

# Chapter 4

## Transaction Costs in Inter-Organizational Systems: Theory and Selected Examples in Supply Management

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### ABSTRACT

*Transaction Cost Economics (TCE) describes the fact that markets are incomplete. This might go without saying—but nevertheless TCE delivers rigorous instruments for microeconomic analysis combined with their application for managerial recommendations. As a result, TCE became quite popular in academia in the late 1990s and early 2000s. We show this by an analysis of scientific databases and journals.*

*Besides describing the core elements of TCE, this paper also shows the application of this concept for purchasing and supply decisions. Therefore, we do have a closer look on outsourcing problems, sourcing strategy decisions, and information technology/e-procurement adoption.*

### INTRODUCTION

Transaction Cost Economics (TCE) was once described as “revolutionary” in economic theory. Even though this seems to be a bit excessive, TCE is a major approach to combining the rigorous

instruments of microeconomic analysis with the practical relevance of incomplete markets. Instead of comparing “relevance versus rigor,” TCE offers the opportunity to combine both aspects through scientific research that combines a sound theoretical basis with concrete implications for management.

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The fact that transaction costs occur both within companies and among companies in a market make TCE an ideal approach for inter-organizational (information) systems. Additionally, as a microeconomic-based approach, it can also be used for managerial purposes. In this chapter, we have determined an inter-organizational approach by using the perspective of a company using (and buying) outside resources, which means a concentration of supply management activities.

To develop these managerial and inter-organizational insights, we first start with the basics of transaction cost economics which ensures an understanding and comprehension of the context. This chapter illustrates the state of the art in TCE which implies a narrow description of the core elements of TCE, the problem of uncertainty and finally the current status in research.

In the second part of the present work, we are applying TCE to selected examples in/for procurement. The applications relate to outsourcing, procurement strategy formulation and e-procurement adaption.

## **BASICS OF TRANSACTION COST THEORY**

### **Core Elements of Transaction Cost Economics**

Aside from being a theory and agency of property rights, transaction cost economics is one of the core elements of new institutional economics. All three elements are closely linked, according to the theories developed by Coase (1937) and Williamson (1985), the main representatives of TCE.

There are a few basic behavioral assumptions of the new institutional economics that are important for a clear understanding of the heuristic TCE model formulated by Williamson (1985):

- Bounded rationality must be understood as a construct of decision-making behav-

ior, which is located in between so-called absolute rationality and process rationality. Because of incomplete information and restricted human information processing, rationality never can be complete (Simon 1976).

- Opportunism is the main characteristic of the pursuit of individual interests (Williamson 1985).
- Methodological individualism means that multi-person organizations such as companies do not have their own personalities; they are just a conglomerate of individuals.
- Property rights are the main interest of the economic analysis in new institutional economics. They are handled in a purely physical or relative-legal manner. Because of this, Williamson (1989) considers the firm (and the cooperation) a “nexus of treaties.”

Coase was the first to spread the idea that usage of markets to realize transactions normally incurs costs. The object of analysis is the transaction. Transactions in general are defined as “not the ‘exchange of commodities,’ but the alienation and acquisition, between individuals, of the rights of property and liberty created by society, which must therefore be negotiated between the parties concerned before labor can produce, or consumers can consume, or commodities be physically exchanged.” (Commons, 1931, p. 652). Economic cooperation exists because there are transaction costs to using the market (or price mechanism). The costs of finding an exchange partner and agreeing to and controlling the transaction are defined as transaction costs. Aside from production costs, there are costs to finding a transaction partner, negotiating, contracting and managing contract fulfillment. Originally, Coase’s idea “that there is a cost of using the price mechanism” (Coase, 1937, p. 390) limited transaction costs to the institution of markets. Based on the idea that the price mechanism is the most efficient way to handle economic transactions, Coase used trans-

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