



Co-Design of innovative contract models for agri-environment and climate measures and the valorisation of environmental public goods

Key concepts in Contracts2.0

Extract from [Deliverable 1 / 1.1](#)

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Work Package: WP 1

Date of delivery: 30/04/2020



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant Agreement No. 818190.

Concept Note 6: Transaction Costs

Introduction

Transaction costs (TC) are the costs arising from organising the transfer of goods and services between two agents (Cheung, 1992) or, in a more general sense, the costs generated by the organisation and coordination of human interaction (Coase, 1960). In the context of agri-environment schemes, TC relate to the time, effort and direct expenditure incurred in activities such as scheme investigation, design, implementation, management and administration of contracts, as well as monitoring and evaluation. TC are essential to consider when assessing whether a government policy (such as an agri-environment scheme) is efficient, or at least cost-effective.

Coggan et al. (2013) suggests that for an environmental policy, TC accrue for the policy maker who designs and administers the policy, and for the private parties who engage with or are affected by the policy. In the specific case of agri-environment schemes a basic distinction can be made between public TC, borne by the government, and private TC, borne by farmers or other private sector actors (Mettepenningen et al., 2009; Krutilla, 2011). A summary of the likely range of transaction costs in agri-environment schemes and their respective distribution among public and private actors is set out in Table 5.

Table 1: Transaction costs encountered in agri-environment schemes (based on Ansell et al. 2016)

	Transaction Cost	When it is incurred	Scheme proponent and administrator costs (Public TC)	Payment recipient costs (Private TC)
Search costs	Information about the problem	Well before the scheme has been decided upon (even many years before)	Identifying, collecting, and analysing data about the problem and potential solutions	Participation in problem scoping and providing information
	Scheme selection and development	Months to years prior to scheme implementation	Examining policy options and consulting with stakeholders	Participation in consultation, lobbying for preferred option
	Establishment	Immediately prior to landholder engagement	Staff training, equipment, systems set-up, advertise and promote	Gathering information about scheme, and preparation to engage
Negotiation costs	Implementation (including repeated implementation)	Initial selection and contracting phase — repeated as needed	Engage with and process participants, negotiate contracts	Engage with scheme, prepare proposals, negotiate contracts
Monitoring	Scheme management	Ongoing scheme management such as making	Make payments, record keeping, engagement as required	Reporting, record keeping

	Transaction Cost	When it is incurred	Scheme proponent and administrator costs (Public TC)	Payment recipient costs (Private TC)
		payments, basic reporting		
	Landholder monitoring and compliance	After contracting — auditing and any enforcement required	Auditing and verifying reporting, any compliance activities	Defence of compliance activities, additional reporting, etc
	Ecological monitoring and evaluation	Before, during and after scheme (depending on ecological response time)	Data collection and evaluation of ecological outcomes (relative to problem formulation)	Likely to be relatively low
	Scheme evaluation and improvement	During and after contract completion	Analysis of effectiveness, making and implementing recommendations	Lobbying for scheme changes

Types of transaction costs

TC themselves can be categorised in three major groups: search costs, negotiation costs, and monitoring and enforcement costs (Dahlman, 1979, Hobbs, 2004).

Search Costs: Search costs arise ex ante to the transaction and include costs for looking for information on AES. From the private side, farmers may want to compare the AES-option with other alternatives for environmental and landscape management, other alternatives for earning an additional income, improving the image of farming or whatever their objective for taking up AES might be. Farmers may also compare the compensation payment to the expected costs arising from the AES-uptake. These decision-making costs also involve the cost of making the wrong decision as a result of bounded rationality (i.e. not all information is known to the decision maker). From the public side, policy makers and those who administer the policy will have to invest time in activities such as research, information gathering, and analysis associated with defining the problem; enacting relevant legislation, including lobbying and public participation costs, or, alternatively, the costs of changing laws through the courts or modifying existing regulations; design and implementation of the policy, which may include costs of regulatory delay.

Negotiation costs: The second category of private TC are negotiation costs, which in the case of AES, can be also called application costs. For farmers, this covers the costs of fulfilling preliminary conditions to be able to apply (such as specific administrative tasks, following a specific training, drawing field maps or taking soil samples) as well as the administrative costs of applying, the costs of contacting the administration when there are problems with the application procedure and so on. Since farmers enter agri-environmental contracts voluntarily, real negotiation between the parties on the contract terms is not applicable here. From the public side, these costs are related to the support and administration of the ongoing program; contracting costs, which may include additional

information costs, bargaining costs, and decision costs, which are relevant when a market has been set up for pollutants or natural resources.

Monitoring and enforcement costs: Monitoring and enforcement costs occur ex post to the transaction and includes costs the farmer incurs as a result of monitoring and enforcement activities required by the government. Farmer can be obliged e.g. to keep fertiliser application records, to accompany the control agency to their fields when soil samples need to be taken, to count bird nests or to do other administrative tasks in order to prove they have performed their contractual obligations. From the public side, these costs are related to monitoring and detection of non-compliance, which may include both the monitoring of the environmental outcome, or the level of compliance with the regulation, the tax or subsidy scheme, or private contract, as well as the development of monitoring technologies; and prosecution or conflict resolution costs incurred if lack of compliance is found.

TC borne by intermediaries may qualify as public or private TC, depending on whether the intermediary is a collective or private advisors, or a public entity. Intermediaries' costs are incurred for mediation, facilitation, advising, planning, organising meetings, contributions to the formulation and coordination of measures.

The diversity of approaches in empirical studies suggests a lack of consensus on how best to measure TC. It is common to capture TC through proxies. Duration and time involved in tasks related to agri-environment schemes are used as proxy for measuring TC because the monetary value of TC is difficult to measure in a survey (Mettepenningen et al., 2009). Understanding stakeholders' perceptions of TC helps explain why land managers engage with some contracts but not others. As noted by Buckley and Chapman (1997) it is often the perception of TC rather than the real TC that determines a farmer's decision to sign up to an agri-environmental contract. A study in France by Dupraz and Ducos (2007) suggests that TCs associated with AES are fixed costs which explains why farmers with larger farms are more likely to enrol in AES. Our premise is that contract parties, in particular farmers, are required to engage in many activities that are usually overlooked or taken for granted, before they enter a contract as well as during implementation of a contract. These activities have an economic value, and taking them into account can explain the economic effects of agri-environmental contracts more holistically. Making costs associated with contracts visible can highlight areas for improvement, similar to Mettepenningen et al. (2009) who compared the level of private TC to other scheme-related costs and the compensation payment.

Application in CONTRACTS 2.0

For Contracts2.0, the decision was taken to use both qualitative and quantitative methodologies to identify the TC perceived by a) private and b) public actors as the most significant TC for the different types of AES under study, as well as the activities perceived as most limiting, time consuming and expensive at the three different levels of TC related to AES. Additionally, the analysis will also explore the determinants of these perceptions (Figure 9).

Key informant interviews regarding public TC in order to obtain insights about the role of TC in a specific type of contract and about the distributional effects of TC among the contract parties will be followed by semi-structured interviews with CIL and PIL members regarding their perceptions of TC and factors influencing these perceptions. The interviews will focus on search costs, negotiation costs and monitoring costs related to agri-environmental schemes.

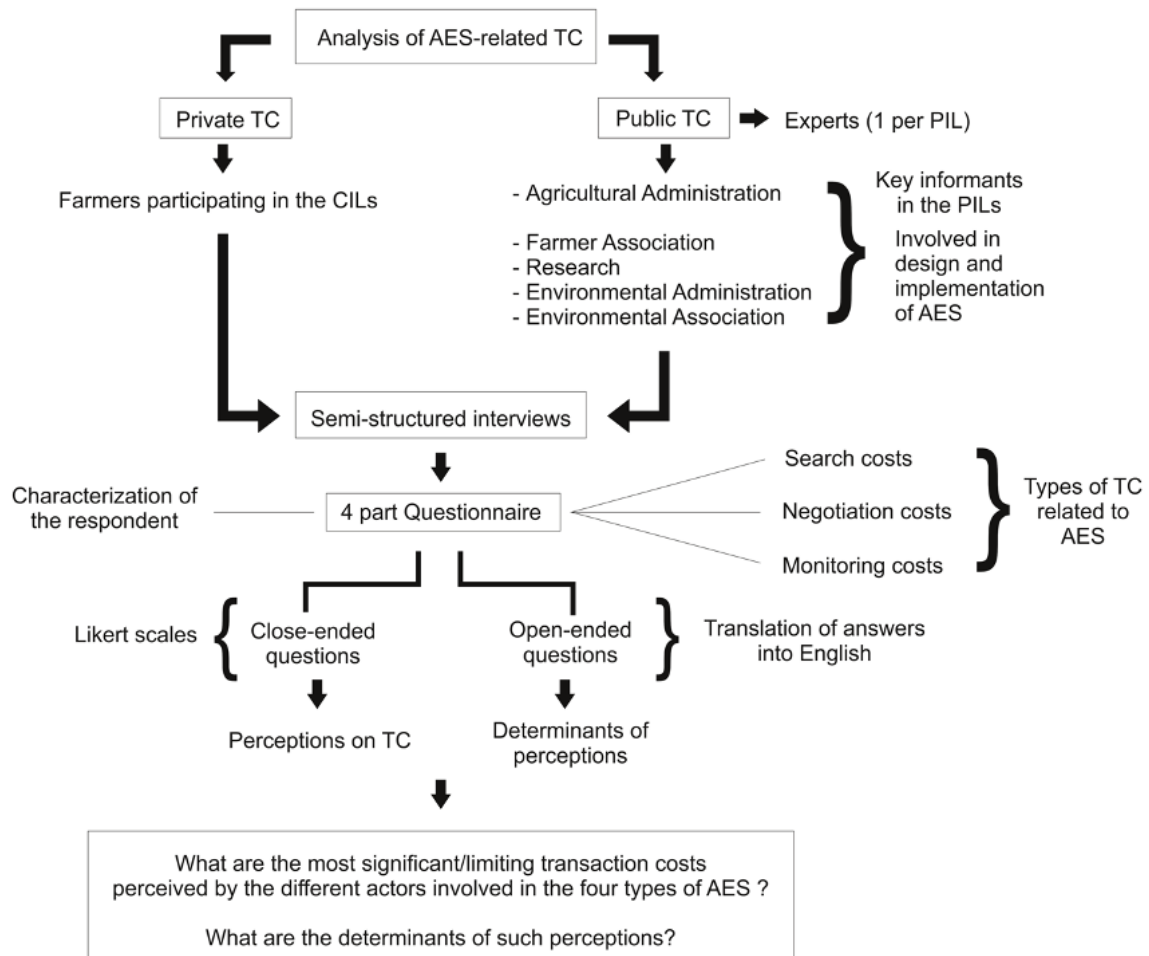


Figure 1: How transaction costs will be captured in Contracts2.0

References

Extract from the Deliverable “Shared Conceptual Framework” (C20_WP1_D01_D1.1_UNIABDN)
 For references see [Original Document](#)