# Transaction Cost Economics

Transaction cost economics (TCE) is most associated with the work of Oliver Williamson (see his book *The Economic Institutions of Capitalism* on the reading list), though he was building on earlier work, particularly by the Nobel prize winner Coase. One reason why the theory is so important is that it represents one of the first and most influential attempts to develop an economic theory that takes seriously the structure of firms. Previously, economic theories tended to treat the firm as a sort of "black box," the internal workings of which were not considered to be important. This, of course, contrasts with most other people's view of businesses, where the internal workings of the organization is given prominence.

It is sometimes said that TCE attempts to explain why firms exist. That is, why are some transactions directed by managers in the context of a hierarchy, as opposed to taking place in an open market? It's more accurate, though, to say that TCE tries to explain the particular structure of a firm, most importantly, the extent to which it will integrate vertically.

It must be emphasised that while Williamson's work is very distinctive, it falls well within mainstream economic thinking. It assumes that firms are profit maximising, and that profit maximisation involves costs minimisation. By implication, it is an equilibrium theory. It assumes rationality on the part of owners and/or managers. Where it differs is in stressing *transaction costs* as well as production costs. Williamson envisions production costs as being analogous to the cost of building and running an "ideal" machine, while transaction costs are those costs which are incurred by departures from perfection, such as friction. In the economic sector, the ideal machine would be a perfectly efficient market. As you know, such a market requires full information to be available to all parties and perfect competition, among other factors. Departures from this perfection (sometimes called "market failures") can result in firms incurring costs when they attempt to buy or sell goods or services. For example, lack of information about alternative suppliers might lead to paying too high a price for a good. Lack of information about a customer's creditworthiness might result in a bad debt. These are *transaction costs*. Williamson argues that firms want to minimise their total costs, which are made up of both production and transaction costs. Under some circumstances transaction costs may be lower if the transaction takes place in an open market, which in other situations costs will be lower if managers co-ordinate the transaction.

Williamson's contribution rests in specifying the variables that determine whether "market or hierarchy" will have the lower transaction costs in various circumstances. Before discussing these variables, though, we also need to mention the *assumptions* that Williamson makes that underpin the theory. It is important not to confuse these assumptions with the variables. The assumptions are unchanging contextual factors. They are important in that if these assumptions were not valid, then the arguments about the effects of the variables would not be valid. But the factors mentioned in the assumptions don't themselves vary, and so they cannot explain variation in organizational structure.

## *Assumptions*

1. Bounded rationality
2. Opportunism

*Bounded rationality* refers to the fact that people have limited memories and limited cognitive processing power. We can't assimilate all the information at our disposal, we can't accurately work out the consequences of the information we do have. A good metaphor is the game of chess. Despite knowing all the rules which fully specify the game, no one is capable of faultlessly analysing any given position during a chess game. This is partly because the game itself is inherently too complex (there are too many alternatives), and also because the actions of the opponent are unpredictable. Managers face the same problems. No matter how knowledgeable they might be, they cannot consider all the possible alternative courses of action. This is compounded by the fact that in reaching a decision they must take into account how competitors will react.

*Opportunism* refers to the possibility that people will act in a self-interested way "with guile," as Williamson puts it. That is, people may not be entirely honest and truthful about their intentions, or

they might attempt to take advantage of unforeseen circumstances that gives them the chance to exploit another party. Williamson doesn't assume that all people will act opportunistically all of the time. He merely assumes that some people will act opportunistically some of the time, and that *you can't tell in advance who is an opportunist and who is not.*

These two assumptions are important contextual factors, but in themselves they tell us nothing about why a firm will integrate vertically, because they are constant characteristics of our world. These assumptions represent something of a departure from standard economic models, but not a terribly dramatic one. People are still assumed to be rational, in the sense that they want to maximise the profits of the firms they manager, but that there are limits on their ability to make a truly rational decision to achieve this end. Similarly, self-interested behaviour is assumed in traditional economic theory, but guileful behaviour — "human nature as we know it," as Williamson put it — is not expected.

## *Variables*

1. Frequency
2. Uncertainty
3. Asset specificity

The real explanatory power of the theory, though, comes from the three dimensions or variables that are used to characterise any transaction. Transactions can be frequent or rare; have high or low uncertainty; or involve specific or non-specific assets. These three variables will, according to the theory, determine whether transaction costs will be lowest in a market or in a hierarchy. It is easiest to consider these variables with respect to decisions about whether to integrate vertically.

*Frequency* is the most easily dealt with. There will never be a situation in which a firm would want to integrate vertically so as to bring "in-house" the provision of a good or service that is very rarely used. For example, most firms will not want to set up their own management consultancy departments because they only use the services of a management consultant on a very infrequent basis. If a firm did nevertheless set up its own consultancy, that department would have to try to sell its services to their parties in the periods when it was not doing consultancy within its parent company. But why should we expect such a department to be able to perform better than specialist consultants? In general, we would expect the firms for which consultancy is a "core competence" to do better.

Of course, if firms use consultants frequently, they may decide to set up an in-house operation. National Westminster Bank, for example, have done just this, though they also use external consultants as well.

Because frequency is so clear cut, it is usually omitted from detailed discussion. But note that this is not because it is unimportant. On the contrary, the effect of frequency on transaction costs is very strong. It is just that the case where the frequency of transactions is low isn't very interesting.

*Uncertainty* is more interesting. The issue here is how hard is it to foresee the eventualities that might occur during the course of the transaction. One obvious factor here is the length of time over which the transaction will take place. Transactions that take place on "spot markets" will have relatively little uncertainty, because one doesn't have to predict the future. On the other hand, transactions that involve a commitment over some time have some uncertainty built in to them. An example we considered before is the printer agreeing to provide a service to a newspaper publisher. Both parties are likely to want a reasonably long term agreement to enable them to plan. But the very long term nature of the agreement adds to the uncertainty. How can the printer be sure that the publisher won't go out of business during the life of the contract, thereby putting at risk her investment in a printing press?

Uncertainty causes problems in part because of bounded rationality. We can't foresee all possible eventualities. It might also come about because of information asymmetries: the printer doesn't know as much about the financial health of the publisher than does the publisher himself. Uncertainty also causes problems because of the danger of opportunism. How does the printer know she can trust any figures that the publisher presents to her? How does she know that, having invested in a press, the publisher won't try to renegotiate the contract at some future time?

What we have to ask ourselves is will uncertainty be reduced by vertical integration? If so, will any savings in transaction costs be enough to outweigh any costs there might be associated with vertical integration — administrative costs, for example? In our example, uncertainty would be reduced by vertical integration of printer and publisher.

*Asset specificity* is perhaps the most important element in Williamson's theory. He argues that where transactions involve assets that are only valuable (or are much more valuable) in the context of a specific transaction, transaction costs will tend to be reduced by vertical integration. In our example, if transport costs mean that the printer would not be able to compete for business from other publishers, her printing press would be a highly transaction specific asset: it would only be of value in the context of transactions with one publisher. This variable is again only a problem in the context of bounded rationality and opportunism. It is this that makes it risky for the printer to invest in a press. Other things being equal, when transactions involve highly specific assets, transaction costs are likely to be lower in a hierarchy than in a market.

The following table gives a summary of the relationship between asset specificity, uncertainty and governance structure.

| | | **Asset specificity** | | |
|---|---|---|---|---|
| | | Low for both parties | High for both parties | High for one party, low for one party |
| **Uncertainty** | High | Contract/vertical integration | Vertical integration | Vertical integration |
| | Low | Spot contract | Long-term contract | Vertical integration |

TCE is perhaps most often applied to understanding vertical integration, but it can often be applied to any internalisation/externalisation question. For example, where employees develop skills "on-the-job" that are highly firm-specific, these skills can be considered to be transaction specific assets. The transaction in this case is the employment relation. As we know, this can take several forms, from highly temporary (such as seasonal farm work), which is similar to a "spot market", to an internal labour market, which is analogous to vertical integration.

## *Criticisms*

Although TCE is very useful, it is not without its critics. It is important to recognise some possible weaknesses in the theory.

1. The theory assumes that it is possible to neatly separate production and transaction costs, but in practice this is often not the case. More generally, it is often very difficult to measure transaction costs even if they can be defined.

2. Although TCE assumes that their are limits on the extent to which decision-makers can be rational (that is, it assumes bounded rationality), it still makes little allowance for the other factors that we know affect decision-making. For example, the profit maximising, cost minimising object is not considered to be problematic. In reality, we know that this is not the case. There are often conflicts of interest among managers, the interests of managers and shareholders may not be perfectly aligned, and so on. Consequently, power plays an important role in decision-making.

3. Reputation and trust are not considered. Transactions are treated as though they occur without any knowledge of previous transactions involving the parties concerned. Yet we know that trust does develop between people as they do business with each other. We know that a reputation for trustworthiness is an important business asset that firms will often be reluctant to jeopardise.

Therefore, the assumption that we cannot judge *ex ante* who will be opportunistic is an over-simplification.