Firm Size Effects on Transaction Costs

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ABSTRACT. Associated with effects of scale, scope, experience and learning there are effects of firm size on transaction costs; in the stages of contact, contract and control. These effects are due to “threshold costs” in setting up contacts, contracts and governance schemes, and to differences with respect to the factors that cause transaction costs: bounded rationality, opportunism, uncertainty and transaction specificity of assets. Implications are considered for firm strategy and public policy.

1. Introduction

While small firms often have behavioural advantages, in many activities they are at a disadvantage with respect to costs. In costs, there are effects of scale, scope, experience and learning. Small firms generally produce small volumes (scale) of few products (scope). Often, they have not been in business long and thereby have little benefit from economies of experience. Often they have limited capacity for the acquisition of knowledge (learning).

Effects of scale, scope, experience and learning play a role in the decision whether to produce an input that one requires, or to purchase it from an outside producer (“make-or-buy decision”). Transaction Cost Economics (TCE), initiated by Coase (1937) and developed further by Williamson (1975, 1985), is designed as an answer to the question why there are firms and why different activities are combined in one firm. There are firms, rather than only individuals selling the fruits of their individual labour, because of economies of scale in production. Firms may produce not only one but several products, including inputs required for a given product, because of inseparable economies of scope between the different products. This yields an argument in favour of inside production. On the other hand, according to Williamson economy of scale favours outsourcing because a specialized outside producer, serving multiple users, can produce at a higher volume and hence more cheaply. However, there are also costs of transaction, and these may exceed the benefits of outsourcing, thus favouring the decision to make. Effects of experience yield an obstacle in the shift from an established to a new producer, and hence may provide an obstacle to a shift either way: from inside to outside production or vice versa. Problems of learning, or the development of new competence, are relevant because they yield an added value to inter-firm cooperation.

In its consideration of the make-or-buy decision, standard TCE considers the effects of scale and scope in costs of production, and to a limited degree their effects in costs of organization, but hardly their effects in costs of transaction. TCE tends to ignore effects of experience and learning. The purpose of the present article is to fill these gaps: what are the effects of scale, scope, experience and learning, and associated with these the effects of firm size, on transaction costs, and what are the implications for make-or-buy decisions and other aspects of policy?

As a preliminary, a summary of TCE is supplied, a survey of types and sources of effects of scale, scope, experience and learning, and the definition of “small and medium sized enterprise” (SME) that is employed. The analysis is conducted from a theoretical perspective, but in the process many bits of experience and results from empirical study will be taken up. The article aims to provide a theoretical reconstruction of known phenomena.

In the analysis of effects of firm size in transaction costs, we employed TCE, but that does not suffice, and extended theory is required. TCE has
limitations in the context of rapid innovation, because it is not a dynamic theory: it does not incorporate a theory of change of preferences and learning (changing capacity for perception, interpretation and evaluation) as the transaction relation develops in time, and the role thereby of interaction between transaction partners.2

Effects of firm size on transaction costs are presented in several steps: generic effects that apply for small firms in the role of both buyer and supplier, and effects that are specific to either role. We will demonstrate that smaller firms, as both suppliers and buyers, incur higher transaction costs directly, and cause higher transaction costs for transaction partners. In the latter case, the partner may demand compensation (on the threat of going elsewhere), whereby the higher costs are reflected back to the smaller firm.

We conclude that there are pervasive effects of firm size, and we consider some of the implications for policies of firms and governments, designed to reduce or eliminate disadvantages in transaction costs.

2. Transaction cost economics

According to Williamson's prior work (1975), the user of some productive input has a stark choice to make between two "governance structures": integration of production of the input in the "hierarchy" of his own firm, or purchase in "the market", from an outside producer. The advantage of outside purchase ("outsourcing") lies in the "high powered incentives" of the market and in economy of scale, by which the input is produced more cheaply by a specialized producer supplying multiple users. There is a disadvantage due to transaction costs; particularly costs of dependency on an outsider partner, which creates vulnerability to opportunism in so far as conditions are uncertain (during execution of the transaction). To the extent that investments are more "transaction specific", there is less scope for economy of scale in outside production, because the volume of production decreases to the volume needed by the focal user, and transaction costs of dependency increase. At some point transaction costs exceed the benefits of outside production and in-house production is to be preferred (because under hierarchical control risks due to dependency are less).

For transactions with an "intermediate" degree of transaction specificity of assets, Williamson later (1985) made allowance for two types of governance structure "between market and hierarchy". "Bilateral governance", with the institution of different kinds of safeguards to limit transaction costs, in the case of frequent, recurring and substantial transactions, which make the investment in such measures worthwhile. Examples of such safeguards are: ownership by the buyer of transaction specific productive assets; guarantees by the buyer, in the form of a guaranteed quantity and price of purchase or a severance payment; the supply of "hostages". Guarantees given by the buyer to the supplier require counter-safeguards to protect the buyer against misuse. For more incidental or smaller transactions, which do not warrant the cost of such measures, "trilateral governance" is proposed, with the appointment of a third party as an arbitrator to regulate any conflicts that may arise.

More on a macro level, North (1990) adduces transaction costs as a reason for the development of institutional arrangements, including sets of culturally determined norms (social, moral, legal, personal), to contain transaction costs that would otherwise be too high to allow for the degree of specialization on which prosperity depends.

TCE is founded on two behavioral assumptions: bounded rationality and opportunism. It is due to the combination of these two conditions that transaction costs arise to the extent that assets are "transaction specific", whereby transaction partners become dependent on each other (are "locked in"). Bounded rationality is taken to arise from the scarcity or cost of information and limited capacity for information processing. If rationality were unbounded, all possible contingencies could be foreseen, even those arising from opportunism, and could be incorporated in a contract prior to commitment. TCE does not claim that opportunism is practiced by everyone all of the time, but by some people some of the time, but since ex ante one does not know when and by whom, governance of contracts should be designed to take opportunism into account. If there were no opportunism, contracts could be left incomplete in the trust that unforeseen contin-