The Role of Transaction Cost Economics in Selecting Firm Strategy

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From the first beginning Transaction Cost Economics (TCE) was concerned by the reason and circumstances when the firms choose the hierarchy instead of market for organizing a transaction. Further this analysis model was expended to considering other governance modes, as relational contracting. Even it was mostly criticized Transaction Cost Economics has an important role in choosing the firm strategy based on a transaction costs analysis. The purpose of this present paper is to offer an transaction assessment griddle – a new instrument for managers in choosing the firm strategy.

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1 Introduction

Transaction Cost Economics originates in "*The Nature of the firm*" of Ronald H. Coase, published in 1937. This paper is considered a classical one because it changed the way in which people see the economic organizations. R.H. Coase argued that the firm and the market are two alternative ways of organizing the same transactions. He has asked two questions that are still in the agenda of those who study economic organizations: "Why is there internal organization?" and "Why not the whole production is made by a single big firm?" Trying to answer these questions, R.H. Coase resorted to transaction costs. Only in the last thirty years a great attention was paid to the R.H. Coase's original contribution to the theory of the firm. This was possible mostly because of Oliver E. Williamson's efforts. He has tried to enlarge and improve the Coase's analysis, by emphasizing certain areas and adding new dimensions. The results of Williamson's research gave birth to a new current in economic thinking, namely Transaction Cost Economics (TCE), where the attention is paid to the comparative costs of organizing economic activity within or without the market. The question of Williamson is, like Coase, what are the conditions for emerging the firms in order to replace the price mechanism? O.E. Williamson argues that, by considering the transaction the basic analysis unit, the transaction features will establish whether the transaction will take place through the market or it will be internalized and thus a firm will emerge.

2. Transaction cost - the core element of TCE

K.J.Arrow describes the transaction costs as "the cost of running the economic system" (K.Arrow, 1969, p.48). Thirty years later since the Coase's basic question on the "nature of the firm" (1937) the concept became established in the center of New Institutional Economics.

This notion has started to come into view during the last century still hanging over the coasian analysis. The transaction cost, as Coase has defined, is the cost of organizing production through price mechanism. Its main component is information, as a part of searching the "relevant prices" in the market. The cost of using market comes equally from the negotiating and signing the contracts separately for every transaction that take place in the market. The delivery cost, connected to production activities, must be separated from transaction cost. The last one includes the resources used in negotiating, dealing and evolving an agreement, through which the property right is transferred from one person to another and from an organization to another. These resources refers to the needed effort for getting a deal, standardizing and certifying the goods, paying the counselors in order to assure the legality of contractual disposals and taxes regarding some transaction types.

Transaction costs refer not only to commercial exchange, but also to organizational exchange. O.E. Williamson defines transaction both as a classical buying-selling contractual relationship between two independent productive entities (two firms) and as an assignment of an intermediary product between two production workshops of the same firm, which doesn't permit the income distribution.

The two main dimensions of transaction costs, information and negociation, represent the common element of transaction costs definition. They are found in O.E.Williamson analysis that distinguish ex-ante transaction costs (related to partner selection and to drafting, negotiating and protecting the contract) and ex-post transaction costs (related to needed adjustments due to unforeseeable disturbances and opportunistic behavior appraisal)

Transaction costs are the costs assumed by a firm when markets are used and they include not only the price asked by the supplier for products or services, but also:

1. **The "ex-ante" costs** are the costs that appear before contracting associated to drafting, bargaining and safeguarding agreement and include:

- **Searching costs** – they refers to the costs of getting information about potential partners, the survey costs (related to judicial system, country risk). These costs also include the costs of comparing offers and the opportunity costs.
- **Bargaining costs** refers to the measuring of the "lost time" or of the bargaining time and also to the costs of traveling, translating and with experts or sometimes costs of the auction organizing.
- **Drafting costs** of some valid contracts that should include all stipulations regarding quality, time of delivery, confidentiality, performance warranties, penalties paid in case of non-performance. They are not only the "costs with ink", but also they refer to the difficulty of anticipating all changes of circumstances where the transaction will perform.

As more the transaction's goods are standardized and have a low informational content, the transaction costs are lower and vice versa. According to Williamson, this stage ends when and agreement is established between parties.

2. **The ex-post costs** are the cost that turn up after the signing of agreement and that suit to the costs of managing, monitoring and controlling in order to watch the accomplishment of contractual stipulations (G. Koenig, 1999, p. 149):

- ***Costs of control activity*** include the monitoring of transaction evolvement that supposes continuous collecting and delivering of information;
- ***Costs of correcting errors*** as a consequence of deviations of agreement stipulations. It is possible to modify contract stipulations without contract canceling. They include the renegotiation costs.
- ***Costs of arbitration (litigation)*** for solving the disputes and conflicts. These costs include the trial costs.

All these costs induce the circumstances in which the firm will choose vertical integration (dealing transaction inside the firm) instead of dealing the transaction on the market.

Some critics of this theory has emphasized that Williamson has not precisely outlined the transaction cost concept in his work in 1975. Now a day, the nature of these costs is better understood. Table 1 presents the source and the nature of the most common transaction costs. As we can observe, transaction costs may appear as ***direct costs*** or ***opportunity costs***. These costs are positive related to asset specificity, environmental and behavioral uncertainty.

Table 1.Sources and types of transaction costs

	Asset specificity	**Environment uncertainty**	**Behavior uncertainty**
A. Source of transaction costs ***The nature of management problem***	Guarantee	Adaptation	Performance appraisal
B. Types of transaction costs ***Direct costs***	Costs of searching guarantees	Communication, negotiation, coordination costs	Costs of searching and selecting (ex-ante) Costs of measuring (ex-post)
Opportunity costs	Failure of investment in unproductive assets	Failure of adapting	Failure of identifying proper partners (*ex-ante*) Losses of productivity by adjusting efforts (*ex-post*)

Source: Rindfleisch, 1997, p.46

The asset specificity creates a ***guarantee problem***. Without proper guarantees, firms are confronting with expropriation risks or productivity losses resulted from the failure of investing in specialized assets. For example, in order to discourage the producers' opportunism, the agents engage direct costs for developing relationships with the downstream clients. Without such guarantees, the agent's effort of developing the market could be exploited or such investment may not take place at all.

The environment uncertainty creates an ***adapting problem***. The associated transaction costs comprise direct costs of communication of new information, of renegotiating the agreements or coordinating new activities that reverberates new circumstances. A failure of adapting involves an *opportunity cost of readapting*.

Behavioral uncertainty creates a ***performance appraisal problem***. If the real performance level of a party is not immediately visible, the direct costs of measuring may increase. These may come into being as measuring the results or the behaviors. In original TCE framework, the appraisal problems lead to the increasing of measuring costs because of the need of preventing the opportunistic exploitation. W.G.Ouchi (1979) gives another explanation of this process. Thus, ***the measuring costs*** come into view in order to allot fairly the rewards between parties. If the rewards are not equitably allocated, one of the partners may reduce his individual efforts. In this way the failure of the performance appraisal may lead to opportunity costs as productivity losses.

Behavioral uncertainty represents a problem because of *ex-post* asymmetry of information regarding the acquired performance. Information asymmetry may be also *ex-ante* as a result of firm incapacity of establishing the real features of the partner before signing the agreement. This form of information asymmetry makes the direct costs to increase in a shape of selecting and searching efforts for identifying *a priori* the proper exchange partners. The relevant opportunity costs are associated with the losses resulted from relationships with parties without motivation or needed abilities.

3. Transaction costs and complexity costs - two opposite forces

According to TCE, the firm should organize inside its system all the activities where the transaction costs for buying them from external suppliers are upper than the costs of making the products and services within the firm. According to Allaire and Fîrşirotu (1998, p.133) the choice between **market** and **hierarchy,** based on the advantages of the last one when there is market failure, induces the size, the success and the everlastingness of the large enterprises.

The transaction costs may explain the reason why some firms integrate and coordinate many functions while others have functions coordinated by different firms connected only by contractual relationships. Transaction costs establish the circumstances where the firm will choose the hierarchy rather than the market for carrying on the transaction. Yet the vertical integration requires other different costs; besides the direct costs associated to the internal production of goods and services, the firm must consider the **complexity costs** due to this decision (Fîrşirotu, Allaire,1998, p.133):

- the supervision and control costs according to the new organizational structure, which for the firm hasn't personnel:
- the costs due to disputes and conflicts determined by establishing transfer prices between the vertical integrated units;
- the costs due to neglecting the subsidiary activities by the top management;
- the costs of cultural conflicts and style management in case of acquisition of some autonomous firms;
- the costs due to the great diversity of products.

Actually, the transaction costs and complexity costs are two opposite forces that determine the choice of the optimal size of the firm.

4. Transaction Cost Economics and the firm strategy

From the first beginning Transaction Cost Economics was concerned by the reason and circumstances when the firms choose the hierarchy instead of market for organizing a transaction (O.E. Williamson, 1975). Actually, the most empirical studies were based on vertical integration. According to TCE, the efficiency considerations determine the choice between market and hierarchy. Supposing production costs equals for all governance alternatives, the transactions costs are determinant. If transactions between firms need high specialized investments (*asset-specificity*) and uncertainty make the contracts incompletes, making place for opportunistic behavior, the hierarchies will replace market agreements between independent firms in order to reduce transaction costs.

Further this analysis model was expended to considering other governance modes, named "relational contracting" (O.E. Williamson 1985). TCE sees the cooperating relations as intermediate hybrid forms between market and hierarchy. They reduce the risks of bilateral contracting between independent agents, while they avoid the inefficiency of bureaucracy complexity that are inherent in hierarchies. This means that cooperative agreements are expected to be a governance mode for exchanges with medium transaction costs. Otherwise firms will commit into cooperative relationships when contracting risks deter from using the short term relationships, but they are not bigger enough to make integration necessary.

Regarding the collaborative agreements, the literature highlights the difference that we have to make between the contractual agreements (non-equity relations, e.g. license, client-supplier relations, research collaborations, distribution and marketing agreements) and the relationships that suppose joint ownership (equity relations, e.g. joint venture that leads to setting up new judicial entities owned by all partners). TCE emphasizes their different performances regarding transaction costs reducing. Therefore, Pisano (1989) says that a firm will choose an equity relationship when the transaction costs are relatively higher.

The main features, that make the difference between *equity* agreements (e. g. joint-ventures) and contractual (*non-equity*) agreements regarding the transaction costs reduction, are (M.G.Colombo, 1998, p.5):

1. joint ownership;
2. ex-ante mutual commitment of resources;
3. the fact that responsibility for control of operations is attributed to a specialized administrative unit (for example, the board of directors of a joint venture is a new created unit).

1. The joint ownership is essential in aligning the partners' incentives that assure the reduction of the opportunistic behavior. In this case, the joint ownership plays the role of an exchange of *hostages* (Williamson, 1983). The opportunistic behavior of a partner may reduce the value of the joint venture. If the partners equally distribute the costs and the benefits of a joint venture, they are interested in avoiding such a value-reducing behavior. M.G.Colombo (1998) emphasizes that a partner will get all the benefits from the opportunistic behavior, but he supports just a part of the costs, according with the share of the capital. Therefore, the protection against the moral hazard is only partially assured excepting the total expected costs are greater than the benefits of such an opportunistic behavior.

2. *The ex-ante mutual commitment of resources.* The firms involved in an equity relationship have to determine ex-ante the resources that they contribute to the joint venture, because this is the base of determining the property rights. If the resources are *ex-ante* committed, a part will not be able to renege opportunistically on his/her promises (G.P.Pisano, 1989).

3. In the equity agreements the residual rights of control are jointly exercised by the partners through a formal administrative unit that is a more efficient monitoring mechanism than those provided by non-equity agreements (B. Kogut, 1988). Through his presence in the board of directors, each partner can directly observe and supervise the managers' decisions, independently check up financial information and monitor better the others partners' behavior. Compared to hierarchy, the joint control has disadvantages due to negotiations between partners and the need for compromise in case of conflict. But, compared to contractual agreements, it has also advantages from solving the problems between partners in unexpected circumstances and reducing the need of ex-ante specification of rights and duties under various contingencies (G.P.Pisano, 1989).

In choosing the governance mode, the above mentioned benefits must be superior to additional costs supported by the partners of equity relationships. Thus, we have to consider the following (M.G.Colombo, 1998, p.6):

- the costs of negotiating and drafting an agreement contain the costs of establishing and managing the new firm and gradual adjustments of parent firms' organizational structures.
- the equity agreements has usually high exit costs in case of transaction-specific resources that determine sunk costs in case of break up.
- the equity agreements are harder to manage and may reduce the firm capacity of reacting to unpredictable environment determinants.

According to the above discussion, TCE literature claims that joint ventures are superior to contractual agreements when are accomplished the following conditions (M.G.Colombo, 1998, p.6):

- in order to keep safe the relations between firms under uncertainty, the transaction needs high transaction-specific investments (Pisano, 1989, p. 110); if it is not possible to draft and enforce a complete contract under such circumstances, joint venture is needed for discouraging the opportunistic behavior;
- it is difficult to monitor the partners' behavior.

5. Transaction assessment griddle - a new instrument for choosing strategies

According to Williamson, there is no superior or universal governance mode. The main conclusion of TCE is that there is a place for every alternative, but each of them must stay at its place (Cabin Ph., 1999).

Starting from above statement and from the determinants of transaction costs (figure 1), we propose a ***transaction assessment griddle*** of which purpose is to identify the best alternative for a transaction so that after a numerical computation of transaction we can place it in one of the three areas (corresponding to the three governance modes proposed by O.E. Williamson): hierarchy (vertical integration), hybrid relationships (strategic alliances) or market.

The transaction assessment griddle (table 2) contains 24 items that characterize the transaction. The first ten items are general features of transaction, manager or other factors that can influence the transaction. The rest of the items refer to features of transaction in case of its externalization. Once the manager has passed the griddle he gets a result between 0 and 2 and according to this result he is able to choose the governance mode for the transaction depending on this result.

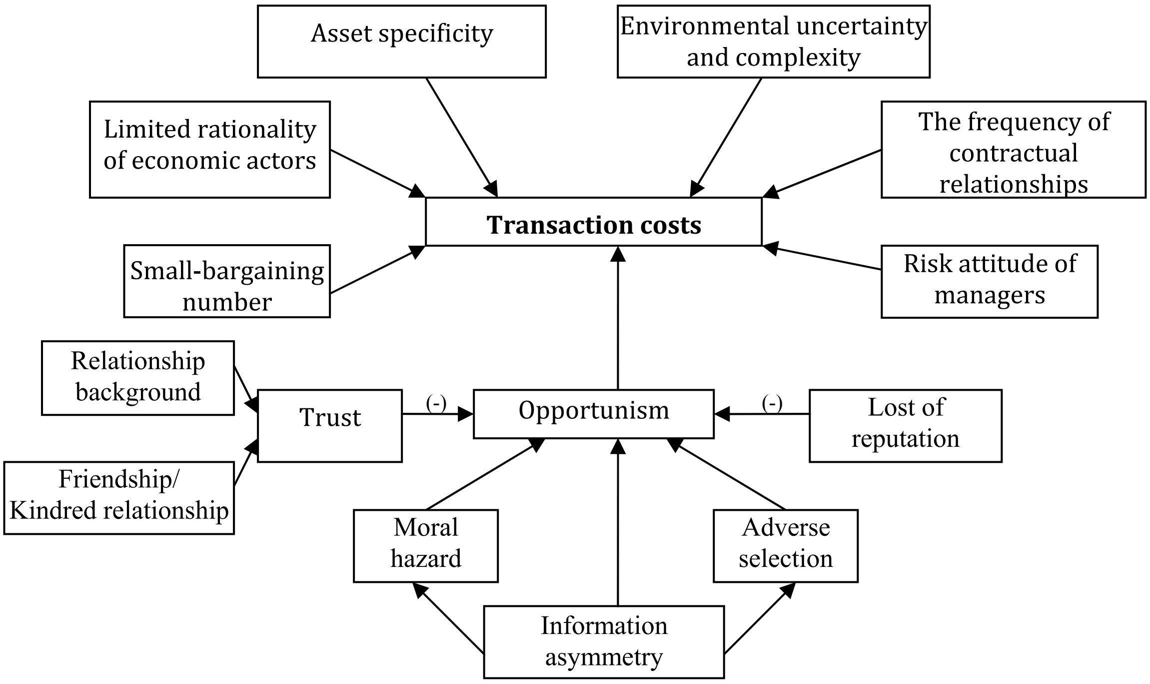

Figure 1 The determinants of transaction costs

Assessment instructions:

The manager will rate every item as follow:

- 2 points for an affirmative answer ("yes")
- 1 point for neither affirmative nor negative answer (neither "yes" nor "no")
- 0 points for negative answer ("no")

Considering that not all the aspects have the same relevance for choosing the governance mode, it is necessary to confer a weight of importance to each item $(0 \le k_i \le 1)$. As more as k_i is closer to 0, the analysis item is less important; and vice versa, as more as k_i is closer to 1, the analysis item is more important.

In order to calculate this assessment index we can use the following formula (weighted average):

$$I_T = \frac{\sum_{i=1}^{n}(k_i.P_i)}{\sum_{i=1}^{n}k_i}, \text{ where:}$$

k_i - the weight of importance assigned to i item of transaction analysis;

P_i - the item's result/points assigned (0,1 or2);

n - number of items

The obtained assessment index can have values between [0-2]. The manager decides if the transaction will be coordinated by hierarchy, hybrid relationships or market as following:

- If the index is placed in the point pair [0-0,75], the transaction will be coordinated by market;
- If the index is placed in the point pair (0,75-1,25), the transaction will be coordinated by hybrid relationships;
- If the index is placed in the point pair [1,25-2], the transaction will be coordinated by hierarchy.

Table 2 Transaction assessment griddle

The transaction features	**Weight of importance**	**Points assigned***
The transaction environment is characterized by high uncertainty.		
You are a manager that avoids risk (doesn't like risk).		
The searching of a business partner for this transaction needs a lot of time and financial efforts.		
In order to evolve efficiently this transaction high-specific investment (that can't be used other way) are necessary.		
This transaction needs specialized personnel (with transaction-specific competences or knowledge).		
The value of the investment is high.		

The transaction features	Weight of importance	Points assigned*
The assets' placement (space nearness) is very important for this transaction		
The risk of transaction cannot be covered by contractual or non-contractual ways.		
Transaction features by high frequency		
The firm has competences for such transaction		
The negotiation need more bargaining rounds		
It is difficult to get an agreement with the partner in case of negotiation		
The conceiving and the drafting of the agreement in case of this transaction need high efforts.		
The monitoring of this transaction (collecting and transmitting information) is difficult to accomplish (with high expenses)		
The partner behavior must be monitored closely because he has a tendency to cheat		
It is difficult to unforeseen all future contingencies for this transaction (for example, the change of consumer preferences, technological innovation)		
It is possible that the partner to overestimate his own abilities so he cannot keep his promises		
It is possible that partner to abort the deal (because of new opportunities or of changing the preferences) even he started with good intentions.		
It is possible that the partner to promise he will behave in a certain way in future without intending to keep his promise		
Even the partner will behave opportunistically he wouldn't lose his future reputation		
You have never had business relationships with this potential partner		
You have no kindred relationships with this potential partner		
The partner cannot be easily replaced in case of unexpected ending of contractual agreement		
The number of potential suppliers/clients is low.		

**according to assessment instructions*

6. Conclusions

Even it was mostly criticized Transaction Cost Economics has an important role in choosing the firm strategy based on a transaction costs analysis. Transaction costs condition the choice of a growth strategy. The firm management must determine precisely the determinants of transaction costs because they can develop and make inefficient the initial choice. The choice must be made depending on environmental uncertainty, the transaction frequency, the asset specificity degree, and also the limited rationality of the economic agents and their tendency to opportunism. The transaction assessment griddle that we proposed wants to be a useful instrument for manager when he makes his option for the most efficient governance mode for a transaction.

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