# **EFR summary**

# Organisation & Strategy, FEB11006X 2023-2024



# Lectures 1 to 11 Weeks 1 to 6







### Details

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# Organisation and Strategy - IBEB -Lecture 1, week 1

## Organization

Social **entity** with identifiable boundaries that functions on a continuous basis to reach common long-term goals (Robbins & Barnwell).

• Entity - each person should know whether he/she is a member of the organization or not.

### Strategy

- Deliberately **choosing** a different set of activities to reach a firm's goals (Porter).
- The **framework** of a firm's business activities that provides **guidelines** for **coordinating** activities so that the firm can cope with and influence the **changing** environment.

## Relevance of organization and strategy

- Every organization needs a strategy to reach their long term goals
- Strategies determine the success or failure of an organization
- Understanding how firms function will also help us understand how firms compete among themselves

# Firm, market, and the environment

If a firm wants to achieve a successful organization and strategy, it must consider the characteristics of:

### 1. The firm

When looking at the characteristics of the firm, we look at the boundaries of the firm. Questions to be asked are:

- "What should the firm do?"
- "How big should the firm be?"
- "In what business should the firm operate?"

### 2. The market

When looking at the characteristics of the market, we perform the market and competitive analysis. The questions that are central are:

- "What is the nature of the market in which the firm competes?"
- "What is the nature of competitive interactions among firms in those markets?"

### 3. The environment

When looking at the characteristics of the environment, we look at the environment and competitive advantage. Questions to be asked are:

- "How should the firm position itself?"
- "What is the main competitive advantage?"
- "How should it adjust over time?"



Source: Lecture 1, Dr. T. Peeters (2023)

# The firm

### Three boundaries of the firm

The activities of the firm are represented by its boundaries. These boundaries can be:

- 1. Horizontal (Substitutes & Entry)
  - What part of the market will the firm serve?

#### 2. Vertical (Supplier & Buyer Power)

• Given the market, which activities will the firm do itself and what part will be outsourced to other firms?

#### 3. Geographical

• On which geographical markets does the firm focus?

Example in practice: Shell

Horizontal boundaries of shell	<ul> <li>Oil &amp; Gasoline; Natural Gas; Chemicals; Renewable energies</li> </ul>	
Vertical boundaries of Shell	<ul> <li>Exploration of new oil sources</li> <li>Drilling and extraction activities</li> <li>Transport and storage</li> <li>Distribution to the consumers</li> </ul>	
Geographical boundaries of Shell	Source: Lecture 1, Dr. T. Peeters (2023)	

# The market

Substitution

Can a product be used instead of your product? If yes, then it is part of your product market.

The market of the firm is defined by the degree of substitution between the products of different firms.

- Strategic choice of a firm affects the performance of another firm:
  - Similar performance characteristics
  - Similar occasion for use
  - Sold in the same geographic area

(it allows firms to think further in regards to the moves that they're willing to take)

### Competition

Competition (which allows firms to think whether or not their competition are also making long-term strategic decisions, etc) including:

- Strategic commitment
  - What happens with the market when firms take long-term strategic decisions? (I.e. what kinds of decisions will make a firm stay in that market? This could be through large investments)
- Entry & exit
  - What happens with the market when a firm enters or exits?

Example in practice: Shell

Substitution?	bp, ExxonMobil, Chevron (ex: become more eco friendly)
	This would allow Shell to question: "given the market structure, what are the possibilities for Shell to make a profit?"
Investments?	Athabasca Oil Sands Project, Sakhalin II, etc

	This would question, "does the investments of Shell have an impact on the characteristics of the market?"	
Resources?	Control of essential resources, Economics of scale	
	This would question, "do new entrants affects Shell's competition position?"	

# The environment

The environment includes the non-industry specific factors that affect every organisation:

Political/legal	Economic	Social/Cultural	Technological	
Taxes	Interest / Inflation	Demography	Changes in IT	
Natural Environmental Policy	Labour costs	Norms / values	New product technologies	
EU regulations	Economic growth	Lifestyles	R&D-spending	
Government stability	Consumer confidence	Education level	government & industry	
Etc.	Etc.	Etc.	Etc.	

Source: Lecture 1, Dr. T. Peeters (2023)

### Competitive advantage

"Given the firm, the market and the environment, how can the firm create and sustain a competitive advantage?"

- Competitive advantage: when a firm is able to create more economic value relative to its competitors
  - Cost position (make the same product but cheaper)
  - Benefit position (differentiation; make a product that people like better)

Example in practice: Shell

- Macro-environment Shell?
  - Natural environmental policy

- Exchange rates
- Public Opinion
- R&D (new exploration techniques)
- Spatial diversity: differences in institutional settings and governmental interference
- Cost position:
  - Reduce staff
  - Repositioning
- Benefit position:
  - Focus on most profitable projects
  - Focus on growth potential
    - Additional investments in chemical activities
    - Investments in oil & natural gas resources

# Organisation and Strategy - IBEB -Lecture 2, week 2 Horizontal boundaries of the firm

## **Five-Forces model**

What forces influence the strategic decisions of the firm? Porter identifies five of these, namely:



### Internal rivalry

- Competition for market shares within the industry
- Relevant market in terms of 2 dimensions, namely:
  - 1) Products
  - 2) Geography
- Price competition vs. Non-price competition
  - In markets with homogeneous products, there will be high price competition. However, in a market with differentiated products, there will be non-price competition

### Entry

- How difficult is it to become a member of an internal rivalry?
  - New entrants steal market shares and increase internal rivalry
- Barriers to entry can be exogenous or endogenous
  - Examples:
    - High Minimum Efficient Scale
    - Government protection
    - Brand loyal consumers
    - Access to key inputs/locations
    - Experience curve and network externalities
    - Expectations about incumbents' reactions to entry
    - Etc.

### Substitutes & complements

- Substitutes erode profits by stealing business and increasing internal rivalry (e.g. VOIP calls vs. phones)
- Complements boost industry demand (e.g. big-screen TVs and loudspeakers)

#### Key factors:

- 1. Identification based on product characteristics/performance
- 2. Price-value of substitutes and complements
- 3. Price elasticity of industry demand
  - => Many substitutes = high price elasticity

### Supplier & buyer power

- Suppliers and Buyers may command prices that extract industry profits
- Suppliers have indirect power if upstream market is competitive whilst suppliers have direct power if upstream market is not competitive (e.g. in case of relationship specific investment)
- Same for buyers downstream

#### Key factors:

- 1. **Industry concentration** (e.g., internal rivalry talks about concentration in your industry)
- 2. Purchase volumes (how much of a certain input is needed?)
- 3. Availability of substitute inputs
- 4. Threat of forward integration (how credible is it that you are going

### Co-opetition and value net

Five-forces assumes firms to fight for a larger share of profits that are limited. However, according to the **co-opetition and value net model**, firms can cooperate to increase the total profits of the industry.

\*Both the five-forces model and the co-opetition and value net model are relevant in the real world

#### Internal rivalry

The next section will discuss some determinants of firm size. There are four concepts that help answer the questions:

"What determines whether a firm would want to serve a large or small portion of its own industry?" and "When is big better than small?"

#### THESE CONCEPTS ARE:

- 1. Economies of Scale and Scope
- 2. Diseconomies of Scale and Scope
- 3. Economies of Learning
- 4. Diversification

# **Economies of scale**

### Definition

- Economies of scale exist over a range of output when average cost (i.e. cost per unit of output) declines over that range.
  - MC goes down as the output goes up
  - If output increases, AC declines
- When average cost (AC) declines as output increases, then the marginal cost of the last unit produced (MC) must be less than the AC.
- Note that in an opposite case, we can say that production exhibits diseconomies of scale
- AC's decline up to the **minimum efficient scale (MES)**

#### U-SHAPED AC-CURVES

- Small and large-firm costs are greater than medium-sized firm costs
- AC increases after the MES

### L-SHAPED AC-CURVES

- All firms operating at or beyond the MES have similar average costs.
- AC remains constant after the MES



Source: Lecture 2, Dr. T. Peeters (2023)

### WHEN MC < AC

- Fixed costs are still being paid off
- The AC curve is sloping downwards

### Sources of economies of scale

- Indivisibilities and spreading of fixed costs
- Increased productivity of variable inputs
- Other sources:
  - Economies of density
  - Purchasing
  - Advertising
  - R&D
  - Physical properties of production
  - Inventories

#### INDIVISIBILITIES AND SPREADING OF FIXED COSTS

- Indivisibilities: when an input cannot be scaled down below a certain minimum size even if the level of output is very low
- Indivisibilities give rise to **fixed costs** 
  - An increase in output causes a decline of AC
    - Examples: cost of a production machine is fixed, at increasing levels of output the fixed cost is spread over a larger volume of production => AC declines
- Indivisibilities occur more often when production is **capital intensive**
- Less likely when production is **labour intensive** or for materials.
  - This is because labor and materials are divisible. Hence, AC do not vary much with output.
- Different technologies may offer the lowest AC at different levels of output
  - Firms may choose to switch technology over time as they grow (long-run economies of scale).

#### Fixed costs and economies of scale

- 1. Product level expensive equipment can be used to make more products
- 2. Plant level
  - 1. Short run economies of scale: reduction in AC due to increases of capacity utilization (likely because of different technologies)
  - 2. Long run economies of scale

### INCREASED PRODUCTIVITY OF VARIABLE INPUTS

- Division of labour with **specialization** of workers in certain activities leads to reduced average costs
- Example: a surgeon specializing in thoracic surgery will perform it more efficiently than a general one.
- Specialization requires an upfront investment (*Example: additional years of education/training*)
- Adam Smith's Theorem: "The division of labour is limited by the extent of the market".
  - The "extent of the market" refers to the demand for activities in relation to the labor being provided.
  - Large markets = narrower specialization
  - Individuals will invest in specialization only if there is enough demand for particular activities => investment is recovered

### OTHER SOURCES

#### Economies of density (Spreading fixed costs)

- Cost savings arising within a transportation network due to greater geographic density of customers (example: beer distributors operating in densely populated urban areas vs. sparsely populated suburbs)
  - Also applicable for a reduction in the size of an area while maintaining the same number of customers.

#### Purchasing (Spreading fixed costs)

- Discounts for large quantities due to higher "purchasing power" or buyer receiving discount for larger purchases. There are three reasons as to why suppliers care about bulk purchases:
  - Less costly to sell to a single buyer
  - People who purchase in bulk are more price sensitive
  - Suppliers may fear a costly disruption in their operations if they do not transact with bulk purchasers.

#### Advertising (Spreading fixed costs)

 Given the same cost of preparing an ad and negotiating a contract with the media, a large firm selling in the whole country has lower advertising cost per final costumer than a local firm (large companies that have national campaigns enjoy lower costs per final customer because the cost of preparing the ad is the same no matter the reach)

- 2 reasons why larger firms may have lower advertising costs per consumer:
  - Lower costs of sending messages per potential consumer
  - Higher advertising reach
- **UMBRELLA BRANDING** is effective when consumers can use information about an advertisement of one product to infer about other products within the same brand (example: Advertisements of AirPods persuade consumers to purchase iPhones because the advertisement shows that both devices support wireless charging)

#### R&D (Spreading fixed costs)

• As research requires high cost, therefore, the more you sell, the more the fixed costs are spread and AC declines.

#### **Physical properties**

- Production capacity is often related to the volume, while costs are proportional to the surface area economies of scale
- **CUBE-SQUARE RULE**: if we double the volume of a container, the surface less than doubles.

#### Inventories

- High ratio of inventory/sales is **less efficient**
- Firms carry inventories to avoid stock-outs: lost business and customers switching to alternative sellers
- Inventories are costly: interest on production expenses, risk of depreciation (i.e. end of season sales @ low price).
  - Cost of inventories boosts average cost of sold goods, the more the higher the ratio of inventory holdings to sales
- Large firms can afford keeping a lower inventory to sales ratio without an increase in the probability of stock-out economies of scale
- Intuition: use of regional warehouses with just-in-time distribution to single stores (e.g. Carrefour, Aldi)

### Complementaries

Practices of a firm are considered as complimentary when the introduction of one practice is enhanced by the presence of others. Oftentimes, such complementaries are also dubbed as strategic fits.

Strategic fits are difficult for other companies to copy because it would require them to copy more than one practice to be effective.

### Economies of scale vs economies of learning

Both can occur at the same time but are two distinct things.

### ECONOMIES OF SCALE

Unit cost reduction by producing more at a **particular point in time** 

#### ECONOMIES OF LEARNING

• Unit cost reduction by **accumulating** experience over time moving down the "Learning Curve"

· Learning benefits are depicted through the **slope** of the graph:

How far AC (average cost) declines as cumulative production output doubles
 Note that learning does not violate the MC = MR rule. Learning economies also apply
 to firms with constant returns to scale, as the level of AC falls across several years.

Economies of Scale	Learning Economies
<ol> <li>Reduction of unit cost at a particular point of time</li> <li>Due to performance on a larger scale</li> <li>May be substantial even when learning economies are minimal</li> </ol>	<ol> <li>Reductions in unit cost over time (accumulated)</li> <li>Due to experience</li> <li>May be substantial even when economies of scale are minimal (complex labor-intensive economies)</li> </ol>



Source: Lecture 2, Dr. T. Peeters (2023)

# **Economies of scope**

- Economies of scope exist if the firm achieves unit-cost savings as it increases the variety of goods and services it produces.
- Compares the total cost of producing a variety of goods (or services) together in one firm vs. separately in two or more firms
- A production process exhibits economies of scope if:

$$TC(Qx, Qy) < TC(Qx, 0) + TC(0, Qy)$$

where:

TC(Qx, 0) : the total costs of producing only product X.

TC(0, Qy): the total costs of producing only product Y.

TC(Qx,Qy): total cost of producing Qx units of good X and Qy units of good Y within a single firm

In other words, it is cheaper for a single firm to produce both goods X and Y than for one firm to produce X and another to produce Y?

Examples:

- Coca Cola Company (Coca cola, Fanta, Sprite, Minute Maid) in production and logistics
- Apple in R&D (spillovers across projects) and Advertising ("umbrella branding")

### Diseconomies of scale and scope

Diseconomies of scale and scope explain why there is no single 'megafirm'.

Sources of diseconomies of scale and scope

#### 1. HIGH LABOR COSTS IN LARGE FIRMS

- a. Reasons why large firms have higher wage:
  - i. Large firms are likely to be unionized
  - ii. Compensating differential: wage paid by firms to lure workers into less attractive jobs
- b. 2 factors that work in favor of large firms:
  - i. Workover turnover is lower (hence less training costs)
  - ii. Large firms are attractive to highly skilled workers

#### 2. SPREADING SPECIALIZED RESOURCES TOO THIN

- a. E.g. Gordon Ramsey
- b. Further evidence that SAC curves are U-shaped (output can be pushed beyond the MES into a region of increasing average costs)

#### 3. BUREAUCRACY

- a. Organizational difficulties within large firms, e.g. slow information flows and coordination problems
- b. 3 reasons why bureaucracy has a bad name:
  - i. Incentives within large firms can be muted
  - ii. Slow information flows
  - iii. Departments fighting for scarce corporate resources can work across purposes.

### Diversification

Many of the world's largest firms are conglomerates involved in unrelated diversification, i.e. they carry activities with limited room for scope economies.

### Reasons for diversification

#### **EFFICIENCY-BASED REASONS:**

- To gain scope economies that arise from spreading underutilized organizational resources.
  - Example: managerial talent that can be applied to very different businesses ("dominant general management logic")
- Internal capital markets: use revenues from cash-rich business to fund profitable investment opportunities in cash-constrained business.
  - This allows cash-constrained businesses to make profitable investments that would not have been made otherwise.

BCG Growth/Share Matrix		Relative Market Share	
		High	Low
Relative Market Growth	High	Rising Star	Problem child
	Low	Cash cow	Dog

Source: Lecture 2, Dr. T. Peeters (2023)

#### Problem with the BCG framework

Firm's role as the "banker" (i.e. deciding which firms to invest in).

Question: Do firms really need to rely on cash cows to fund their rising stars? Answer: Yes, because:

- 1. Difficult in finding external investors due to their asymmetric information
- 2. Reluctancy to provide capital to a firm with existing debt (hence why bondholders have first dibs on any positive cash flows)
- 3. External finance consumers monitoring resources

#### **PROBLEMATIC JUSTIFICATIONS**

- Diversifying shareholders' portfolios
  - Shareholders have many other ways of diversifying the risk of their investments (e.g. financial portfolios)
  - It is not the management's job to diversify the portfolio of shareholders
- Identifying undervalued firms
  - Unlikely given increasing market efficiency
- Managerial reasons

• Managers looking for firm growth even when not profitable, for personal returns (e.g. prestige, future career)

Hence the positive effect of diversification is difficult to justify, especially in well-developed countries. It seems to only be beneficial if there is a clear way for **real efficiency gains** (e.g., from overcoming inefficiencies of financial sectors in developing countries or from a managerial know-how that can be spread).

#### Is diversification effective?

- 1. **THEORETICALLY** yes, there are genuine benefits of scope economies and the use of internal capital markets.
- 2. **EMPIRICALLY** yes, but only if the economies "make sense". Always take note of the statistical adage that correlation does not imply causality.

# Organisation and Strategy - IBEB -Lecture 3, week 2 Vertical boundaries

Main question: which activities will the firm carry out itself, and which will be outsourced to other firms?

# Vertical chain

### Definition

- The process that begins with the acquisition of raw materials and ends with the distribution and sale of finished goods and services.
  - Examples: Many firms do most activities in-house (e.g. Scott Paper) and others are just designers and assemblers (e.g. Nike, Hawlett Packard)

### Problem

• Because there are very few firms that produce all their inputs themselves, a problem arises, namely: How should a firm organize it's vertical production chain?

### Key concepts



Source: Lecture 3, Dr. T. Peeters (2023)

- Production activities at the beginning of the chain, when the final product is still far from being produced, are called **upstream** activities. Added value at the end of the chain is called **downstream** activities. Besides the **Processing and Handling process**, the vertical chain also includes **Supporting activities** such as accounting, finance, human resource management, legal support, marketing and planning
- The **vertical boundaries** of a firm define the activities that the firm itself performs as opposed to purchases from 'market firms'
  - Market firms: external parties in the market.

**Make-or-buy** decisions determine whether a firm performs an activity internally (i.e. "make"), or purchases it from an external supplier through contracts (i.e. "buy")

### The market

Advantages and disadvantages of using the market are:

#### Advantages

- 1. Market firms achieve economies of scale
- 2. Market firms are subject to market discipline and are efficient and innovative

#### Disadvantages

- 1. Coordination problems
- 2. Private information can be leaked
- 3. Transaction costs can occur

### Reasons to buy

- 1. Economies of scale and learning
- 2. Bureaucracy effects:
  - a. Avoidance of agency costs
  - b. Avoidance of influence costs

### Economies of scale and learning

- Market firms specialize in a certain activity (e.g. production of an input) are often more efficient than the internal division of an integrated firm.
  - A restaurant is not likely to produce its own garlic even though the demand for this is large because the demand for garlic in the restaurant is still tiny in comparison to the total demand of garlic in the entire country/market.
- OTHER REASONS:
  - Market firms have proprietary information or patents => to achieve lower production costs
  - Market firms can aggregate demand of many buyers => economies of scale, scope and learning

Example: Audi – make-or-buy antilock brakes



Source: Lecture 3, Dr. T. Peeters (2023)

Firms (in this case, Audi) need to produce quantity A\* to reach MES and achieve average costs of C\*. If a firm that requires only A' units to meet its own needs, the incurred average costs of C' will be above C \*. If a firm that requires output in excess of A\*, such as A", they will have costs C \* and will not be at a competitive disadvantage. Therefore, **price paid to supplier should be between C\* and C'.** 

### Agency costs

- **Shirking:** managers and workers knowingly acting against the best interests of their firm (opportunistic behaviour)
- Agency costs: costs associated with shirking and the administrative controls to deter it
  - Examples of agency costs include:
    - Loss of production
    - Performance monitoring
    - Sanctioning
  - Agency costs become very high in large vertically integrated firms.
     This may be because of 2 reasons:
    - Overhead (support services)
      - Dividing over sub-divisions
    - Sub-divisions or "cost-centers"
      - No competition and market to benchmark
        - No benchmark to tell whether inputs are cheap.

- It is difficult to evaluate the efficiency of "cost centers" which perform activities solely for their own firms and generate no outside revenue. (such as laundry department. Since there are no market benchmark, it is easy to shirk)
- Managers may not readily react on inefficiencies: changing things in a large company is not easy.

### Influence costs

- Different divisions inside the company compete internally over the limited financial and human resources that the company has. Thus, managers try to influence allocation.
- Influence costs include:
  - Direct: costs of influence activities (Example: lobbying)
  - Indirect: Costs of bad decisions
- Influence costs are greater in a large vertically integrated firm than in a smaller independent market firm
  - Higher costs = large scale companies

### Foundation of contracts

- **Contracts**: documents that define the **conditions** for the exchange of goods/services.
  - **Conditions** include:
    - Rights
    - Obligations
    - Conflict resolution
- **Goal:** They are meant to protect parties from opportunistic behaviour (shirking), by degree of **completeness** and **contract law**

Contracts specify the tasks that each party expects the other to perform and remedies in case one party does not fulfil its obligations (up until recourse to courts). Contracts aim to remove risks of opportunistic behavior

### Completeness

- A complete contract is one that stipulates:
  - 1) each party's obligations and rights for each and
  - 2) every contingency for risks that could arise during the transaction

However, all real-word contracts are **incomplete**. Why?

- 1. Bounded rationality: the limited capacity of individuals to process information makes it impossible to write down every single future situation and correspondent action that is possible.
- 2. Difficult to measure performance: it is hard to specify everything in a contract with good wording. The language used in some parts of the contract will remain vague, which makes reviewing by third parties (e.g. judge in trials) impossible.
- 3. Asymmetric information: one party knows something the other does not, and may take advantage of it.

### Contract law

• A good body of contract law (e.g. a code) specifies a set of standard provisions applicable to wide classes of transactions (to reduce incompleteness of contract).

However, it is still not a perfect substitute for completeness, because:

- There is still **uncertainty** about how general provisions will be applied
- Litigation in courts may be very costly and time consuming
  - Determining the **end of long-term** business relationships difficult to replace

Therefore, contracts are not obvious ways to smooth transactions. **If there are high** inefficiencies: "make" may be better than "buy".

# Reasons to make

- 1. Coordination advantages
- 2. Protection of private information
- 3. Transaction costs

### Coordination advantages

When many different parties interact in a vertical chain, coordination is fundamental. Four types of coordination are:

1. Timing fit

- a. Example: increased production and distribution must come along with the launch of a marketing campaign.
- 2. Sequence fit
  - a. Example: operations must be performed in a certain order;
- 3. Technical specification fit
  - a. Example: pieces of a product must fit together;
- 4. Color fit
  - a. Example: parts of a dress
- Coordination can be managed using contracts or merchant coordinators, but since contracts are incomplete and managers can be expensive, firms may decide to "make" instead of "buy", to ensure that coordination is achieved internally through administrative control.
- Assignment problems can also occur through coordination problems.
- An area where this is especially crucial is in processes with many **design attributes**, which is defined as attributes that need to relate to each other precisely, where a small mistake in coordination may become very costly.

### Protection of private information

A firm's private information is information that no one else knows. It may concern know-how or information about consumers.

- 1. By dealing with buyers/suppliers, private information may leak out that could result in a loss of competitive advantage
- 2. This is especially relevant for **non-patentable** knowledge
- 3. Private information may also be lost even when employees leave the company
  - Therefore, many companies require their employees to sign non-compete clauses, which prevents them from competing with the firm for several years and sharing this information.

### Transaction costs

Transaction costs: are all costs involved in organizing transactions

#### 3 types of transaction costs

1. Search for partners

- 2. Time and expenses of negotiating, writing and enforcing contracts
- 3. Costs of opportunistic behaviour (shirking) of counterpart due to incompleteness (and costs associated to trying to prevent it)

### 3 key concepts of transaction costs

Reasons why firm choose to 'make':

#### **1. RELATIONSHIP-SPECIFIC ASSETS**

- Relationship-specific asset: investment made to support efficiently a specific transaction. It cannot be redeployed to another transaction without some sacrifice in productivity or adaptation costs.
  - Firms that have invested in relationship-specific assets cannot easily switch trading partners. They become "bilaterally dependent", i.e. locked in the relationship to some degree.
- **Fundamental transformation**: before the investment is made, a firm may trade with a large number of potential parties (competitive situation). After making the investment, there are few, if any, alternatives. This results in **less competition & bargaining for profits**.
- There are a few forms of relationship-specific assets
  - Site specificity: the supplier settles close to the buyer to reduce transportation and inventory costs;
  - Physical asset specificity: the asset is specifically tailored and can only be used to one specific buyer in the transaction;
  - Dedicated assets: investments in plant and equipment that are made to satisfy a specific buyer in the transaction;
  - Human asset specificity: skills that are gained that is more valuable to one employee than another.

#### 2. QUASI-RENTS

- **Quasi-rent**: difference between expected profit from the relationship for which you decide to invest, and profit from the second-best alternative
  - If quasi-rent = 0, there is no relationship-specific investment
  - If quasi-rent is high, there is a high risk of losses and hold-up
- **Relationship-specific investment**: what you lose if you do not trade with the best-option company

#### 3. HOLDUP PROBLEM

- A firm **holds up** its trading partner by attempting to renegotiate the terms of a deal in order to capture part (or all) of the quasi-rent generated by the deal.
- Holdup is more of a problem when quasi-rents are large and if contracts are incomplete (e.g. it is easy for Ford to claim that market conditions have changed, forcing a revision of the terms of contract)
- Bigger risk when:
  - Quasi-rents are large
  - Contracts are more incomplete (may be due to frequent changes in the market)
- The holdup problem increases the transactions costs of "buy', and thus may a be a good reason to "make"
- 1. **Contract Negotiation** is difficult as parties want to protect themselves + frequent renegotiations
- 2. **Investments to improve ex-post bargaining position** (e.g. investment in machines to adjust cup-holders for alternative buyers à higher costs)
- 3. Distrust harming coordination and willingness to share relevant information
- 4. **Reduced ex-ante investment**: expecting holdup, firms may not be willing to invest in specific assets to the optimal extent à higher costs

# Make-or-buy fallacies

1. If an asset is a source of **competitive advantage** for that firm, it should make it, even though it might be cheaper to buy it.

Incorrect, because an asset cannot be a source of competitive advantage if it can be obtained from the market cheaper and more easily. It is no longer unique and can be purchased by other firms.

2. Making costs money, so firms should buy.

Incorrect, because buying to avoid the cost of making is not good reasoning. The cost of making the product will just be calculated into the price, so the firm will still pay for it. The technical cost of making cannot be avoided.

3. Independent firms charge a **profit margin**, so firms should make. Incorrect, there might be better ways to invest the firm's capital (opportunity costs). Accounting profits (revenues – expenses) are not equal to economic profits (accounting profits from an activity – accounting profits from investing in the most lucrative alternative activity). The question, therefore, is not whether the other firm is making an accounting profit, but rather if it is making a profit above the normal rate of capital payout. If this is the case, then there may be some reason to make. However, if the firm is only making an accounting profit, it may be safe to purchase from them.

4. The firm should make, to insure against the **risk of high prices** when demand is high.

Incorrect, a firm could protect itself from fluctuating prices by using a contract.

If there is a strong shortage, the firm making the inputs will sell to other firms and will not sell the inputs to itself.

5. The firm should make to gain **market share** from competitors.

Incorrect, competitors may easily follow, hence it is not a credible threat. This can also be an **antitrust** offense. Then, other firms can make the product themselves.

# Vertical foreclosure

Vertical foreclosure is the use of integration to tie up channels. There are 4 ways to foreclose rivals that seem to increase profits:

- 1. Upstream monopoly acquires downstream firm and refuses to purchase from other downstream suppliers
- 2. Downstream monopoly acquires upstream firm and refuses to purchase from other upstream suppliers
- 3. Upstream firm acquires downstream monopoly and refuses to supply to downstream competitors
- 4. Downstream firm acquires upstream monopoly and refuses to supply to upstream competitors

\*Bottleneck: a firm that monopolizes a single stage in the vertical chain

### Dangers of foreclosures

- 1. Competitors may open new channels
- 2. Competitive firms will have to pay a steep **fee** to acquire a monopolist
  - a. A firm cannot increase profits above the monopoly profit, hence it would be unreasonable for the competitive firm to foreclosed.
  - b. This also means that monopolists have no reason to acquire competitive firms because their profits are already at a maximum.

# Organisation and Strategy - IBEB -Lecture 4, week 2 Alternatives to make-or-buy decisions

Which activities will be undertaken by the firm and which activities will be outsourced to external firms?

### Efficiency (technical versus agency)

Technical efficiency: the production process with the lowest costs

• Economies of scale, scope, learning

**Agency efficiency**: the production process with the lowest coordination (Notice: if holdup threat leads to reduced investment and higher production costs, this is agency inefficiency). Organizational cost of production.

Agency, influence, and transactions

**Trade-off:** "make" tends to improve agency efficiency, while "buy" tends to improve technical efficiency.

**Optimal vertical organization** must strike a balance: minimize the sum of technical and agency inefficiencies. This is called **economizing.** 

## Diagram (make versus buy)



Source: Lecture 4, Dr. T. Peeters (2023)

#### Parts of the diagram

- k = level of asset specificity
- $\Delta T$  (technical efficiency)
  - Production cost to 'make' production cost to 'buy'
  - $\circ$   $\Delta T$  never touches 0 in the y-axis.
    - There are some scope and scale economies that a making-firm cannot fully capture.
  - Large  $\Delta T =>$  Vertical integration is less likely to be optimal for activities involving high scale, learning and scope economies (e.g. routine inputs and services such as paper).
  - Small ΔT => Vertical integration is more likely to be optimal for a firm with high scale and scope.
- $\Delta A$  (agency efficiency)
  - Transactions costs to 'make' transaction costs to 'buy'
  - ΔA touches 0 at the y-axis at k\*

#### Total efficiency $\Delta C$ = total cost of making – total cost of buying

- $\Delta C = \Delta T + \Delta A$ 
  - On the left of k\*\* = buy
  - On the right of k\*\* = make

#### Growth of k

- Vertical integration is more likely to be optimal when activities involve large investments in relationship-specific assets (high k)
- $\Delta T =$  declines.
  - Less economies of scale and scope at market firms
- $\Delta A = decline.$ 
  - More coordination, relationship-specific investment, hold-up problems
  - ΔA negative and large in absolute value, which more than offsets technical inefficiency.

#### At a very low k

- Better off buying
  - △A is (+)
    - It's better to give a component with a low k to a market party to produce instead of incurring an organizational (managerial) cost and expanding the firm. Hence, when specificity is very low, firms can avoid being a larger firm and having to deal with agency and influence costs by just buying in the market.

#### Increase in production

(With given specificity k) (More vertical integration = k\*\* < k\*\*\*)

Source: Lecture 4, Dr. T. Peeters (2023)

- $\Delta T$  declines.
  - More in-house scale economies. This is due to a likelihood of occupying a bigger part of total demand, therefore the difference in scale economies with respect to outsiders is small.
- $\Delta A$  rotates around its crossing point at the 0 axis.
  - Any advantage at the beginning is more pronounced when the production input is more important and if the firm needs more of it.

### Conclusion

- If we sum both effects together, we see clearly that our curve in △C shifts to the left.
  - The region where we make becomes larger than the region where we buy
  - If we occupy a larger share of the market, then we are more inclined to make.

### **Real-world examples**

• **Automobiles**: components demanding higher engineering effort, i.e. higher human asset specificity, are more likely to be produced internally (e.g. Tesla car batteries). Larger firms more likely to "make"

- **Aerospace**: components with higher design specificities, i.e. higher physical asset specificity (k), are more likely to be produced internally. Same for more complex components
- **Electric Utility:** coal-burning generators located close to coal mines, with plants tailored on the characteristics of coal, i.e. both site and physical asset specificity, are more likely to be vertically integrated
- **Electronic components:** manufacturers rely on in-house sales agents when human asset specificity is high, e.g. extra-training needed. à Larger firms more likely to "make"

### Relation to vertical integration

- 1. **Scale and scope economies**: should buy if (1) the input requires a significant upfront setup costs and (2) there is a large market outside the firm for the input
- 2. **Product market share and scope:** A firm with (1) larger share of the market and/or (2) with multiple product lines will benefit more from being vertically integrated
- 3. **Asset specificity:** The higher the asset specificity, the more beneficial it is to be vertically integrated.

### Double marginalization

- Double marginalization is when an upstream firm charges a price greater than marginal cost, and the downstream firm does the same.
- At the end, two mark-ups are applied (from upstream & downstream firms) à high price for final buyers à reduced demand
- A single vertically integrated firm may do better by avoiding double marginalization: lower final price but higher demand and profits

### Vertical integration and asset ownership

Transfer of property rights. Ownership of an **asset grants residual rights of control**, i.e. right to make decisions on any instance unforeseen by a contract. Authority is an issue because as previously discussed, real-world contracts are always incomplete.

• Example: PepsiCo has both independent and company-owned bottlers. Authority over internal bottlers' decisions is obviously much higher

### Three modes of organizing transactions

Assume Firm 1 is upstream. Firm 2 is downstream. They carry a transaction with each other. This can be organized in 3 ways:

- 1. Non-integration: two firms remain independent
  - Best if: Firm I's impact = Firm 2's impact
- 2. Forward integration: firm 1 owns the assets of firm 2
  - Best if: Firm I's impact > Firm 2's impact
- 3. Backward integration: firm 2 owns the assets of firm 1
  - Best if: Firm I's impact < Firm 2's impact

**The form of integration** affects the incentives of parties to invest in relationship-specific assets:

- Control of assets determines a better bargaining position when making decisions à capture larger share of value created in the transaction à higher incentives to make relationship-specific investments
- Vertical integration is desirable when one firm's investment in relationship-specific assets has a significantly greater impact on the value created in the vertical chain than the other's investment does
- When investments of both are of comparable importance, non-integration is the best arrangement

### GOVERNANCE ISSUES IN VERTICAL INTEGRATION

As vertical integration cannot guarantee that arm's-length organizational inefficiencies are eliminated, it is required to have the right governance structure within the integrated firm. This often exhibits inefficient path dependency.

• Decision-making rights for an activity should be given to those managers whose decisions have the greatest impact on the performance of that activity

Example: when firm 1 acquires firm 2, decision-making rights better stay with:

- firm 2: if success depends on its key contacts and know-how
- firm 1: if success depends crucially on centralized coordination
- 1. **Delegate authority:** When human and physical capital ar highly complementary
- 2. **Centralized Authority:** when physical capital is complimentary across applications

# Alternatives to "make" and "buy"

- 1. Tapered integration
- 2. Franchising
- 3. Strategic alliances and joint ventures
- 4. Close-knit semiformal relationships

## Tapered integration

Tapered integration is the mixture of vertical integration and market exchange. Example: manufacturer producing some quantity of an input internally and purchasing the rest externally.

### ADVANTAGES

- 1. Expansion of input channels without significant capital outlays.
- 2. Use of internal cost information to negotiate contracts with market firms
- 3. Motivation tool for both internal division and market firms
- 4. Protection against holdup risk

### DISADVANTAGES

- 1. Both internal and external production may stay below minimum efficient scale
- 2. Coordination and monitoring problems
- 3. Inefficient internal divisions may be kept when not efficient

### Franchising

The franchiser (e.g. McDonald's) relies on franchisees (e.g. the owners of individual McDonald's restaurants)

- Franchisees provide the capital to build and operate stores and pay a fee for using the franchiser's brand and business model
- Franchisers may require franchisees to offer specific products, conform to certain standards and purchase from designated suppliers

### ADVANTAGES

1. Franchisers: can focus on tasks involving high scale economies

- 1. e.g. purchasing and branding, while franchisees follow closely the taste of the local market
- 2. Franchisees: local market knowledge

### DISADVANTAGES

3. Franchisees: may free ride (lower quality) on the reputation of the franchiser by lowering quality, thus hampering the value of the brand

## Strategic alliances and joint ventures (JV)

Strategic alliances are ways in which firms organize complex transactions collectively without sacrificing autonomy.

- 1. Horizontal: involves two firms in the same industry
  - a. e.g., accreditation labels
- 2. Vertical: involves two firms in the same vertical chain
  - a. e.g., caterpillar land rover
- 3. Across industries: neither horizontal nor vertical
  - a. e.g., Senseo

**Joint ventures:** are a particular type of strategic alliance in which two or more firms create, and jointly own, a new independent organization (staffed with employees of parent firms or independently)

### REASONS FOR JOINT VENTURES

Strategic alliances and joint ventures fit transactions for which there are compelling reasons to both "make" and "buy". **Natural candidate transactions** have all or most of the following features:

- 1. Involve impediments to comprehensive contracting: high degree of incompleteness
- 2. High complexity, no routine
- 3. Both invest in relationship-specific assets and could holdup the partner
- 4. It is excessively costly for one party to develop the expertise to carry the transaction itself (e.g. due to experience curve)
- 5. High uncertainty: difficult to commit to a long-term contract with certain conditions
- 6. Need a local party in a country due to regulatory environment (often the case in China)

### ADVANTAGES

- 1. Firms in a strategic alliance/joint venture remain independent, but more cooperation, coordination and info sharing than in simple arm's-length market transactions (No formal contracts for every decision).
  - a. This is done by:
    - i. Trust and reciprocity
    - ii. Negotiations to solve disputes
    - iii. No formal contracts for everything
    - iv. Evolving relationship

### DISADVANTAGES

- 1. Risk of losing control over **proprietary information:** serious as transactions are complex and involve a lot of cooperation and info sharing. Moreover, what happens after the alliance?
- 2. **Coordination difficulties:** serious as cooperation is largely informal, thus a clear official way of resolving disputes may be missing.
- 3. **Agency costs:** firms may be slack at monitoring activities as they do not capture the full benefit of it: "free-riding" problem, less serious for firms engaging in multiple alliances due to reputation effects.
- 4. Influence costs: higher if no clear hierarchical structure.

### Close-knit semiformal relationships

- Close-knit relationships are based on long-term, implicit contracts based on trust.
- Implicit contracts: unstated understanding between parties
- Enforcement
  - These are not enforceable in a court
  - Enforced by the threat of losing future businesses with a counterpart

### **REAL-WORLD EXAMPLES**

- The traditional way of organizing business in East Asia, especially in Japan and South Korea is large business groups. These include many firms working together. Firms rely on a long-term semi-formal collaborative relationship with counterparts up and down the vertical chain.
- Keiretsu: Japan. Involve a complex web of institutional linkages. There are six large keiretsu, each with more than 80 member firms. All of them have core
bank members in key industries (steel, life insurance, chemicals). A problem with keiretsu is that they benefit members that do not perform well, which happens at the expense of profitable partners

- Chaebol: South Korea. Have a more varied structure than keiretsu. They are often controlled by family groups, which ensures close coordination and investment in specific assets. Chaebol has a mix of highly trained but low-paid labour force, which allows firms to move quickly in technology markets. However, they have not been able to keep up as the pace of innovation has increased
- Business groups in emerging markets. Widely diversified multinational business groups in emerging markets are doing very well at the moment.
  - Tata Group (India):
    - 98 companies in engineering, materials, IT consumer products, energy, chemicals, and services
    - Centralized corporate control and close oversight
    - Close relationship with government at home
    - Investment in internal talent for skill-intensive activities and high innovation

# Organisation and Strategy - IBEB -Lecture 5, week 3 Performance measures and incentives

# Principal-agent relationship

# Conditions

- 1. Principal hires agent
- 2. Agent takes actions (or makes decisions) that affect the payoff of the principal

# Agency problems

Agency problems arise when **both conditions** are met:

- 1. The objectives of principal and agent are different
- 2. The actions taken by the agent and/or the information possessed by the agent is hard (or impossible) to observe for the principal

#### Example of Case: Company owner and its CEO

- Owner's objective is to maximize profit meanwhile the CEO's objective is to maximize personal wealth. Therefore, the CEO may not act on own's expectations (e.g., "empire building").
- Owners do not have access to all the CEO's information

# Agency solutions

### BUREAUCRACY

- Designing rigid rules limiting employees' discretionary behaviour
- Useful if inefficiencies stemming from red tape are less than the problems related to "anarchy" in the firm.
- Example of sales agents of a firm: If every agent is free to apply discounts, overall profitability may go down.
- So, there can be some bureaucracy measures to prevent it, such as: discounts over 20% need approval from managers & discounts over 60% need CEO approval

### MONITORING

- Spending resources to check what agents do and gather their "privileged" information.
- Limitations of monitoring:
  - Never perfect
  - Costly
  - Who monitors the monitors?

### PERFORMANCE-BASED INCENTIVES

- Objective: align the interests of principal and agent
- Intuition: principal links agent's pay to principal's payoff
- Notice: non-monetary benefits also work.

Examples:

- Sales agents are paid proportionally to realized sales
- CEO receives shares of the company, becoming an owner himself

# Performance-based incentives

# A FORMAL MODEL

The model shows that the employee's effort depends on the marginal payoff of the variable salary, not the fixed salary. Therefore, a firm should increase commission and decrease the fixed salary to increase profits. The model reveals:

- 1. It is not the absolute pay level that provides incentives for effort, but rather the slope of the relationship between pay and performance.
- 2. Firms can earn higher profit when they offer a salary + commission job rather than a fixed salary job.
- 3. Firms can do best by giving 100% commission and ask employees to pay license fee (e.g. through franchising fee)
- 4. Performance-based pay can help resolve hidden information issues

# FEATURES OF A GOOD PERFORMANCE MEASURE

- 1. Firms can tie pay closely to performance (without much variability) with measures that are less affected by random factors
- 2. Measures that can reflect all firm activities will allow the firm to use strong incentives

# PROBLEMS WITH PERFORMANCE-BASED INCENTIVES

- 1. Risk-related problems
- 2. Multiple tasks problems
- 3. Incentive in teams

#### **Risk-related problems**

More risk averse = Lower certainty equivalent = higher risk premium

- There is a trade-off between risk and incentives
- Performance-based incentives may imply risk for agents.
  - If they are risk-averse they will demand additional compensation.
- Most people are risk averse, or they prefer a safe outcome to a risky outcome with the same expected value **(Fixed salary > Uncertain commission)**

• Risk-averse employees will demand a **risk premium**, which is a cost to the decision maker of having to bear the risk of an uncertain outcome.

Stronger incentives are more likely to be optimal when:

- 1. Employees are less risk averse
- 2. The sales are subject to less uncertainty
- **Risk premium:** Amount agent is willing to pay to avoid risk
  - Risk premium = Expected value Certainty equivalent
- **Certainty equivalent:** the amount of money where the employee is indifferent between taking the risky job and safe job
- **Intuition:** the risk premium is the cost to the decision maker of having to bear the risk of an uncertain outcome
- **Implication:** the more risk averse you are, the lower your certainty equivalent, the higher the risk premium you need in order to be willing to gamble

#### Multiple Task Problems

- A job may involve many different tasks, and this may arise a problem:
  - When pay is tied to measures of performance that do not cover all tasks, employees may neglect tasks not reflected in the measures, but still relevant for the firm
  - Example: teaching to the test vs. teaching higher-order thinking
- Therefore, firms should design incentives in a smart way or avoid them (in the limit) if unmeasurable tasks are crucial. Firms can also use:
  - Subjective performance evaluations
  - Implicit contracts

#### Incentives In Teams

- Work within firms is often organized in teams, therefore, firms would want to enhance cooperation. To enhance cooperation, individuals get rewarded according to the performance of the whole team (e.g. common grade to students for collective assignment)
- Profits are higher when there is less random variability in measured performance (this can be done through a reduction of wage costs by paying smaller risk premiums for different incentives)
  - Lower risks by selecting performance measures that have as little randomness possible
- However, there is the **free-rider problem**

### "FREE-RIDER" PROBLEM

Total benefit to the team from action > total cost of action (individual) Total cost of action (individual) > (1/n)\*total benefit to the team

#### Solutions

- 1. Keep teams small
- 2. Encourage repeated interaction

**This shows that** mismatch between individual cost and individual utility may lead to welfare improving actions not being undertaken

#### Stronger incentives are better if:

- 1. The firm has less risk averse employees.
- 2. The employees of the firm have a lower marginal cost of effort.
- 3. The marginal return to effort is higher.
- 4. The variance of measured performance is lower.

# Organisation and Strategy - IBEB -Lecture 6, week 3 Strategy and structure

# Organizational structure

# Definition

Organizational structure: arrangements (formal and informal) by which a firm (1) divides up its critical tasks, (2) specifies how its managers and employees make decisions, and (3) establishes routines and information flows to support continuing operations.

# Importance

- Organization is crucial for:
  - Implementing strategic choices and
  - Improving performance

# Small firms (organization basics)

There are three ways to organize tasks in small firms:

- INDIVIDUALLY
  - each member has little interaction with others and is paid based on **individual actions and outcomes**. (e.g. head-hunters, financial traders)

#### • SELF-MANAGED TEAMS

individuals work closely together, share information and coordinate, and are paid based on **overall team performance** (e.g. strategic consultants, construction workers)

#### HIERARCHY OF AUTHORITY

This is present in firms that are growing and starting to become too large to organize it in one of the first two ways. Needed as groups (firms) get larger and operations get more complex; one member specializes in monitoring/coordinating/resolving disputes (e.g. dean in business school)

However, there isn't only one way firms can organize tasks. Optimal firm choices depend on the firm's needs and its need for coordination.

# Organization in large firms

Large firms often require complex hierarchies: organization of individuals in groups and an organization of groups in larger groups

# Two key problems

#### DEPARTMENTALIZATION

Departmentalization is the partition of the organization into different groups and sets of groups, based on the dimensions of:

- 1. Product,
- 2. Function,
- 3. Geography

#### How?

- Combine workers and teams in the same department when there are economies of scale and scope
  - E.g. R&D at 3M Corporation, hardware (iPod) and content (iTunes) at Apple vs. Sony

#### **COORDINATION/CONTROL**

- **Coordination:** flow of information to facilitate subunit decisions that are consistent with each other and with organizational objectives
- **Control:** location of decision-making and rule-making authority within a hierarchy (determines accountability)
  - Who is accountable for what?
- Coordination and control need to **adapt over time** to changing conditions: "creative tensions"

#### 2 approaches for coordination

- **AUTONOMY (SELF-CONTAINMENT)**: single units work autonomously with own targets and minimum information flows.
  - Dense coordination at a lower level with minimum information flows outside the unit.
  - Profit centres (e.g. product divisions of P&G or J&J)
  - Responsibility centres (e.g. research programs in pharma)
- LATERAL RELATIONS: close coordination & information flows among work groups (e.g. products and geography at ABB)

#### 2 approaches for control

- **CENTRALIZATION**:more decisions are made by senior managers who see the "big picture".
  - Disadvantage: This is limited by span span-of-control. (e.g. army)
- **DECENTRALIZATION**: more decisions are made at lower levels, for instance product divisions of diversified firms (e.g. product divisions at P&G)
  - This utilizes local information

\*Note that combination (of both approaches) are common

# Types of organizational structure

- 1. Unitary functional structure (U-form)
- 2. Multidivisional structure (M-form)
- 3. Matrix structure
- 4. Network structure

\*Profit centers: focus on a target profit goal

\*Responsibility centers: focus on performance (e.g., cost, revenue, investment goals)

# UNITARY FUNCTIONAL STRUCTURE (U-FORM)

Sample Chart of a Functional Organizational Structure



Source: Besanko, D., Dranove, D., Shanley, M., & Schaefer, S. (2016). Economics of strategy.

### Divisions

- The division of labour in different departments are classified based on the **function** that they specialize in.
- Suited for stable conditions in which operational efficiency is valued
- Departments are **not** independent businesses
- Departments are small subcultures, since they will have similar:
  - background,
  - work culture,
  - goals, and the
  - decision-making organized centrally.

#### Supervision

• Centralized strategic decision making.

#### Focus

- Operational efficiency
- Growth
  - As firm grows, new departments can be added

# MULTIDIVISIONAL STRUCTURE (M-FORM)

#### Sample Chart of a Multidivisional Structure



Source: Besanko, D., Dranove, D., Shanley, M., & Schaefer, S. (2016). Economics of strategy

### Divisions

- By product line/geographic market (ex: Asia, America or diapers, lotion)
- Assigned profit targets but are autonomous & function independently
- Organized in departments (as in U-form)

### Supervision

- Centralized from the top
- Focus on division profits

### Issues are dealt by

- Operational issues = division managers
- Strategic issues = top managers and corporate headquarters

### Advantage

• Reduces some agency problems that may arise in U-Form

# MATRIX STRUCTURE

#### A Matrix Organization Structure with Project and Function Dimensions



Source: Besanko, D., Dranove, D., Shanley, M., & Schaefer, S. (2016). Economics of strategy.

### Divisions

• Organization along multiple dimensions at once, e.g. product and geography

# Supervision

- Single units report to two bosses (employees have 2 or more sets of managers at one level of the firm)
  - Example 1: Engineer reports to a R&D and a project office
  - Example 2: Salesperson reports to the head of sales of a particular product and the regional manager of sales in a specific region.

# Advantage

- Most suitable when demand of competing dimensions are more or less equivalent and difficult to address in a sequential manner.
- An advantage of the structure is to achieve economies of scale by having one product across multiple countries, and at the same time economies of scope by having multiple products in one country

**Rationale**: economies of scale (1 product across countries) and scope (multiple products in 1 country)

# Disadvantage

• Conflict of interest. In one unit, an agent must listen to two managers but those managers might not always agree on how things are supposed to be.

# NETWORK STRUCTURE

# Division

• Flexible organization where workers, either singly or in combination, can contribute to multiple tasks and be recombined as the tasks change

# Advantage

• A big advantage of this structure is that coordination and agency costs are avoided, hence reducing organizational costs in general (e.g. due to the Internet). Moreover, networks can reach further among many firms with formal or informal ties.

• A close alternative is "Modular Organizations" with independent firms tied together by a technology standard, (e.g. "Apps" producers working closely with Apple)

# Multiple firms

- Networks may also extend beyond single firms, with formal or informal ties,
  - e.g. Keiretsu and Chaebol, or industrial districts in Italy where small firms along the vertical chain cooperate closely

# Structure - environment coherence

The optimal organizational structure for a firm depends on the environmental circumstances it faces (e.g. regulations, uncertainty, technology). Example: Cray (U-form) vs. JP Morgan (matrix).

# **Environmental factors**

- Technology and task interdependence
- Information processing

# TECHNOLOGY AND TASK INTERDEPENDENCE

**Technology:** base of scientific knowledge underlying what a firm does, as well as the general state of know-how behind the application of scientific knowledge to specific products and services.

- If a firm operates with a mature slowly changing technology, stable hierarchical structure is applicable
- If technology is rapidly evolving, more decentralization is needed
- Continuous adaptation of the organization is crucial

**Task interdependence:** the extent to which two or more positions depend on each other to do their own work.

# 3 types of task interdependence

• **RECIPROCAL INTERDEPENDENCE:** when two departments depend on each other to develop a product; (e.g. Apple's software and hardware development teams)

- **SEQUENTIAL INTERDEPENDENCE:** one department can only continue when the other is done, not vice versa; (e.g. regulation department and sales of pharma company)
- **POOLED INTERDEPENDENCE:** when two departments are not dependent, but its activities are important to the firm's overall success. (e.g. Disney's Pixar and ESPN)

Organizational structure should group together tasks showing reciprocal interdependence, adapting over time.

# Information processing

Organizations should be designed to facilitate information processing optimally. Work groups can normally operate independently through routines, authority is needed to handle exceptions. The more difficult they are, the higher the level of responsibility in the structure

The organizational structure of the firm must reflect the necessary needs of processing information and therefore, efficient information retrieval from the environment is key.

# Structure follows strategy

Given the environmental factors, the organizational structure needs to be consistent with the overall strategy.

- The first structure typically employed by these early hierarchical firms was the U-form. After 1920, the multidivisional structure (M-form) emerged as a response to the limitations of the U-form in larger diversified firms.
- Recent example: network structure of SAP AG (Germany), strategic focus on software development, relying on network of partners for training and implementation consulting (e.g. Accenture)

# THE CASE OF MULTINATIONAL FIRMS

Multinationals have discovered the need to balance responsiveness to local conditions with centralization to achieve global economies. This is called transnational strategy.

Structure follows strategy with flexible organizations combining matrix and network approach: exploitation of scale and scope economies in global production and distribution

balancing responsiveness to local conditions with centralization for efficiency gains activities are undertaken on a global scale where there is an advantage (e.g. R&D in technology clusters)

# Organisation and strategy - IBEB -Lecture 7, week 3 External context and strategy

Success of a firm's organization and strategy depends on: **the firm**; the market; the environment. Previous lectures focus on the firm and the market. Today's focus is on the environment. It will discuss how the social context of the firm impacts firm behaviour and thus firm strategy.

# Social context

- **Firms:** Are transaction-based institutions designed and established by entrepreneurs.
- Firms act within networks of already established relationships.
  - Relationships are often based on shared customs, language, norms or rules.

#### Importance

This is useful because social context can reduce transaction costs through trust by:

- Enhances relationships within firms.
- More efficient exchange of goods and services between firms.

# Shared understanding

In social context, there is shared understanding between organizations. There are FOUR different sources for this including:

- Common history
  - (e.g., similar culture practices)
- Common regulatory environment
  - (e.g., EU creates large amount of rules in the common market that firms within it must adhere to)
- Common political environment
  - (e.g., common government such as the one in the USA can ensure that rules are the same across the country)
- Common technological constraints
  - (e.g., app owners who develop applications for the AppStore have the same barriers in technology and an understanding of a similar social context)

# COMPETETIVE ADVANTAGE THROUGH SHARED UNDERSTANDING

Shared understanding can persist over time but could also change quickly & dramatically (e.g.: Arab Spring) changes in shared understandings provide new opportunities of competitive advantage.

# Internal and external context

### Internal context

Internal environment of a firm in which managers and employees work.

- Internal power and politics
- Culture

**INTERNAL CONTEXT:** Provides the formal and informal mechanisms that guide the actions of managers and workers

- The aggregated individual performances of a firm's employees ultimately determine firm performance. However, goals pursued by different actors may be divergent, such as agency-problems à Firms can address by giving incentives (such as pay for performance), however these tools often have limited effectiveness
  - Inadequacy of formal controls. In case of goal conflict, differential motivation, and incomplete authority:
    - Power and culture become alternative means to accomplish goals

# INTERNAL CONTEXT: POWER

- **POWER:** The ability to accomplish one's goals through non-contractual exchange relationships.
  - The ability to tell people what to do without having to write a contract about it.
  - Power also exists at many levels in the firm: e.g. universities, faculties, and departments
- Power differs from:
  - Authority, which comprises of explicitly granted decisions rights (formal organization structure).
  - Influence, which is the use of power by an individual in a given situation.

### Sources of power

- 1. Legitimate power based on FORMAL AUTHORITY.
  - 1. E.g., coach in a basketball team
- 2. Reward/coercive power based on the **ABILITY TO REWARD/PUNISH**.
  - 1. E.g., MVP's in a soccer team who decide if players can get the ball. They are able to choose whether to lend their expertise to people
- 3. Power based on status, image or **REPUTATION**.

#### **POTENTIAL SOURCE: Firm structure**

- Persons occupying critical brokerage positions within the structure can have more power
  - **STRUCTURAL HOLES:** Relationships in social networks in which one actor is the critical link between individuals or groups
    - Broker between groups can access information of both groups
    - Broker has bargaining power with the groups on either side
    - "Tertius Gaudens" "a rejoicing third."

#### Relational views of power

- Often based on social exchanges and resource dependence.
- Actors can increase their power by reducing dependence on others and increasing the dependence of others on them.
  - Power is accumulated by those who control critical resources and indispensable skills.

People with prominent positions in a network:

Are better able to influence organizational outcomes The firm is potentially vulnerable to their departure

### Is more power better?

Managers need some power – which they can get through authority through structure

- **MORE POWER IF:** (efficient solutions) The firm is in a stable environment with coordination problems (e.g., shirking).
- LESS POWER IF: (causes more conflicts) The firm is in a changing environment and there are coordination problems between managers (e.g., managers who work together across departments and have a lot of agency costs or hidden information between them).

# INTERNAL CONTEXT: CULTURE

- CULTURE: Set of shared values, believes, and norms that influences people's preferences and behavior.
  - Sets context in which **relationships** among firm members
  - Serves as informal **guideposts** for appropriate behavior

### Advantage & disadvantage

Culture may explain why seemingly identical firms from different countries perform differently.

### ADVANTAGE

• When unique, inimitable, and valuable for the firm

(Example: Success of Japanese car manufacturers.)

# DISADVANTAGE

• When the firm needs to integrate different cultures (Example: Chinese multinational firms in Europe.)

# Culture and Strategy

Poor fit between strategy and culture can develop because of several reasons:

• Initial success and firm growth

(Example: supply chain failure of American Giant Clothing)

• Shocks in the competitive environment of the firm (Example: Nokia missing the smart-phone market)

• Intercultural mergers and acquisitions (Example: Daimler – Chrysler disaster. )

• Role of managers (example: Yoga and CEO at Aetna)

### Asset or problem?

- **ASSET:** When a firm's strategy fits the environment, cultural norms can be an asset and reduce transaction costs (e,g., no need for too many contracts)
- **PROBLEM:** However, when the firm environment changes and firms must adapt to survive, culture can be a drag on performance (becomes a problem).

# External context

The external environment of a firm that affects and guide a firm's business through the:

- Business environment
- Macro-environment

Or through:

- 1. Institutions (regulation)
- 2. Resource independence

Outside of the boundaries of the firm, disputes need to be solved without the use of managers. To do this, institutions are needed.

**INSTITUTIONS:** are stable organizational arrangements bring order to economic transactions

- 1. **Formal institutions:** Constitutions, laws, property rights, and regulations (most exist on paper).
- 2. **Informal institutions**: Norms of behavior, attitudes, customs, taboos, conventions, and traditions.

# EXTERNAL CONTEXT: REGULATIONS

**Regulations**: Governments impose rules on firms that affect the strategic behavior of firms.

### Costs

Regulation imposes costs on firms:

- 1. Direct costs of compliance
- 2. Penalties for noncompliance (e.g., fines)
- 3. Costs of strategic options that must be forgone due to regulation (e.g., Anti-trust regulation causes forgone revenues)
- 4. Higher prices for goods (i.e., firms pay more for inputs if suppliers are faced with regulations)
- 5. Market distortions as a result of regulatory imperfections

# Advantages

Firms not only react to the external environment, but they can also use it to gain strategic advantage. Firms set standards that adhere to regulations. These standards may be costly to new firms, especially if the first firm has adhered to the regulation previously.

(Example: patents, taxes, rules for environmental standards)

# EXTERNAL CONTEXT: RESOURCE DEPENDENCE

Business environment: Firms develop power/dependence relationships with other firms or organizations in their environment, such as:

- Competitors
- Buyers or suppliers
- Non-business organizations (e.g., NGOs)

Status and reputation could be intangible resources that lead to power for larger firms

# Reduce dependence on trading partners by

(Example: One Belt One Road Initiative)

- 1. Vertical integration
- 2. Long-term contracting
- 3. Joint ventures/alliances

# Organisation and Strategy - IBEB -Lecture 8, week 4 Competition

**Competition:** If one firm's strategic choice (adversely or favorably) affects the performance of another firm.

# Types of competition

- **Direct competitors:** Strategic choice of one firm directly affects the performance of another firm.
  - E.g.: cars, Audi coupes versus BMW coupes or jeans, Levi's versus G-Star.
- **Indirect competitors:** Strategic choice of one firm affects the performance of another, because of a strategic reaction by a third firm.
  - E.g.: G-Star versus Zara through Levi's.

In practice:

- Direct competition, when an increase in price of one firm results in a loss of customers to another firm, **or**
- Firms are direct competitors only when they produce products that are **substitutable.**
- Competition can occur within input markets such as that of labor.

# Substitution

Two products tend to be close substitutes when:

- They have similar performance characteristics
  - (what does the product do for you as a consumer?)
- They have similar occasion for use
- They are sold in the same geographical market.

# Competitor identification

Cross-price elasticity (weak, close, perfect):

$$n_{yx} = \frac{\Delta Q_y / Q_y}{\Delta P_x / P_x}$$

When  $n_{yx} > 0$ , implies  $P_x$  increase results in  $Q_y$  increase, or substitution. Thus:

- If  $n_{yx} > 0$ , the two products are substitutes
- If  $n_{yy} = 0$ , the two products are independent
- If  $n_{yx} < 0$ , the two products are compliments

E.g.: when of price soda increases, this would result an increase in quantity of lemonade sold (no bubbles)

# Analysis

- DIVERSION ANALYSIS
  - Calculate the market shares of a consumer's second choice.
  - Ask consumers what their best alternative is. The highest alternative can be considered as a competitor.
- STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES.
  - E.g.: 822 Colleges & Universities subdivision of 82 Educational services.
- GEOGRAPHIC IDENTIFICATION
  - Flow analysis

# The market

- Market: A market consists of buyers and sellers of a good or service.
- Economists look at the market by the degree of concentration of sellers of a good or service.
  - E.g.: Monopoly: 1 seller
  - E.g.: Perfect competition: many sellers.

# Market structures

### STATIC VIEW

#### **Perfect competition**

- Characterized by competitive equilibrium.
- Firms are forced to produce as efficiently as possible → inefficient firms exit the market.
- No abnormal profits.

#### Imperfect competition

- Monopolistic competition
- Oligopoly
- Monopoly

**The static view** on market structure defines whether a market has perfect competition or imperfect competition. This is a disadvantage because it does not address the drivers of the current state of the market and how markets develop. In reality, markets are **dynamic**.

#### DYNAMIC VIEW

#### **Selection of new entrants**

- New firms learn about their relative productivity.
- New firms either exit (inefficient) or grow (efficient)
- As firms grow, they profit from scale economies, transition from perfect to imperfect competition.

#### E.g. Schumpeter (Austrian school)

- Competition is driven by innovation (product/process).
- Innovative firm becomes monopolist  $\rightarrow$  monopoly profits.
- Other firms catch up → Monopolies only last for a short period of time because other firms can catch up and copy.

**Conclusion:** Market structure, the strategy of the firm, and firm performance are interrelated!

# Harvard School

# Structure - Conduct - Performance (SCP)

- Structure-Conduct-Performance (SCP) Harvard School: Highly influential in industrial organization from 1950s to 1970s.
- (high) market concentration = (high) market power = (high) price-cost margin
- Paved the way for antitrust legislation as it shows the relation and importance of competition for the welfare of consumers.
- High concentration of market power is bad for consumers (according to SCP) and paved the way for antitrust legislation.
  - Higher prices for consumers is bad for welfare
- Forward causation: Market structure (concentration) affects conduct (strategy), which in turn affects performance (market power).
  - Market structure is driven by basic supply, demand and cost conditions (but is considered exogenous).
  - Number of players in the market is considered given
  - Performance is the measured outcome.

# Measuring

# HOW TO MEASURE STRUCTURE

### **Market concentration**

- 1. (N-firm) concentration ratio: the combined market share of the N largest firms.
  - Disadvantage: If you are presented with only the result of this index, you won't know anything about the relative market share about the 4 firms.
- 2. Herfindahl-index: sum of the squared market shares of all players in the market.
  - The more concentrated a certain market is, the higher the Herfindahl-index.
  - This index is more informative than the C4 index.

$$H = \sum_{i} (si)^{2}$$

si represents the market share of firm i

# SOURCES OF ENTRY BARRIERS

1. Minimum efficient scale MES

- 2. (Sunk) capital investments
- 3. Advertising
- 4. R&D

# HOW TO MEASURE CONDUCT (STRATEGY)

The policy and strategy of the firm in its widest sense:

- 1. Pricing of products.
- 2. Investment.
- 3. Mergers and acquisitions.
- 4. Product choice.
- 5. Collusion.

# HOW TO MEASURE PERFORMANCE

- 1. Price-cost margin/ Lerner-index
  - Measures market power!
  - Not ideal for empirics because firms never report marginal costs.

$$L = \frac{(P - MC)}{P}$$

where P is price and MC is marginal cost

### 2. Profitability.

E.g.: Return on equity or return on assets.

- 3. Production efficiency.
- 4. Innovative performance (number of patents).

# **SCP** empirics

• Several empirical studies have been conducted to study the interrelatedness of market structure, firm's conduct and performance in the SCP and testing 2 hypotheses:

# **HYPOTHESIS 1**

- Market power increases with market concentration
- Evidence has been found in the past, but the effect is very small. Weiss (1974) show a positive effect of market power and concentration in several industries where approximately a 10% increase in C4 increases Lerner-index by 1.2%

# HYPOTHESIS 2

• Market power increases with larger entry barriers.

• The second hypothesis has more proof. The effect of entry barriers is bigger and found more often. A higher level of MES, capital investments, advertising and R&D are all positively correlated with higher profits.

# Chicago School

- Chicago School: Influential in industrial organization from the 1960s to 1980s.
- Conduct affects market structure = (temporary) monopoly profits.

#### **Reverse** causation

- Firms make choices (such as innovation), which not only influence performance, but also affect market structure.
- More efficient firms are more profitable and tend to grow large (performance influencing structure).
- Chicken and egg story with SCP.

#### Monopoly is often transitory:

- Entry (or threat of entry) is important.
  - Firms can pursue strategies to influence entry decisions of other firms (thus conduct affects structure).
  - Monopolies only last for a short period because of entry.
  - Market structure is not given and exogenous. It is endogenous and determined by the strategy of the firm.

# Harvard and Chicago

### Collusion hypothesis

- Argues that a positive relation between concentration and profitability is evidence of collusion (or other abuses of market power) designed to enhance profit.
- Concentration and profitability infers abuse of market power which is not good for consumer welfare.
- E.g.: OPEC (Organization of Petroleum Exporting Countries).

# Efficiency hypothesis

- Argues that a positive relationship between concentration and profitability reflects a natural tendency for efficient firms to be successful and to become dominant in their industries. This may be beneficial for consumers.
- E.g.: Microsoft.

# Antitrust law

- SCP showed a positive correlation between market concentration and market power. It had a big influence on regulations. Antitrust enforcements became very aggressive since there was a lot of discontentment. In the end, SCP declined, and regulations became less strict.
- Cartel: group of firms that attempt to reduce the degree of competition among each other.

#### Examples of antitrust law are:

- European competition law
- Article 101
  - About restrictive prices and price agreements such as market sharing, price fixing and quota agreements. This article prohibits cartels: groups of firms that try to limit competition amongst themselves
- Article 102
  - About the abuse of dominant power through excessive pricing, price discrimination (discounts and rebates) and refusing to make deals with certain firms.

#### **Conclusion:**

- Similar to cartels, merger or acquisition is a formal agreement to cooperate.
- Prevent the creation or strengthening of a dominant position that would impede effective competition in the common market.

# Example cartel

- When both firms have an incentive to cheat, there will be a defect for both firms
- Equilibrium is a tit-for-tat strategy.

### WHEN CAN CARTELS WORK?

- 1. With an enforcement mechanism: detect and punish cheaters.
- 2. If producers have little variation in marginal cost.
  - The goals is to produce at lowest cost
  - More variation, more instability
- 3. If the long-run profits associated with not cheating outweigh the short-run gains of cheating.

### CONCLUSION

- There is competition when products are substitutable.
- Market structure is often characterized by the degree of concentration of the number of sellers in a market.
  - (decrease in) number of sellers (increase in) market power (decrease in) competition = impact on profits
  - Higher market power = higher profit
- Market structure, firm strategy and performance are interrelated.
  - SCP / Chicago.
  - High degree of concentration may be bad for consumers.
  - Therefore, antitrust legislation.

### COMPUTATIONS

**First:** Competition (non-cooperation in cartel). Consider demand function P=150-Q where  $Q=q_1+q_2$  so 2 firms and MC=30.

- Revenue for firm 1:
  - $R_1 = Pq_1 = (150 q_1 q_2)q_1$
- Profit maximisation requires MR=MC:
  - Firm 1:  $MR_1 = 150-2q_1-q_2 = MC$
  - Firm 2:  $MR_2 = 150-2q_2-q_1 = MC$
- Solve: symmetry argument q1=q2=q
  - So, 150-3q=30 and q=40 (output)
  - Price is P=(150-(40+40))=70
  - Profit for each firm is (70-30)\*40 = 1600



Source: Lecture 8, Dr. B Karreman (2023)

Now: Cooperation in cartel (2 firms act as a monopolist).

- Monopolist revenue:
  - R=PQ=(150-Q)Q
- Profit maximisation requires MR=MC:
  - Monopolist: MR=150-2Q=MC
- Solve:
  - So, 150-2Q=30 en Q=60 (output)
  - Price is P=(150-60)=90
  - Profit for monopolist (90-30)\*60 = 3600
  - Divide profits: Profit for each firm is now 1800!

Source: Lecture 8, Dr. B Karreman (2023)

**Defect from the cartel agreement?** If firm 1 believes that firm 2 will stick to the agreement, it will increase its output and get a higher profit.

- Firm 2 respects agreement:
  - $q_2 = 60/2 = 30$  (quota agreement).
  - Given  $q_2$  firm 1's revenue:  $R_1 = Pq_1 = (150 q_1 30)q_1$
- Profit maximisation requires MR=MC:
  - Firm 1:  $MR_1 = 120-2q_1 = MC$
- Solve:
  - So, 120-2q<sub>1</sub>=30 en q<sub>1</sub>=45
  - Price is P=(150-q<sub>1</sub>-q<sub>2</sub>)=75
  - Profit for firm 1: (75-30)\*45 = 2025
  - Profit for firm 2: (75-30)\*30 = 1350

Source: Lecture 8, Dr. B Karreman (2023)

### Firms in prisoner's dilemma:

- Competition: (1600; 1600)
- Mutual interest in cooperation: (1800; 1800)
- Cartels are unstable (incentive to defect): (1350 ; 2025 vv)
- Defect both, i.e.  $q_1 = q_2 = 45$  : (1350; 1350)

#### Firm 2

		Cooperate	Defect
Firm 1	Cooperate	(1800 ; 1800)	(1350 ; 2025)
	Defect	(2025 ; 1350)	(1350 ; 1350)

Source: Lecture 8, Dr. B Karreman (2023)

# Organisation and Strategy - IBEB -Lecture 9, week 4 Entry and Exit

The number of players in the market is likely to change over time = Entry and Exit. In order for a firm to make successful entrance into a market it must be able to recognise barriers to entry and anticipate many scenarios of post-entry behaviour by the entrant's competitors.

# Entry

The beginning of production and sales by a new firm in a market.

### There are two ways to enter a market

- 1. By a brand new firm. (e.g.: Dell Computers)
- 2. By an established firm that is diversifying into a new market
  - 1. A market for a new product (e.g.: Apple iPhone)

2. A new geographical market (e.g.: ICBC in Europe)

# Effect of entry on the market

- 1. Competition intensifies
- 2. The market shares of incumbent firms (firms already in the market) decreases.

# When will a firm enter?

When the sunk cost of entry are lower than the present value of the post-entry profit stream (NPV>0).

### Sunk costs?

E.g.: Range from investment in specialised assets to obtaining government licenses.

### Post-entry profit?

Depends on demand and cost conditions as well as post-entry competition.

# Barriers to entry

# DEFINITION

- Incumbent perspective: Anything that allows incumbent firms to earn above-normal profits without the threat of entry (Bain, 1956)
  - Market power of firms already in the market
  - In Bain's typology markets are characterised by:
    - Structural and strategic barriers to entry.
    - Entry deterring strategies.
- Entrant perspective: A cost that must be borne by firms that seek to enter an industry, but is not borne by firms already in the industry (Stigler, 1968)

Entry barriers reduce the likelihood of entry and affect the returns of both the incumbent and the entrant.

# **3 ENTRY CONDITIONS OF A MARKET**

#### **Blockaded entry**

Incumbents do not take any action to deter entry  $\rightarrow$  existing structural barriers are sufficiently effective. *E.g.: Water utilities firm* 

#### Accommodated entry

Incumbents should not bother to deter entry  $\rightarrow$  structural barriers to entry may be low and strategic barriers may be ineffective or not cost effective. *E.g.: Restaurants.* 

#### **Deterred entry**

Incumbents deter entry  $\rightarrow$  strategy to deter entry is (cost-) effective. E.g.: Site pre-emption in retail banking.

### ENTRANTS VS INCUMBENTS

Differences predominantly in terms of costs:

- 1. Sunk cost for incumbents are incremental costs for entrant.
  - a. E.g.: Shell, BP, Texaco → already made enormous investments in the past (sunk), while entrants have to make these costs step by step (incrementally).
- 2. Established relationships with customers and suppliers are not easy to replicate.
- 3. Learning curve effects.
  - a. E.g.: Gaining experience is time consuming  $\rightarrow$  international expansion of banks.
- 4. Switching cost for customers from incumbent to entrant are often high.
  - a. E.g.: Switching computer programs  $\rightarrow$  SPSS versus STATA.

### STRUCTURAL BARRIERS TO ENTRY

Long-term barriers that are natural advantages of incumbent firms, think of:

#### **Essential resources**

- Natural resources may be controlled by incumbents or the government
  - $\circ$  E.g.: Mining  $\rightarrow$  diamonds.
- Protection by government policy and regulations.

- Patents can prevent rivals from imitating a firm's products.
  - E.g.: Pharmaceuticals.
- Special know-how that is hard to replicate for rivals.
  - E.g.: Car manufacturers

#### Cost advantages (economies of scale and scope)

- If economies of scale are significant, entrant may face cost disadvantages
  - E.g.: Capital intensive industries, such as the oil-industry.
- If economies of scope exist, entrant may face cost disadvantages.
- Multiple product lines are produced in the same plant.
- Upfront costs of brand awareness are high for entrants.

E.g.: Cereals  $\rightarrow$  Kellogg's Cornflakes/Frosties/Smacks.

#### Marketing advantages.

- Incumbent can exploit the brand umbrella to introduce new product more easily.
  - DISADVANTAGE: If one product is bad, consumers may assume that all products of that brand are bad.
  - E.g.: Sony "make.believe"  $\rightarrow$  Playstation, tv's etc.
- Easier to negotiate the vertical chain
  - E.g.: Easier to get shelf space with an established brand.

# STRATEGIC BARRIERS TO ENTRY

- Barrier set-up by incumbent firms. Often short-term strategic reactions.
- For strategic barriers strategies to work:
  - Incumbent firms must earn higher profits as a monopolist than as a duopolist and,
  - The strategy should change the entrants' expectations regarding postentry performance.

Strategic barriers to entry (incumbents' actions to deter entry), think of:

#### Limit pricing

- The incumbent sets the price sufficiently low to discourage entrants.
- If entrant infers that post-entry price will be low, entry may not be likely.
- DISADVANTAGE: However, limit pricing may lead to sacrifice of profits or inability to meet market demand (contestable versus strategic limit pricing).

So, the success of this strategy depends on the periods. When multiple periods are considered the incumbent may be better of being a duopolist than limit pricing forever as a monopolist.

#### **Predatory pricing**

- Setting the price below short-run marginal cost expecting to recoup the losses via monopoly profits once the rival exits.
- However, Chain-Store Paradox:
  - If all entrants can perfectly foresee the future course of incumbent's pricing, predatory pricing will not work.
- Risk of 'war of attrition': when 2 or more firms spend resources battling each other, the survivor who claims the market leaves the loser with nothing. When this occurs, the spent resources of the survivor may be larger than the future cash flows that it could still obtain.
- So, it depends on the information of the entrant.

#### When can limit pricing and predatory pricing be effective?

Because competition between firms is good for the welfare of consumers, limit and predatory pricing are banned. If, however, this weren't prohibited, it is not always a rational thing to do. It is only effective:

- 1. When the incumbent wants the entrant to lower its expectations for post-entry price.
- 2. When the entrant lacks information about the incumbent's costs.
- 3. When there is asymmetric information.
  - E.g. When the entrant does not know that the incumbent has valuable information on the entrant.

#### **Expanding capacity**

- By holding excess capacity the incumbent can credibly threaten to lower the price if entry occurs.
- Lower price and meet increasing demand
- If a firm holds excess capacity, it can threaten to lower the price credibly, making possible entrants hesitant to enter the market. When a firm lowers price, demand for the product will increase and the firm's ability to meet demand is based on its excess capacity.
- To be a barrier to entry, the excess capacity possessed by incumbents must be sunk prior to the threat of entry.

Expanding capacity works if:

- 1. The incumbent also has a sustainable cost advantage
- 2. The growth of demand is slow
- 3. Incumbent cannot back-off from the investment in excess capacity

#### Strategic bundling

- When a combination of goods or services is sold at a price that is less than the price of the same items separately.
- DISADVANTAGE: However, it is potentially anticompetitive, violating antitrust laws.

Strategic bundling works if

- 1. Incumbent is monopolist in one market but threatened by entry in another.
- 2. Giving consumers little choice but to buy the entire bundle from the incumbent.

# Exit

When a firm ceases to produce and sell in a market

# How do firms exit the market?

- 1. A firm may simply cease to exist. (E.g.: Wow Air in Iceland.)
  - This can also occur due to acquisitions or mergers.
- 2. A firm may discontinue a particular product or product group. (E.g.: Sega exits the computer hardware market.)
- 3. A firm may leave a particular geographical market. (E.g.: Google China.)

# Effects of exit on the market

- 1. Competition decreases
- 2. The market shares of incumbent firms increase

# Barriers to exit

- 1. Sunk costs: Make the marginal costs of staying low.
  - Obligations and commitments to suppliers and employees are sunk costs as well.
- 2. Relationship specific assets may have low resale value.
- 3. Government regulations.
  - E.g.: Railway firms

- For a manufacturing industry, the exit barriers are higher than in the service industry.
- Exit barriers are what drive a wedge between Pentry and Pexit.



# Organisation and Strategy - IBEB -Lecture 10, week 5 Strategic commitment

# Definitions

Choices can be based on two concepts:

- 1. Tactics:
  - Short term effects
  - Easy to change or undo
  - Example: lowering prices of products

#### 2. Strategies:

- Long term implications
- Difficult to reverse or even irreversible
- Example: investing in a new production facility (high sunk costs)

# Strategic commitment

• Strategic commitment implies decisions or strategies of the firm that have long term impact and are difficult, if not impossible, to reverse.

### Problem

- Sunk costs: long term and irreversibility involve risk and uncertainty.
- Effect on Competition: Commitment can have a profound effect on the decisions of competitors. The firm has to anticipate changes in terms of market rivalry.
  - Commitment has to be credible

### Importance of commitment

- Inflexibility can be beneficial to a firm.
- Limits the options of the firm but affects the expectations of competitors.
  - Simultaneous game sequential game

### Conditions

Competitors will only react to a strategic commitment when it meets certain conditions. Hence, the commitment is only valuable under the conditions of:

- 1. Visibility
- 2. Understandability
- 3. Credibility
- 4. Irreversibility

Examples:

- "Continental Airlines said yesterday that it would raise airfares on about two-thirds of its routes ... to take effect September 5." New York Times. → Later that year. "Continental Airlines has dropped its plan to raise domestic airfares by 5%." USA-Today.
- "Microsoft officials won't confirm or deny that its commitment to ACE was a bluff, but the announcement bought them about six months." UnixWorld.
**Problem:** Lack of credibility or tactical bluffing? However, bluffing systematically does not work.

# Credibility

Credibility makes your commitment irreversible.

### Principles

- 1. Change the payoffs of the game. Make it in your interest to follow through on your commitment:
  - $\circ$  Turn a threat  $\rightarrow$  a warning, or turn a promise  $\rightarrow$  an assurance.
  - E.g.: Reputation or contracts.
- 2. Limit your ability to back out of a commitment:
  - Deny any opportunity to back down
  - E.g.: Relation-specific investments.
- 3. Use others to help maintain commitment
  - A team may achieve credibility more easily than an individual.
  - E.g.: Subsidiary in multinational enterprise.

# Compliments and substitutes

Competition: How do competitors react to a tactical decision?

- 1. Strategic complements: When a firm's action induces a rival to take the same action.
  - Example: A price decrease of firm A is likely to be followed by a price decrease of firm B → complements.
  - E.g.: Price war among supermarkets.
- 2. Strategic substitutes: When a firm's action induces a rival to take the opposite action.
  - An increase in output of firm A is likely to be followed by a decrease in output by firm  $B \rightarrow$  substitutes.
  - E.g.: Eneco produces more electricity, then Essent produces less.

#### This shows that:

A. Strategic complements → aggressive behaviour leads to more aggressive behaviour of competitors. Both reaction functions in its graph are downward sloping. B. Strategic substitutes → aggressive behaviour leads to less aggressive behaviour of competitors. Both reaction functions in its graph are upward sloping.

Tactical decision: Cournot (a) and Bertrand (b). Prices are generally compliments while quantities are generally substitutes.



Source: Lecture 10, Dr. B Karreman (2023)

# Tough and soft commitments

Competition: How do competitors react to strategic commitment?

- 1. Tough commitment: A commitment with an adverse effect on competitors of the firm.
  - Traditional view of competition.
- 2. Soft commitment: A commitment with a beneficial effect on competitors of the firm.

#### How to analyse?

Consider a market with 2 firms and decisions will be made in 2 stages:

- 1) Stage 1: Firm 1 decides to make a commitment.
  - Shift in reaction function
- 2) Stage 2: Both firms decide output or prices simultaneously

### Example, tough commitment made by firm 1

1. COURNOT MARKET - substitutes

- Firm 1: Reaction function shifts right (direct effect seen by "d" in the graph)
- Firm 2: Strategically reacts to firm 1 and decides how much output to deliver to market (seen by "s" in the graph)
- Hence, the total effect consists of both a direct and strategic effect (d+s)
- 2. BERTRAND MARKET compliments
  - Firm 1: Reaction function shifts left (direct effect seen by "d" in the graph)
  - Firm 2: Strategically reacts to firm 1 and decides how much output to deliver to market (seen by "s" in the graph)



Source: Lecture 10, Dr. B Karreman (2023)

# Two effects of commitment

• Direct effect

The impact on the net present value (NPV) of the firm's cash flows, assuming that the firm adjusts its own tactical decisions in light of this commitment.

• Strategic effect

The effect of the tactical decisions of competitors on the NPV of the firm's cash flows after the commitment is made.

Note: When committing to a strategy, a firm should not only take the direct effect into account, but also the reaction of competitors – the strategic effect!

- E.g.: A direct effect may be positive, but the overall effect may be negative due to a negative strategic effect or the other way around.
  - Hence. When a negative strategic effect is larger than the positive direct effect, firms should not commit to the strategy.

# Commitment & competition

- Strategic commitments and inflexibility may lead to beneficial outcomes to a firm.
  - Why? Because committing yourself to a certain strategy triggers a reaction of commpetetors, for which there is valuae
- Commitments that lead to less aggressive behaviour from rivals will have a beneficial strategic effect.

There are four combinations of commitment posture and the nature of the competitor effect, influencing the strategic effect result of the commitment and leading to either making the commitment or refraining from it:

- 1. Soft commitment & strategic substitutes = negative strategic effect = refrain from commitment
- Soft commitment & strategic complements = profitable strategic effect = make commitment
- Tough commitment & strategic substitutes = profitable strategic effect = make commitment
- 4. Tough commitment & strategic complements = negative strategic effect = refrain from commitment

Commitment Posture	Nature of Stage 2	Commitment Action	Strategy
Soft	Strategic Substitutes	Refrain	Lean and Hungry Look <sup>FT</sup>
Soft	Strategic Complements	Make	Fat-Cat Effect <sup>FT</sup>
Tough	Strategic Substitutes	Make	Top-Dog Strategy <sup>FT</sup>
Tough	Strategic Complements	Refrain	Puppy-Dog Ploy <sup>FT</sup>

Source: Lecture 10, Dr. B Karreman (2023)

- **SUBSTITUTES** => aggressive behaviour leads to less aggressive behaviour of your competitor
- COMPLIMENTS => aggressive behaviour leads to aggressive behaviour of your competitor

# Flexibility

### Flexibility & options

Strategic commitment and inflexibility:

- Value of commitment refers to creating inflexibility.
- With increasing uncertainty, flexibility becomes more valuable. However, it is often not very useful to be completely flexible:
  - Sometimes firms want to invest first to end up with a first-mover advantage over rivals, which in itself can last for a longer period of time
  - Past commitments may provide a negative result that could result in further options of growing in the future. This may give firms positive rewards (like banks in Ukraine)
  - Hence, inflexibility through strategic commitments can add value if they are credible
- However: Strategic commitments are made under uncertainty about:
  - Market conditions.
  - Cost.
  - Strategies and goals of competitors.

Therefore, preserving some flexibility can be valuable for the firm. Taking into consideration competitors, retaining flexibility works best when you have an exclusive right on some kind of product (through a patent, license, etc.). If this is not the case, the option value of investing later declines due to the entrant of competitors.

### WAYS TO RETAIN FLEXIBILITY

- 1. Adjusting the commitment when conditions change
  - Example: Your firm made a small investment in a production facility. If the product is found to be very successful, the firm can make a follow-up larger investment in a larger facility.
- 2. Postpone commitment till there is more information available.

- When there is a lot of uncertainty, gaining information is very valuable.
- 3. NPV of a commitment may be negative today, but there may be an option to make a follow on investment in the future.
  - Example: Make an investment with a loss now but with the expectation that it would bring large profits with future growth.

### **Real options**

**Real option:** Choice to adjust an (investment) decision based on future information.

- Real options exist when managers can influence the size and risk of cash flows as a reaction to changing market conditions.
- This is a right and not an obligation
- Amount you are willing to pay to understand the effect of uncertainty
- Competition reduces the value of the option.
- Potential actions in the future can be assigned financial value → value of flexibility!

#### **Examples of Real Options**

- Option to Delay: Delay decisions to wait for new information and learn whether investing might be a good option to do
- Option to Expand
- Option to Abandon

# Strategic commitment: an analysis

- New empirical industrial organization:
  - Build structural models and tests empirically.
  - E.g.: Does strategic commitment with respect to R&D expenses lead to better performance?

### FRAMEWORK FOR ANALYSIS: GHEMAWAT

Analysis of strategic commitment in a qualitative perspective based on:

- **Positioning analysis** =>direct effect of strategic commitment
- Sustainability analysis =>strategic effect of strategic commitment
- Flexibility analysis => about risk and uncertainty
- Judgement analysis => other external effects that may affect the strategic commitment decisions and reaction decisions of rivals.

# Organisation and Strategy - IBEB -Lecture 11, week 5 Strategic positioning & competitive advantage

**Goal:** A firm's ability to **create value** and enjoy a competitive advantage over other firms depends on how it positions itself within its industry. Strategies must be clear.

However:

- Firms within the same industry can position themselves in different ways.
- Not all positions will be equally profitable or lead to the same odds of survival.

## Competitive advantage

- A firm has to try to position itself in such a way that it is able to produce more value relative to its competitors. This would result in competitive advantage.
- Competitive Advantage: When a firm outperforms (i.e. earns higher rates of economic profit than) competitors who sell in the same market.
- Economic Profit: Depends on the attractiveness of the market as well as the success of the firm in creating more economic value than its competitors.



Source: Lecture 11, Dr. B Karreman (2023)

- Market economics includes market structure, number of sellers, etc.
- Strategic positioning > Market structure in terms of importance
  - Thus, it is important to focus on how you will position yourself from your rivals

### Value creation

Given market attractiveness, how can a firm create value?

#### CREATED VALUE

• The difference between the value that resides in the finished good and the value that is sacrificed to convert inputs into finished products.

### WILLINGNESS TO PAY & CONSUMER SURPLUS

- Maximum willingness-to-pay:
  - Price at which the consumer is indifferent between buying the product and not buying
  - This is the value that resides in the finished good.

#### • Consumer surplus:

- The difference between the maximum the consumer is willing to pay and the prevailing market price.
- Consumer surplus is important because it needs to be positive for a purchase to occur. In case of a choice between two products the consumer will choose the one with the largest consumer surplus.
- When a firm fails to offer as much consumer surplus as its rivals, its sales will decline.
  - So, try to sell a product whose consumer surplus is greater than that of its rivals
- Increase consumer surplus by:
  - Increasing the perceived benefit (quality)
  - Lowering the price

### Equation

If we define maximum willingness-to-pay as B, price as P and costs as C, then:

- Consumer surplus = B P
- Created value = B-C=(B-P)+(P-C)= consumer surplus + producer surplus

 Hence, P determines how much sellers capture as profits and what buyers capture as surplus



### Graph example

- Consumers will always prefer product C over A, B, & D: it has a relatively high quality, low price, and a higher consumer surplus
- Consumers are indifferent between A & B:
  - A: higher quality and price
  - B: lower quality and lower price
- Consumers will never buy product D: it has a lower consumer surplus
- Let's say, product Q exists. To gain more sales, there are several options:
  - Lower price, preferably in such a way that it is below the indifference curve to outperform A and B
  - Increase quality
  - Apply a combination of improving quality and lowering price

### CONCLUSION

- Consumers demand the same surplus from the firm as from its rivals.
- With superior value creation, the firm can offer as much consumer surplus as its rivals and still make an economic profit.

- Therefore, to achieve competitive advantage a firm must produce more value than its rivals.
- To produce more value, firms can conduct a value chain analysis.

# Value chain

- Value chain: Is the representation of the firm as a set of value creating activities.
- Each activity may potentially add benefits but will also add costs

### HOW TO CREATE MORE VALUE

- Configuring the value chain differently.
- Performing the activities more efficiently.
  - Need for resources and capabilities rivals do not have.
    - E.g.: Resources  $\rightarrow$  patents, brand name.
    - E.g.: Capabilities → superior acquisition of information. These are activities within a firm that add additional value but are difficult to identify, copy, and administer.

However, in practice, it is very difficult to isolate the incremental perceived benefits and costs of each activity.

# Strategic positioning

### Overview

According to Michael Porter, a firm's generic strategy describes how it positions itself to create more value. There are two (+1) competitive strategies:

- 1. Cost leadership
- 2. Benefit leadership (differentiation)
- + Focus strategies (focusing on a particular customer base)

Strategies must be deliberate and clear. Do not mix things up too much or else the firm will not be able to outperform its rivals.

### Cost leadership

Applied strategy: A cost leader creates a larger B – C by achieving a lower C than its rivals.

- How?
  - Undercut rivals' prices and sell more than they do.
  - Match rivals' prices and attain higher price cost margins than they can.

#### GRAPH



Source: Lecture 11, Dr. B Karreman (2023)

In the graph above:

- F: cost leader  $C_F < C_E$  (emphasized by  $\Delta C$ )
  - F has lower quality  $q_F < q_E$  (emphasized by  $\Delta q$ )
- E: All other firms in the industry
- Consumers are indifferent between F and E
- Notice that the difference in price is much lower than the difference in cost. P,C margin of the cost leader (P<sub>F</sub>-C<sub>F</sub>) is much larger than the P,C margin of the other firms in the industry. Hence, even if consumers are indifferent between F and E, F still obtains a much higher price-cost margin relative to other firms.
  - In this market, Cost leadership is a more profitable strategy to perform.

#### Strategy

- Firm F offers lower quality and has much lower costs than the rest of the industry (E).
- Only If: The cost leader attains consumer surplus parity with the rest of the firms in the industry it earns a higher profit margin. This implies that:
  - $\circ \quad \mathbf{C}_{\mathrm{E}} = \mathbf{C}_{\mathrm{F}} \diamond \mathbf{P}_{\mathrm{E}} = \mathbf{P}_{\mathrm{F}}$
  - $\circ$  P<sub>F</sub> C<sub>F</sub> > P<sub>E</sub> C<sub>E</sub>, implying that the price-cost margin of firm F is higher.

### COST ADVANTAGE IS A SUITABLE STRATEGY WHEN

- 1. The nature of the product does not allow benefit enhancement. E.g.: Oil  $\rightarrow$  scale economies
- 2. Consumers are relatively price sensitive. E.g.: Mars bar.
- 3. It concerns a search good.
  - Quality of good is known before purchase.
  - E.g.: Chairs or other furniture.

# Benefit leadership

**Applied strategy:** A benefit leader creates a larger B – C by achieving a higher B than its rivals.

- How?
  - Match rivals' prices and sell more than they do.
  - Charge price premium (larger C) and attain higher price cost margins than rivals can.

#### GRAPH



Source: Lecture 11, Dr. B Karreman (2023)

#### Strategy

- Firm F offers higher benefit than the rest of the industry (E) at a slightly higher cost.
- Only if: The benefit leader attains consumer surplus parity with the rest of the firms in the industry it earns a higher profit margin.
  - $\circ \quad C_{\rm E} = C_{\rm F} < P_{\rm E} = P_{\rm F}$
  - $\circ$  P<sub>F</sub> C<sub>F</sub> > P<sub>E</sub> C<sub>E</sub>, implying that the price-cost margin of firm F is higher.

### BENEFIT ADVANTAGE IS A SUITABLE STRATEGY WHEN

- 1. Consumers are willing to pay a premium for benefit enhancements. E.g.: Rolex.
- 2. When economies of scale and learning are significant (obtain benefit advantage through differentiation in a niche market). E.g.: Internet brokers
- 3. It concerns an experience good.
  - Quality of good is only known after purchase and when it is used for a while.
  - E.g.: Your brand new car.

### Focus strategy

- 1. Customer specialisation: Offer a wide range of products to a narrow customer group.
- 2. Product specialisation: Offer limited product variety for a wide range of customers.
- 3. Geographic specialisation: Exploit the unique conditions of the region.

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