Higher School of Economics
**Center for Institutional Studies**

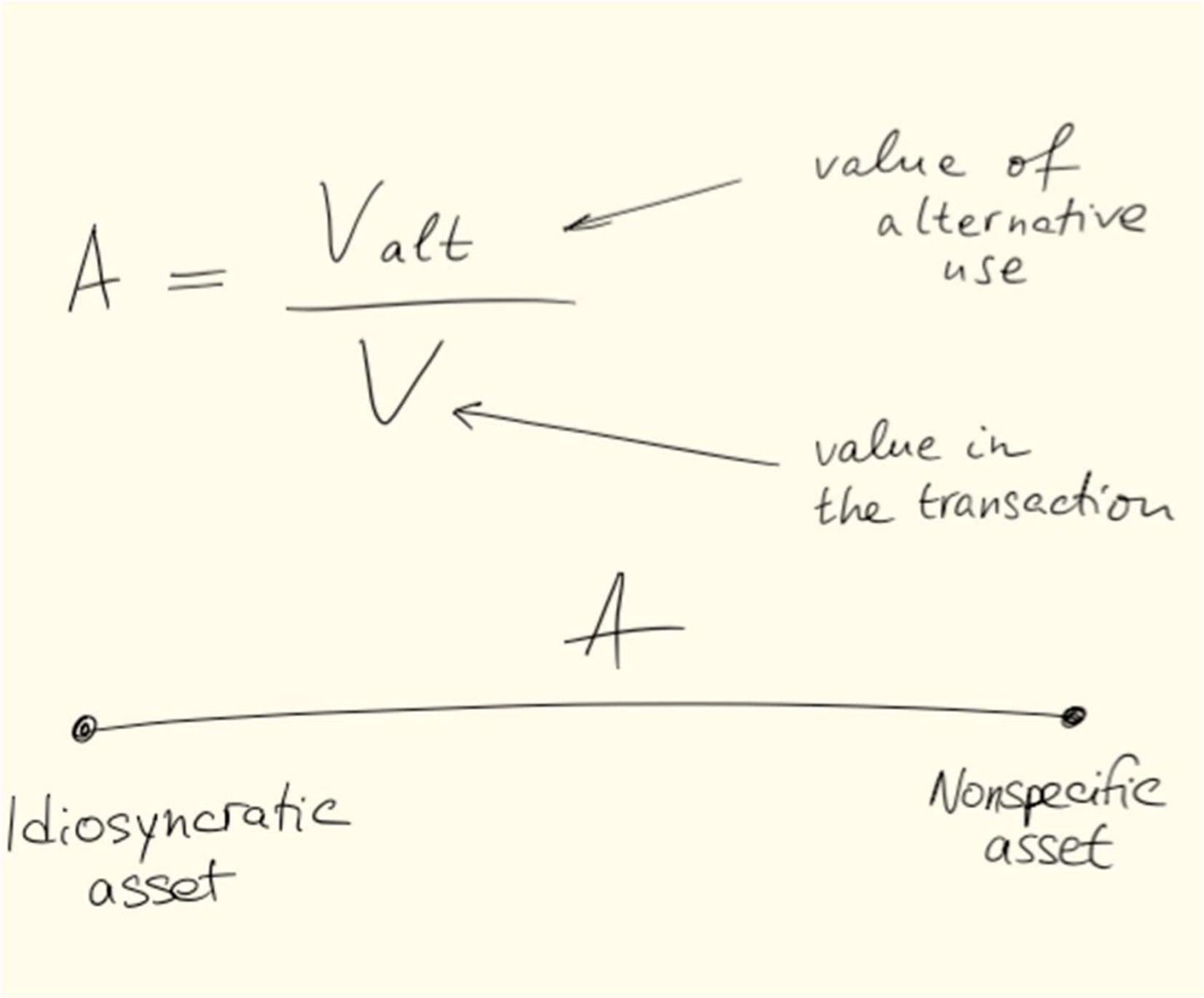
# Lecture 6. Transaction costs and incomplete contracts

# TCE: main ideas

Transaction cost economics studies how trading partners protect themselves from the hazards associated with exchange relationships. (*Joskow, 2002*)

The basic insight of TCE is to recognize that in a world of positive transaction costs, exchange agreements must be governed, and that, contingent on the transactions to be organized, some forms of governance are better than others. (*Marcher and Richman, 2008*)

# Specific investments



# Types of specificity

## Site specificity

Resource available at a certain location and movable at a high cost

- Transaction between railway company and factory
- Investments in railroad constraction

## Physical asset specificuty

Technical characteristics of the good produced for the single purpose

- Transaction between Fisher Body and General Motors
- Investments in production of car bodies for GM

# Types of specificity

## Human capital specificity

Investments in human capital could be either specific or nonspecific

- Transaction between firm and employee
- How can make specific investments in this transaction?

## Dedicated assets

Discrete invesment for particular transaction which are not supported by demand outside this transaction

- Transaction between milk factory and farmer
- Investments in expansion of pastures and increase in the lifestock

# What characteristics of transaction are important?

## Frequency of transaction

- Occasional
- Recurrent

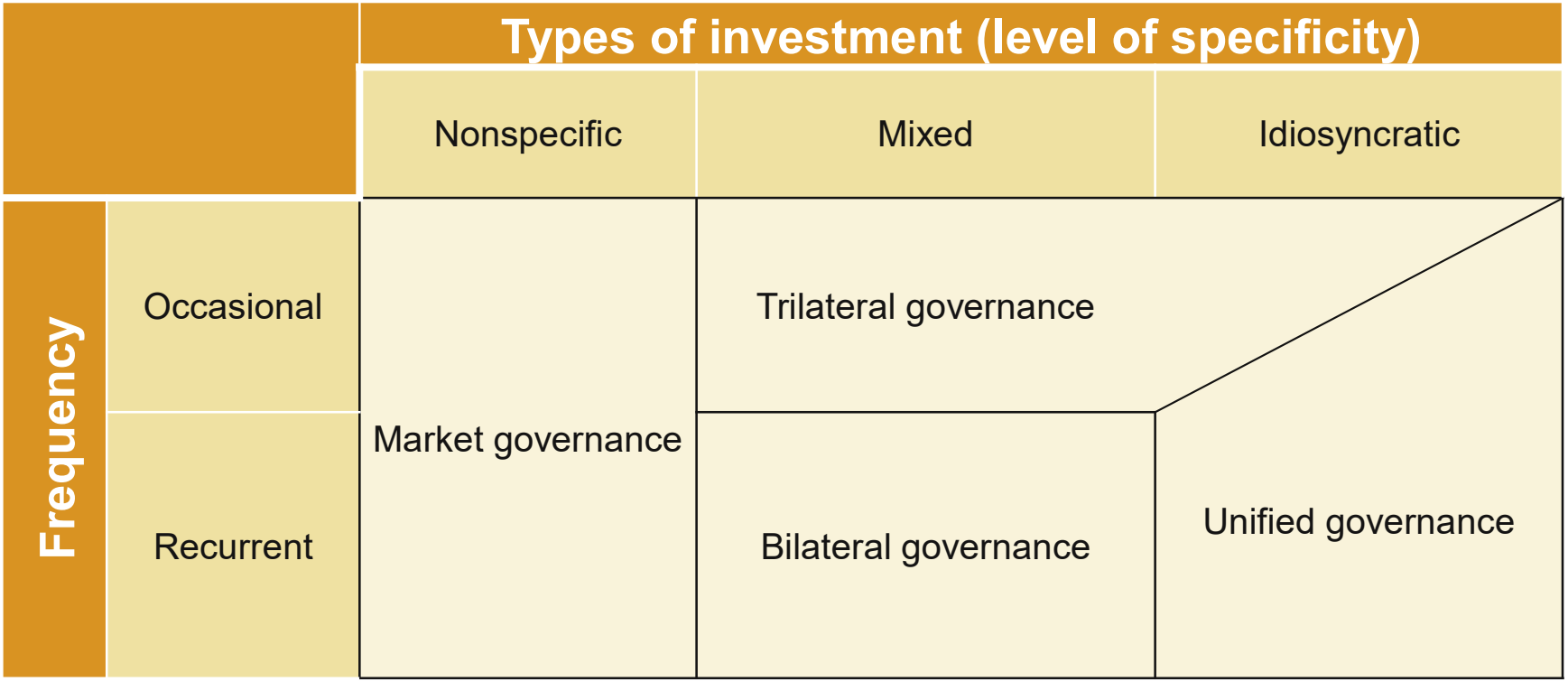
## Specificity of assets

- Nonspecific
- Specific (mixed)
- Idiosyncratic

## Uncertainty

- Behavioral
- Environmental

# Efficient governance



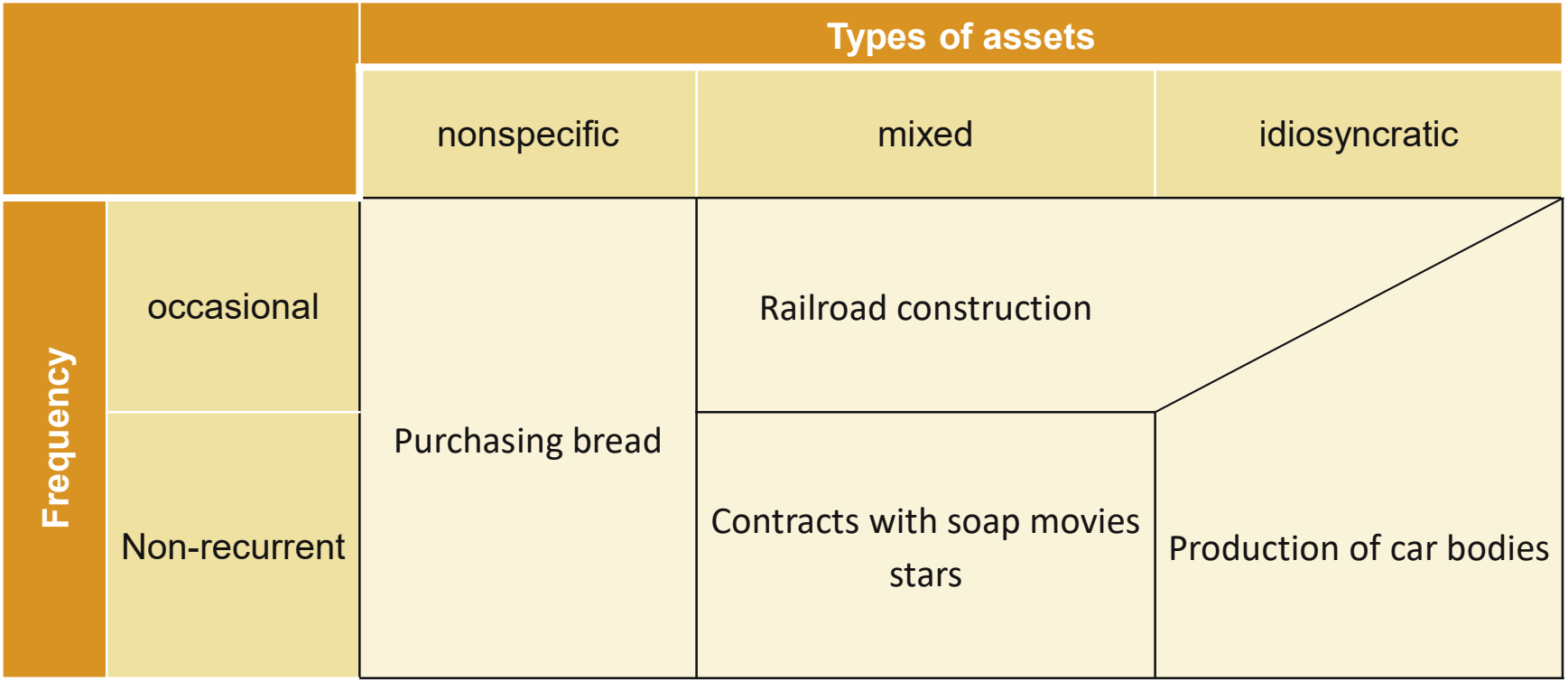
# Fundamental transformation

**Fundamental transformation** – transition from competitive relationships (with large number of providers and side opportunities for choice) that exists ex ante to bilateral governance ex post (as a result of specific investments)

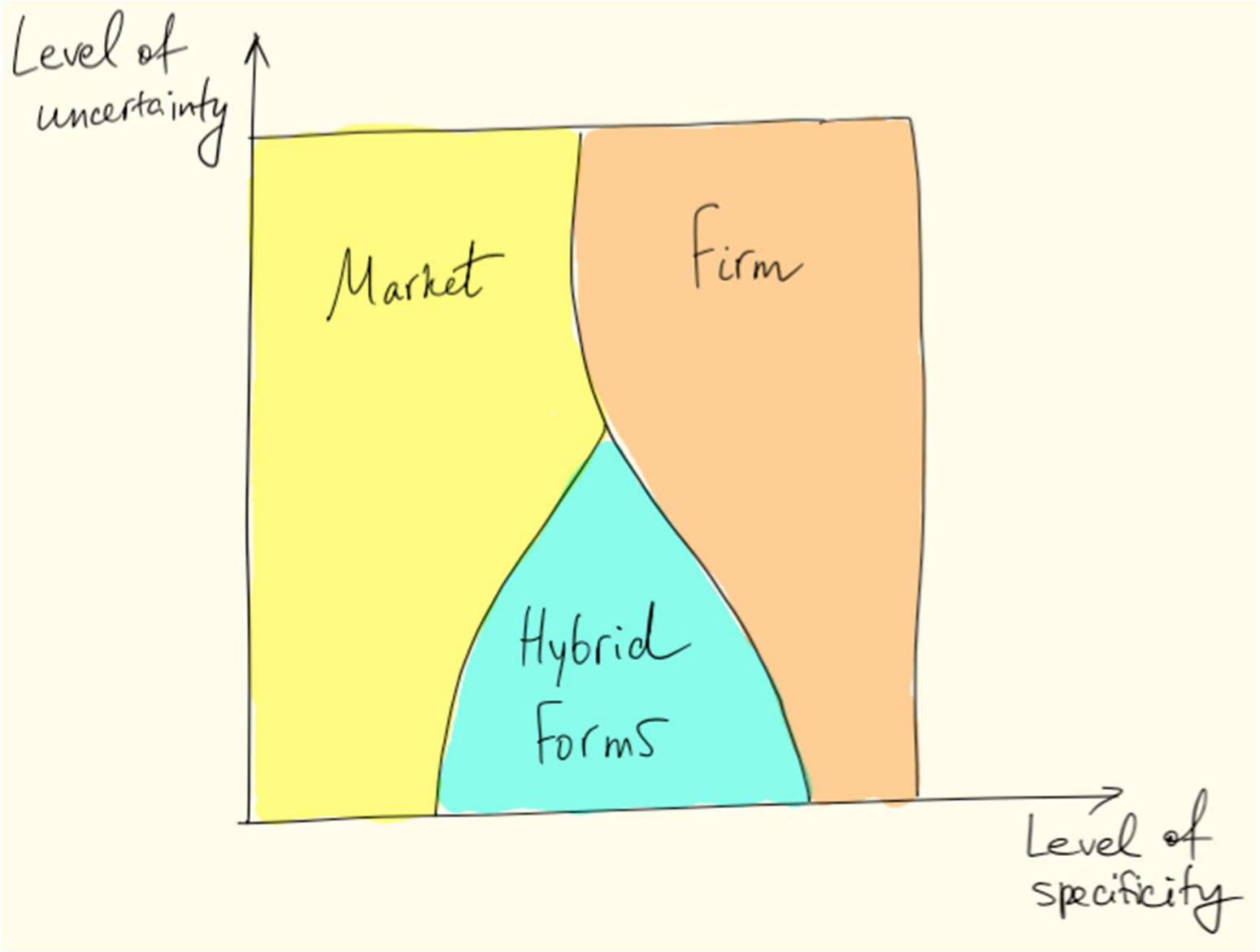
**Examples**:

- Contracts with soap movie stars
- Public transportation (France: provider is chosen via competitive tender, 1995 – 2002 – only 12% of providers were changed)
- IT systems in large corporations

# Efficient governance



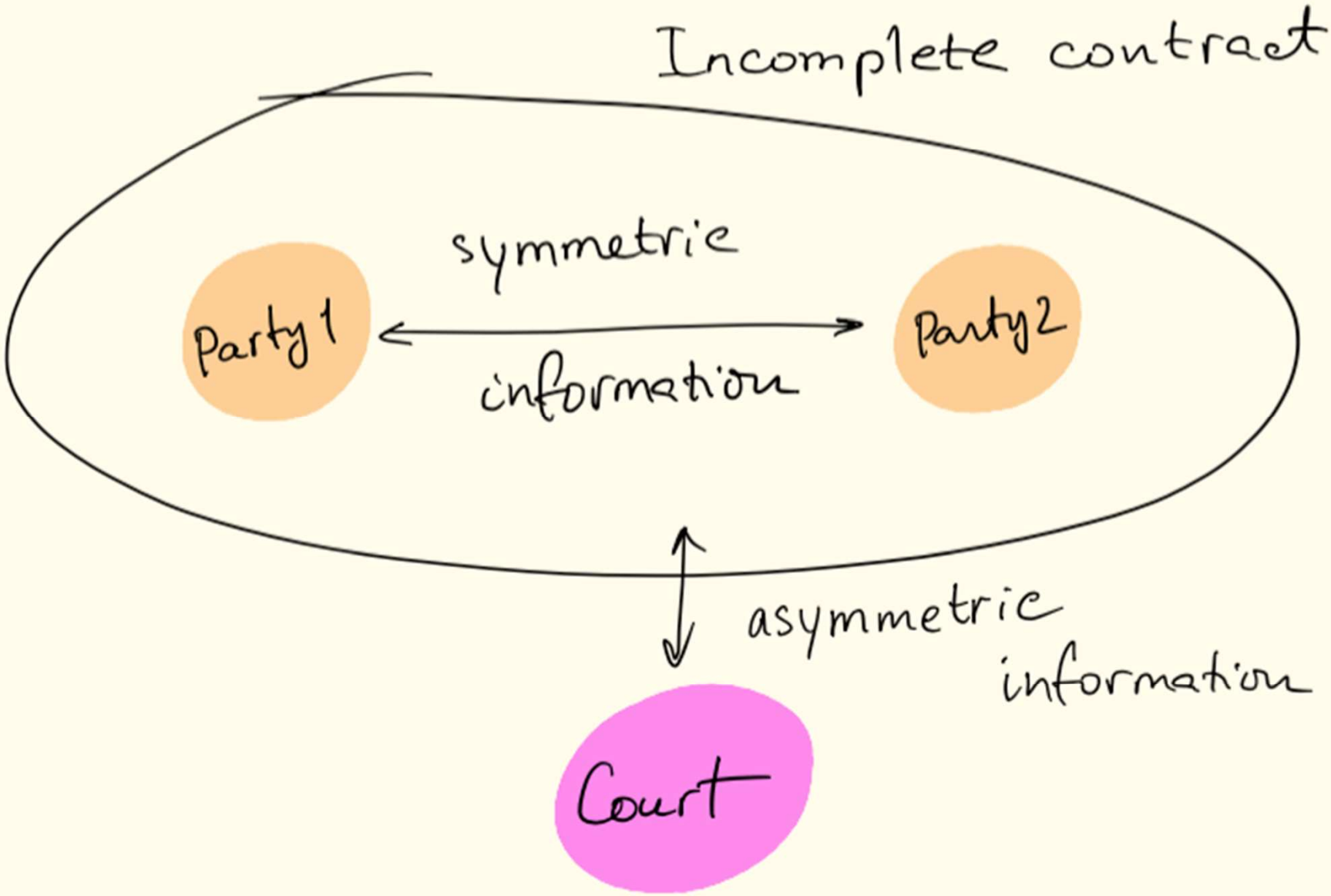
# Incertainty and governance



# Incomplete contracts

## Assumptions

- Perfect rationality
- Symmetry of information between contract parties
- Incomplete nature of contracts / asymmetry of information between contract parties and court/arbitrage system
- Investments in specific assets


Incomplete contract
symmetric
Party 1
Party 2
information
asymmetric
information
Court

# Incomplete contracts: examples

**Firm and employee: investments in human capital**

- When contract is initially signed, bargaining powers are equal
- Firm makes specific investments when pays for the training program
- When conract is under reconsideration, the firm barganing power diminishes
- Hold-up from employee' side is possible

- What are the consequences of potential hold-up?
- How to prevent a hold-up?

# Incomplete contracts: examples

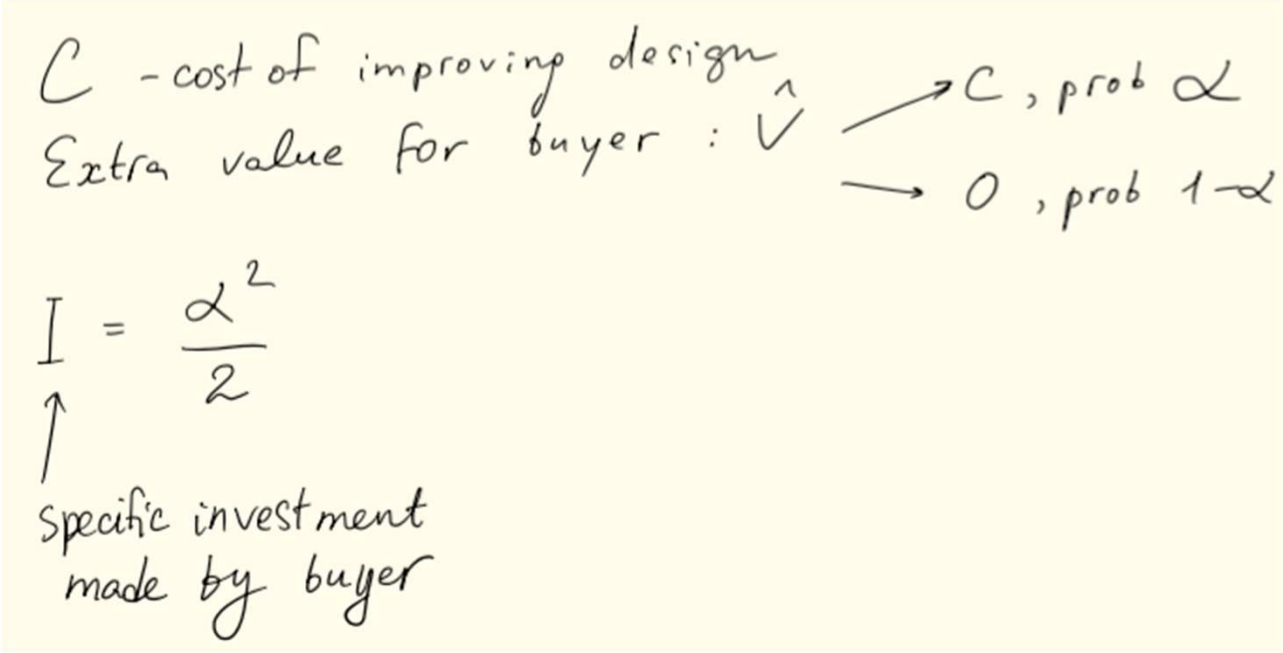
## Consumer and supplier: investments on dedicated assets

- Purchase of supplementary bakery equipment to increase supply of production to commercial network (to be made by bakery)
- At the initial stage bargaining powers are equal
- Bakery makes specific investment
- When contract is reconsidered, bakery has lower bargaining power
- Potential hold-up from commercial network

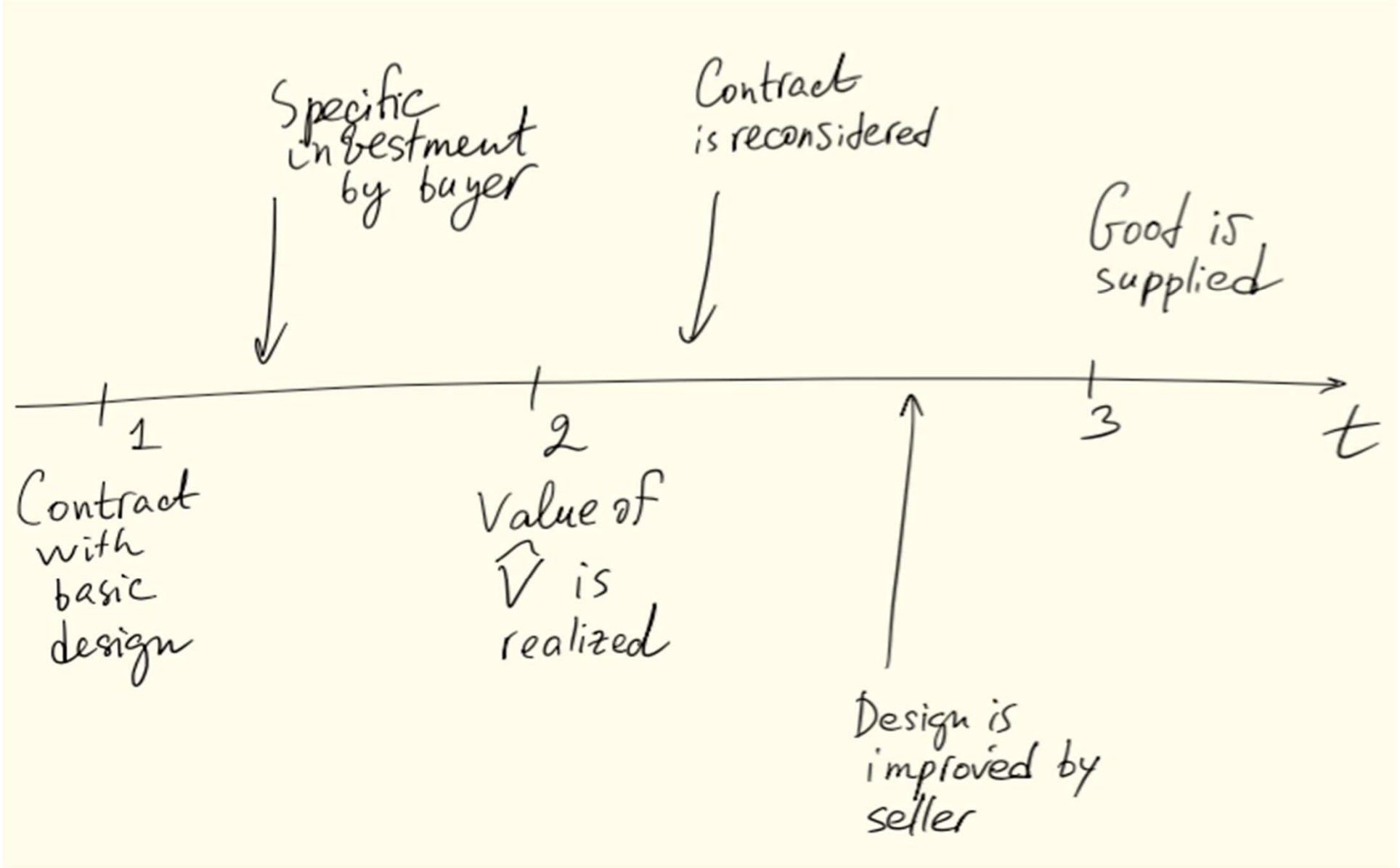
# Grossman-Hart model: assumptions

Buyer and Seller sign a contract for good of basic design
Design can be improved in the future

At what cost?
Is this improvement valuable for buyer?



# Grossman-Hart model: timing



# Grossman-Hart model: optimum

$$\max_{\alpha} E\pi = \alpha(V-C) + (1-\alpha)(0-0) - \frac{\alpha^2}{2}$$

$$F.O.C.: \alpha^* = V-C$$

$$I^* = \frac{(\alpha^*)^2}{2} = \frac{(V-C)^2}{2}$$

$$\max_{\alpha} E\Pi = E\pi^* = \frac{(V-C)^2}{2} > 0$$

# Grossman-Hart model: independent parties

## Both parties can block decision

$$\max_{\alpha} E\pi_B = \frac{1}{2}\alpha\cdot(V-C) - \frac{\alpha^2}{2}$$

↑

buyer maximizes expected extra utility

$$\alpha' = \frac{1}{2}(V-C) \quad , \quad I' = \frac{(V-C)^2}{8} < I^* \leftarrow \text{under-investment}$$

$$E\pi_S' = \frac{(V-C)^2}{4}$$

$$E\pi' = E\pi_B' + E\pi_S' = \frac{3}{8}(V-C)^2 < E\pi^*$$

# Grossman-Hart model: vertical integration

## Buyer decides

$$\max_{\alpha} E\Pi_B = \alpha \cdot V + (1-\alpha)\frac{c}{2} - \frac{\alpha^2}{2}$$

$$F.O.C.: \quad V - \frac{c}{2} = \alpha'' > \alpha^*$$

$$I'' = \frac{(\alpha'')^2}{2} = \frac{\left(V - \frac{c}{2}\right)^2}{2} > I^* \leftarrow \text{overinvestment}$$

$$E\Pi_S'' = -\alpha'' \cdot c - (1-\alpha)\frac{c}{2} < 0$$

$$E\Pi'' = E\Pi_S'' + E\Pi_B'' = \alpha''(V-c) - \frac{(\alpha'')^2}{2} =$$

$$= \frac{1}{2}(V-c)^2 - \frac{1}{8}c^2 < E\Pi^*$$

# Grossman-Hart model

If $V \geq 2C$, then

$E\Pi'' \geq E\Pi'$

# Grossman-Hart model: conclusions

- Distribution of decision rights matters;
- If improved quality is associated with high benefits then integration with assignment of property rights to buyer is more efficient than independent relationship or assignment of decision rights to seller;
- Decision-making rights are valuable and those who make specific investments under some conditions are ready to pay to own them;
- Vertical integration can be used as a mean to minimize hold-up risks.