Social Organisations and their significance for rural development in transition countries

Setting up a methodological framework for economic research

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ABSTRACT

The paper attempts to set up a methodological framework for the economic assessment of social organisations of people living in rural areas of Central and Eastern European countries (CEEC). The authors assume that research has not yet been done in the complexity that is required for such a topic. The main theses are two: The first is that the economic wealth generated by social organisations is determined by a complex set of factors that include incentives for individuals to organise themselves, the organisational structure of the organisation itself, and the social and economic framework organisations are facing. The second is that this set of factors is a specific one in transition countries with their special historic political, economic and social background of different varieties of socialism. In this stage of the study, the hypotheses are not yet tested, but a theoretical analysis is conducted in order to prepare the methodologies for future tests.

The first part of the study is dedicated to the empirical findings on social capital in rural areas of CEEC. There are social and economic rural and agricultural problems in transition countries that are at least sharper, if not different from those in western societies. An appropriate tool for solving such problems are organisations of farmers and other stakeholders in such areas, but this requires something that is called social capital. The discussion shows that there definitely is social capital in transition countries, and that there are many examples for social conflicts and social capital related solution requirements in rural areas. Amongst them, the strive for solving land tenure and other property rights are the most important. Such conflicts arise when the restructuring of these factors is rather driven by ideological than by rational economic arguments.

Closer analysis should give policy decision makers information on *how* to foster *which* kind of social organisation. This should yield a higher efficiency and sustainability of regional policies in form of a better allocation of funds to target groups, as at present, such funds are often spread with the watering can.

The analysis framework is set by following a neo-classical production function analysis approach, the basic analysis level is the individual level. Here, social capital is treated as something related to the individual. It is further re-defined as a composite of social labour and "real" social capital. This approach allows to separate and integrate profit and non-profit activities and include them into the same production function. It further allows to investigate also the impact of social investments on regional level, by defining variables of "regional social investments" and integrating them in the production function. Last but not least, aspects of institutional economics are integrated in the production function, as well as specific aspects of transition and the post-socialist restructuring process in rural areas.

Some open questions remain. One is certainly that of the appropriate functional form of the production function. Another is, how to integrate questions of intertemporal dependencies or of growth and accumulation of social capital. But the major part of this question has to be solved during the empirical work on the field, which is about to start.

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1 INTRODUCTION

1.1 Background and aim of the study

Rural areas in CEEC are facing a decline of their economic base, mostly agriculture, as well as a deterioration of their physical and social infrastructure. The consequence of these developments are vicious circles, as decaying rural areas become less attractive for investors from non-agricultural branches, and with consequently increasing economic problems and emigration of the younger and the skilled, such areas decay further.

Nowadays, development policies for rural areas are broader based than only a few years ago. Besides fostering agricultural productivity, diversifying economic structures and increasing the quality of life in rural areas by measures like village revitalisation and others are now the key issues. In this context, organisations can have various functions: They can be agents in participatory policy approaches for the development of rural areas, like in the LEADER or SAPARD programme of the EU. They can provide access to resources and markets for disadvantaged individuals like small scale farmers. Or they can simply improve the quality of life in rural areas by undertaking cultural activities and services and thus attract people and investors. While the availability of suitable organisations is relatively good in Western Europe, this is not the case in transition countries. The reason for this is the following: During socialist time, political and other organisations had to follow the path described by the socialist party. Consequently, it is not clear whether the will for participation in civic organisations of any type exists in these countries. The socialist system often oppressed individual initiatives, and the present political and economic instability in many countries seems to reduce motivation for people to organise and/or participate in organisations. The question is whether and how organisation building can be stimulated under these conditions.

The paper attempts to set up a methodological framework for the economic assessment of social organisations of people living in rural areas of Central and Eastern European countries (CEEC). The authors assume that research has not yet been done in the complexity that is required for such a topic. The main hypotheses are two: The first is that the economic wealth generated by social organisations is determined by a complex set of factors that include incentives for individuals to organise themselves, the organisational structure of the organisation itself, and the social and economic framework organisations are facing, in this particular context a rural and agriculturally dominated framework. The second is that this set of factors is a specific one in transition countries with their special historic political, economic and social background of different varieties of socialism. In the part of the study that is presented here, a theoretical analysis is conducted in order to prepare the methodologies for future tests. This theoretical analysis is done with respect to empirical information on social organisations that is available from rural areas of CEEC.

The rationale behind the research is to assess the origin and driving forces of organisations in rural areas of CEEC, as well as their impact on economic wealth of their members. This should enable researchers to give advice on how to foster such organisations that contribute to economic wealth of both their members and the public as a whole.

Terms like "grassroot organisations", social organisations, social capital and networks are closely related to each other, and some authors also relate them to institutions that affect economic activities. Thus, the subsequent part of the first chapter is dedicated to some brief definitions of the above mentioned terms, with special emphasis on the relationship between social capital and social organisations.

The second chapter presents some relevant aspects of the state of the art both on the empirical field of social organisations in rural areas and social capital. This state of the art covers the whole range from less developed countries across Western Europe to CEEC. It also gives a closer look on the economic and social status of agriculture and rural areas in general and of those in transition countries in particular.

The third chapter discusses ways of measuring the relationships between social capital, social organisations and economic wealth. Consequently, the fourth chapter derives an analytical framework for the assessment of the above mentioned problems of social organisation building and its economic impact in rural CEEC. Conclusions and an outlook on further research activities are given in chapter five.

1.2 Some definitions

All of the above mentioned terms are related to each other, some of them even overleap in their meaning. The latter argument especially holds for terms like social organisations, networks and social capital. To begin with the last in line, *social capital* it might be helpful to split it up in the terms *social* and *capital*. Linguistically, the term *social* has two meanings. The first focuses more on the mere interaction of individuals (or the collective action) and the second mostly means beneficiary behaviour in and for the public. In the authors' terms, social is a mixture of both: It is "social" in the sense of collective action as well as social in terms of beneficiary and not merely or primarily profit-oriented. Other authors use the term *civic* for expressing the social feature (WEINBERGER and JÜTTING 1999). *Capital* is defined as the produced production factors that can, in a time-consuming process, be transformed into other goods or be re-produced. Capital is a means to efficiently allocate the two original production factors labour and soil (MÄNNER 1978). *Social capital* is defined as horizontal mergers of people. Accordingly, social capital consists of social (in the above mentioned sense of collective action) networks and related norms that determine the productivity of society. It therefore can be considered as a production factor in the above mentioned sense. A main feature of social capital is that it facilitates co-operation and co-ordination between members of a society to their mutual benefit. Yet it has to be emphasised that social capital can have both positive and negative impacts on the productivity of a society, whereas the negative effect can be caused by rent-seeking of certain groups or activities that are even worse (PUTNAM 1993, cited from THE WORLD BANK 1998, PUTNAM 1993 ET AL. cited from THE WORLD BANK 1998). If we follow the definition of capital from above, social capital can be produced, re-produced and, in the narrow sense of capital, also be exchanged individually. It should nonetheless be stated that this might not entirely be so, as social capital is very much related to individual interactions and therefore to the individuals themselves. Some authors see social capital even as the ability of people to co-operate, (COLEMAN 1988 cited from PALDAM 2000:7) which would imply that it is something merely individual. It might, as a consequence, be to a lesser extent externally influenced (that means produced and re-produced and individually exchanged) than other forms of capital, be it money or machinery. But it gives us the chance to define social capital variables on individual levels, as section three will show. This is, in our opinion, an important aspect when quantifying and assessing the impact of social capital.

For *social organisations*, the same procedure of definition as for social capital holds. Splitting it up in *social* and *organisations*, *social* is in this context more related to attributes like group-interest, local affiliation and solidarity as opposites to individual profit orientation (WEINBERGER and JÜTTING 1999). This does not mean that social excludes the term beneficiary. It means rather that the benefit – be it monetary or of other type – is distributed among the members, as it is e.g. in credit associations or machinery rings in agriculture. The term *organisation* can be explained as goal-oriented social action that co-ordinate and order, and as assignments of people to objects, people to people or objects to objects (BERG 1980). Consequently, social organisations are goal oriented social (in the sense of collective) actions that are driven by more public interests than enterprises, which are rather profit-oriented and driven by self-interest. They are also assignments in the above mentioned sense, which means that they are necessarily subject to constraints, rules and other mechanisms that regulate these assignments.

As stated above, organisations are a feature of social capital, as they are a kind of merger or *networks*. This could imply that organisations and networks are congruent. But there are some authors that discriminate networks from organisations, mainly by using two criteria: Contrarily to organisations, networks do not have a contracted, binding set of rules for the relationship between the individuals. (PANTHER 1997). COLEMAN describes the difference between a network and an organisation as follows: An organisation is a corporate actor, who, as a principal co-ordinates its agents' activities and benefits from the activities of the agents. Contrarily to this, a social network is not a principal, there are only agents exchanging information, goods or services without being formally structured (COLEMAN 1995). There can, however, be a hierarchy between the different members of a network. We can conclude here, that networks are discriminated from organisations by their (lacking) structure and low intensity, whereas their objective portfolio might not really differ from that of organisations. Nonetheless, both organisations and networks can be considered as types of mergers and therefore as features of social capital.

Last but not least, the relationship between *organisations* and *institutions* should be discussed. Although a number of authors state that organisations are a specific type of institution (GÖTZ 1996 and 1998, RICHTER and FURUBOTN 1998), the common economic definitions see organisations as the actors and institutions as the rules that both organisations and individuals are a subject to (FOSS 1995:xxi).

2 STATE OF THE ART

2.1 Organisation building and rural development

Problems with the development of rural areas have long been known worldwide. They have been the subject of countless political and scientific efforts in developing countries and Western societies alike including the European Union. Policies for rural development have often been characterised by a lack of efficiency and sustainability. Nowadays, development policies are unanimously seen as to be more than simply giving money to invest in new agricultural technologies. Measures are now broader based. Besides fostering agricultural productivity, diversifying economic structures and increasing the quality of life in rural areas by measures like village revitalisation and others are now the key issues. Participatory development, and the change from top-down to bottom-up or partnership approaches are the new ways favoured by politicians and also researchers and followed especially in developing countries (GERMAN DEVELOPMENT FOUNDATION ET AL. 2000). There, organisations are considered as partners in rural research development project planning and implementation (NEUBERT 2000, FLOQUET and MONGBO 2000), and as means to provide access to resources like risk management, extension services, credit or others (WEINBERGER and JÜTTING 2000). In the European Union, generally the same arguments count: Participatory structural adjustment programs both for the present members and for the accession candidates are conducted with the help of local organisations. Examples for the former are LEADER and its successors, for the latter, SAPARD and PHARE.

It has to be discussed why organisations in agriculture and rural areas are more important than they might be elsewhere. In common, organisations like enterprises are built up through investments. But this is only feasible when benefits are easily quantifiable and exchangeable, and returns are high enough to reimburse the investors. According to SACCOMANDI, agriculture faces problems of low capital endowment and a relatively low productivity. It should be stated that the productivity of agriculture might be high in absolute terms but rather low in comparison to other sectors like industries or services. This might be due to the so-called Engel-curve effect, as during economic development, when income increases, a relatively lower share of the income is spent on food. Accordingly, prices and revenues for agricultural products are lower than those in other sectors. This leads to difficulties in attracting investors or creditors and forces farmers to organise when they want to get access to resources or outlets (SACCOMANDI 1998:216, MURDOCH 2000).

2.2 Social capital in transition countries

It should be clear by now that organisations and social capital are related with each other. Be it, that social capital features as organisations (or networks) or that social capital is the origin of organisations, without social capital, the generation of organisations cannot be done.

The existence of social capital in transition countries is controversially discussed among scientists and politicians. There are some studies ongoing on this issue, but it has to be said that there is up to now little information on social capital and even less on its economic impact in the former socialist countries. Some argue that in the socialist times, social capital existed only in specific forms (as informal networks) or not at all because of being destroyed by totalitarian states: Initiative of individuals to organise themselves and pursue specific goals of their proper interest was considered to be subversive. The government reacted with repression, which had as a consequence that people reduced their activities. This finally lead to a decrease of social capital (PALDAM and SVENDSEN 2000A and 2000B). The other side argues that social networks and consequently social capital existed in both the socialist and the post-socialist transition times. Examples of this are manifold: Some go even as far as to say that economic transition in former socialist countries is strongly related, if not based on networks that were built in socialist times. They simply result from the former economic organisation and hierarchies and are represented by the same people that held important network (or hierarchy) positions in socialist times.Such networks now replace markets (that were desired by western countries to be established in former socialist countries). They facilitate the often informal exchange of goods and services that is often coined by barter businesses. And they can have positive or negative impact on development, as they sometimes hamper development, when inflexible structures or people impose obstacles on decision making and innovation (HARTER 1997, SCHWANITZ 1997). Besides such networks that derived from the former economic structure, NGOs form a so-called "Third sector" of political participation. These NGOs had only weak roots in the socialist area and are now newly arising and thus rather typical for transition-induced organisations (SCHMEDT 1997). While the last mentioned three authors regionally refer to Russia, such networks and organisational activities are also reported from other transition countries, yet they differ from country to country. In Poland, e.g., political self-organisation aimed at setting up resistance structures against the authoritarian regime. It thus existed during socialist times, yielding into the *Solidarnosc* party but declining after transition when such structures were no longer necessary (FEIN and MATZKE 1997).

2.3 The specifics of social capital in rural areas of transition countries

The section 2.2 emphasises two points: The first is that there are specific types of networks and organisations and consequently social capital in transition countries which base on both socialist and post-socialist economic and social structures. The second is that these networks might differ from country to country and thus be specific to specific types of socialism.

The same might hold for rural areas in transition countries. Thus, the features of socialist organisation might be the key to social capital and organisation analysis for these areas.

Looking towards Central and Eastern European Countries, we find that most of the regions are predominantly rural with a population density below that of Western Europe and the EU. Further, agriculture often holds a major share of the income in such areas, namely in Poland, Romania and Bulgaria (EUROPEAN COMMISSION 2001), but also in other countries like the Ukraine. Generally, the share of agriculture in GDP is higher in Eastern Europe than in the present EU.

This means that many areas in the CEEC suffer from the problems that we described in section 2.1, sharpened by the adjustment during the transition process, when agricultural enterprises had to re-adjust their production from a planned economy towards in- and output markets.

Besides that, the re-organisation of factors, i.e. labour, land and capital, played a decisive role for the agricultural sector and thus the rural areas in CEEC. These factors had been subject to major regulations during the socialist times, which also coined the post-socialist area.

Labour was subject to a specific form of specialisation, which might be unique world-wide. With the creation of large co-operatives such specialisation was driven up to an industrial level with the respective type of specified skills. Moreover, managerial and economic skills were less preferred than technical skills. All this led to a quite specific endowment of human capital and a consequent low elasticity of labour supply, resulting in high unemployment rates e.g. in the German "New Länder" (MEHL 1999, EUROPEAN COMMISSION 2001).

The re-allocation and re-organisation of capital and land, known as privatisation and de-collectivisation were even more complicated, but showed more about the social and organisational background that one might have thought at first. Re-privatisation and de-collectivisation often seemed to be driven more by ideological viewpoints than economic rationality. It seemed to be more important to assign property rights and set up some status before collectivisation than to try to reach an efficient state of land endowment.

However, it is reported that in CEEC, restructuring of agricultural enterprises was not only forced by the political background, but also heavily depended on various factors of social and human capital. Co-operative managers were successful in continuing the co-operative, if there was a lack of information among the members (human capital and social capital) about opportunities to leave, if the members were old and female and thus rather risk averse (human capital), and if the manager had appropriate connections (social capital) to others that provided access to factor- or output markets. Private family farms emerged where informal credit institutions (social capital) existed, and where the private owners had access to markets via networks similar to those mentioned for the case of the co-operative managers. These networks often were relicts of socialist shadow economies (SWAIN1999B). Moreover, social networks also seem to have existed in socialist times, where farm managers exploited their connections to agricultural authorities to have inputs, capital and subsidies provided (SWAIN 1999A).

A less "collective" or "post-collective" but rather individually oriented type of rural organisations and rural social capital is provided by the so-called agricultural circles in Poland. They developed in the 19th century as farmers' associations and persisted until today. During this time, they had to face several problems with their political environment in Poland: They were prohibited during the occupation in World War II and in the first years of the socialist regime in Poland. In this time, the government tried to establish large co-operatives of the soviet type. With a strong decrease of agricultural productivity that threatened the national self sufficiency and a political change in the mid-fifties, the agricultural circles were re-established (HEGENBARTH 1972). The determinants for their genesis in the late 19th century are described to be regionally different, depending especially on the economic performance of farmers and their social awareness, but also on the political background of the region, as Poland was divided between Prussia, Russia and Austria at that time. The activities of these circles aimed at the increase of productivity, improvement of in- and output marketing, additional vocational training for farmers and the preservation the cultural heritage. They included e.g. machinery rings, credit associations and associations of farmers' women (HEGENBARTH 1972:36). The incentive structure of the circles was both individual and collective, and the farmers' motivation to join them were mostly economic reasons but also the fact that there was an organisation that claimed the interest of farmers in the public. Another advantage against the competitors, the co-operatives was that entry and exit was formally voluntary. However, there was social pressure to built up agricultural circles, as governmental development funds for villages were distributed through agricultural circles. By that, agricultural circles provided not only collective or private goods for their members but also public goods for the village societies and even private goods for non-members (HEGENBARTH 1972). Thus, these circles provide almost an ideal of social organisations in rural areas: Serving their members, serving the public and being responsive to external political incentives without losing their independence. Last but not least the agricultural circles provide an example for the existence of social capital with a long tradition and the ability to persist also in socialist systems. At present, circles with 2.6 Million members cover 90 percent of the villages in Poland (TODEV and BRAZDA 1994:36).

This section provides evidence that

a) social capital and thus the potential to organise exists in transition countries
b) this social capital depends on the present post-socialist framework, the socialist background and sometimes even longer backward historical situations
c) social capital in rural areas specifically was and is coined by the collectivisation and de-collectivisation (or the attempts respectively, if we regard the Polish "circles", but it also determines these processes, so that we can call it a two-way-process

Table 1 tries to briefly list up these issues.

Table 1: Specifics of rural areas' economics and social capital in transition countries

Rural economics		Social capital	
General	**In transition countries**	**In transition countries**	**In rural transition countries**
Remote Lack of infrastructure Agriculture-dominated Unemployment Over-ageing Economic divergence		Subject to oppression in socialist times (?) Specific due to political and regional background of socialism Persisting networks in post-socialist times	
	Extremely dominated by agriculture Sharp adjustment of terms of trade De-collectivisation and privatisation Disintegration of agric. enterprises Disintegration of social systems Low status of human capital		Coined by pre-socialist and socialist background Coined by processes and conflicts of collectivisation and de-collectivisation patterns (land use, property rights) Persisting networks and hierarchies of former agricultural enterprises Kinships and family bonds

3 ANALYTICAL FRAMEWORK OF SOCIAL ORGANISATIONS IN RURAL AREAS

3.1 General remarks

Having discussed the empirical background for organisation building in rural areas of CEEC, For this purpose, we come back to the term of organisation as defined in chapter 1. Taking them as assignments of various issues, we could state that organisations are a composition of capital in monetary and technical terms, the former as liquidity providing working capital, the latter as investments, and human capital, often defined as labour forces. This neo-classical approach can now be extended by the term social capital, an abstract term however, that is expected to contribute to productivity like the other three mentioned above.

But defining social capital as a production factor is the easier part of the work, as this is already done by various authors (ROSE 1999). According to PALDAM and SVENDSEN this can be achieved using two approaches. The first one is to treat social capital as resource to be integrated in a production function together with other resources like human capital. labour and physical capital. The second approach treats social capital as transaction costs. Here, social capital is not treated as productive capital but as a scaling function to production (PALDAM and SVENDSEN 2000A).

It has also to be stated that the all of the above mentioned production factors can be split up in related to human beings, and those who are rather technical and thus independent of human behaviour and characteristics. The former class consists of money and technical assets. These capital features can be easily defined, quantified and consequently assessed as it is frequently done in production function analyses of neo-classical economics. Things are getting more difficult when we include human capital into the analysis: Here, individual characteristics like education, age, and others should be taken into account when analysing the value of this type of capital.

Things become more difficult when defining social capital in a quantitative way. The definition above shows that social capital is the part of an organisation that consists of – or builds – networks and related norms within an organisation (and elsewhere). As a consequence, social capital is also related to individual human beings, but much more abstract than human capital. It tangles both individual and organisational characteristics, and is consequently called the "missing link" between the two economic actors (GROOTAERT 1998). Present definitions are taking this into account by somewhat relating the interactions in a network an individual has to the individuals economic wealth. The approaches discussed below represent such types of assessment.

3.2 Defining social capital: Current approaches

The most common approaches to define and operationalise social capital is provided by PALDAM and SVENDSEN (2000A and 2000B), who give three types of quantification which they call Putnam's instrument. Two of these are related to the individual, whereas the third one is more specified according to a meso-level.

The first is to measure social capital by evaluating the amount of trust between individuals through asking the "loan question", i.e. how many people of a certain circle would give loans to their fellow individuals. This is quite handy for surveys, especially in the field of agricultural research, but it has some decisive disadvantages: First, the amount of trust an individuals contributes to another is not only dependent on the social potential of the individual trusting, but also on the integrity and social attributes of the trusted. The second is that such a measurement is rather informal and does not relate individuals to a productive body like an organisation. Third, such trust can be directly productive or not, so that the link between productive capital and trust cannot be easily seen.

The second criterion of PALDAM and SVENDSEN is to assess learning and co-operative behaviour in experiments that are based on the "prisoners' dilemma". Here, it is assumed that the quicker individuals caught in such a dilemma learn in sequenced experiments from their failure – which is a non co-operative behaviour – and follow a co-operative strategy, the better is their social capital (PALDAM and SVENDSEN 2000B). There remains the question whether this experiment really detects social capital, or, more precisely, detects social capital separately: Earlier publications relate the results of such experiments rather on strategies and learning than on the –at that time maybe not so well-known- term "social capital". They further show ambiguous results, as some experiments yield learning behaviour and some

rather non-co-operative behaviour (ANDREONI 1988). Besides that, experiments are generally not the method of choice in agricultural economics.
The indirect way to measure social capital is the density of organisations (on meso-level) or the number of interactions and their intensity respectively, a measure that is called "Putnam's instrument" (PALDAM and SVENDSEN 2000A). This is to be criticised for the fact that such measures do not provide an inter-individually objective measure. The value of the intensity of interactions may differ from organisation to organisation, but it may also differ from individual to individual according to the opportunity costs of interaction, e.g. the opportunity costs of labour when interacting within a network[2].

3.3 An alternative concept: The productivity approach

3.3.1 General remarks

The productivity approach mainly bases on the concepts of Olson, who related the success of organisations to their contribution to the individual productivities of their members.
According to Olson, the purpose of organisations is the provision of collective goods. It should be noticed that OLSON considers both public and private organisations. Thus, the term 'collective' is related to the members' group of an organisation. This means that e.g. the provision of a recreation facility in a club is a collective[3] good (for the club members) as is the return of a joint stock company (for the shareholders). One of his most important arguments is that the incentive for individuals to build organisations is determined by the relationship of costs of being a member of the organisation and the benefits individuals draw out of them. Small organisations are more likely to sustain than large ones, as the latter have for each member rather low returns that can hardly compensate the costs[4] Another important argument Olson provides is the heterogeneity of interests that might affect the productivity (or the genesis) of organisations, and therefore also the productivity gains of their members (OLSON 1992). It should be stated here again that the term benefit does not exclusively mean monetary benefits, but also non-monetary benefits like spare-time activities or others. It should be subject to discussion later whether such benefits, however, have to be measured in monetary terms.
The productivity concept provides two advantages: It is inter-individually comparable, as it can be related to market prices – based productivity values. Following PUTNAM (2000), productivity is, besides the "common" production factors, significantly based on interactions of individuals with others. It follows an individual approach, treating social capital as an individual characteristic rather than something extra-individually produced.

3.3.2 The first analysis step: Setting up an individual "social" productivity function

Productivity function analyses are a common and well known tool. In this case we refer to a common agricultural production function that represents the total factor productivity of an agricultural farming and household system. It can further be applied to every other household system by omitting the agricultural production variables and taking the revenues of off-farm

[2] This is considered to some extent by PALDAM (2000), who adjusts Putnam's instrument by weighting the intensities. However, this does not remove the valuing problem.
[3] The term collective good is used to discriminate a good that is a public good in the theoretical sense for only a group (a synonym would be club good) from real public goods who are public for the society as a whole. As a public good is defined by the two criteria non-rivalry and non-excludability, a collective or club good is characterised by non-rivalry but at the same time excludability of those who are not members of the club.
[4] Olson compares large organisations with polypolies on markets with perfect competition: Here, none of the competitors' efforts to influence the price through production adjustments could yield any benefit, as they are too small to provoke market reactions, so that the investment in such efforts would be lost (OLSON 1992:8).

labour as the total output. In every case, the contribution of factors to overall productivity is estimated. The production function is formulated as follows:

$$\Pi = \sum_i p_i \pi_i = f(L, C, S, E, I) \qquad (1)$$

with Π the total factor productivity as the sum of outputs π_i weighted with their market prices p_i

L the input of labour

C the input of capital

S the input of land (soil), specifically for agricultural activities

Environmental variables (like rainfall, temperature, soil quality etc.)

I other inputs like fertilizer etc.

The next sub-step would be to separate production factors into social and non-social (private) factors, i.e. into factors that are applied in whatever form of organisation, so that

$$L = L_p + L_s \qquad (2)$$

holds for labour, which is now split up in something we could call "private" L_p and "social" L_s labour

and

$$C = C_p + C_s \qquad (3)$$

for social (C_s) and private capital (C_p) respectively.

Integrating (2) and (3) into (1), we get

$$\Pi = \sum_i p_i \pi_i = f(L_p, L_s, C_p, C_s, S, E, I) \qquad (1')$$

A formulation like that has the following advantages:

a) Social and private factor allocations can easily be investigated in surveys
b) Profit and non-profit activities can be integrated simultaneously. It makes no difference whether social labour is allocated in a marketing co-operative or a golf club. If it made one, it should be nonetheless possible to further differentiate social factors into profit and non-profit ones.

The next steps would be to link this individual production function a) with organisational features and b) with the meso-economic (or regional) level. The productivity approach easily allows such linkage by integrating further variables into the productivity function.

3.3.3 Linking individuals and organisations

In this section, there is first some discussion necessary on organisations and their feature in the economic sense. The previous section merely based on the neo-classical theory where actors are profit-maximisers, transaction costs do not exist as there is full information and perfect in- and output markets.

However, it is known since COASE (1937, cited from PITELIS 1994) and at least since WILLIAMSON (1975, cited from PITELIS 1994), that both markets and organisations are subject to transaction costs which affect their efficiency. Although such transaction costs are quantified at least theoretically by optimisation problems in the principal-agent-case (SACCOMANDI 1998), it seems empirically rather difficult to determine such transaction costs. Thus, proxies have to be found, at least at this stage of the study, that might be related to transaction costs. Such proxies could origin from the number and slope of organisational hierarchies in an organisation, from the simple number of members, from the heterogeneity of interests (represented by the resource distribution among the members), from the legal form of an organisation and others. However, such variables could also be integrated, e.g. as dummies (for the last mentioned) or as discrete variables (in most of the other cases, e.g. as GINI-coefficients for resource distribution aspects).

However, such variables could also be integrated into the production function. If we call them N and indicate them as a number of j variables, the function (1') reads

$$\Pi = \sum_i p_i \pi_i = f(L_p, L_s, C_p, C_s, S, E, I, N_{1-j}) \qquad (1'')$$

3.3.4 Linking individual and meso-level

It should also be possible to link the individual and meso-level (in our case the regional level) by using the social variables defined in chapter 3.3.2. If we assume that organisations (or networks or any form of social capital) have a certain spatial range they refer to, they could affect externalities all the people living in this range through externalities, be it as a firm that creates jobs or as a sports-organisation that increases the quality of life and thus attracts people and investors.

If we assume that there are, within a region k, a total number of organisations n (or networks) that consist of a total amount of social investments (capital and labour)

with

$$\overline{C_k} = \sum_n C_{Sk} \qquad (4)$$

for social capital and

$$\overline{L_k} = \sum_n L_{Sk} \qquad (5)$$

for social labour

we can introduce these variables as "regional social investment variables" into the individual production function, hypothesising that the total amount of social investments affects the wealth of an individual in this particular region, so that we get

$$\Pi = \sum_i p_i \pi_i = f(L_p, L_s, C_p, C_s, S, E, I, N_{1-j}, \overline{C_k}, \overline{L_k}) \qquad (1''')$$

It should be made clear that evaluating social investments on regional level requires a lot of data collection, yet only slightly more than Putnam's (weighted) instrument as suggested by PALDAM (2000), as we can consider the intensity of interactions of individuals with organisations as social labour and thus additionally only have to investigate the capital stock. The assumption on the separability of profit and non-profit oriented social investments of section 3.3.2 also holds.

3.3.5 Evaluating the determinants of social investments

The last step in this analysis would be to estimate the influence of individual characteristics on the social investments. Such individual characteristics might be human capital (skills and education), other personal characteristics like age, gender and others. This could be now, following the findings from section 2, extended by specific characteristics of personal histories in socialist and post-socialist times, like the present and former position in parties, co-operatives and other networks. Third, social investments could be related to the political environment, specifically the post-socialist but, taking into account the long term character of social capital, also to socialist characteristics (e.g. the mode of collectivisation of farms) and even to the historical background of a region (as we know that the "agricultural circles" in Poland differ according to which occupant (Prussia, Russia or Austria) the region belonged in the nineteenth century).
Thus, the social investment variables L_s and C_s now turn from independent to dependent variables as

$$L_s = f(H_{1-m}, P_{1-l}, B_{1-o}) \qquad (6)$$

with H human capital and other individual characteristics, P the personal history variables and B the political and historical background variables.

The same holds for social capital

$$C_s = f(H_{1-m}, P_{1-l}, B_{1-o}) \qquad (7)$$

These two equations can now be put together with equation 1''' into a system of equations, if we assume that there is an at least stochastic interdependence between Π, C_s and L_s. We could even relate the variables by putting the endogenous variables as exogenous variables in one of the other two equations and thus estimate interdependencies. So might the amount of social investments also be a function of total productivity. Doing this, we could get the following equation system:

$$\Pi = \sum_i p_i \pi_i = f(L_p, L_s, C_p, C_s, S, E, I, N_{1-j}, \overline{C_k}, \overline{L_k}) \qquad (1''')$$

$$C_s = f(\Pi, H_{1-m}, P_{1-l}, B_{1-o}) \qquad (7')$$

$$L_s = f(\Pi, H_{1-m}, P_{1-l}, B_{1-o}) \qquad (6')$$

This system can be estimated simultaneously by using multiple stage techniques like the two-stage-least square or the three-stage-least square estimation. Of course, identities of equations, and multicollinearities between variables must be avoided.

4 CONCLUSIONS

The discussion during the study has shown the following points: First, there are social and economic rural and agricultural problems in transition countries that are at least sharper, if not different from those in western societies. An appropriate tool for solving such problems are organisations of farmers and other stakeholders in such areas, but this requires something that is called social capital. The existence of such social capital is doubted for transition countries, as socialist governments are expected to have oppressed individual initiatives.

The discussion shows that there definitely is social capital in transition countries, and that there are many examples for social conflicts and social capital related solution requirements in rural areas of transition countries. Amongst them, the strive for solving land tenure and other property rights are the most important. Such conflicts arise when the restructuring of these factors is rather driven by ideological than by rational economic arguments.

The third section sets an analytical framework for the assessment of the impact of social capital on individual productivity. Following a neo-classical production function analysis approach, the basic analysis level is the individual level. Here, social capital is treated as something much related to the individual. It is further re-defined as a composite of social labour and "real" social capital. This approach allows to separate and integrate profit and non-profit activities and include them into the same production function. It further allows to investigate also the impact of social investments on regional level, by defining variables of "regional social investments" and integrating them in the production function. Although falling back to the "hard economics" as PALDAM (2000) would call it, we think that this approach is easy to follow, data are relatively easy to investigate and linkages are made between economic aggregation levels. Last but not least, aspects of institutional economics are integrated in the production function, as well as specific aspects of transition and the post-socialist restructuring process in rural areas.

There are, however, some open questions that remain. One is certainly that of the appropriate functional form of the production function. Another is, how to integrate questions of intertemporal dependencies or of growth and accumulation of social capital. But the major part of this question has to be solved during the empirical work on the field, which is about to start.

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