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Governing structural change and externalities in agriculture: toward a normative institutional economics of rural development

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DISCUSSION PAPER

**Institute of Agricultural Development in
Central and Eastern Europe**

**GOVERNING STRUCTURAL CHANGE AND
EXTERNALITIES IN AGRICULTURE:
TOWARD A NORMATIVE INSTITUTIONAL
ECONOMICS OF RURAL DEVELOPMENT**

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**DISCUSSION PAPER No. 73
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ABSTRACT

The paper aims at a conceptual contribution to the normative economic analysis of rural development (RD) policies. RD is regarded as a problem of interaction between individuals; (lacking) structural change or the (missing) integration of externalities are therefore reconstructed as coordination rather than allocation problems. A social dilemma is taken as the paradigmatic core of normative institutional economics: how can potential gains from cooperation be realised by way of institutional policy? Starting from a critique of the hitherto dominating welfare economics conception, three principles for institutional policy are derived: (1) the *realisation of gains from cooperation* as the normative, regulative idea, (2) *incentive-compatible self-regulation* as the principle of individual action, and (3) *institutionalised competition* as the institution-related principle. An application to rural credit markets demonstrates how these principles can be used to structure institutional policy of RD.

JEL: D 63, D 74, Q 18, Q 58.

Keywords: rural development, institutional economics, welfare economics, social dilemma.

ZUSAMMENFASSUNG**STRUKTURWANDEL UND EXTERNALITÄTEN IN DER LANDWIRTSCHAFT: ANSATZPUNKTE FÜR EINE NORMATIVE INSTITUTIONENÖKONOMIK DER LÄNDLICHEN ENTWICKLUNG**

Dieser Aufsatz versteht sich als konzeptioneller Beitrag zur normativen ökonomischen Analyse ländlicher Entwicklungspolitik. Ländliche Entwicklung wird als ein Interaktionsproblem von Individuen angesehen; (fehlender) Strukturwandel oder die (Nicht-)Integration von Externalitäten werden daher als Koordinations- und nicht als Allokationsprobleme rekonstruiert. Ein soziales Dilemma wird als paradigmatischer Kern der normativen Institutionenökonomik eingeführt: wie können durch ordnungspolitische Maßnahmen mögliche Kooperationsgewinne realisiert werden? Ausgehend von einer Kritik der bisher dominierenden wohlfahrtsökonomischen Konzeption werden drei institutionenökonomische Politikprinzipien abgeleitet: (1) die *Realisierung von Kooperationsgewinnen* als normative, regulative Idee, (2) *anreizkompatible Selbststeuerung* als handlungsbezogenes Prinzip und (3) *institutionalisierter Wettbewerb* als institutionenbezogenes Prinzip. Eine Anwendung auf ländliche Kreditmärkte zeigt, wie diese Prinzipien zur Strukturierung von ländlicher Entwicklungspolitik eingesetzt werden können.

JEL: D 63, D 74, Q 18, Q 58.

Schlüsselwörter: ländliche Entwicklung, Institutionenökonomik, Wohlfahrtsökonomik, soziales Dilemma.

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1 INTRODUCTION¹

In recent debates on reforms of the Common Agricultural Policy (CAP), rural development (RD) measures in the framework of the so-called 'second pillar' have figured prominently. A further shift away from classical market and price policies under the CAP makes a future extension of these second pillar RD programmes likely. A methodologically informed investigation and evaluation of them is therefore of prime interest for policy-makers and must be regarded as a most relevant task for the profession of agricultural economists. However, the recent shift of attention in government departments also makes new demands on scientific policy evaluation.

Over decades the profession has developed highly sophisticated concepts and models suitable for giving quantitative assessments of policy impacts in the area of import tariffs, production quotas and commodity price support, in which standard welfare theory forms the cornerstone of the argument. Given the new emphasis on RD, the issue has to be raised whether this type of analysis is similarly suitable for dealing with the more structurally and environmentally oriented policy packages now under public debate. The paper seeks to address the question: do agricultural economists have available a *theoretical conception* that allows them to give scientifically grounded policy recommendations on problems of RD? The relevance of this question emerges from a perceived rift in the academic landscape dealing with RD issues:² on the one hand, orthodox approaches based on welfare economics (still) dominate as the fundamental point of theoretical reference, at least among economists (for a recent survey cf. BULLOCK and SALHOFER 2003). On the other hand, there is a nowadays rapidly expanding field of policy analyses, evaluation studies, and debates on the most appropriate RD policy instruments, which has been fuelled by the new emphasis on the 'second pillar' of the CAP and the huge needs for RD in the course of EU enlargement. These latter studies often abstain from any theoretically reflected conception of RD and – in parts dictated by the guidelines of legislative bodies – confine themselves to pragmatic evaluation and impact analyses with regard to various aspects (cf. the mid-term evaluations of the Commission's rural development programmes 2000-2006). Attempts to bring these two 'worlds' together usually result in the somewhat helpless admission that the relevance of orthodox economic thinking for actual policy making on RD is probably small. "The superior alternative to the CAP ... would be a complete market liberalization and a cessation of all budget payments to the farm sector, which are not related to the supply of public goods. ... As far as to the final desirability of such a fundamental policy reform, ... there seems to be in general a relatively broad consensus among analysts. However, the theoretically efficient solution is frequently criticised as purely academic since its implementation is unlikely ..." (SCHRADER 2000, pp. 22-23).

Many researchers have therefore given up to base policy advice on a theoretically justifiable conception of rational RD policy. Theoretically pre-structured models are of course still widely used, but they are not embedded in an encompassing framework that highlights the fundamental links of RD policy. It seems clear that a successful policy has to be based on a conception that guarantees the consistent targeting of its instruments. On the other hand, there will probably never be a framework that performs this task in an ideal way. The question

¹ The author is indebted to INGO PIES for inspiring lectures and instructive discussions and to ANDREAS GRAMZOW, JARMILA CURTISS, PETER WEINGARTEN and AXEL WOLZ for helpful comments on an earlier version of this paper. The paper is a slightly revised version of a contributed paper prepared for the 87th EAAE-Seminar "Assessing rural development policies of the CAP" held in Vienna, Austria, April 21-23, 2004.

² This 'rift' is analysed as a general problem in agricultural economics by HAGEDORN (1996, chapter 2).

therefore remains whether or not welfare economics is the best of all available theoretical alternatives.

The aim of this paper is to outline a conception that takes up recent developments in institutional and constitutional economics to modify and extend the traditional welfare economic approach to normative policy analysis. Although several weaknesses of the orthodox approach are criticised and hence modified, the power of other theoretical insights of neoclassical economics is preserved. The general desire is to make the recent literature in institutional economics amenable to a normative analysis of RD policies. This is done by the development of *principles for policy design*. These principles do not represent single policy elements or even instruments, they should rather demonstrate in a theoretically reflected way the inherent *link* between policy objectives and the conditions of their implementation. As such, they are heuristic³ devices that should instruct policy makers and advisors where and how to look for desirable policies. They are also aimed to perform an important role in political discourse: principles are abstract abbreviations of more complex justifications. They could therefore be called semantic focal points of the political discourse (SUCHANEK 2000, p. 46).

To make the rather unspecific notion of RD analytically tractable, the paper concentrates on the following two core problems to be addressed by an agriculturally oriented RD policy (cf. HAGEDORN 2003):

- The problem of *delayed structural change in agriculture*. In a unifying Europe, this shows regionally different patterns: In Western Europe, labour-saving technical progress and changes of sector-specific price relations have exerted a permanent income pressure on farm households over decades. Structural changes in the agricultural sectors dominated by small-scaled family farms have been substantial, but labour productivity and income have continued to lag behind other sectors of the economy. In Central and Eastern Europe (CEE), the fundamental restructuring processes ensuing the transition of a centrally planned to a decentralised market economy have resulted in a more diverse picture of agriculture in different countries. However, relatively abrupt changes in ownership and organisational forms have been widespread. They resulted in a dualistic agricultural structure, often characterised by many small-scaled private farms and few large-scale successors of former collectives or state farms. It is argued, however, that many private farms in CEE may be too small and large operators too large to be efficient and stable in the medium run (SARRIS et al. 1999). Various constraints, e.g., with regard to the access to capital, are made responsible for the apparent lack of adjustment.
- The problem of *multifunctionality* and (positive or negative) *environmental externalities of agricultural production*. In the course of agricultural development after WW-II, increasingly intensive farming activities exerted negative effects on the environment: for example, natural resources such as water or air have been used as sinks for excess nutrients, and the appearance of landscapes has changed as a result of large-scale and specialised production methods. Awareness of these developments seems to be more pronounced in Western Europe. However, it is likely to rise also in CEE as a result of EU legislation.

Section 2 of the paper examines to what extent the welfare economic approach is a suitable conception for the analysis of RD policies. Section 3 presents the frame of an alternative 'normative institutional economics' of RD. Section 4 attempts an illustration of the power of this alternative with regard to rural credit policies. Section 5 concludes. The paper draws heavily on research work by a German group consisting of K. HOMANN, I. PIES, A. SUCHANEK, and others. Whereas the insights laid down in SUCHANEK (2000) have been of paramount im-

³ 'heuristic' from Greek 'heuriskein', to find; concerning finding and discovering.

portance for the conceptual parts of this paper, its contribution is to make these insights fruitful for RD policy analysis.

2 WELFARE ECONOMICS – A SUITABLE CONCEPTION TO ASSESS RD POLICIES?

A closer look at the portfolio of RD instruments now unified under the umbrella of the second pillar shows that they have as their central theme the two core problems of the agricultural sector as mentioned above, the problem of delayed structural change and the problem of environmental externalities of agricultural production.

With regard to both problem areas, standard welfare theory has offered a less than satisfying analytical framework, both when it comes to the explanation and the assessment of real world institutions and policies. In particular, the emphasis on optimal resource allocation by market forces is unable to rationalise lasting income disparities between sectors. Moreover, by referring to ubiquitous 'immobilities' and 'market failures', it neglects the institutional dimension of RD processes. Hypothetical first-best solutions therefore remain abstract in a negative sense and easily result in normativistic or 'nirvana' fallacies when it comes to policy advice.

Within this chapter, the attempt is made to give a very brief overview of the welfare economic approach, highlight its central principles for policy advice, and present a critique of the suitability of this approach for RD policy evaluation.

2.1 The welfare economics of structural change and externalities in a nutshell

The welfare economic approach to RD regards the problems of structural change and externalities in agriculture as problems of *suboptimal allocation of scarce resources*.⁴ The objective of a welfare-theoretically founded policy is hence to contribute to a more efficient allocation of resources, following the subsequently explained programme:

1. Farming activities involve scarce resources, such as land, labour, capital, but also water or the atmosphere to produce other resources, primarily agricultural commodities such as wheat or milk, but also, e.g., landscapes or manure. All these resources spend differing utility levels in different uses – directly for human nutrition or recreation, or indirectly as production factors for other goods or as sinks for waste. The general idea of welfare economics is that all resources, including environmental goods, *should be used in a way that spends the highest level of utility*. If this is the case, an optimal allocation of resources is achieved.
2. How resources are valued exclusively depends on the *preferences of the individuals* within a society, given a certain level of income. The will of the individuals is the only standard for normative decisions. On an aggregate level, the Pareto principle is applied to ascertain whether an optimal allocation has been achieved. The characteristic of an optimal state is that no individual can be made better off without making anybody else worse off. This poses two fundamental problems of information and compensation: individuals must be *informed* that a state is suboptimal, and an individual must be *compensated* if he shall make the resources under his control available to others in a Pareto improving way.
3. Both problems are solved by the institutional arrangement of a *perfect market*. The information problem is solved by a system of *relative prices*, which represent the marginal value of all resources. Furthermore, the market arrangement allows individual compensa-

⁴ The following is a summary of the standard approach found in many textbooks, e.g. JUST et al. (1982) or HENRICHSMeyer and WITZKE (1991 and 1994) with specific emphasis on agriculture, SIEBERT (1995) with specific emphasis on environmental problems. The presentation follows SUCHANEK (2000, pp. 54 et seq.).

tion by way of *exchange of resources*. An equilibrium is achieved if the price of a resource equals the individual's marginal willingness to pay and its opportunity cost. A number of conditions must be fulfilled to obtain this result: all resources are traded on markets, market participants are price takers, there is perfect competition, markets are sufficiently transparent, there are no entry and exit barriers.

4. This framework is taken to reconstruct the problems of RD as a result of *failing markets*. Market failure in the agricultural sector exhibits different patterns (cf. HENRICHSMEYER and WITZKE 1995, pp. 58-64, for an overview): in Western Europe, the delays in structural change and the associated disparities in factor incomes are supposed to be primarily due to *exit barriers* and *factor immobilities* (e.g., with regard to labour and capital, HENRICHSMEYER and WITZKE 1991, pp. 383-388), whereas they might also be due to *entry barriers* in CEE (e.g., with regard to capital and technology, SARRIS et al., 1999). Most environmental problems are due to *positive or negative externalities*, i.e., uncompensated resource use. As a consequence of market failure, Pareto improving reallocations of resources are not realised.
5. The welfare economic therapy in the form of policy recommendations takes the analytical framework of perfect markets serious: unfettered markets guarantee a desirable allocation of resources. Any type of intervention should therefore be avoided, except if it supports the functioning of markets. External effects should be internalised as far as possible. All resources should be allocated via the market mechanism. Where markets do not exist or do not function – for example, in the case of externalities or public goods – they should be simulated by governmental action. This could mean to *correct* market outcomes – by a Pigou tax, or government supply in the case of public goods – or to *create* markets by assigning property rights – as in the so-called Coase solution.
6. In the traditional welfare economic approach, the *political implementation* of recommendations is commonly not an issue, which implies the assumption of a benevolent dictator or a functionally similar agency implementing the 'optimal' policy. Politics and economics are regarded as separable entities; political frictions have no impact on the correctness of policy recommendations based on welfare economics. Furthermore, since market agents are modelled to parametrically adjust to changes in their environment, *enforcement* of policy measures is unproblematic.

The welfare economic approach can hence be summarised as consisting of three basic principles (SUCHANEK 2000, pp. 65 et seq.):

- *Optimal resource allocation* based on individual preferences as the normative, regulative idea. All resources should be used in a way that maximises aggregate social welfare. This is the overarching leitmotif of welfare economics, the relevance of which for political action is specified further in the following two principles.
- The *opportunity cost principle* as a principle of individual action. Resources should be used in a way that minimises their opportunity costs. With regard to tradable goods, where market prices signal social opportunity costs, it is the direct consequence of individually optimising (= 'rational') behaviour. With regard to environmental goods the problem arises that their property rights are imperfectly defined. The principle therefore takes the specific form of the 'polluter-pays-principle' (SIEBERT 1995, pp. 160-161): the user of resources should be held responsible for the consequences of his activity in terms of social costs. The imposition of these costs on the individual should in turn induce a socially efficient resource use.

- *Coordination by equilibrium prices* as the institution-related principle. Factual or simulated markets should allocate the resources of the economy, whereby prices are the key instruments to coordinate individual action. Prices both inform about the relative scarcity of resources and offer an incentive to use the resource in a way that maximises social welfare. This does also hold in a dynamic perspective: changing environments induce changing price relations, which cause substitution effects and hence structural changes in resource use.

2.2 A critique of welfare economic principles

In the following, the previously outlined principles of welfare economics are criticised from an institutional economics perspective. A constructive extension and modification of these principles will be presented in section 3. The arguments raised against the principle of optimal resource allocation are basically that it takes an unreachable ideal as the standard for policy recommendations and that it neglects to legitimise its measures on the side of the affected parties:

- A first objection is that the welfare economic approach is not suitable as a guide for policy formation because its focus on maximal social welfare is *unable to structure what is feasible in the real-world*. The inherent 'top-down-deduction' (SUCHANEK 2000, p. 75) compares reality with an idealised first-best. This has been termed a 'nirvana'-approach (DEMSETZ 1969), an unattainable paradise. To base policy recommendations on a first-best situation leads systematically to normativistic fallacies, i.e. recommendations not sufficiently grounded on real-world conditions. As a consequence, deviations from the ideal cannot consistently be integrated. It is misleadingly assumed that a central authority could realign real-world conditions in such a way that the perfect market is attained – even under conditions of permanent change with new and unpredictable events. It is here where the critique of HAYEK applies (1945, p. 530, quoted by SUCHANEK 2000, p. 78): "To assume all the knowledge to be given to a single mind ... is to assume the problem away and to disregard everything that is important and significant in the real world."
- It has been a frequent strategy in theory formation to treat situations that divert from the first-best as being 'constrained-efficient' or 'second-best', but leave the analytical framework unchanged. As DAHLMAN (1979) has pointed out, a fundamental difficulty arises from this logic. If all constraints of the real world are taken as given, a situation can *always* be described as Pareto-optimal: "if it exists it must be optimal, and if it does not exist it is because it is too costly, so that it is optimal too" (DAHLMAN 1979, p. 153). As a result, any *reasonable benchmark in terms of efficiency or optimality disappears*.
- Furthermore, the *basis of legitimisation and implementation* is missing in a welfare theoretic approach, as argued by BUCHANAN (for references cf. SUCHANEK 2000, pp. 80-83). Strict adherence to the rule that only Pareto superior policies should be implemented would lead to total political standstill. Welfare economists therefore recommend policies which are associated with *net* welfare gains, i.e. which would allow a hypothetical compensation of losers by the winners of a policy change (Kaldor-Hicks criterion). This leads to a disregard of *individual* assent. Since agents always have an individual scope of action, desirable outcomes cannot directly be enforced. It is therefore necessary to set adequate incentives, which require the assent of individuals. This is defined away by any hypothetical compensation or policy advice based on 'deadweight loss'. The efficiency criterion should therefore be replaced by a consensus criterion. Furthermore, since desirable states cannot be enforced due to individual scope of action, policies should concentrate on the setting of rules. Hence, not social states but rules should be compared.

The critique of the opportunity cost principle concentrates on a too narrow understanding of economic activity as mere response and not *interaction*. Furthermore, the assignment of responsibility by the polluter-pays principle is questioned:

- The opportunity cost principle disregards the *social dimension* of economic activity, i.e., the idea that economic outcomes are the result of interactions between individuals. Agents always act in a social context. Institutional arrangements, which are the means to coordinate exchange and the realisation of gains from cooperation in this social context, must not be neglected in a comprehensive analysis. Due to this neglect, the welfare economic approach cannot explain why the market mechanism in the real world does not function as theoretically postulated. Immobilities or external effects are simply assumed to exist but cannot be consistently explained in the welfare theoretic framework. Following COASE (1960), the reasons are sometimes seen in transaction costs, but the nature and source of these costs is not analysed further. In short, the *institutional preconditions* of economic activity are not an issue in welfare economic reasoning. A prominent example in the debate on structural change in agriculture is the question why farmers apparently do not seek an efficient allocation of their production factors and thus accept income losses. HAGEDORN (2003) provides an explanation based on transaction cost reasoning.
- To assign an individual the responsibility for resource use (as the polluter-pays principle postulates) would require that the individual has sufficient *control* to realise a desirable outcome and has an *incentive* to do so. However, if functioning markets are not existing, the 'definition' of polluters and hence the assignment of incentives is an endogenous choice. The polluter-pays principle gives no hint how this choice should be made. Moreover, the assignment of a polluter status is to some extent arbitrary, because polluters may produce only because their products are demanded by certain consumer groups, who therefore might be held responsible as well. Indeed, in agriculture, polluters – e.g., nitrate emitters – are rarely punished and the polluter-pays principle seems to be of little relevance for actual policy making.

The objections raised against the principle of coordination by equilibrium prices are that it neglects the institutional dimension of economic activity:

- The principle of coordination by equilibrium prices does not take into account the *investment character* inherent to any interaction. Individual activity at the same time influences current and future conditions of action. It always has investment character, in particular with regard to reputation, social capital, or productive institutional structures. These are essential elements of exchange that cannot be read off from prices alone. Standards, labels, or hostages are necessary preconditions for exchange if information is asymmetrically distributed and specific investments will only be carried out if their return is independent of the price mechanism (WILLIAMSON 1985; cf. also chapter 4 of this paper). It is therefore necessary to differentiate under which conditions coordination mechanisms complementary or alternative to price coordination are desirable. These complementary coordination mechanisms are most important in highly integrated production systems such as family farms, where non-price incentives, altruism, and loyalty play important roles as well as incentives to maintain the organisational unit over the long run (POLLAK 1985).
- Under which conditions short-term opportunism or long-term stability is socially desirable cannot be assessed by the principle of price coordination. Individual rule compliance in single cases is almost always suboptimal, because non-compliance allows the acquisition of rents. In the longer run, however, this may result in losses as a consequence of de-

stroyed behavioural expectations or mutual trust, which is the basis of long-term cooperation. Agricultural transition in CEE provides several examples where these aspects had significant repercussions on RD. Reputation and trust were shown to be important determinants in access to credit (cf. PETRICK 2004b with regard to Poland). Hold-up problems on downstream markets are a further example (GOW and SWINNEN 1998).

Overall, it follows that welfare economic principles of an overarching policy framework exhibit systematic deficits. It is conceded that mainstream economics allows the sophisticated analysis of isolated, individual cases. However, important issues of the institutional dimension of economic interaction cannot be investigated within the traditional framework. In particular, the fact that individuals always have discretionary scope of action and that this action is embedded in a social context is not sufficiently taken into account on the conceptual level.

The presentation so far has been in parts simplistic and of course did not do justice to the many modifications and extensions of welfare economic reasoning found in the literature. The question however remains: is the welfare theoretic approach capable of providing a useful guide for the formation of actual RD policies? To what extent can we go beyond a position characterised by the following statement by BOHM and RUSSELL (1985, p. 455, quoted in SUCHANEK 2000, p. 63): "No general statements can be made about the relative desirability of alternative policy instruments once we consider such practical complications as that location matters, that monitoring is costly, and that exogenous change occurs in technology, regional economies, and natural environmental systems"?

3 OUTLINE OF A NORMATIVE INSTITUTIONAL ECONOMICS OF RD

The aim of this chapter is to show that pragmatic ad-hoc advice without any theoretically justified concept of a rational RD policy is not the only alternative to welfare economic principles. It therefore seeks to outline the basis of a normative institutional economics⁵ which tackles the systematic deficits of welfare economics without throwing overboard its analytical strengths. The normative institutional economics proposed in this paper is aimed to provide a *conceptual* contribution to the evaluation of RD processes and policies that takes the aforementioned deficits into account. It attempts to integrate the positive and normative analysis of relevant institutional arrangements based on a systematic distinction between actions on the one hand and their institutional framework on the other. This implies that moves *in* the game and rules *of* the game are analysed separately. Whereas, in the positive part of the analysis, individual actors are still regarded as rationally optimising agents and the analytical power of the rational choice approach is therefore maintained, the normative analysis is strictly based on the *consent* of the involved agents and not on the maximisation of an abstract welfare measure. It will be shown that this concept – despite its simple paradigmatic core – allows a methodically controlled differentiation to various applications that are of relevance for RD policy. The critique of welfarism as presented in the previous section shall therefore be complemented by a constructive extension of welfare economic principles.

In a first step, RD problems are reconstructed as interaction problems. The core of normative institutional economics is then presented: the management of social dilemma situations. Based on this core, three alternative principles for policy making are developed.

⁵ The term 'normative institutional economics' is taken from PIES (1993).

3.1 Structural change and environmental externalities as interaction problems

In the following, RD is regarded as a problem of interaction between individuals. It is hypothesised that all relevant problem areas in RD can more usefully be reconstructed as *coordination* rather than *allocation* problems. The approach pursues not less than a *change in perspective* regarding the analysis of RD processes: it aims to replace the (too narrow) perspective of scarcity and resource allocation by a more encompassing one of conflict and coordination. The task is to reconstruct (lacking) structural change or the (missing) integration of externalities as coordination problems of rational actors. Indeed, as partly already mentioned above, several examples come to mind where coordination problems are at the core of structural change and environmental externalities:

- Institutional choice in the organisation of agriculture can be regarded as a problem of coordination of management and labour force, where moral hazard and supervision play central roles (SCHMITT 1991, 1993; BECKMANN 2000; ALLEN and LUECK 2002).
- Coordination problems between different members of the farm family are responsible for lasting income disparities compared with other sectors: farmers at the same time are suppliers and users of land, capital and labour. Any factor is dependent on the presence of all other factors and cannot be easily removed from the farm-household nexus (HAGEDORN 1996).
- Development of viable downstream sectors is hampered by the possible exploitation of specific investments (hold-up) (GOW and SWINNEN 1998).
- Farming businesses in CEE cannot be modernised due to lacking access to credit as a result of widespread principal-agent relationships between lenders and borrowers (PETRICK 1999, 2004a; SWINNEN and GOW 1999).
- Agri-environmental problems can be reconstructed as coordination problems of competing groups of resource users (BAHNER 1996; BROMLEY and HODGE 1990; HAGEDORN 2002).

Admittedly, these examples are still somewhat eclectic and a rigorous reconstruction of RD as an interaction problem has to await further elaboration. However, they demonstrate that types of economic exchange which are of key relevance for RD do occur not only through markets and that opportunistic behaviour and transaction costs are relevant. Furthermore, it will be shown below that all of them can be integrated into a paradigmatic core of normative institutional economics.

3.2 The paradigmatic core of normative institutional economics

Following recent developments in the field of constitutional economics (BRENNAN and BUCHANAN 1985; HOMANN and SUCHANEK 2000), a *social dilemma situation* is taken as the fundamental structure of the problem to be analysed. A social dilemma is the paradigmatic expression of the question that lies at the heart of *any* policy: how can potential gains from cooperation be realised by way of institutional reform? The approach is based on the fundamental insight that gains from cooperation at the same time *legitimise* institutional reform and facilitate its *implementation*.

Figure 1: The tragedy of the commons as a typical social dilemma

| | | All other farmers: overgrazing? | |
|---------------------------|-----|---------------------------------|-------------|
| | | yes | no |
| Farmer A: overgrazing? | yes | I 1 , 1 | II 3 , 0 |
| | no | III 0 , 3 | IV 2 , 2 |

Nash-equilibrium points to the (1, 1) outcome in quadrant I.
 Pareto-improvement points to the (2, 2) outcome in quadrant IV.
 Arrows indicate that individual rational choices lead to the Nash equilibrium (1, 1) from both (1, 0) and (0, 1).

Source: Author's depiction.

Figure 1 illustrates a 'classical' case of a social dilemma: the tragedy of the commons. A pasture in common property is used by several farmers. An individual farmer A faces the decision whether to increase his cattle herd beyond what can be sustainably nourished by the pasture if all farmers increase their herd. His pay-offs are given on the left-hand of each quadrant in the matrix, whereas the pay-offs for all other farmers are given on the right-hand. In the individually most preferred case, farmer A increases his herd whereas all others do not (quadrant II). Vice versa, quadrant III is the most preferred outcome for the other farmers. However, since each farmer anticipates that the other farmers will overgraze, all increase their herd, which results in a Nash equilibrium of low returns for all as indicated by the arrows (quadrant I). Had all farmers kept their herds in limits, a Pareto superior outcome for all would have been possible (quadrant IV). However, this is not individually rational.

The conceptual contribution of this simple scheme shall be highlighted as follows:

- Rational behaviour of agents prevents a Pareto-superior solution. In contrast to traditional 'invisible-hand' arguments, individually rational behaviour does not lead to a socially optimal outcome.
- Actions are mutually dependent. Both common and conflicting interests are existing simultaneously. Actors have partial, but not complete control over outcomes. Mutual advantage can only be realised by way of cooperation, there are unexploited gains from cooperation. The interaction of behaviour is therefore emphasised.
- There is an incentive problem: individual interest conflicts with cooperation and results in collective self-damage. There is also an information problem: the other party's willingness to cooperate is unknown, moral behaviour can therefore be exploited.⁶
- The exogenous variables in this model are the individual pay-offs, which are hence the control variables for policy action. However, policy is no longer guided by the desire to simulate perfect markets. It rather aims at the establishment of an (attainable) institutional alternative that allows the realisation of gains from cooperation. A comparison with abstract first-best worlds is hence avoided. External effects have no longer to be assigned to one particular 'polluter', they are rather regarded as not yet realised gains from cooperation.

⁶ In the standard game theoretic model, it is *assumed* that the parties do not cooperate.

tion. These have to be 'internalised' by an alternative institutional arrangement, by way of *institutional policy*. The alternative arrangement could involve a price mechanism, but other solutions are also conceivable.

- The opportunity of mutual improvement creates a basis for consensus and a common interest in regulation. This means, however, that all parties involved must in fact gain from an institutional alternative and can rely on the cooperation of all others. This is the precondition for individual assent, which is a key difference to the welfare economic approach.

A natural objection to this concept appears to be that any policy reform produces losers and universal assent is therefore never attainable. To solve this dilemma it is necessary to look at a *sequence* of policy reforms that is guided by a general procedure which in turn finds the assent of all individuals. This general procedure is established by a system of institutions, a constitution. *Subject to this constitution*, individuals will be willing to agree to decision procedures that are *not* based on universal assent. The reason is that it would be too costly for any individual to find consensus in every single case. Consensus is the normative idea which nevertheless may imply that 'sub-constitutional' decisions are made by majority vote or other decision rules (HOMANN and SUCHANEK 2000, pp. 194-197).

A major strength of the normative institutional economics presented here is that it allows to shed new light on the role of *competition* as a key institutional arrangement. Individuals compete over the acquisition of scarce resources, which suggests a situation of conflict between rivals, but it also offers the opportunity to engage in mutually advantageous exchange with a third party. To acquire this advantage, individuals will be willing to expose themselves to the pressure of competition, provided that others are forced to do so as well. There is an incentive to form a cartel to escape competitive pressure. However, this would imply that gains from cooperation cannot be acquired. Market participants will therefore agree to a rule that prevents the establishment of cartels. This is an example where conflict and the establishment of a social dilemma situation is *desirable* to achieve a higher-level societal goal (cf. PIES 2001, pp. 155-176). Competition is hence regarded as a way of conflict resolution that can be used – under certain conditions – to achieve gains from cooperation. Among the conditions are that property rights are defined and enforced, that competition does not lead to disadvantages for third parties, and that there is free market entry for those who offer desired goods or services on better terms than the current suppliers (SUCHANEK 2000, pp. 126-128).

Furthermore, the framework allows to reconstruct *organisations* as forms of cooperation under competitive pressure. As argued above, the realisation of gains from cooperation often requires a shelter from price variations, so that expectations concerning mutual behaviour can be stabilised. In particular, organisations are means to solve information and incentive problems. As WILLIAMSON (1985) has argued, organisational choice crucially depends on the frequency of transaction and the level of specific investment involved. Forming organisations is socially desirable if gains from cooperation can be realised that would not be acquired otherwise.

It should be stressed again that the social dilemma model is used here as a *paradigmatic* scheme. This is a different approach than usually taken in game theory: game theorists analyse optimal *strategies* of actors in various, partly highly complex settings. In the present conception, the dilemma structure serves as a means to analyse the *rules* that govern individual behaviour (PIES 2001, pp. 140-155). It thus illuminates the *basic problem of social order* that

cannot be reduced further.⁷ It is not an immediately empirical structure, but a theoretical framework by which specific empirically observed interactions can be analysed if further specific details of the situation are taken into account (HOMANN and SUCHANEK 2000, p. 38).

All of the examples of successful or failed interactions relevant for RD given in section 3.1 can be reduced to a dilemma situation. The family farm can be regarded as an institutional arrangement to overcome the danger of exploitation and opportunism inherent to any dilemma situation: "The family farm can be regarded as an organizational solution to the difficulty of monitoring and supervising workers who, for technological reasons, cannot be gathered together in a single location" (POLLAK 1985, p. 591). Furthermore: "Because economic relationships are entwined with significant personal ones, the family commands rewards and sanctions not open to other institutions. Severe misconduct involves not simply the risk of dismissal from job but also the risk of ostracism or expulsion from the family, a penalty drastic enough that it is likely to be an effective deterrent to serious malfeasance" (p. 586). Downstream sector restructuring will not happen if farmers abstain from specific investments in, say, modernised farm equipment to ensure product quality, if they have to fear that the processing company does not guarantee to buy their products. Similar problems exist on credit markets (see chapter 4 below). The tragedy of the commons example has already illustrated the paradigmatic nature of the social dilemma for environmental problems.

3.3 Principles of RD policies in a normative institutional economics perspective

Based on the previous considerations, it is now possible to deduce a number of policy principles that can be regarded as the *properties of desirable institutional reforms*. Table 1 displays them together with their welfare economic counterparts.

Table 1: Principles of welfare economics and normative institutional economics

| | <i>Principles of welfare economics</i> | <i>Principles of normative institutional economics</i> |
|---------------------------------------|--|--|
| <i>normative, regulative idea</i> | Optimal resource allocation | Realisation of gains from cooperation |
| <i>principle of individual action</i> | Opportunity cost principle | Incentive-compatible self-regulation |
| <i>institution-related principle</i> | Coordination by equilibrium prices | Institutionalised competition |

Source: Modified from SUCHANEK (2000, p. 131).

This comparison shall also illustrate that normative institutional economics is aiming at an *extension* of the welfare economic approach. Although the realisation of gains from cooperation as the normative idea is also seeking to exploit efficiency improvements, it does not aim at an ideal first-best state of affairs. It is rather looking for a better alternative as compared to the status quo. What *is* the better alternative depends on the assent of the affected persons and not on an abstract net welfare improvement that balances over individuals. Furthermore, it is still assumed that agents behave rationally and optimising, but *all* incentives are now taken

⁷ Even so, certain classes of problems within this paradigm have a structure that is even simpler. An example is the one-sided or asymmetric prisoner's dilemma, where one strategy (either in quadrant II or III) is irrelevant. The borrowing decision referred to in section 4 is an example where this the case because the model has a sequential structure. Cf. PIES (2001, pp. 145-155) and RASMUSEN (1994, p. 130).

into account – in particular those which arise as a result of interaction constellations or the institutional environment. Compatibility with rational behaviour is also regarded as a condition for successful implementation of policy measures. Finally, competition is an important institutional arrangement also in a normative institutional economics view. However, emphasis is now laid on the interactive structure of markets which may induce alternative organisational forms.

3.3.1 Realisation of gains from cooperation

Normative institutional economics regards RD problems as societal problems, whereby society is understood as a "cooperative venture for mutual advantage ... [that] is typically marked by a conflict as well as an identity of interests" (RAWLS 1999, pp. 74, 109). This normative idea encompasses four important aspects (SUCHANEK 2000, pp. 133 et seq.):

- Successful cooperation requires that the interests of *all* involved parties are sufficiently taken into account.
- Any cooperation is characterised by common *and* conflicting interests.
- Cooperation needs to be *institutionalised*.
- The search for gains from cooperation has to *start with the status quo*.

Whereas the first aspect appears to be immediately plausible, the second one is often neglected in policy debates. It is instead common practice to refer to moral suasion and to urge all involved parties to cooperate ("entrepreneurs should take serious their social obligations", "farmers and environmental lobbyists should sit round the table"). This ignores the frequently inherent conflicts of interest and inevitably must result in failure. A paradigmatic case is the above introduced social dilemma. This scheme highlights the information and incentive problems of cooperation and underlines the need for institutionalised cooperation. Many important forms of cooperation go beyond the common sense "handshake" between individuals. Instead, they are embodied in numerous rules, contracts, and institutions – for example, competitive markets, certain types of organisations (e.g., cooperatives), but also a functioning court system. These institutions are a form of capital, which is also of benefit for possible (short-term) losers of policy measures. The approach followed here stresses that short-term losses for a group affected by policy reform should be regarded as investment into the institutional capital of society. This in turn is of benefit for all affected parties in the longer run. As detailed above, it requires that 'nirvana' comparisons are avoided and that policy recommendations focus on realistic alternatives.

3.3.2 Incentive-compatible self-regulation

It was stressed above that the discretionary scope of action individuals possess is particularly taken into account by a normative institutional economics approach. Therefore, in order to be incentive compatible, any policy must be regarded as legitimate by the affected parties. It is not a new insight that governments should set the right incentives (although the history of the CAP testifies how much trouble this means for governments). However, if incentive setting still implies a centralistic top-down approach, local institutional arrangements and governance structures are often neglected. Incentives emerging from the social environment of actors are then systematically disregarded. "The economic problem of society is thus not merely a problem of how to allocate 'given' resources ... It is rather a problem of how to secure the best uses of resources known to any members of society, for ends, whose relative importance *only these individuals know*" (HAYEK 1945, pp. 519-520, emphasis added). The necessity to have local

knowledge is therefore a plea for local self-regulation, wherever possible. On this level, not outcomes but rules are the subject of self-regulation.

This principle expresses scepticism with regard to any centralism in RD policy making and therefore has direct implications for the debate over subsidiarity in EU policy. HAGEDORN (2002, p. xviii) has noted: "As far as the environmental programmes are concerned, both farmers and the administrative units at the community level usually complain that these measures are not adjusted to the heterogeneity of ecological conditions and environmental problems In addition, monitoring and supervising these measures has turned out to be more difficult than expected. Most of the people involved in these programmes agree that more competencies should be shifted to the regional and local level." The chapters of the book provide various examples what incentive-compatible self-regulation could mean with regard to environmental problems in agriculture.

Similarly, incentive-compatible self-regulation is much more likely to be adhered to in the Community Initiative 'Leader' and its successors, which focuses on local groups and their potential to valorise indigenous resources by the active participation by the public, voluntary and business sectors within the designated territory (cf. RAY 2000).

The principle of incentive-compatible self-regulation means that measures should be implemented *in* and not *against* the interests of the affected individuals. Contrary to the polluter-pays principle, which assigns (undesired) responsibility to the declared polluter, it is asked which advantages for the affected parties arise from a regulation. Possible win-win situations in RD include the establishment of natural reserves in agriculturally disadvantaged regions and the use of these areas for tourism purposes.

3.3.3 Institutionalised competition

Markets do achieve a highly complex coordination of individual action that could never be attained by a central planner. This is also true with regard to problems of structural change and environmental externalities. However, as explained above, coordination by equilibrium prices alone is regarded as a too narrow understanding of competition. In a normative institutional economics perspective, the market is not seen as a means of resource allocation, but as an institutional arrangement to foster desired interactions within society. The decisive characteristic of a market is not the coordination via market prices, but an institutionalised competition over opportunities to cooperate with potential exchange partners (SUCHANEK 2000, p. 141). It is this decentralised coordination of individual activity which – given a suitable framework – serves the realisation of gains from cooperation by means of incentive-compatible self-regulation. The idea of 'institutionalised' competition means to enhance desirable and to restrict harmful competition. As noted above, desirable competition generally contributes to the realisation of gains from cooperation.

In the tragedy of the commons example, a suitable way to restrict competition would be to assign and enforce private property rights in the pasture. In such a way, competition would be restricted and would enable a sustainable utilisation of the pasture. However, private property rights are not the only possibility to achieve this goal – various institutional arrangements are possible and observable in reality (OSTROM 1990).

BAHNER (1996) gives an instructive analysis concerning under what conditions cooperation between farmers and environmental groups will happen and which institutional arrangements are likely to emerge. He argues in the spirit of WILLIAMSON (1985) that this is highly dependent on the technical and institutional characteristics of the 'goods' to be traded, which determine the risks of the investments and thus the optimal form of governance. For example,

farmers undertake partly irreversible specific investments if they agree to convert their pastures into a natural reserve. They will be only willing to do so if the other side – environmental groups or governments – provide a credible commitment that they will maintain compensatory payments in the future. One such form would be via the land market if environmental groups buy the land that should be extensified. However, other arrangements, such as environmental cooperatives, might be more cost effective but can only be realised under specific preconditions, for example, if social sanctions can be imposed.

It is true that the formation of market prices in the traditional sense is an important aspect of this decentralised coordination. However, the price is only one of several parameters of competition. A higher price might well be compensated by a better quality or reputation. Furthermore, the principle of institutionalised competition can also be applied to branches of society that are not 'economic' in the narrow sense, for example to federal states, administrative bodies, non-governmental organisations, research institutes, etc.

4 AN ILLUSTRATIVE APPLICATION: RURAL CREDIT POLICY

This chapter shall provide an attempt to demonstrate the usefulness of the approach presented in the previous sections. It is not the aim to give a detailed policy recommendation concerning rural credit policy in the EU. It is rather the heuristic power of the principles of normative institutional economics that shall be illustrated.

Rural credit policy was chosen as a subject of investigation for several reasons:

- First, rural credit policy is an *important policy area* in RD. Investment support measures play a major role in the 'second pillar' of the CAP.⁸ Various national governments complement this by substantial national credit programmes for agriculture (notably also in the new Member States, cf. NETWORK 2004, chapter 8).
- Second, credit markets are particularly suitable to *demonstrate the interaction character* of problems. This is due to the inherently inter-temporal nature of credit transactions and the specific roles incentives, risks, and information play on these markets.
- Third, although credit markets have been a vivid topic in the theoretical literature, normative assessment based on standard welfare theoretic arguments has proved to be *less than satisfying* and was therefore of little value to inform public policy.

The following analysis proceeds in three steps: first, the interaction problems on rural credit markets are highlighted, second, the question of normative assessment is addressed from a traditional, welfare theoretic point of view, and finally, an alternative analysis based on the principles of normative institutional economics is presented.

4.1 Interaction problems on credit markets

As detailed above, the traditional assumption of economic theory is that markets clear and there is no rationing. Any excess demand or supply is eliminated by the 'invisible hand' of the price mechanism. This stands opposite to real world observations of, for example, persisting unemployment or credit rationing, i.e., a persistent excess supply or demand with no clearing by a price mechanism. Although explanations of these phenomena have been sought and pro-

⁸ There are several RD measures that have direct implications for credit markets since they imply either an investment grant or an interest subsidy component: investments in farms (expenditure in the EU-15: 4682.0 million EUR from 2000-2006), young farmers (1824.0 million EUR), investments in processing/marketing (4807.0 million EUR). Other measures (e.g., afforestation) may also include investment grants (cf. European Commission 2003).

posed for a long time, only recently did institutional economists seriously call into question the general applicability of the standard textbook model to certain types of markets. A central feature of the recent credit market literature is the assumption of an *asymmetric distribution of information* between market participants which gives rise to principal-agent-problems (for an overview see BAMBERG and SPREMANN, 1987).

One of the earliest contributions in this line of research was AKERLOF (1970), who demonstrated the effects of unknown quality of used cars on outcomes of the second-hand automobile market: the fact that there are 'lemons', that is used cars of a poor quality which cannot be distinguished from high-quality cars by potential buyers, may lead to a complete breakdown of the market. These insights are also of key relevance for the market for credit. It is plausibly assumed that lenders have only limited information about the 'quality' of borrowers, that is their honesty, reliability, or trustworthiness with regard to the due repayment of the loan. It does matter *who* is the trading partner, and interaction becomes an essential characteristic of exchange on this market. It may pay the opportunistic borrower to *pretend* to be honest, and take the money and run after he received the loan. As a result, the lender will think twice whom he will grant a credit. In this case, the lender is called the *principal*, and the borrower is the *agent*, due to the differential information they possess about each other.

In a general view, this problem can be stated as a *one-sided prisoner's dilemma* (RASMUSEN 1994, pp. 130-131). Under the assumption that the borrower behaves opportunistically and defaults after he got the loan, the bank will not be willing to extend a loan, so that no transaction is the Nash equilibrium. A Pareto improvement would be possible if there were institutional arrangements that signal to the lender that the borrower is trustworthy.

In more detailed analyses, the effects of asymmetric information distribution are often classified according to the *sequence of actions* of principal and agent. With regard to credit markets, there are four key problems a lender must contend with: the lender must (a) ascertain what kind of a risk the potential borrower is (the problem of *adverse selection*), (b) make sure she will utilise the loan properly, once made, so that she will be able to repay it (*moral hazard*), (c) learn how her project really did in case she declares her inability to repay (*costly state verification*), and (d) find methods to force the borrower to repay the loan if she is reluctant to do so (*enforcement*) (GHATAK and GUINNANE 1999, p. 197). Broadly speaking, lenders need to actively sort out borrowers, whereas borrowers have an incentive to signal their quality because otherwise they may experience excessively high interest rates or may even be denied loans. Leading candidates among the mechanisms to overcome the aforementioned problems are collateral provision, third-party-guarantees, joint liability, and the borrower's abilities and reputation. However, riskiness of loans, difficulties in overcoming informational asymmetries, and high transaction costs will be particularly relevant in underdeveloped rural areas (BINSWANGER and ROSENZWEIG 1986).

Summing up, the introduction of informational asymmetries and enforcement problems undermines the traditional role of the price as the single allocation mechanism. Therefore, non-price allocation mechanisms such as collateral, but also honesty or reputation come into play. Interlinkages between different markets may arise, for which trade credit is an example. New sorts of externalities emerge. A whole set of institutions in the area of financial intermediation is the response to prevailing informational asymmetries. However, even in the presence of such institutions, markets are still unlikely to function perfectly. Some markets, particularly those involving risk, will be missing, and many other markets will be thin and thus imperfectly competitive. The possibility of credit rationing is one of the ultimate consequences – a problem of significant importance in some of the EU's new Member States (cf. PETRICK 2004a with regard to Poland).

4.2 Welfare theoretic assessment of credit market policy

Governments have often intervened in rural credit markets by offering interest subsidies, public grants, public loan guarantees, or a mixture of these. Examples include the CAP RD policy itself as well as national programmes in the US, Germany, and many of the new Member States of the EU. It is not the place here to discuss the failures of these programmes to reach their stated objectives. The standard argument from a welfare economic point of view against these programmes is that they bias incentives and therefore lead to a socially suboptimal resource allocation. The recommendation is thus to liberalise credit markets and to cease interest subsidies (e.g., HENRICHSMEYER and WITZKE 1994, p. 361).

It is clear that neither a uniform top-down policy nor a simplistic normative assessment of this policy do justice to the manifold institutional dimensions of credit markets outlined above. What is of particular interest here is a line of literature showing that credit markets are 'inefficient', i.e., not Pareto optimal *even without* any governmentally induced price distortion. As soon as information asymmetries are introduced into the models, *most of the traditional welfare analytic insights breaks down*. As demonstrated by GREENWALD and STIGLITZ (1986), in economies with imperfect information, market equilibria are rarely efficient. This implies that much of welfare economic reasoning (such as "government intervention on competitive markets is welfare decreasing" or "unfettered markets are efficient") loses its basic foundation.

Moreover, once information asymmetries are allowed for, the models do not provide clear-cut policy advice anymore. A recent case in point is the interrelatedness of credit rationing and underinvestment. From a standard neoclassical perspective, one would assume that, by its very name, credit rationing necessarily implies too little investment as compared with a first-best solution, so that subsidising interest rate could be a reasonable policy option. DE MEZA and WEBB (1987; 2000) show that this is in no way the case, since credit rationing may both imply too much or too little funding. Whether one or the other applies in a given real-world situation is therefore a priori an open question. Compared with the standard welfare arguments usually put forward by trade theorists when it comes to an assessment of border protection or customs regulation, a welfare economic view on credit markets provides much less straightforward guidance. It is no surprise that the basic positions concerning government intervention on credit markets are widely varying, as the following two quotes may illustrate:

"There *is* a role for the state in financial markets; it is a role motivated by pervasive market failures. In most of the rapidly growing economies of East Asia government has taken an active role in creating financial institutions, in regulating them, and in directing credit, both in ways that enhance the stability of the economy and the solvency of the financial institutions and in ways that enhance growth prospects" (STIGLITZ, 1994, p. 50).

"In summary, there may be good arguments for intervention, and some may be based on market failure. But as one unpacks each argument, the realization grows that, given the current state of empirical evidence on many relevant questions, it is impossible to be categorical that an intervention in the credit market is justified. Empirical work that can speak to these issues is the next challenge if the theoretical progress on the operation of rural credit markets is to be matched by progress in the policy sphere" (BESLEY, 1994, p. 45).

It can thus be concluded that welfare economic concepts such as 'market failure' or 'constrained efficiency' are of little value for policy formation unless the need for *institutional policy* is explicitly recognised. However, welfare economics gives little guidance how this institutional policy should look like.

4.3 Rural credit markets in the view of normative institutional economics

The questions to be addressed by a normative economics that instructs institutional policy of rural credit markets are:

- Given the manifold interaction problems present on rural credit markets, how should a policy look like that contributes to the realisation of gains from cooperation?
- How can such a policy induce incentive-compatible self-regulation?
- How is it possible to implement institutionalised competition?

It seems clear that any effective policy measures must concentrate on the creation and/or strengthening of a *supportive institutional environment* for credit markets. Not outcomes but rules have to be addressed. To realise gains from cooperation, the regulation must be in the (profit) interests of all relevant parties. It should promote proactive behaviour of affected parties instead of making them victims of regulation.

Since any realistic advice must start from the status quo, a suggested first step is to look at the existing institutional solutions on rural credit markets. As a result of the abovementioned interaction problems, a demand for services or institutions that help to mitigate the negative consequences of asymmetric information is likely to emerge. This in turn provides a rationale for the existence of *financial intermediaries*, which are superfluous in a world with perfect information. It is possible to reconstruct financial intermediaries as an institutional arrangement to realise gains from cooperation. As may be intuitively plausible, there will be economies of scale in screening, monitoring, and auditing (as well as in risk diversification), which fosters the creation of specialised firms offering these services. In fact, it may be efficient for borrowers to form 'information sharing coalitions' in order to signal their quality to investors, an argument that can explain the emergence of specialised financial intermediaries (LELAND and PYLE 1977). Similarly, they may emerge if it pays individual lenders (or savers) to delegate the monitoring activity to a specialised institution, instead of performing it themselves (a case of 'delegated monitoring', DIAMOND 1984). In both cases, the existence of financial intermediaries can be reconstructed as a form of *self-regulation* – which principally legitimises its existence. It is the role of the government to strengthen the functioning of these financial intermediaries, a point that may be of considerable relevance in CEE where many rural banks still suffer from their socialist heritage and await privatisation or restructuring. Government activity would involve the *prudential regulation of the banking sector* without directly interfering with its intermediation tasks, thus a form of 'governmentally regulated private self-regulation' (SUCHANEK 2000, 190). At the same time, this is a prime example for institutionalised *competition*: governments should create a level playing field for all types of banks and not protect and/or subsidise specific sectoral banks, as has been the case in many CEE countries and is also of relevance, e.g., with regard to the German savings bank sector.

Given financial intermediaries, there are further specific institutional arrangements that secure gains from cooperation. A very common instrument is to make credit extension conditional on the provision of *collateral*. Collateral, essentially a form of hostage in the sense of WILLIAMSON (1985), provides an incentive for the borrower to repay the loan. Compared to the alternative to get no credit at all, borrowers will agree to this arrangement. In addition, at a given interest rate, collateral increases the expected return for the lender, shifts the risk of losing the principal from lender to borrower, and has a screening effect on the applicant pool (BINSWANGER and ROSENZWEIG 1986). If collateral is used in order to eliminate borrowers with riskier projects, credit rationing will disappear.

Collateral thus introduces a non-price element into the loan contract. However, this element *discriminates against* those who are unable to provide sufficient suitable assets. It might therefore be in the interest of the affected parties to search for alternative institutional arrangements that potentially overcome incentive problems on loan markets.

Indeed, various arrangements of particular importance for rural areas have been described in the literature. They emphasise the role of joint liability, multiperiod effects, or interlinkage of credit with other transactions. Many of these have direct implications for policy design in CEE (cf. OECD 1999).

The first category refers to any sort of *joint liability*, also sometimes called 'social collateral'. The basic idea is that the social and economic relationship between the borrower and a third person (which may also be a borrower) is utilised to overcome the abundant incentive problems of giving credit. The third person may simply be an outside *guarantor*. Alternatively, it may be reasonable to form *groups of borrowers* who are jointly liable and thus have an incentive to monitor each other ('peer monitoring'). This is practised in many developing countries (cf. GHATAK and GUINNANE 1999). Moreover, informational advantages of peers rationalise the existence of *credit cooperatives*, which allow a group of otherwise credit-constrained borrowers to raise outside finance (BANERJEE et al. 1994).

Social sanctions available in credit cooperatives may also provide incentives to sustain *long-term* non-opportunistic behaviour of borrowers, which leads to the second category of arrangements stressing the importance of *multiperiod effects*. The threat of termination of the borrower-lender relationship can be used to encourage borrower behaviour that the lender finds desirable. Borrowers in turn can develop a *reputation* for being creditworthy over time, which may improve access to funds (DIAMOND 1989).

A third category of arrangements concern the case where credit exchange is *tied to other types of transactions*, also called 'interlinkage'. The most well-known is the trade-credit interlinkage, or trade credit in short. Giving credit to trade partners makes private information about business activities available to the lender at little costs. Screening and monitoring of potential borrowers may thus be greatly facilitated. Furthermore, enforcement of loan repayment may be easy by simply deducting it from the goods sold to or through the lender (PETERSEN and RAJAN 1997).

It should be stressed again that the purpose of the principles of normative institutional economics is to guide and instruct the concrete situational analysis, and not to deliver cookbook recipes. The aim of this section was to underpin the claim that the principles provide a systematically more appropriate framework for policy advice than welfare theoretic concepts. Even so, more specific policy recommendations have to be tailored to the situation at hand. Important roles of government in any case will include the provision of sufficient information and knowledge regarding the implementation of institutional alternatives as well as the provision of a suitable juridical framework.

5 SUMMARY AND CONCLUSIONS

The major aim of this paper was to make a conceptual contribution to the economic analysis of RD policies. Starting with a critique of the dominating welfare economics conception, a more encompassing normative institutional economics was outlined. A social dilemma was used as the paradigmatic expression of the question that lies at the heart of any policy: how can potential gains from cooperation be realised by way of institutional policy? Three fundamental policy principles were derived: (1) the *realisation of gains from cooperation* as the normative, regulative idea, (2) the principle of *incentive-compatible self-regulation* as the

principle of individual action, and (3) the principle of *institutionalised competition* as the institution-related principle. The strengths of this approach are summarised as follows:

- Policy recommendations focus on realistic alternatives and not on idealised and unattainable first-best solutions. Even so, major insights of welfare economic reasoning – such as the social desirability of competition – can be integrated into the paradigmatic core of normative institutional economics.
- On a conceptual level, policy reform is designed to explicitly seek the assent of all affected parties and therefore is considered to be both legitimate and incentive-compatible.
- All relevant individual incentives are taken into account, also those that are due to the institutional arrangements in which economic activity takes place. This is particularly relevant because individuals always have discretionary scope of action and this action is embedded in a social context.

RD is regarded as a problem of interaction between individuals. It is hypothesised that all relevant problem areas in RD can more usefully be reconstructed as coordination rather than allocation problems. The approach therefore aims to replace the perspective of scarcity and resource allocation by one of conflict and coordination. Examples were given how to reconstruct (lacking) structural change or the (missing) integration of externalities as coordination problems of rational actors.

An application to rural credit markets demonstrated how the policy principles can be used to structure institutional policy of RD. Instead of influencing market outcomes by more or less unspecified subsidy payments, it is recommended to create and/or strengthen an institutional framework that allows the functioning of financial intermediaries operating in the interest of both borrowers and lenders. This would include the prudential regulation of the banking sector without directly interfering with its intermediation tasks, hence a form of both 'governmentally regulated private self-regulation' and institutionalised competition. This is of particular relevance for the EU's new Member States. Furthermore, government policy should concentrate on the development and/or adaptation of suitable institutional alternatives to bank credit, such as trade credit or joint liability schemes.

Despite these illustrative examples and although there is now a considerable amount of literature devoted to this issue, the reconstruction of RD as a problem of interaction certainly deserves further elaboration. There is still a considerable way to go toward a systematic assessment of RD policies. This is in particular true with regard to the various aspects of structural change in agriculture. However, it already becomes clear that most of the single RD instruments actually in place under the CAP are purely interventionist in the sense that they directly address economic outcomes (or moves *in* the game) without changing the institutional set-up (the rules *of* the game). In light of the approach chosen here, these measures will contribute little to the 'healing' of the problems acute in RD, but (at best!) cure the symptoms. On the contrary, instruments which encourage the reform of local governance structures and networks such as the Community Initiative 'Leader' seem to be much better suited to bring about institutional reform that realises gains from cooperation in rural areas. The present approach also reinforces the need to design policies that impact on the appropriate administrative level and hence includes a plea for consequent subsidiarity.

REFERENCES

- AKERLOF, G. A. (1970): The Market for 'Lemons': Qualitative Uncertainty and the Market Mechanism, *Quarterly Journal of Economics*, Vol. 84, pp. 488-500.

- ALLEN, D. W., LUECK, D. (2002): *The Nature of the Farm, Contracts, Risk, and Organization in Agriculture*, Cambridge, MIT Press.
- BAHNER, T. (1996): *Landwirtschaft und Naturschutz – vom Konflikt zur Kooperation, Eine institutionen-ökonomische Analyse*, Frankfurt (Main), Peter Lang.
- BAMBERG, G., SPREMANN, K. (eds.) (1987): *Agency Theory, Information, and Incentives*, Berlin, Springer.
- BANERJEE, A. V., BESLEY, T., GUINNANE, T. W. (1994): Thy Neighbor's Keeper: The Design of a Credit Cooperative with Theory and a Test, *Quarterly Journal of Economics*, Vol. 109, pp. 491-515.
- BECKMANN, V. (2000): Transaktionskosten und institutionelle Wahl in der Landwirtschaft, Zwischen Markt, Hierarchie und Kooperation, *Berlin Cooperative Studies*, Vol. 5, Berlin, edition sigma.
- BESLEY, T. (1994): How Do Market Failures Justify Interventions in Rural Credit Markets?, *World Bank Research Observer*, Vol. 9, pp. 27-47.
- BINSWANGER, H. P., ROSENZWEIG, M. R. (1986): Behavioural and Material Determinants of Production Relations in Agriculture, *Journal of Development Studies*, Vol. 22, pp. 503-539.
- BOHM, P., RUSSELL, C. S. (1985): Comparative analysis of alternative policy instruments, in: KNEESE, A. V., SWEENEY J. L. (eds.): *Handbook of Natural Resource and Energy Economics*, Volume I, Amsterdam, Elsevier, pp. 395-460.
- BRENNAN, G., BUCHANAN, J. M. (1985): *The Reason of Rules, Constitutional Political Economy*, Cambridge, Cambridge University Press.
- BROMLEY, D. W., HODGE, I. (1990): Private property rights and presumptive policy entitlements: reconsidering the premises of rural policy, *European Review of Agricultural Economics*, Vol. 17, pp. 197-214.
- BULLOCK, D. S., SALHOFER, K. (2003): Judging agricultural policies: a survey, *Agricultural Economics*, Vol. 28, pp. 225-243.
- COASE, R. H. (1960): The Problem of Social Cost, *Journal of Law and Economics*, Vol. 3, pp. 1-44.
- DAHLMAN, C. J. (1979): The Problem of Externality, *Journal of Law and Economics*, Vol. 22, pp. 141-162.
- DE MEZA, D., WEBB, D. (1987): Too much Investment: A Problem of Asymmetric Information, *Quarterly Journal of Economics*, Vol. 102, pp. 281-292.
- DE MEZA, D., WEBB, D. (2000): Does credit rationing imply insufficient lending?, *Journal of Public Economics*, Vol. 78, pp. 215-234.
- DEMSETZ, H. (1969): Information and Efficiency: Another Viewpoint, *Journal of Law and Economics*, Vol. 12, pp.1-22.
- DIAMOND, D. W. (1984): Financial Intermediation and Delegated Monitoring, *Review of Economic Studies*, Vol. 51, pp. 393-414.
- DIAMOND, D. W. (1989): Reputation Acquisition in Debt Markets, *Journal of Political Economy*, Vol. 97, pp. 828-862.
- EUROPEAN COMMISSION (2003): Fact Sheet: Rural Development in the European Union, Brussels, <<http://europa.eu.int/comm/agriculture/publi/fact/rurdev2003/en.pdf>>.
- GHATAK, M., GUINNANE, T. W. (1999): The economics of lending with joint liability: theory and practice, *Journal of Development Economics*, Vol. 60, pp. 195-228.
- GOW, H. R., SWINNEN, J. F. M. (1998): Up- and downstream restructuring, foreign direct investment, and hold-up problems in agricultural transition, *European Review of Agricultural Economics*, Vol. 25, pp. 331-350.

- GREENWALD, B. C., STIGLITZ, J. E. (1986): Externalities in Economies with Imperfect Information and Incomplete Markets, *Quarterly Journal of Economics*, Vol. 101, pp. 229-264.
- HAGEDORN, K. (1996): Das Institutionenproblem in der agrarökonomischen Politikforschung, *Schriften zur angewandten Wirtschaftsforschung*, Vol. 72, Tübingen, Mohr Siebeck.
- HAGEDORN, K. (ed.) (2002): Environmental Co-operation and Institutional Change, Theories and Policies for European Agriculture, Cheltenham, Edward Elgar.
- HAGEDORN, K. (2003): Rethinking the theory of agricultural change in an institutions of sustainability perspective, in: VAN HUYLENBROECK, G., VERBEKE, W., LAUWERS, L. (eds.): Importance of Policies and Institutions for agriculture, Liber Amicorum Prof. dr. ir. Laurent Martens, Gent, Academia Press, pp. 33-56.
- HAYEK, F. A. (1945): The use of knowledge in society, *American Economic Review*, Vol. 35, pp. 519-530.
- HENRICHSMEYER, W., WITZKE, H. P. (1991): Agrarpolitik, Band 1, Agrarökonomische Grundlagen, Stuttgart, Ulmer.
- HENRICHSMEYER, W., WITZKE, H. P. (1994): Agrarpolitik, Band 2, Bewertung und Willensbildung, Stuttgart, Ulmer.
- HOMANN, K., SUCHANEK, A. (2000): Ökonomik. Eine Einführung, Tübingen, Mohr Siebeck.
- JUST, R. E., HUETH, D. L., SCHMITZ, A. (1982): Applied Welfare Economics and Public Policy, Englewood Cliffs, Prentice-Hall.
- LELAND, H. E., PYLE, D. H. (1977): Informational Asymmetries, Financial Structure, and Financial Intermediation, *Journal of Finance*, Vol. 32, pp. 371-387.
- NETWORK OF INDEPENDENT AGRICULTURAL EXPERTS IN THE CEE CANDIDATE COUNTRIES (2004): The future of rural areas in the CEE candidate countries, Halle (Saale), IAMO, <http://europa.eu.int/comm/agriculture/publi/reports/ccurdev/index_en.htm>.
- OECD (ed.) (1999): Agricultural Finance and Credit Infrastructure in Transition Economies, Proceedings of OECD Expert Meeting, Moscow, February 1999, Paris, OECD.
- OSTROM, E. (1990): Governing the commons, The evolution of institutions for collective action, Cambridge, Cambridge University Press.
- PETERSEN, M. A., RAJAN, R. G. (1997): Trade Credit: Theories and Evidence, *Review of Financial Studies*, Vol. 10, pp. 661-691.
- PETRICK, M. (1999): Demand or supply constraints?, Financial intermediation in the private farm sector of Moldova, *Quarterly Journal of International Agriculture*, Vol. 38, pp.150-164.
- PETRICK, M. (2004a): A microeconomic analysis of credit rationing in the Polish farm sector, *European Review of Agricultural Economics*, Vol. 31, pp. 23-47.
- PETRICK, M. (2004b): Farm investment, credit rationing, and governmentally promoted credit access in Poland: a cross-sectional analysis, *Food Policy*, Vol. 29, pp. 275-294.
- PIES, I. (1993): Normative Institutionenökonomik, Zur Rationalisierung des politischen Liberalismus, Tübingen, Mohr Siebeck.
- PIES, I. (2001): Eucken und von Hayek im Vergleich, Zur Aktualisierung der ordnungspolitischen Konzeption, Tübingen, Mohr Siebeck.
- POLLAK, R. A. (1985): A Transaction Cost Approach to Families and Households, *Journal of Economic Literature*, Vol. 23, pp. 581-608.
- RASMUSEN, E. (1994): Games and Information., An Introduction to Game Theory, Second Edition, Cambridge, Blackwell Publishers.
- RAWLS, J. (1999): A Theory of Justice. Revised Edition, Oxford, Oxford University Press.

- RAY, CH. (2000): The EU LEADER programme: rural development laboratory, *Sociologia Ruralis*, Vol. 40, pp. 163-171.
- SARRIS, A. H., DOUCHA, T., MATHIJS, E. (1999): Agricultural restructuring in central and eastern Europe: implications for competitiveness and rural development, *European Review of Agricultural Economics*, Vol. 26, pp. 305-329.
- SCHMITT, G. (1991): Why is the agriculture of advanced Western economies still organized by family farms?, Will this continue to be so in the future?, *European Review of Agricultural Economics*, Vol. 18, pp. 443-458.
- SCHMITT, G. (1993): Why Collectivization of Agriculture in Socialist Countries Has Failed: A Transaction Cost Approach, in: CSAKI, C., KISLEV, Y. (eds.): *Agricultural Cooperatives in Transition*, Boulder, Westview Press, pp. 143-159.
- SCHRADER, J.-V. (2000): CAP Reform, the Berlin Summit, and EU Enlargement, *Kiel Working Paper No. 973*, Kiel, Kiel Institute of World Economics.
- SIEBERT, H. (1995): *Economics of the Environment., Theory and Policy. Fourth, Revised and Enlarged Edition*, Berlin, Springer.
- STIGLITZ, J. E. (1993): The Role of the State in Financial Markets, *Proceedings of the World Bank Annual Conference on Development Economics*, Vol. 1994, pp. 19-52.
- SUCHANEK, A. (2000): *Normative Umweltökonomik, Zur Herleitung von Prinzipien rationaler Umweltpolitik*, Tübingen, Mohr Siebeck.
- SWINNEN, J. F. M., GOW, H. R. (1999): Agricultural credit problems and policies during the transition to a market economy in Central and Eastern Europe, *Food Policy*, Vol. 24, pp. 21-47.
- WILLIAMSON, O. E. (1985): *The economic institutions of capitalism*, New York, Free Press.

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