# Transition in Eastern German agriculture, lessons to be learned for the EU-enlargement process

#### Klaus REINSBERG and Steffen ABELE

#### 1. Introduction

Agriculture has always been a major subject of EU-Policies, and particularly the Common Agricultural Policies (CAP). Problems of efficiency, social aspects like employment, and the contribution (or non-contribution) of agriculture to overall economic welfare, closely linked with the CAP and its regulation policies have stood in the public spotlight for decades. With the EU-accession process, the afore-mentioned questions are raised again. Now discussion focuses on the question of how to integrate the agriculture of Central and Eastern European countries (CEEC), while at the same time, means are sought with which to increase the efficiency while controlling the social impact of the adaptation process in both the present and future EU-member states. This is being done with an awareness of the fact that there is a wide variation in the significance of the agricultural sector in the candidate countries (Tillack and Schulze 1999). The reunification of the Federal Republic of Germany (FRG) and the German Democratic Republic (GDR) gives an example of both the transition from a socialist to a market economy and of integration into the EU within a rather short period. Thus, the development of agriculture in East Germany can be considered as an example for accession candidates.

In summarising ten years of the reunification of East and West Germany, the economic status quo is seen as rather negative, some even consider the reunification as an economic failure. Reasons for this failure can be seen in the sudden rise of factor costs that have rendered the industrial sector less competitive on the world market. This so called "Dutch Disease", together with the "Mezzogiorno-problem" of failed structural development policies, has led to a decline in this sector and to a relative increase in the tertiary sector and labour migration from East to West Germany (Sinn 2000, Dichtl and Issing 1993, Encyclopaedia Britannica 1998). East-Germany currently demonstrates about 60 % of the productivity of West Germany (Sinn 2000). It has much higher unemployment rates, about 7% in West Germany versus 17 % in East Germany (Bundesanstalt für Arbeit 2000), and the GDP accounts in all the "New Länder" for less than 75 % of the EU-average, which makes East Germany an objective 1 region in EU-structural policies.

Nonetheless, agriculture in East Germany seems to be at least as profitable or even more profitable than agriculture in West Germany, despite the fact that the climate and soil conditions are no better and generally even worse than in the western part of the FRG. This could indicate that agriculture in East Germany has been able to cope with the transition process. This contribution will try to throw some light on the institutional facts that have

enabled agriculture in East Germany to develop relatively efficient structures in the process of transition and EU-integration.

- 2 Institutional background of the agricultural transition
- 2-1 General remarks

With the reunification on October  $3^{rd}$  1990, two major things took place in the former GDR: Firstly ~ legislation, the economic system and the social system were transferred from the FRG into the former GDR. Second, East Germany became a full member of the European Union, acquiring the entire CAP and, since 1993, also the structural policies of the EU. All this took place formally in a very short period (one could even say that there were only two steps, the monetary union in July 1990 and the final reunification in October 1990). Even though the adaptation process took much longer and might still be considered as on-going, this specific strategy of transition could be described as a "big bang" strategy. However, the impact of this "big bang" was softened by social security measures that were gained from the FRG at the same time, and a big amount of public investment from both Germany and the EU.

As mentioned above, agricultural enterprises perform at least as well in East as in West Germany, and that is despite the fact that they are at the - given yield level - not necessarily equally favoured by natural conditions, as exemplified in Table 1. This table shows structural and efficiency indicators of a specific farm type, the partnerships, for West and East Germany. Eastern Germany's enterprises are bigger, with a high land endowment and low labour endowment per ha. Consequently, they have a low land productivity, but their labour productivity outperforms the Western farms by far. The following issues could have contributed to that positive development: Initial farm structure, legislation and property rights, access to finance and capital markets, access to input markets and new technologies, mobility of land and labour, legal status of enterprises as well as human and social capital (MOTHES and TILLACK 2000). They will be discussed in the subsequent part of this chapter.

Indicator	Unit	Old Länder	New Länder
Number of farms <sup>1</sup>	No.	495	235
(1999)			
Av. Farms size	На	66.0	395.9
Leased land	На	48.5	375.7
Total Labour forces	No. per farm	2.3	5.2
Own Labour	No. per farm	1.9	2.5
Hired Labour	No. per farm	0.4	2.7
Total Labour	No. per 100 ha	3.5	1.3
Own Labour	No. per 100 ha	2.9	0.6
Hired Labour	No. per 100 ha	0.6	0.7
Profits	DM ha <sup>-1</sup>	1,285	557
Profits	DM per own labour	44,235	88,001

 Table 1:
 Indicators of efficiency in the Old and New Länder (Partnerships)

Source: Own calculations, based on Bundesministerium für Ernährung. Landwirtschaft und Forsten, various editions

### 2-2 Initial farm structure and organisation in the former GDR

Looking at the structure of farms in terms of resource endowment, productivity and organisational forms in comparison to West German farms should inform us about the starting points for transition and on the possible comparative advantages at that time. Looking at the changes since 1989 could also show where the adaptation took place, and consequently what was inefficient, and what was worth retaining from the old structures. The farm structure of the GDR was characterised by large scale farms that were either publicly owned or organised as production co-operatives. Although land and capital was private property, production was collectively organised and management decisions were made centrally. This eventually led to a *de facto* collectivisation with no decision making opportunities for the individual farmer. Although much larger in scale, labour productivity was at only 60 percent of the FRG, land productivity at only about 87 %.<sup>2</sup> The same figures can be found for animal production. It should be noted that before World War II – at the then given yield level - , the territory of the later GDR was more productive than the western part of Germany in every field. Another point of interest is, that when looking at net productivity, the above mentioned gap even widened, which indicates post harvest losses and downstream inefficiencies. Looking at the technical equipment, we can state that the GDR, endowed with half of the arable land of the FRG, had only 11 % of the tractors and about 7 % of the combine harvesters of the FRG (Thalheim 1978). Yet the latter figures are ambiguous, as they cannot be compared by means of power and as it is well known that in the west there was a certain over-mechanisation.

<sup>&</sup>lt;sup>1</sup> The number of farms reflects a sample of representative farms in Germany. As agricultural enterprises, only farms above 1 ha (until 1999) and 2 ha respectively (in and after 1999) are counted

<sup>&</sup>lt;sup>2</sup> These are technical coefficients of gross production values, dt cereal units per labour force or hectare of land respectively.

2-3 Institutional framework for the creation of factor markets

### 2-3-1 General remarks

Transition means, in economic terms, the shift from a planned to a market economy. More precisely, factor allocation is now done via the price mechanism and is no longer regulated by central planning. Of course, the basis for functioning markets is the existence of private property rights and the right to use them. But it goes far beyond this point. Functioning markets require information and a mobility of demand and supply, that means facilities to enter and exit the markets. In the New Länder, this framework was arranged so that fixed factors (land, assets), capital and labour were mobile on functioning markets. The following section deals with the details of this institution building process.

### 2-3-2 Land and assets

Privatisation was the first issue to be addressed with the reunification in 1990. Legislation essentially followed the steps outlined in Table 2. The pivotal point in this development was the Agricultural Adjustment Law. With this law, the legal framework for a sustainable restructuring was provided. The reason for this lies in the adaptation of the law in the ongoing restructuring process, its flexibility and at the same time its clear objective definition. The clear objective was privatisation and restructuring, and the compensation of those who would leave the agricultural sector. Adaptations were as follows: Initially, the aim of the law was simply to privatise and reinstate the status before collectivisation. During the adaptation process, the novels of the law also regulated liquidation, compensation and restructuring by setting incentives for those involved, i.e. both those who wanted to invest in agriculture and those who wanted to withdraw their investments. Those incentives were: There was only support for those enterprises that had cleared up their compensation issues by a certain point in time, co-operatives could only persist when being converted to new types of co-operatives with their balances proven by official chartered accountants, and compensation was calculated according to balances over a certain period of time that took into account both the market and productive values of the assets. The latter fact was particularly important, as most of the technological equipment had a extremely low value on the markets and consequently in the balance, although it was still productive and had a positive and high rate of return which led to a higher internal shadow value than accounted for in the balance.

Governmental decision	Date
Private property of input factors is introduced.	12 January 1990
The Privatisation Agency (Treuhandanstalt) is founded.	1 March 1990
Agricultural Adjustment Law (Landwirtschaftsanpassungsgesetz) is enacted.	29 June 1990
Monetary Union between FRG and GDR is established.	1 July 1990
The Common Agricultural Policy (CAP) of the EU is extended to the GDR.	1 July 1990
Law of Support (Fördergesetz) the NGL is enacted.	6 July 1990
Official reunification of East and West Germany.	3 October 1990

Source: Wiegand (1994, S. 39), Thiele (1996, S. 4f), cited by Mothes and Tillack (2000)

All of these measures created a market for assets and land, finally for whole agricultural enterprises, not only by assigning private property rights but also by institutionalising markets that facilitated the restructuring of agricultural holdings (see also Mothes and Tillack 2000).

The mobility of land, in agricultural terms the "migration of land to the better landlord" can only be seen in close connection to labour mobility (in the next section) and the mobility of assets. With regard to this process, it has to be said that the restitution of the huge cooperatives led to the small scale land ownership that was characterised by the state of the land reform in 1945: Small and non arrondised farms. In the early 1990's, after privatisation, this situation reappeared, with both those who wanted to leave agriculture and those who wanted to stay in agriculture left in possession of small plots. Due to the above mentioned Agricultural Adjustment Law, a market developed with the former being the suppliers and the latter being the demanders of land. Former co-operative members leaving agriculture but still holding land were lending their land to those who stayed in the sector – that is those with better starting conditions, the "better landlords". Impediments to this were the legal limits of public support given to those who had leasing contracts of more than 12 years, and some competition problems on land markets. The outcome was a leasing rate of more than 90 % in the New Länder compared with a rate of 50 - 60 % in the Old Länder (BMELF 2000).

However, it should be mentioned that the adjustment process was full of pitfalls. First, it had to struggle with the poor state of land registration. Some of the registers had been wiped out in the collectivisation process or because of cases of emigration. In addition, on the fields, landmarks had been removed or destroyed. All this caused a rather chaotic situation in the restitution and privatisation process.

### 2-3-3 Capital markets

One of the major problems of newly emerging agricultural enterprises was the lack of capital. Thus, it was necessary to create access to capital markets. Again, this was done by enforcing information and setting incentives for participants to generate this information properly. Enterprises had to provide a management concept that revealed information on returns, costs and investment. Based on this plan, public funds were available. The access to funds was divided into; start up capital, public credits, taxation bonuses, and investment grants for certain production systems (milk, ruminants, special crops etc.). In cases of bankruptcy, all the funds had to be reimbursed. With this system, a pre-selection of efficient enterprises was achieved that supported access to private credit.

With access to capital markets secured, the way was made clear for innovation. This led to a quick modernisation of agriculture, in terms of new varieties, new animal breeds and new production techniques, factors which, when added together, led to high increases in efficiency (Mothes and Tillack 2000).

## 2-3-4 Labour

Every structural adjustment requires the mobility of factors. While capital might be highly mobile, problems frequently arise with labour and land. Labour in the agricultural sector is of low mobility due to its specific skills and vocational training. Thus, off-farm job opportunities are scarce, and restructuring which entails downsizing the labour endowment also requires a social net to catch those affected. The consequences of the lack of job alternatives or a functioning social security system in rural areas can be seen in Central and Eastern Europe, where many people have been driven into subsistence agriculture during transition.

The New Länder benefited from both mobility and a social buffer. This led to a decline of 80% in those people working in agriculture from 1989 to 1995, which is shown in figure 1. However, only a small part of this labour was really mobile in the sense of finding other employment, in fact only 14 % immediately found another occupation in 1991, almost 70 % were dependent on the social net, as they retired (or even retired early), took part in job creation measures or were employed short-term or even unemployed (Mehl 1999). In 1999, the figures look even more drastic: only 14 % of those formerly employed remain (BMELF 1999 and Statistisches Bundesamt 1990). This has to be interpreted not only with respect to the jobs that were lost directly in agriculture but in sectors that were integrated in large cooperatives, like services and social services. These features show the downside of restructuring agriculture and lead to the problems of social and economic developments in rural areas that will be discussed below.



Figure 1: Decrease of working population in agriculture in the New Länder

However this restructuring is valued, it has led to a structure of relatively low labour input and consequently to high labour productivity from the remaining workers. But this can be differentiated even further. Looking at the co-operatives, we can see a labour endowment per hectare that is almost twice as high as in partnerships, for example (1.41 per 100 hectares versus 2.58 per 100 hectares) (BMELF 2000). This means that in the co-operatives, social

Source: Mehl (1999)

buffers remain, as employed people are also shareholders of the co-operatives, and so cannot be released easily.

## 2-4 Organisation of enterprises: Legal forms

This section deals with one of the most important features of a market economy. The legal form of an enterprise determines questions of foundation (and foundation costs), profit sharing, decision making, liability, internal and external control and incentive mechanisms, taxation and liquidation. Thus, almost all the transactions and related costs are determined by the legal form of an enterprise. Having a broad portfolio of legal forms to choose between means a wide range for optimising the organisational set up of an enterprise according not only to external conditions, but also to the personal preferences of entrepreneurs with respect to e.g. capital endowment, attitude towards risk and so on.

A single proprietorship - i.e. a family farm - or a partnership might mean higher liability, demanding more owned capital and therefore holding a higher risk of failure, but it could also offer high credibility and ease of control. In contrast a production or marketing co-operative with the personal identity of shareholders and operative decision makers, might offer lower risks and lower capital requirement but could involve conflicts in decision making. A public limited or joint stock company bears even lower risks when spreading the capital among a high number of shareholders, but has high transaction costs in controlling and avoiding principal-agent-problems. Single proprietorships may be highly motivated, but they may lack the high level of innovation and entrepreneurship necessary, especially in agriculture, due to the lack of skills and due to risk aversion, whereas people working as employees in joint stock companies might be of lower motivation but also of lower risk aversion.

The Tables 3 and 4 show legal forms in the New and the Old Länder. It is evident that in the New Länder, there is a widespread distribution of all legal forms. Although the family farms are holding the highest share in the number of enterprises, the hold a minority of the cultivated area. Most of the area cultivated is held by partnerships and legal entities. This shows the full exploitation of the opportunities given by the portfolio of legal forms.

In the Old Länder, an overwhelming share of the number is held by family farms, whereas a huge amount of land is cultivated by enterprises. This shows the rather traditional and sometimes inefficient structure of the agriculture in this area. In fact, efficiency seems to be highest in partnerships and legal entities, both forms that are typical for the New Länder. This is shown in Table 5.

### 2-5 Human and social capital

These issues have recently found their way into economic theory, initially they were treated as residuals of the production functions of capital and resources, nowadays considered as indispensable for economic development. Human capital is the stock of skills and productive knowledge embodied in people (Eatwell et al. 1996). Social capital is the ability of people to work together in groups and organisations. Social capital can also be considered as a production factor to be added to the above mentioned, or it can be considered as reducing transaction or monitoring costs. Especially for former socialist transition countries, the existence of social capital is often denied. It is then assumed that the political system oppressed individual social initiatives, a fact that hampered the development of social capital. (Paldam and Svendsen 2000). There is support for both viewpoints. However, there might be the argument that, without the combination of both – skills and the ability to co-operate, that is human and social capital, transition of East German agriculture would not have taken place. This can be traced through all of the above mentioned points.

 Table 3: Legal forms of agricultural enterprises in the former GDR, the New and Old

 Länder by number

	New Länder							Old
								Länder
	1988	1992		1996		1999		1999
		No.	%	No.	%	No.	%	%
Agricultural Enterprises total	4,507	18,575	100	30,843	100	27,890	100	100
Private farms, of which								
Family Farms		14,602	78	25,014	81	21,803	78	96.6
Partnerships		1,123	6	2,820	9	3,046	11	3.0
Legal Entities		2,749	15	2,894	9	2,968	11	0.2
Other enterprises		101	1	115	0.3	73	0	0.2
Co-operative farms	4,043							
State owned farms	464							

Source: Own calculations, based on Bundesministerium für Ernährung. Landwirtschaft und Forsten, various editions.

Table 4: Share of the different	t types of enterprises by endowment with land in the New
and Old Länder	

	New Länder						Old Länder
	1992		1996		1999		1999
Agricultural Enterprises total <sup>1</sup>	Ths.ha	%	Ths.ha	%	Ths.ha	%	%
Private farms, of which	1,380.3	27.0	2,438.0	43.9	2593.9	46.3	
Family Farms	674.0	13.2	1,205	21.7	1,314.1	23.5	69.6
Partnerships	706.3	13.8	1,233	22.2	12,79.8	22.8	12.2
Private legal entities	3,679.5	73.0	3,108.0	56.1	2,996.4	53.7	17.8
Co-operative farms	2,250.6	44.1	1,843.0	33.2	1,702.1	30.4	
Other types	1,428.9	28.9	12,65.0	22.9	1,294.3	23.3	
Other enterprises	48.7	1.0	10		0.2	11	0.2

<sup>1</sup> As agricultural enterprises, only farms above 1 ha are counted.

Source: Own calculations, based on Bundesministerium für Ernährung. Landwirtschaft und Forsten, various editions.

	8	Legal form				
Indicator	Unit	Family farms	Partnerships	Legal entities		
Number of farms (1999) <sup>1</sup>	No.	7,767	730	368		
Farm size	ha	50.9	178.8	1,515.7		
Leased Land	ha	29.3	160.4	1,449.5		
Labour forces	No. per 100 ha	3.33	1.84	2.3		
Net profits	DM	53,457	131,255	-12,538		
Gross profits (incl. labour costs)	DM	60,600	170,275	1,436,261		
Gross profits	DM/ha	1,190.6	952.6	947.6		
Gross profits	DM/labour force	36,511	51,700	40,780		

Table 5: Efficiency of different legal forms

<sup>1</sup> As agricultural enterprises, only farms above 2 ha are counted.

Source: Bundesministerium für Ernährung, Landwirtschaft und Forsten 2000

Human capital was significant in farm restructuring. Here the concept of productivity as having a quantifiable value, enabled individuals to estimate the value of the assets to be brought into the new enterprise and to reimburse those who drop out of the enterprise. An emerging farmer had to decide whether he could make more out of the assets he had left when using them for production than when selling them on the market. For this, precise knowledge of the potential of the capital was necessary. Besides knowledge, other characteristics likethe age – being old enough for experiences but young enough to amortise the investments, a certain willingness to take the risks that are linked with the proposed activities might have been of importance. Those who demonstrated these qualities created the demand for land and assets, the others dropped out. This process was difficult however, as many of those who dropped out at an early stage felt betrayed later on, which led to the above mentioned adaptation of the Agricultural Adaptation Law. However, the difference between the values reimbursed and those valid for productivity contributed to a different perception of opportunities and risks – and therefore in different endowments with human capital.

Social capital enables the new entrepreneurs to set up networks that facilitate inputs of resources or outlets to markets, or the interaction with other relevant institutions such as farmers associations, for example, or extension services etc. It also enables entrepreneurs to co-operate in the starting phase and even further with their business partners. But there has to be co-operation not only with their future business partners, but also with the former partners within the co-operative in order to restructure without incurring major transaction costs. Nonetheless, there are also quite a few examples of the abuse of social capital, a phenomenon that is known as the "downside of social capital" (Portes and Landolt 1996). Social networks were often the base for restrictions to the free land market in Eastern Germany, and in many

CEEC, social networks serve as social and economic buffers in economically critical transition processes, operating on barter relations and subsistence farming and thus causing welfare losses due to the renunciation of the potentials for trade (Abele et al. 2001).

In every case, the significance of social and human capital for the restructuring of the agricultural sector should be subject to further scientific discussion. *Mothes and Tillack* discuss in depth, the fact that data on the efficiency of different legal forms found in literature differ widely: While some studies find large and co-operative farms are more efficient than small and family farms, others argue the opposite way. Differences in performance are suggested to be related to transaction costs and size (Mothes and Tillack 2000). This theory could lead to the conclusion that a consideration of the specific social and human capital characteristics of the people involved is an indispensable prerequisite for choosing the "optimal" legal form and structure of agricultural enterprises. However, science has to provide a quantification of social and human capital and its impact on the success of enterprises. If this is not done, leaving social capital as a mere residual for the unexplainable would be a tautology.

### 2-6 Conclusions

To conclude, it could be said that after ten years of transition, agriculture in East Germany is efficient and competitive relative to West Germany and the EU. Reasons for this are:

a) A large scale farm structure at the beginning of the transition process, b) sufficient human capital, i.e. entrepreneurial skills and knowledge, c) access to capital, both in the form of private credits as well as publicly supported funding programs, combined with an incentive structure that avoided rent-seeking d) flexible but reliable legislation, flexible in terms of legal forms of enterprises, both reliable and flexible in terms of the privatisation process: Reliable in terms of the restitution of private property, flexible in terms of handling arising problems in the restructuring process, like e.g. the valuing of assets during buy-outs, e) mobility of labour being assured both by private sectors and regional migration, as well as the existing buffers of a social security system that facilitated retirements, unemployment benefits, job creation measures and additional vocational training, f) mobility of land, i.e. the opportunity of leasing, g) last but by no means least the existence of social capital that enabled emerging entrepreneurs to initiate efficient networks of co-operation, both in the restructuring process.

In fact, legislation and other measures provided markets for all resources. The functioning of these markets was ensured by setting incentives, providing information and opening up facilities to enter and to leave the sector, particularly for those who wanted to leave it by ensuring compensation and a social network.

Despite all this, it cannot be denied that all these measures may not have worked so well without the immediate linking of East German agriculture to the common market which provided both regulation and an outlet for the products.

#### 3 The development of rural areas

#### 3-1 General remarks

The section on labour mobility in the previous chapter detects the downside of the rural development in the New Länder during the last decade. The structural adjustment of agriculture and the connected loss of employment opportunities have caused severe structural problems in rural areas. Looking at the distribution of economic wealth in the New Länder, it can be seen that most of the former typical agricultural areas belong to the economically weakest regions with the highest unemployment rates. Only a few of them belong to more favoured areas, like the sub-region of Berlin or Leipzig (Barjak et al. 2000). Decreasing employment in rural areas has induced a number of further problems, like emigration of those endowed with promising human capital, ageing of the population and a loss of infrastructure that is now leading to a vicious circle. Thus, increasing efforts are made to develop the regions with structural policies that are designed by the European Union.

#### 3-2 Measures for the development of rural areas

As already mentioned above, all the New Länder, except Berlin, are within the objective 1 region of the European Union. For the development of these regions, structural funds are provided to co-finance measures that range from measures to increase the efficiency of agriculture, environmental protection and marketing activities in the agricultural sector, to infrastructure improvement, development of small and medium size enterprises and handcrafts. Other measures focus on cultural activities and the development of tourism. The latter two belong to the so-called soft factors (besides the hard factors like infrastructure) in regional development that nonetheless are said to account for a weight of 70 percent in the decision making factors for both investors and citizens in choosing a region in which to work and live. Today these regions are trying to attract both tourists, new citizens and investors by outlining the beauty of the landscape or special cultural heritages. Still, both efforts are intensive ones, as competition is high in these fields and regions often do not differ so much in their supply of beautiful landscapes or cultural heritages. Moreover, both tourists and citizens will not be satisfied with the simple existence of those features but will require many more services and inducements whether staying for a shorter or longer period. This means an intensive programme of physical input and services that require a high proportion of human resources and their co-ordination will be needed. This automatically implies social and human capital.

### 3-3 The role of social capital in rural development

As mentioned above, social capital, together with human capital is an important factor in generating wealth in societies: Skills to perceive advantages and the ability to co-operate with other individuals to exploit them, are considered to be the missing links in development. So

for example, the bottom-up principle with participation at its core requires social capital. The principle of participation is based on the assumption that the articulation of needs and interests of the groups involved in regional development, also known as demand driven development, leads to a better achievement of these goals and therefore more efficient policy development measures. The participation principle is already demonstrated in the EU legislation for structural policies and regional development measures: Without the integration of local groups, (and the consideration of gender issues), regional development projects are no longer funded by the EU.

For participation, interest articulation is required, as there may be regionally and within a region diversified interests, which leads to conflict but also to synergies that can be exploited in that region's development. The better the relationships between the interest groups, and the more able they are to articulate their interests, the better these synergies can be exploited and the easier the conflicts can be solved or even avoided in early stages. This is especially important in sensitive processes like land reforms and land restructuring.

However, regions have their specific development potential, dependent on their environment, their history, and human interests may range from economic interests to other interests like the provision of spare time activities etc.

Consequently, the feasibility of regional development measures is a product of the interaction of all the above mentioned factors: physical potentials, human interests and social and human capital.

### Conclusions

Overall, four conclusions can be made: The first is that the efficient institutional measures in Eastern Germany have contributed to the exploitation of its agricultural potential. Besides the institutional framework provided by state authorities, human and social capital must have played a decisive role in this development. This can be seen in the structure of firms that are due to social capital and in the quick economic recovery that was also fostered by human capital and the capacity to exploit the institutional framework. However there may be an ongoing process of adjustment, as there may still be co-operative forms of agriculture that will not be competitive due to their high labour endowment, as a result of its function as a social buffer, and due to the fact that in the whole EU, the structural adjustment process is still ongoing.

The second conclusion is the fact that the structural adjustment in agriculture has caused major social and economic distortions in rural areas. In other words, policies were efficient in creating functioning markets for land capital and assets, but labour markets still need to be developed. These problems cannot be solved without social capital and the integration of local interest groups, as problems and their potential solutions are so complex that they cannot be solved efficiently in a top-down fashion. Even the problem statement should be left to

participatory approaches. This finally requires a decentralised structure of administration, policies, and local organisations that can act as interest groups and therefore as the agents of rural development, especially by lowering the transaction costs and by ensuring the proper articulation of demand for support.

The third conclusion is derived from the experiences in the New German Länder: After having restructured agriculture, one now becomes aware of the social and economic problems in rural areas, often the results of the restructuring process, that have to be solved. However, it could have been more effective and less costly to follow a more comprehensive approach by developing agriculture and rural areas simultaneously. This is one of the major findings for those who are standing on the brink of EU-integration.

The fourth conclusion interweaves the discussion of sequencing and the timing of the different measures that is presently conducted in literature (Buchenrieder 2000). The problems discussed above reveal that all the steps of the process are woven together. Privatisation cannot function without market structures, markets need money and capital, adjustment of enterprises cannot be done without the mobility of labour. This suggests that the efficiency of the restructuring process is proportional to the number of restructuring initiatives that can be implemented simultaneously.

#### **Bibliography**

- Abele, S., Biesold, H. and Reinsberg, K. (2001): Soziale Netzwerke: Hemmnis oder treibende Kraft im ländlichen Raum? in: IAMO 2001, Institute of Agricultural Development in Central and Eastern Europe, Halle.
- Barjak, F., Franz, P., Heimpold, G., Rosenfeld, M. (2000): Regionalanalyse Ostdeutschland: Die wirtschaftliche Situation der Länder, Kreise und kreisfreien Städte im Vergleich, in Wirtschaft im Wandel 2/2000, pp. 30-55. Halle (Institut für Wirtschaftsforschung).
- Buchenrieder, G. (2000): Theoretical concepts of institution, sequencing and timing how applicable are they to the transition process?, in: Buchenrieder, G. (ed.): Proceedings of the mini-symposium on "Institution sequencing and timing in transition economies", held in Berlin on the XXIV. International Conference of Agricultural Economists (IAAE). Stuttgart (Universität Hohenheim.
- Bundesanstalt für Arbeit (2000): Arbeitsmarktstatistiken September 2000; http://www.arbeitsamt.de/hst/services/statistik/zentral/index.html
- Bundesministerium für Ernährung, Landwirtschaft und Forsten (various editions):
- Agrarbericht der Bundesregierung.
- Bundesministerium für Ernährung, Landwirtschaft und Forsten (1999): Statistisches Jahrbuch. Münster (Münster-Hiltrup).
- Dichtl, E. and Issing, O. (Eds.) (1993): Vahlens großes Wirtschaftslexikon, p.480. München (Vahlen).
- Eatwell, J., Milgate, M. and Newman, P. (Eds.) (1996): The New Palgrave: A Dictionary of
- Economics, p. 682. London (Macmillan Press Limited).
- Encyclopaedia Britannica (1998), Vol. 8, p.86.
- Paldam, M. and Svendsen, G.T. (2000): An essay on social capital: looking for the fire behind the smoke. In: European Journal of Political Economy Vol. 16 (2000) 339 366.
- Portes, A. and Landolt, P. (1996): The downside of social capital. The American Prospect no. 26, May June 1996.
- Mehl, P. (1999): Transformation of the social security system in agriculture in East Germany: Lessons for CEECs?, in Frohberg, K. and Weingarten, P. (Eds.): The significance of politics and institutions for the design and formation of agricultural policies, pp. 139-156. Kiel (Vauk):
- Mothes, V. and Tillack, P. (2000): Re-established farms in the New German Laender (NGL): Situation and Prospects, in: Forgacs, C.: How Do Farmers Find their Way in a Transition Economy, Mini-Symposia, XXIV International Conference of Agricultural Economists. August 13-18, 2000, Berlin, p. 16.
- Sinn, H. (2000): Zehn Jahre deutsche Wiedervereinigung Ein Kommentar zur Lage der neuen Länder, in: Institut f
  ür Wirtschaftsforschung (Ed.): IFO-Schnelldienst 26-27, 2000. M
  ünchen.

Statistisches Bundesamt (1990): DDR 1990. Zahlen und Fakten. Stuttgart (Metzler-Poeschel).

Thalheim, K.C. (1978): Die wirtschaftliche Entwicklung der beiden Staaten in Deutschland. Opladen (Leske).

- Thiele, H. (1996): The Transition of Agriculture: Lessons learned from East Germany, Universita Degli Studi Di Siena, *Discussion Paper N. 17*, Siena.
- Tillack, P., Schulze, E. (1999): Employment Situation and Labour Productivity in Central and Eastern Europe Agriculture, in: Proceedings XXIII CIOSTA – CIGR V CONGRESS (Hrsg.): Work Sciences in Sustainable Agriculture, Horsens/Dänemark, S. 368-373.
- Wiegand, S. (1994): Landwirtschaft in den neuen Bundesländern. Struktur, Probleme und zukünftige Entwicklung. Johann-Wolfgang-Goethe-Universität Frankfurt/Main. Diss. Vauk, Kiel.