

# BSM906

# Economic Environment of Business

Lecture 5  
Transactions cost

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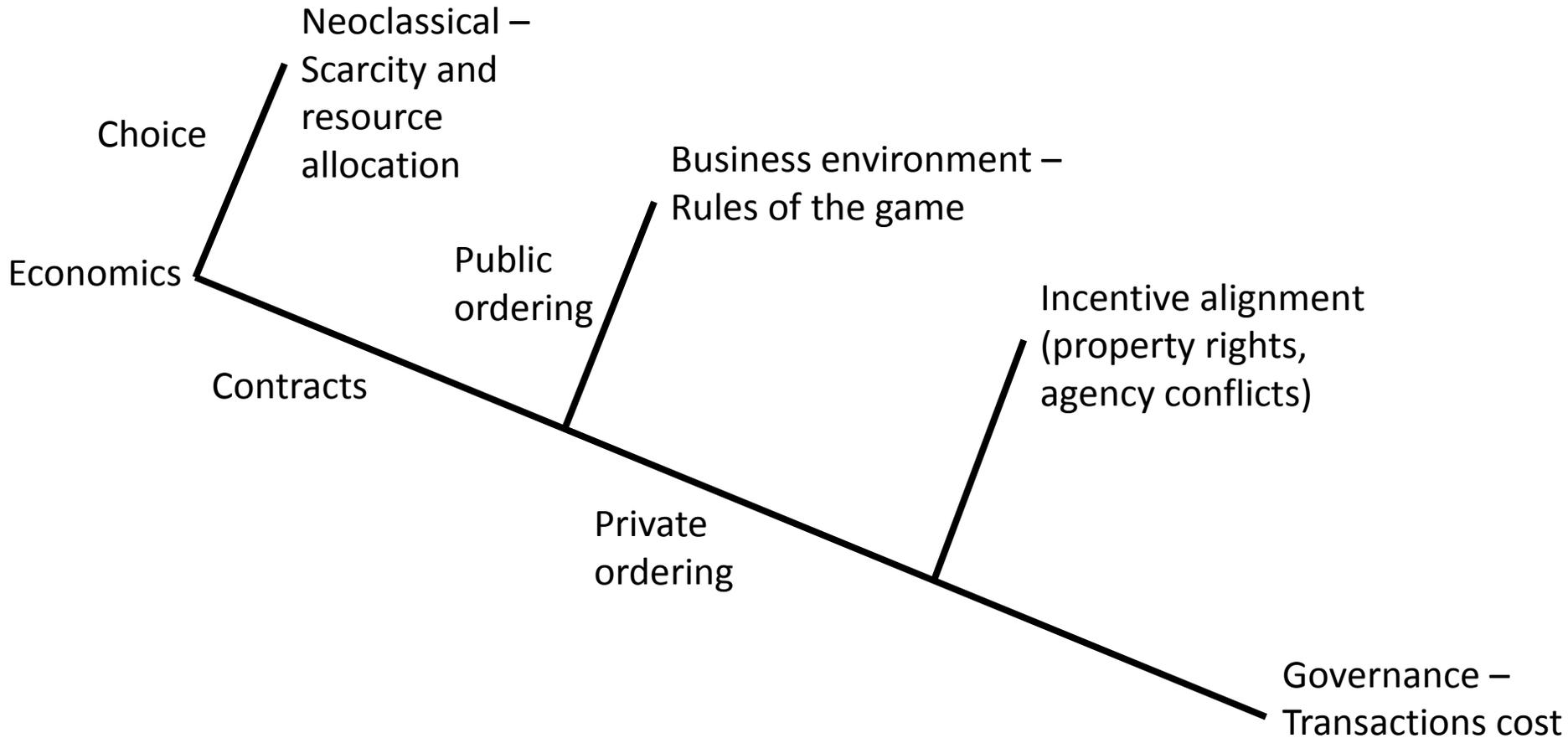
# Problems with contracts

## What have we learnt so far?

- Property rights
  - Are property rights well defined?
  - Can these rights be enforced easily, at a low cost?
  - Can hold up problems be resolved using unilateral, bilateral or multilateral mechanisms?
- Information asymmetry
  - Can one identify the *type* (i.e., “good” or “bad”) of the counterparty with which (s)he is entering into a contract? (Adverse selection)
  - Can one easily decide whether the counterparty is acting in good faith after they enter into a contract? (Moral hazard)

# Recap

## Economic environment and the firm



# Transactions cost economics (TCE)

## Rudiments

### Fundamental question

**Why do firms exist?** In other words, why do we rely on the market to procure certain goods (*outsourcing*) and produce some other components of the product internally (*vertical integration*)?

- Bounded rationality
  - All contracts are incomplete
- Counterparties are opportunistic
  - All contracts have a *governance cost*
- Asset specificity
  - When an asset has a very specific use, i.e., it does not have too many alternative uses
- Property rights insufficient to guarantee desired outcome

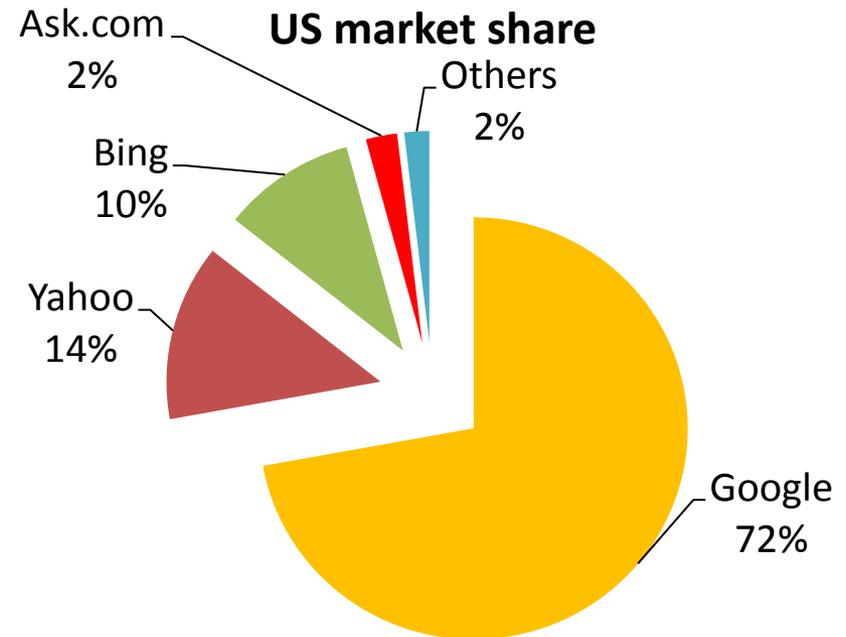
# Understanding bounded rationality

## What about Microsoft's internet strategy?

From where do Americans get their news?

- 78 percent from local TV stations
- 73 percent from national TV stations
- **61 percent online**
- 54 percent from radio news programme
- 50 percent from local newspapers
- 17 percent from national newspapers

Source: <http://pewinternet.org/Reports/2010/Online-News.aspx>



Source: <http://www.pcmag.com/article2/0,2817,2370521,00.asp>

# Asset specificity

## Applied to labour contracts

|        |                      | Human assets   |                     |
|--------|----------------------|----------------|---------------------|
|        |                      | Non-specific   | Highly specific     |
| Output | Easily observed      | Spot market    | Obligational market |
|        | Difficult to observe | Primitive team | Relational team     |

### Examples:

|                             |   |
|-----------------------------|---|
| <i>Spot contract:</i>       | Retail fast food outlet                     |
| <i>Obligational market:</i> | University teaching                         |
| <i>Primitive team:</i>      | Teams of two working for moving companies   |
| <i>Relational team:</i>     | Legal teams associated with solicitor firms |

# Boundary of a firm

## Outsourcing vs. vertical integration

“Outsourcing has been prospering since the 90s for various reasons such as cost reduction, focus on core competencies and a long list of others. But if you have been following the news lately, it is hard to overlook the shift to ‘vertical integration’ by a number of leading companies such as Oracle, Apple, Arcelor Mittal, GM, Boeing, Pepsi, Tata to name a few. Oracle has been on a spending spree over the last few years by acquiring just about any maker of software, computers, and computer components. The intent is to sell ‘complete systems’ made of chips, computers, storage devices and software from Oracle.

Apple which exited the semiconductor business recently shifted its strategy by silently grabbing small semiconductors suppliers so it can develop its own chips to meet its popular new devices.

General Motors, despite its struggle, is also moving towards a lean vertical integration model by grabbing a number of struggling suppliers (e.g. Delphi) and purchasing factories. Pepsi and Boeing are also following the same albeit for different reasons.

The trend towards vertical integration is driven by many reasons such as more control over raw materials (e.g. Arcelor), more control over parts supply (GM, Boeing), more control over beverage distribution (Pepsi), and strategic differentiation (Oracle, Apple).”

Source: <http://blog.wipro.com/blog/2010/07/19/the-re-rise-of-vertical-integration-mega-or-dead-supply-chains/>

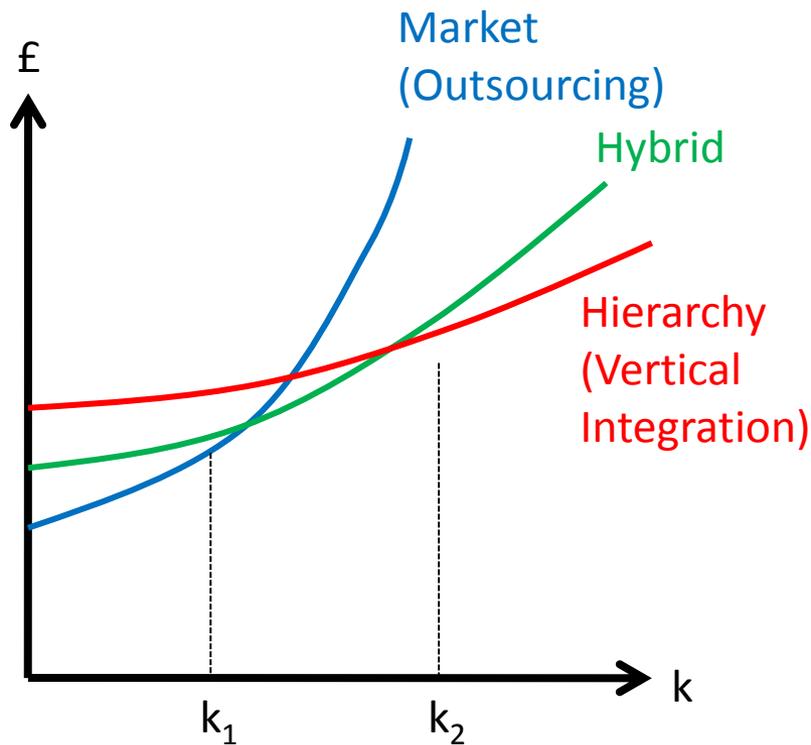
# Outsourcing vs. vertical integration

## Background

- Markets have advantages when assets are non-specific
  - Market has lower production cost (economies of scale)
  - Market has the ability to pool risk
- The benefits associated with these are reduced when assets become more specific
- Firms have advantages in managing bilateral exchange
  - Common ownership reduces incentive to suboptimize
  - Low cost arbitration to resolve differences
  - Greater access to information to resolve contractual disputes

# Outsourcing vs. vertical integration

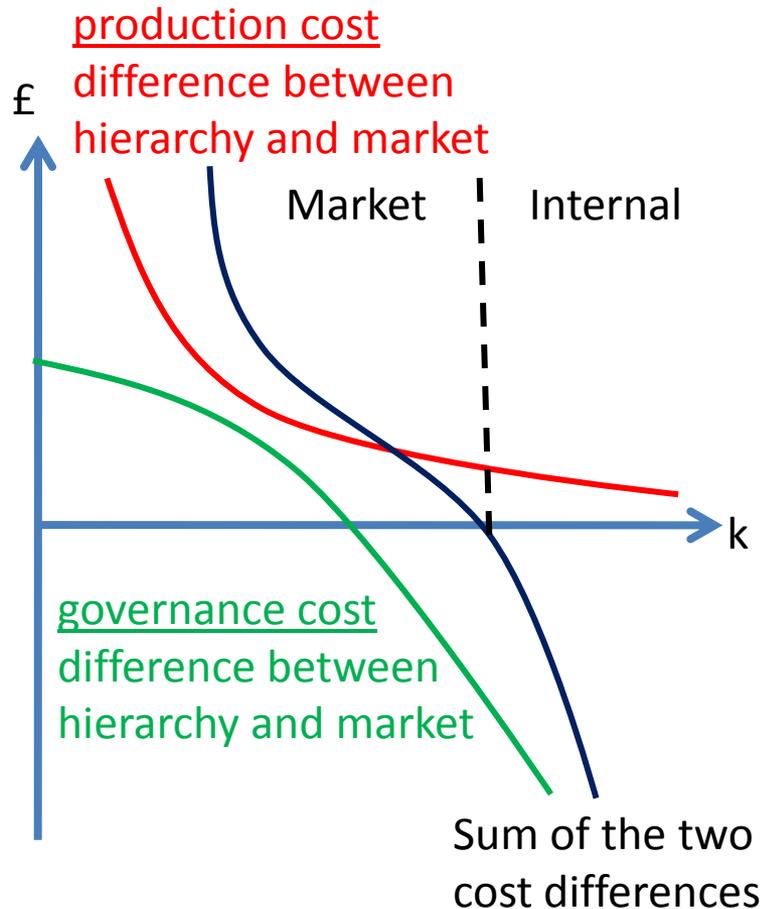
## Role of governance costs



- Lines capture governance cost of alternative organisational forms
- Slopes of the lines capture differential ability of these organisational forms to implement “coordinated adaptation”
- Optimal organisational forms:
  - 0 to  $k_1$ : Market
  - $k_1$  to  $k_2$ : Hybrid
  - Beyond  $k_2$ : Hierarchy

# Outsourcing vs. vertical integration

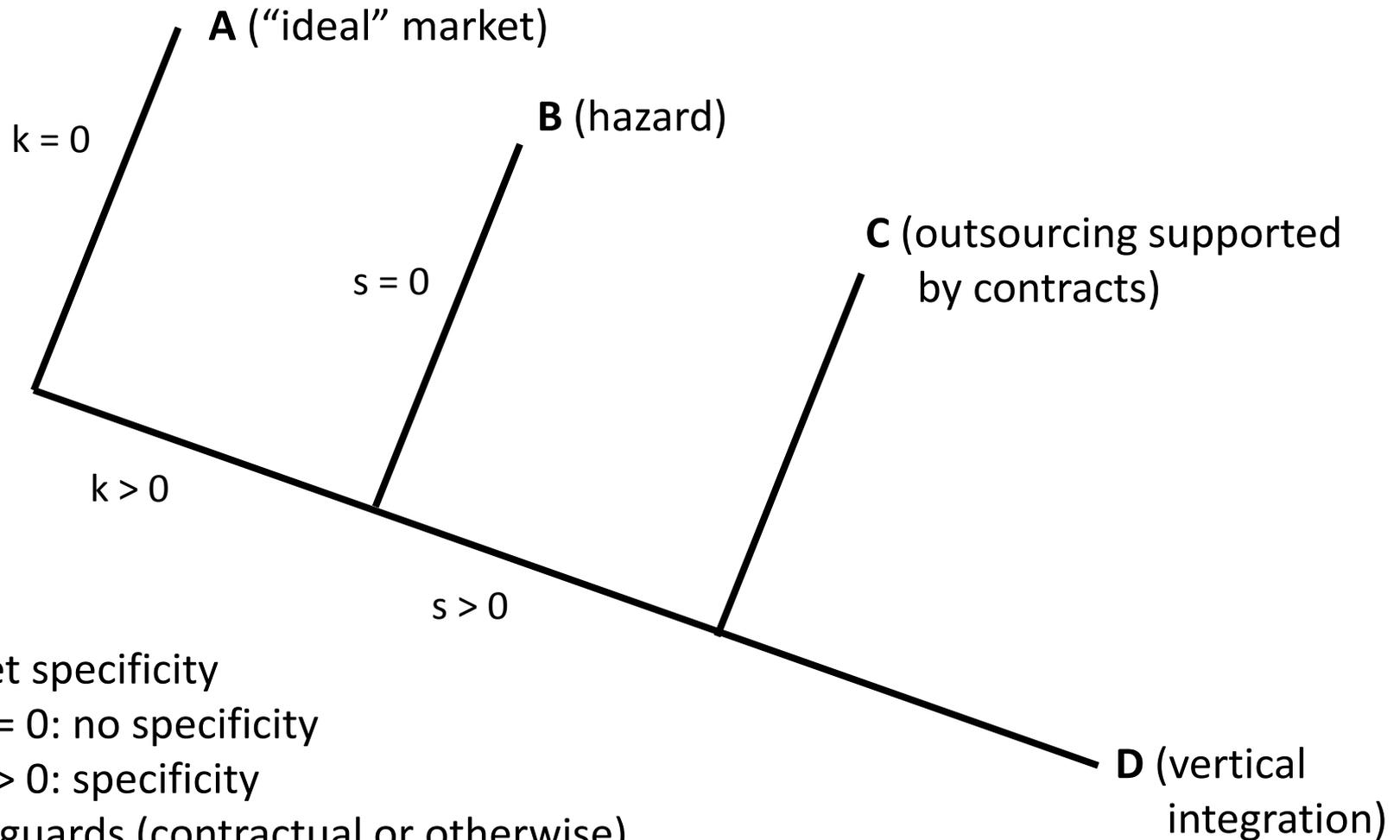
## Production and governance costs



- When asset specificity ( $k$ ) is low, governance cost within a hierarchy is higher (i.e., cost difference is positive) but this advantage of the market goes away when  $k$  is high enough
- Market always has an advantage with respect to production cost, but this advantage is narrowed significantly as  $k$  becomes large
- The choice between outsourcing and hierarchy is made on the basis of the difference in the sum of production cost and governance cost

# Outsourcing vs. vertical integration

## Decision tree



Asset specificity

$k = 0$ : no specificity

$k > 0$ : specificity

Safeguards (contractual or otherwise)

$s = 0$ : no safeguards

$s > 0$ : safeguards

# Outsourcing vs. vertical integration

## Decision tree – applications

- Labour market
  - A firm cannot “own” labourers, and hence node D is irrelevant
  - When labourers do not require specific skills, the job can be outsourced (call centres)
  - When labourers need specific skills, they are hired by the firm directly, and contracts are drawn up (R&D)
- Financing of firms
  - If a firm’s asset is not specific (e.g., land) it is possible to borrow from the market (i.e., debt), and the firm is in node A
  - As asset specificity increases (e.g., specialised machines), debt contract becomes “hazardous”, and the firm moves to node B
    - On account of this hazard, contracting with creditors costly
  - To overcome hazard, firm creates a security called equity that is a contract between investors and the firm about claims and the quality of corporate governance, and it moves to node C
  - If contracting with equity holders is infeasible, e.g., in the absence of credible commitment about quality of corporate governance, a firm uses internal resources, and moves to node D

# Digression

## A primer on econometrics

- Economic theory makes certain predictions
  - E.g., the structure-conduct-performance hypothesis predicts that market concentration and price-cost margin are positively correlated
- The predictions should be testable; and econometrics provides a set of tools to test these predictions
- Each prediction is treated as a hypothesis, and econometric analysis tells us whether or not we can reject a hypothesis
  - We never “accept” a hypothesis
- When we reject a hypothesis, we prefer to reject it with at least 90 percent confidence

# Other applications of TCE

## Entry mode choice

|                       | Greenfield   | Acquisition | Joint Venture |
|-----------------------|--------------|-------------|---------------|
| Institutional quality | 0.22 (NR)    | 0.13 (96%)  | - 0.34 (NR)   |
| Intangible asset need | - 0.26 (92%) | 0.02 (99%)  | 0.25 (92%)    |
| Tangible asset need   | - 0.22 (91%) | 0.01 (NR)   | 0.22 (91%)    |

*Sample hypothesis:* Institutional quality has no impact on choice of entry mode

*Source:* Meyer, Estrin, Bhaumik and Peng (Strategic Management Journal, 2009)

| Entry mode choice | Costs  |
|-------------------|--|
| Greenfield        | Search cost and cost of negotiating implicit and explicit contracts will suppliers, distributors , bureaucrats, etc. |
| Acquisition       | Cost of renegotiating contracts with existing stakeholders   |
| Joint venture     | Cost of negotiating and enforcing contract with local partner  |

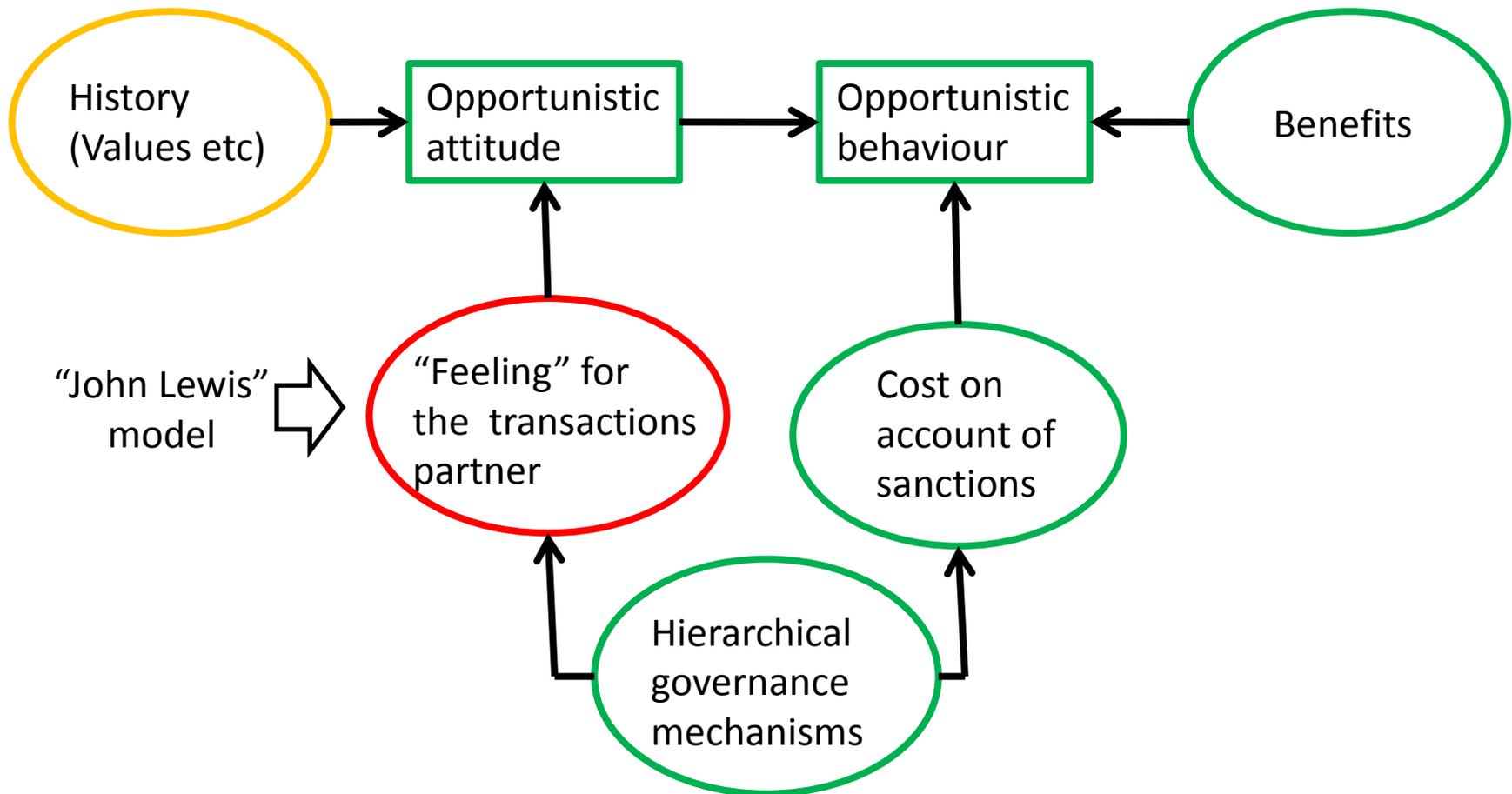
# Transactions cost approach

## Critique

- Opportunistic behaviour lies at the heart of Williamson's transactions cost approach; without it there would be no need for contracts and hierarchies
  - It is not necessary for everyone to have an opportunistic attitude; so long as it is not possible to *ex ante* distinguish between those who have such an attitude and those who do not
- Problem: If opportunistic behaviour is assumed, it is necessarily true that hierarchical control mechanisms would be required to ensure transactions
- Question: What if the attitude that drives opportunistic behaviour changes over time?

# Transactions cost approach

## Making attitudes variable - visualisation



# Transactions cost approach

## Making attitudes variable - implications

- Hierarchy and fiat are introduced to reduce opportunistic behaviour
- A negative feeling about the hierarchy is created; increasing the likelihood and magnitude of opportunistic behaviour (making opportunistic behaviour a self-fulfilling prophecy)
- Further controls have to be introduced, raising governance costs of the organisation
- Eventually costs are too high and transactions cost approach suggests a return to the market
- When would organisations dominate in this paradigm?
  - When uncertainty makes it difficult to identify opportunistic behaviour
  - When it is difficult to establish reputation of transacting parties
  - When short term gains from opportunistic actions are very large