TRANSACTION COST ECONOMICS

The firm is an institution within which transactions between individuals take place, as alternative to transactions that take place in a market

Why should a firm have advantages or disadvantages relative to any other marketplace?

Differences between:

- A transaction in the firm and
- The same transaction in the market

Coase: when undertaking a transaction, parties to the transaction must incur several kinds of costs

these costs differ:

- by the nature of the transaction itself and
- by the way it is organized

it is suitable to adopt the institution that minimizes these transaction costs

MC(transaction inside the firm)= MC (same transaction in the market)

Williamson O. (1985) “ The Economic Institutions of Capitalism”, New York, Free Press

The costs that parties involved in a transaction incur may be ex ante and ex post costs:

- *ex ante costs* are incurred before the transaction takes place. If, for instance, the transaction must be governed by a written contract, the contract must be drafted and the terms of the transaction must be negotiated
- *ex post costs* are incurred to achieve and safeguard the deal ex ante drafted

In some circumstances these costs are very small, but in many other cases they are very large.

And transactions can be arranged in different ways:

- making use of different legal or social institutions;
- providing more or less details in the contract;
- so on

Transactions tend to be placed in a way that maximizes the net benefits they provide, including the costs of transaction

Factors that give rise to the costs of transaction:

- HUMAN FACTORS
- FACTORS SPECIFIC TO THE PARTICULAR TRANSACTION

HUMAN FACTORS:

Human beings are

- Boundedly rational and
- Opportunistic

Bounded rationality

It will be costly for individuals to contemplate and hence to contract for <u>every contingency</u> that might arise over the course of the transaction

- → increase the ex-ante costs of drafting the contract
- These ex ante costs may be so high that the individuals might fail to contemplate all the contingencies in drafting the contract.
- And there might be contingencies that individuals cannot foresee at all
- Obviously, the contingencies that are not foreseen or considered ex-ante imply increases in ex-post costs too

Opportunism

individuals are:

- Self-interested and
- Astute

To distinguish simple self-interest from opportunism, think of a completely honest individual who would never break her word or would never lie about what she knows BUT who also seeks to maximize her own welfare

- It is opportunistic to refuse to give information that you hold and another lacks when the other person asks you to give up that information

QUALITIES OF TRANSACTION

It is the conjunction of the human factors and various aspects of the specific transaction that lead to significant transaction costs

3 aspects or qualities of the transactions, that can influence their costs:

- Asset specificity;
- Extent of uncertainty;
- Frequency

1. Asset Specificity

A transaction has high levels of asset specificity if, during the trade process, one side, or the other, or both become more tied to and in the power of the other side

Example 1:

A company that makes glass bottles and locates a plant near to a bottler

- Note that in ex-ante negotiation, if the bottler doesn’t like the deal (agreement) that the specific bottle maker proposes, she can turn to many other bottler manufacturers, and the reverse is true.
- BUT, ONCE THE bottle maker puts his plant next to the bottler and the bottler puts her bottling lines near to the bottle maker plant, EACH SIDE HAS SPECIFIC ASSETS AT RISK

Now each side has a degree of monopoly power against the other and opportunism has scope to operate

The bottle maker might decide to expend resources to negotiate a more rigid contract **ex ante** and to enforce that contract **ex post**

Example 2:

n economic agents

1 buyer and

n-1 sellers

Buyer gets utility by a commodity that requires specific machinery for its production (that can't be used in alternative productions) (e.g. buyer is an automotive company and sellers are firms producing car head lights)

The buyer chooses among the n-1 sellers.

Before negotiation →competition among sellers

After the negotiation between the buyer and one of the sellers → the seller invest in the specific machinery (invests in specific assets):

- The seller has to accept eventual changes in the agreement imposed by the buyer
- The buyer depends on the seller for a quick delivery of the lights and, hence, has to accept the eventual new conditions imposed by the seller

- Both the sides have invested in specific assets for this transaction and each side has specific assets at risk
- Now each side has a degree of monopoly power against the other and opportunism has scope to operate

Each side, predicting these possibilities, might decide to expend resources to negotiate a more rigid contract ex ante and to enforce that contract ex post

OPPORTUNISM+ASSET SPECIFICITY => higher ex-ante and ex-post costs

2. Extent of uncertainty in the transaction

About the contingencies that will prevail during the transaction.

This goes hand in hand with bounded rationality.

Uncertainty + bounded rationality → very costly to define what to do in every contingency, so that the deal is usually less precise than it ought to be.

Or…it is very costly to draft!
In fact, to insure the sides, the deal might become more complex, in the attempt to specify duties, rules, and procedures (if part A won't do that, part B will do this and that….)

3. Frequency of the transaction

This quality doesn’t influence the absolute magnitude of the transaction costs, but rather the relative costs of various means for dealing with transaction.

Transactions between two parties that are one-time-only or that recur only infrequently →it is less costly to make use of a “general purpose” governance structure

transactions between two parties that recur frequently → the two parties can construct special governance structures for that transaction, even if these special structures are costly, since the cost of the structure can be amortized over many transactions

Moreover the frequency of the transaction between the same two parties → reciprocity mechanism may occur, without any formal governance that grants the execution of the contract

CLASSIFYING TRANSACTIONS BY THE TERMS OF GOVERNANCE

Terms of governance: the way in which the terms of the transaction are adapted to contingencies when they arise.

The terms of governance may be explicitly and rigidly specified within a contract that governs a transaction

Or the terms of governance can be implicit, arising from common practice and law

Williamson proposes the following classification scheme of transactions on the basis of the terms of governance:

(i) Transactions within the framework of ***classical contracting*** are those in which the terms of the transaction are **completely** specified ex-ante.

This category includes the classical exchange of oranges for apples, but even more complex contract, whose peculiarity is that adaptation beyond the explicit terms of the contract is not expected

e.g. a complex purchase and sale agreement for a building (Party A receives payment x if party B fails to perform in such and such manner)

Anytime a contingency of nonperformance occurs, the terms of governance of this contingency are provided ex-ante in the classical contract.

Enforcement of the contract remains a problem

In case of dispute, one can rely upon third parties, legally authorized, with very little discretion, as a notary or the civil justice

ii. As third parties, who act with discretion are added, we move into the realm of the

Neoclassical contracting or Trilateral relationship

Contracts for this category of transactions no longer say what sorts of adaptation will be made in various contingencies, BUT instead prescribe a third party who will determine appropriate adaptation, according to some specified procedures. E.g. arbitration

iii. When the parties to the transaction have NO formal agreement about how the contents of the agreement will be adapted to contingencies, BUT instead rely upon their own ability to work things out as they evolve, we move into the realm of the

Bilateral relationship

A particular kind of bilateral transaction deserves special attention, which constitutes the fourth category of transactions

iv. ***Hierarchical transaction:*** One of two parties retains, by law or by costume, (e.g. father and son) most of the authority to determine how the contract will be fulfilled.

The second party will retain some explicit rights, such as to abrogate the contract, perhaps at some specific cost, and some rights are implicitly retained under law.

Anyway, inside these limits, the first party (***hierarchical superior***) determines how the transaction will proceed.

Chief example: labor contract.

v. When one party to the transaction takes command of the assets of the other party, internalizing the transaction we move into the realm of the ***unified governance structure.***

ownership implies control

What sort of governance structure minimizes the transaction costs in specific instances?

Scheme, in which transaction are classified according to:

- The asset specificity of the transaction:
  - Non-specific
  - Intermediate specificity
  - High specificity
- The frequency of the transaction:
  - Occasional (rare)
  - Frequent

I. If assets are **non-specific** there is no need for any complex governance structure.

If the asset is non-specific, competition from the marketplace (the case of many bottle makers or many sellers of the examples above) prevents either individual from taking advantage of the other.

And this is true independently from the frequency of the transaction.

→ a classical contracting can work well!!

II. When assets are moderately specific to the transaction, **relational contracting** are necessary

trilateral, bilateral and hierarchical, depending on the frequency of the transaction.

- If the transaction between the two parties is repeated between the same two parties <u>frequently</u> → a **bilateral relationship** can fit!

- If one party of the two engages in this medium specific asset transaction frequently and the second party engages in the same transaction less frequently → a **hierarchical structure** can work better, that gives most of the discretion to the first party
- When the frequency of the transaction for either of the two parties decreases, bilateral contracting are less suitable, and becomes necessary to appeal to a third party, who can act in an adjudicatory role → a **trilateral relationship** is necessary

III. When assets are highly specific to the transaction, the costs of relational contracting rise.

Each party has more at risk and wants more complex and rigorous and <u>expensive</u> clauses ex-ante and more careful and <u>expensive</u> monitoring and enforcement activity ex post!

→ **Unified governance structure,** where one party buys the assets of the other party and takes full control and responsibility for the transaction

- A firm corresponds to a unified governance structure
- Is the firm an entity similar to the market?

EXAMPLE

2 parties: party A

Party B

Who wish to undertake a transaction, an exchange.

Assume that:

- Party A has got and will supply expertise concerning the <u>design</u> of some product
- Party B has got and will supply the expertize in <u>manufacturing</u> that product

This transaction requires some tools:

- Computers to aid in the design
- Robots and industrial lathes to produce the product

We can assume that:

(1)

- A owns the computers
- B owns the robots and the industrial lathes

In this case, the exchange between the two parties is a **market-mediated exchange**

In which:

- Either B buys the project design from A, to manufacture the product (e.g. A is an independent industrial design), that B will sell to the consumers
- Or A buys from B finished pieces produced according to the project given to B by A (B is a subcontractor). In this case A will sell the finished product to the consumers

In both cases the exchange of product design, or finished pieces for money is a market- mediated transaction

(2)

Alternatively we can assume that:

- A owns the computers, the robots and the industrial lathes

  => She controls all the assets → she controls a firm

  which employs B for his labor services.

In this case the exchange of labor services for money is a **firm-mediated transaction**

- In the first case (market- mediated transaction) each party owns and controls her own assets

- In the second case (firm- mediated transaction) A controls all the assets.

  → UNIFIED GOVERNANCE STRUCTURE

- Why not use ALWAYS unified governance structure?

- What are the relative inefficiencies of the unified governance structure?

Differences between:

- ***High-powered*** market incentives
- ***Low-powered*** internal incentives

- In market- mediated transaction :

  B has strong incentives:

  - to produce efficiently
  - to care for his robots and lathes

- Instead, when A controls all the assets and hence in a firm- mediated transaction, these incentives are less strong.

A is unable to internalize these strong incentives in the employment contract she proposes to B.

- It is difficult for A monitoring the effort of B
- She can offer B a piecework contract, that gives B strong incentives to increase his effort in production,

BUT

- very weak incentives to care for robots and lathes that now are owned by A

- The elaboration of an incentive structure is costly.
- So, when considering the more suitable governance structure for a transaction, we have to consider, among the transaction costs, also the costs connected to an incentive scheme.
- That’s why the unified governance structure is not always the more efficient governance structure
- And the firm can’t be considered perfect substitute to the market

EMPIRICAL ANALYSIS

cross-section studies

probit/logit models

- dependent variable = decision of vertical integration (unified governance structure)
- independent variables = measures of asset specificity

Measures of asset specificity:

1) <u>specificity of physical assets</u>. Often measured as subjective perceptions through direct interviews to firms. We would expect more integration, as this measure of specificity increases

2) <u>specificity of human capital.</u> Measured through indicators of specific skills required to workers. The more the skills required the more vertical integration there should be .

3) dedicated assets. Measured as the portion of output of the seller dedicated to just one buyer. The more the portion, the more vertical integration there should be.

4) site specificity. That is the more the geographical proximity between seller and buyer, the more vertical integration there should be.

- What emerges is that vertical integration is found also when those different kinds of specificity don’t work!
- Empirical evidence of transaction cost economics is not so robust!