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Analysis

Public transaction costs of agri-environmental schemes and their determinants—Analysing stakeholders' involvement and perceptions

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ABSTRACT

Despite an overall budget increase for rural development in the new programming period (2007–2013), most older Member States in the now expanded European Union are facing a substantial reduction in their budget for rural development and thus for agri-environmental schemes (AESs). It can be assumed that, in most countries, none or at best only part of this loss can be offset by national funds. Therefore the design of more efficient national governance structures for AESs, which decrease public transaction costs (TCs), would be an appropriate solution to this problem. The objective of this paper is to define the factors that influence these public TCs, so that appropriate action can then be taken to reduce them. A statistical analysis, with a proxy for public TCs, is combined with an analysis of stakeholder perceptions (excluding farmers) concerning public TC influencing factors. The research showed that it is mainly scheme related factors that are perceived to be important, although the governance structure, institutional environment and level of trust also play a role. Finally, the analysis of perceptions concerning TCs also showed that AES related actors have a limited knowledge of TCs.

1. Introduction

Since the Second World War, European agriculture has been characterized by increasing specialisation and intensification, which has led to negative environmental externalities. The European Union reacted to this situation by introducing agri-environmental schemes (AESs) in Council Regulation (Reg.) (EC) 2078/92. From that point, member states could compensate farmers financially for providing environmental goods and services. With the implementation of Reg. (EC) 1257/1999, AESs became a core element of the second pillar of the European Common Agricultural Policy, but they also became increasingly entangled in critical debates questioning their environmental effectiveness (see e.g. Berger et al., 2006; Kleijn et al., 2004, 2006; Kleijn and Sutherland, 2003; Matzdorf et al., 2008; Melman et al., 2008; Ohl et al., 2008). However, in addition to their environmental effectiveness, the economic efficiency of the schemes also deserves attention. In the light of recent changes in the European budget for rural development, which provides up to 55% of the funding for the schemes,[2] this last concern is particularly justified. Despite an overall budget increase for rural development in the new programming period (2007–2013) compared to the previous one (2000–2006) (European Commission, 2006, 2007), most 'old' countries[3] in the now expanded European Union are facing a substantial reduction to their budget for rural development. This is largely the result of increases to the number of Member States (27 compared to 15, in 2000–2004, and 25, in 2004–2006). In addition to this, new responsibilities were added to the rural development policy, such as support linked to Natura 2000 areas. Taking into account these changes, the Commission asked for a higher budget than the one that was finally agreed by the Council. Even if the funding had remained the same, it is debatable as to whether this would be sufficient in the new programming period. The second programming period builds on the achievements of the preceding period, so some funding will be committed to contracts that have already been agreed upon under existing schemes. It can be assumed that in most countries none, or at best only part of this loss, could be offset by national funds. Additionally, most countries are

Abbreviations: TCs, transaction costs; AESs, agri-environmental schemes.

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[2] 80% in Convergence regions.
[3] These countries are Germany, Greece, Spain, France, Ireland, Luxemburg, the Netherlands, Austria and Finland.

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facing greater budgetary constraints within their own administrations. Designing more efficient national governance structures for AESs, which decrease public transaction costs (TCs), would be an appropriate solution to this problem. Therefore, the objective of this paper is to define the factors influencing these public TCs, so that appropriate action can then be taken to reduce them. When judging TCs relating to AESs, however, the costs associated with failure to meet the targets or the environmental utility losses should always be taken into account, since it is the sum of TCs and the costs resulting from the failure to meet targets that should be minimised in designing measures with optimal precision (Eggers, 2006).

Firstly an overview will be given of the relevant literature concerning the factors that influence public transaction costs associated with agri-environmental policies. This is followed by a description of the methodology used to assess these factors. Results are presented in the fourth section and critically discussed in the final part, including some policy recommendations for decreasing public TCs regarding AESs.

2. Definition and Background

TCs, which can be defined as the costs arising, not from the production of goods, but from their transfer from one agent to another (Niehans, 1971), have gained considerable importance in socio-economic research on agri-environmental policies (Beckmann et al., 2009; Ducos et al., 2009; Falconer and Saunders, 2002; McCann et al., 2005; McCann and Easter, 2004; Mettepenningen et al., 2009; OECD, 2001; Peerlings and Polman, 2008; Smits et al., 2008). From a transaction cost economics point of view, an AES can indeed be seen as a contractual mechanism for the transaction of environmental goods and services between the farmer, as seller, and society, represented by the public authorities, as buyer. The costs directly resulting from this transaction are called private TCs when borne by the farmer, and public TCs when borne by the government. A direct transaction between citizens and farmers suffers from the absence of fully articulated property rights, which leads to market failure and hence governmental organisation of AESs (Falconer et al., 2001; Whitby, 2000). According to Transaction Cost Economics (TCE), and its principle of discriminating alignment, the chosen mode of governance has to match the characteristics of the transaction in such a way that the costs incurred are minimised (Leiblein, 2003; Williamson, 1998).

Following this principle, the current form of governance could indeed minimise the costs. However, there are other factors which might influence public TCs regarding AESs. The analysis of public TC influencing factors in this paper is not only done on the basis of the measurement of these costs, but also on the perceptions of stakeholders involved in AESs. When investigating the influence of TCs on managerial decision making, Buckley and Chapman (1997) found that managers very often do not know what TCs are, but that they do take them into account, albeit not in a numerical way. They therefore claim greater importance for the perception of TCs, since it is this that determines their effect on decision making. Perception of TCs does not necessarily correlate with the exact measurement of TCs, as shown by Love and Roper (2005) who compared economists' and managers' predictions of outsourcing activities based on TC arguments. Because of the importance of perceptions regarding TCs, some studies use this instead of real TC measurements (see e.g. Brockhoff, 1992 and Badstue, 2004). The use of perceptions is also theoretically consistent with the concept of bounded rationality, which refers to human behaviour that is intentionally rational but only to a limited extent (Simon, 1978). The data used have been collected within the framework of the European research project ITAES[4] and reflect the situation regarding AESs in Europe. However, the scope of the results goes beyond the European case and can even be extended to policy areas other than the agri-environmental one.

3. Factors Influencing Public TCs Relating to AESs

This section gives an overview of the factors influencing public TCs. According to Oliver E. Williamson (1985, 1996, 2003, 2005), the main founding father of TCE theory, TCs are influenced by: (1) the behaviour of the actors involved in the transaction, (2) the attributes of the transaction, which are the asset specificity of the transacted good or service, the frequency of the transaction and the level of uncertainty regarding the outcomes of the transaction, (3) the institutional arrangements or governance structures and (4) the institutional environment in which the transaction takes place. Several empirical studies are available specifically addressing the topic of agri-environmental policy. On the basis of the general literature on TC theory and sources in which the theory has been applied to AESs, four main categories of influencing factors can be distinguished: factors relating to the actors involved in AESs, the characteristics of the schemes, the institutional environment in which the schemes are designed and implemented and the natural environment upon which they are designed to act. These influencing factors are graphically represented in Fig. 1. Each of these factors, and the links between them, will be further explored as follows.

The main actors involved in the AES transaction are farmers and the government. The costs of a transaction depend on the number of trading partners involved—with lower TCs per participant when the number of participants increases (Stavins, 1995). For AESs with a higher uptake by farmers, economies of scale can result, with lower public TCs per participant and per unit of the desired environmental goods and services (Falconer et al., 2001; Falconer and Whitby, 1999, Eklund, 1999, cited in Nilsson, 2004). As well as the number of actors involved, the characteristics of the actors also play a role. The more heterogeneous the population of farmers taking up AESs, the higher the public TCs will be (Eklund, 1999, cited in Nilsson, 2004). Another important aspect concerning the characteristics of the actors is trust, which can also be seen as an informal institution (Williamson, 1993): the more the government trusts the farmers applying AESs, the less resource needs to be spent on monitoring and control (Falconer and Whitby, 1999). Costs for monitoring and control will also be influenced by farmers' attitudes towards AESs and their understanding of the schemes, because this will influence compliance (Falconer

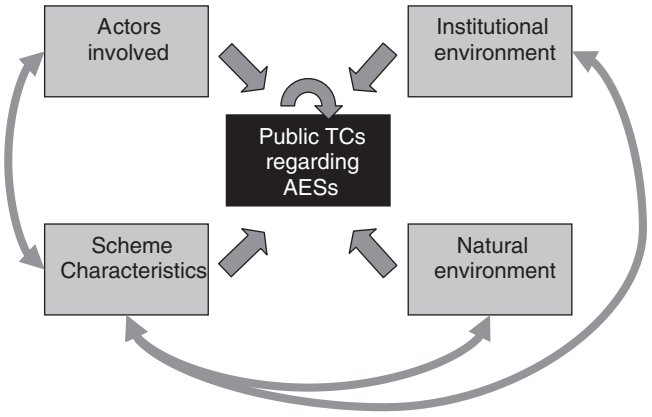

Fig. 1. Factors influencing public TCs.

[4] Integrated Tools to design and implement Agri-Environmental Schemes.