How to make institutional economics policy-relevant: Theoretical considerations and an application to rural credit markets in developing countries

by

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Abstract

Welfare economics as the traditional, prescriptive theory framework used in agricultural economics has been criticised by institutional economists as being largely irrelevant to real-world policy issues. We therefore ask how normative statements are possible within an economic theory framework that does recognise the importance of institutional arrangements. Instead of applying established outcome-oriented criteria of social welfare, we examine whether the rules of economic interaction allow the acquisition of gains from cooperation. We suggest to reconstruct any interaction as an existing or repealed social dilemma. This approach helps to identify common rule interests which create room for improvement of all parties involved, and to suggest desirable institutional reforms. An application to credit markets in developing countries demonstrates the insufficiency of welfare economic arguments and the potential insights generated by a social dilemma heuristic. The latter sheds new light on the role of various forms of collateral and informal arrangements to overcome credit rationing.

JEL-codes: D02, D63, D74, Q14.

1 Introduction

Perhaps even more than in other economic subfields, traditional welfare theory has been regarded as the mainstream reference framework for prescriptive policy analysis in agricultural economics. It implies as a normative benchmark the neoclassical efficiency criterion, according to which the operation of a set of competitive markets yields, under certain conditions, a Pareto-optimal equilibrium outcome that maximises the welfare of society.[1]

Institutional economists have questioned this approach as being unable to provide a relevant framework to base policy recommendations on. Demsetz (1969, p. 1) criticised the comparison of existing institutions with an ideal norm as a 'nirvana approach' and called for a 'comparative institution approach', where the relevant choice is between alternative real institutional arrangements. The latter alternative has been advocated by less formally inclined authors, such as Williamson (1996), and has found its way into agricultural and rural economics (see e.g. Van Huylenbroeck et al. 2004). However, this literature largely focuses on positive analysis and has not developed a systematic normative framework informing about the kind of arrangements that are socially desirable. Furubotn and Richter (1997, p. 477) hence suggest that a satisfactory normative framework for evaluating economic institutions is currently not in sight: '… one consequence of the movement into the territory of the New Institutional Economics is that we are left without a standard that can be described as comprehensive in its applicability and rigorous in its formulation'. An implication of this lacking normative framework is that institutional economists have difficulties in contributing constructively to public policy debates. Eggertsson (1998, p. 336) notes: 'The new institutionalism, so far, has spent most of its energy explaining social outcomes, both analyzing the effects of alternative institutional arrangements and attempting to explain institutional change. … [B]ut the literature seldom offers lessons for government policy, except perhaps implicitly.'

In this paper we challenge the view that institutional economists are left without a normative standard. We build upon insights of *constitutional economics*, an alternative to welfare theo-

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[1] In the final chapter of the Handbook of Agricultural Economics Vol. 2B, Gardner and Johnson (2002, p. 2226) note: "The standard conceptual framework for normative analysis of policies is welfare economics,

retic reasoning that has not been followed by the mainstream of institutional economists (Buchanan 1987). In Section 2 we briefly discuss this normative approach. Drawing on the latter, we introduce our own proposal for a *social dilemma heuristic* in Section 3. We move on to discuss the strengths and limitations of this approach and its implications for economic policy advice. Section 4 contains an illustrative application to rural credit markets in developing countries. Section 5 concludes.

2 Comparative Normative Analysis in Constitutional Economics

Constitutional economics changes the neoclassical approach to normativity in two fundamental ways: First, it aims at a comparison of *realistic* alternative institutional arrangements, and second it uses the *consensus* of citizens as a criterion to choose between alternatives. This follows from the idea that both the economic and the political domain shall be analysed in an analogous and thus consistent manner, however no longer under the 'maximisation paradigm' of welfare economics but under an 'exchange paradigm' of what is called the 'contractarian approach' (Brennan and Buchanan 1985, chapter 2). The market is conceptualised not as an *allocation mechanism* to maximise social welfare, but as a *coordination process* of individual maximisation strategies. It is then useful to distinguish the rules *of* and the moves *in* the game of market exchange. Whereas market participants compete over scarce resources in their actions, they have a common interest in a market order that enables mutually beneficial trade. The political sphere is understood in the same two-stage structure: political entrepreneurs seek their self-interest in the polity system, but there is a common interest in the constitutional rules that make up the political order and shape political competition. Both in the market and the polity an exchange or contract of mutual agreement *to* the rules is required before mutually advantageous trade *within* the rules can take place. In this analytical framework, the rele-

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with the central issue being the Pareto optimality of unregulated market prices as the coordination signal for vant choice is between different rules, not outcomes, because under currently given rules outcomes are pre-determined by rational behaviour. Moreover, the relevant normative criterion is the consent of the involved actors, and not an abstract social welfare. Accordingly, the task of the economist is to suggest improvements in rules which can be assented by the citizens (Buchanan 1959).

In line with these conceptual modifications of the neoclassical approach, also the basic normative terms are redefined. 'Efficiency' is no longer regarded as an objective, external measure of social desirability, but is completely based on the subjective values of the affected individuals, and hence transformed into a process-internal criterion. It follows that 'efficiency, as an attribute, is necessarily present when there is a demonstrated absence of possible agreed-on changes.' (Buchanan 1975a, p. 227). Closely related, the Pareto criterion is now applied to alternative sets of (attainable) rules. It is thus useful to speak of Pareto-*superior* rules instead of Pareto-*optimal* outcomes.

3 The Social Dilemma Heuristic

Given the positive insights of institutional economics and the normative concept of constitutional economics, we now attempt to develop the nucleus of a *normative institutional economics* that exploits the strengths of both approaches but avoids their flaws. In the following, we subject the social dilemma to an institutional economics interpretation and then show how it can be used as a policy-oriented heuristic for both positive and normative analysis of sub-constitutional institutions.

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production and consumption decisions."

3.1 The Social Dilemma in an Institutional Economics Perspective

We define a social dilemma as a situation in which, as a result of an unresolved conflict, actors as a group do not make full use of their opportunities. Technically speaking, it is a situation of human interaction in which the equilibrium outcome is Pareto-inferior. Actors in the social dilemma hence remain in a situation of *collective self-damage*.[2]

Situational incentives, i.e. the rules that channel individual moves, can be modified in such a way that social dilemmas are overcome. This potential to shape situations of strategic conflict by way of institutional reform makes social dilemmas and their game-theoretic analysis the central building block for our approach. First, by way of the familiar positive analysis, the functioning of institutional arrangements can be studied and reconstructed as solution of strategic interaction problems. Second, by way of normative analysis, common interests of conflicting parties can be identified and be used to evaluate these arrangements. Finally, as will be shown in Section 3.3, an analysis based on the social dilemma heuristic can be used to generate arguments which, from a methodological point of view, are compatible with Max Weber's notion of freedom from value ('Wertfreiheit') and at the same time, from a political point of view, are compatible with democracy.

In comparison to traditional welfare economic reasoning, an analysis in terms of social dilemmas puts emphasis on the following:

- Rather than focusing on *allocation* outcomes that result from the parametric reaction functions of individuals, the *interaction* of behaviour is emphasised. The simultaneous

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[2] The classical case of a social dilemma is the equilibrium outcome of pure strategies in the one-shot prisoners' dilemma (Dawes 1980). However, we are not primarily interested in a specific game, but generally in situations that lead to a Pareto-dominated equilibrium outcome. For example, in the one-shot 'assurance' game, one of the two equilibria is Pareto dominated. In indefinitely repeated games, the equilibrium outcome of frequently used games such as 'chicken' or 'battle of the sexes' may be Pareto-inferior as well (Binmore 1994, pp. 113-117).

existence of both common and conflicting interests is made visible. Furthermore, it becomes clear that actors have only partial control over outcomes, which can be described as non-intended consequences of intentional behaviour. Unexploited mutual advantage can therefore only be realised by way of better rules.

- 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 attain the ideal of a perfect market. It rather aims at the *establishment of an (attainable) institutional arrangement* that allows the realisation of mutual gains. A comparison with an abstract first-best world is therefore avoided.
- The opportunity of mutual improvement creates a *basis for consensus* and a common interest in the according rules. This means, however, that all parties involved must in fact gain from an institutional alternative and can rely on the rule-abiding behaviour of all others. This is the precondition for individual assent, and thus a key difference to the welfare economic approach.

The social dilemma hence captures the basic problem of social order: How can potential gains from cooperation be realised by way of institutional reform? The fundamental criterion for the normative evaluation of institutional arrangements inherent to this structure is that *a desirable institution provides all involved actors with incentives that allow the realisation of mutual gains*. These gains at the same time *legitimise* institutional reform and facilitate its *implementation*. A ‘good’ institution hence brings to bear the interests of all affected individuals, who are the only source of values in this approach.

The choice between alternative sets of rules and the consensus of affected parties as the relevant normative criterion are emphasised by both the social dilemma heuristic and the constitutional economics approach. Compared to the latter, the social dilemma heuristic provides an explicit formal framework concerning the *specific alternative that can be agreed upon by the* *involved parties*. In this sense, the problems of normativity and implementation are solved simultaneously. It is not necessary to ensure consent by limiting the choice of rules to the exchange of rights at the abstract level of the constitution, where a 'veil of uncertainty' prevents exploitation by particular interest groups or the most powerful (Buchanan 1975b). In the social dilemma, the situational structure is such that achieving the institutional alternative is beneficial to *all* participants. Furthermore, it emphasises the normative aspects of institutional design, which are often neglected by traditional game theorists.

3.2 The Methodological Status of the Social Dilemma Heuristic

The aim of our approach to normative institutional economics is to provide a link between positive reconstruction, normative evaluation, and public policy advice. It is useful to strip the approach of dispensable aspects and to focus on the fundamental problem structure that cannot be reduced further. In order to extract the *in*dispensable ingredients of the structure, a problem-oriented, pragmatic reduction of complexity is required (Suchanek 1994). In capturing the essence of the problem under investigation, the structure should be precise and simple. Given our intention to use the approach (also) as an argumentation scheme for public discourse, this latter aspect is of particular importance. On the other hand, the structure should be sufficiently flexible to allow a methodologically controlled differentiation and application to empirical phenomena. Based on these considerations, we can formulate the fundamental hypothesis of our approach as follows:

For a normative analysis that aims to be free from arbitrary value judgements and compatible with the democratic principle of normative individualism, it is useful to reconstruct any *economic interaction in terms of social dilemmas.*

Because the dilemma structure captures the essential tension between common and conflicting interests in institutions in a precise and simple way, we propose that a normative analysis of institutions should begin with a *search for dilemma structures*. In this sense the methodological status of the social dilemma can be characterised as a *heuristic* of normative institutional economics: It provides guidance concerning the search for solutions to the problem of what the characteristics of a ‘good’ institution are and how desirable institutional reform could be accomplished.[3]

3.3 Implications for Public Policy Advice

The essential insight of the social dilemma heuristic for policy discourse is that it allows to see the common interest in situations that are apparently characterised by pure conflict. Very often, these conflicts are dominated by controversial value judgements. Examples include the dualisms of liberty versus social justice, capital versus labour, or profit maximisation versus social responsibility. In these apparent value trade-offs, our approach can serve as a grammar of argumentation, as a structuring aid that allows to rationalise political discourse. In particular, it can be used for the systematic derivation of *orthogonal positions* in value-loaded policy debates of the democratic public. An orthogonal position means not to take side within such a trade-off but to help overcome the very trade-off (Pies 2001, pp. 219-225).

In the social dilemma heuristic proposed here, advice is sought orthogonally *to*, not as a compromise *in* the conflict. It requires that the conflicting positions are not taken at face value. To the contrary, the one-dimensional perception of the conflict is extended into a two-dimensional perception, which allows to identify a common interest apart from the dominating conflicting interest. By referring to situational win-win constellations, common and conflicting interests can be simultaneously charged and can be located on different levels. Key is the difference between moves in the game and rules of the game. The conflict of actors’ inter-

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[3] We use the term heuristic in a way similar to Lakatos’ (1970) ‘positive heuristic’ as a set of suggestions to direct and develop research further and to provide guidance on how to process ‘anomalies’, i.e. facts that at first glance seem to be inconsistent with the theory or model within the positive heuristic.

est in the game constitutes the common interest in a change of rules to achieve a more productive game.

4 An Illustrative Application: Rural Credit Markets in Developing Countries

Poor households often remain poor because they do not have access to income-enhancing resources. Policy makers have therefore paid much attention to rural financial markets in developing countries, which are often characterised by a dual structure of both *formal* banks and a dense network of *informal* institutions and arrangements, including interlinkages between credit and product markets, informal credit associations, village moneylenders, and regionally segmented markets. Rural credit markets are thus a prime example of the economic relevance of complex institutional arrangements. In the following we take the problem as a case to demonstrate how our approach can be used to analyse and evaluate these arrangements in order to derive policy recommendations.

At the outset, it is instructive to note that until the mid 1980s, in many developing countries rural credit policy was dominated by the view that informal finance was something evil that should be suppressed and replaced by (governmentally-promoted) formal lending institutions. In the centre of the critique was the 'usurious moneylender' and his monopolistic power. Behind this view was the simplistic notion that all that mattered was the infusion of additional, often subsidised funds into rural areas. This policy grossly failed and informal finance continued to be an important source of funds for households that were rationed by formal lenders.

As a consequence, the question which policy recommendations can be given to overcome credit rationing has been posed anew. Most of the current literature either shies away from a theoretically founded answer to this question or clings to traditional welfare economic reasoning (Petrick 2004). But how far does this reasoning take? A central feature of the more recent credit market literature is the assumption of an *asymmetric distribution of information* between market participants (Stiglitz and Weiss 1981). The typical welfare economic response to such problems of market failure is to consider a *tax scheme* that restores first-best efficiency. This is considered by de Meza and Webb (1987), who show that, in the case of credit rationing, a *subsidy* on interest rates may restore the first-best outcome under full information. However, they also show that this result is extremely sensitive to the distributional assumptions of the model. Given only relatively minor changes in assumptions, the result of *under*investment is turned into one of *over*investment compared to the first-best level, so that a *tax* on interest rates would be needed to restore efficiency.

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. The alternative approach advocated in this paper is to reconstruct the credit rationing problem not as an *allocation* but an *interaction* problem. In a general view, the problem can be stated as a *one-sided prisoners’ dilemma* (Rasmusen 2001, pp. 117-119). Under the assumption that the borrower behaves opportunistically and defaults after he got the loan, the lender will not be willing to extend a loan, so that the strategy combination (default, refuse) is the Nash equilibrium (Figure 1).

Figure 1: Interaction on credit markets as a one-sided prisoners’ dilemma

		Lender	
		refuse	*grant*
Borrower	*repay*	0 , 0	1 , 1
	default	**0 , 0**	2 , -2

As in a two-sided prisoners’ dilemma, actors fail to acquire gains from cooperation and remain in a Pareto-inferior equilibrium. The institutional design is therefore unsatisfactory for *both* of the affected parties, and the central question emerges whether there are institutional alternatives that, compared with the status-quo, allow an improvement for both players.

To overcome the dilemma, the new rules must lead to a reduction of the borrower's pay-off for default below the level of the non-default pay-off. An alternative contracting scheme to the one illustrated in Figure 1, quite common in the developed world, involves the pledge of *collateral* on the side of the borrower, which can be interpreted as a form of self-bonding of the borrower. Collateral provides an incentive for the borrower to repay the loan and signals his credit-worthiness to the lender. If collateral is used in order to eliminate the default of borrowers, credit rationing will disappear (Coco 2000). However, this element *discriminates against* those who are unable to provide sufficient suitable assets, a case of particular relevance for developing countries.

The interaction approach also allows a differentiated normative assessment of existing *informal* arrangements in developing countries, and it is precisely here where alternatives to Western types of collateral can be found. One example is the formation of *groups of borrowers* who are jointly liable and thus have an incentive to monitor each other (Ghatak and Guinnane 1999). The default option for the borrower is punished by peer pressure, which is particularly effective due to the social proximity of the group. A second example is where credit exchange is *tied to other types of transactions*, the above-mentioned interlinkage. The most well-known is trade credit. Giving credit to trade partners makes private information about business activities available to the lender at little cost. Screening and monitoring of potential borrowers may thus be greatly facilitated (Bell 1988). These insights have induced a revision of thinking about rural credit markets. It is increasingly acknowledged that *institutional reforms* do matter for financial development, in contrast to additional funds or preferential interest rates (Krahnen and Schmidt 1994). Formal banks and informal credit arrangements are no longer seen as stereotype antagonisms. The current trend is rather to learn from informal arrangements how mutually beneficial exchange can be achieved, and that linkages between both should be established rather than destroyed. Microfinance institutions such as the Grameen Bank in Bangladesh demonstrate that innovative lending technologies can reach poor customers. The muchmaligned moneylender is reconstructed as an important emergency source of funds, because his unique knowledge of the borrower prevents default and thus allows mutually beneficial exchange that no other institution could possibly accomplish (Adams 1992).

5 Conclusions

Based on considerations of the constitutional economics literature, we have proposed to regard normative economics as the study of human *interaction*. Central to this approach is the search for (changes in) rules that allow the interacting individuals to secure gains from cooperation. The assent of the affected actors is required to legitimise and successfully implement reform. We use the notion of a social dilemma as a basic tool for the analysis of economic interaction because it captures the tension between common and conflicting interests in institutions in a straightforward way. Building on normative individualism, it conforms with freedom from value and is compatible with democracy. Furthermore, it serves the awareness of the common interest, helps to detect the scope for improvement of all involved parties, and suggests institutional reforms which possibly accomplish mutual gains. We have shown how it provides a relatively simple but flexible heuristic for the analysis and evaluation of institutional arrangements. In this way it has the potential to make insights of the established positive institutional economics literature amenable to public policy making.

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