Marketing Science no.8

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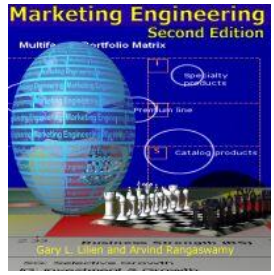
Strategy Concepts and Tools



- Market Demand Analysis
- Product Life Cycle
- ✓ Cost Dynamics

Cost Dynamics: Scale and Experience Effects

•**Cost dynamics** is another phenomenon **affecting marketing strategy**.

•In **profit impact of marketing strategy (PIMS)** program, market share is a primary determinant of business profitability:

On average, a **difference of market share** between competitors of **10%** is reported translates into a 5% **difference in pretax return** on investment.

Cost Dynamics: Scale and Experience Effects

One reason for this **profitability increase** is that firms with **larger market shares** have **lower costs**, partly

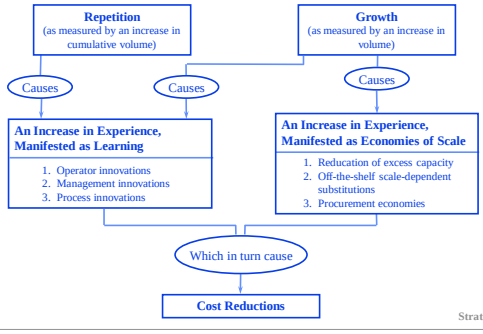
•because of **economies of scale** —

very large plants cost less per unit of production to build and run

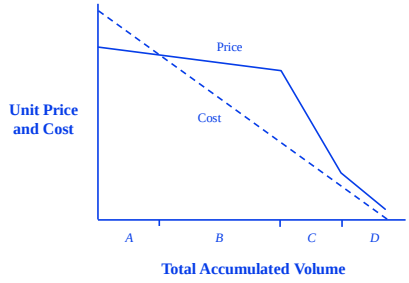
•because of the **experience effect** –

the cost of many **products declines 10 to 30%** in real terms each time the company's experience in producing and selling them **doubles**.

The Learning Curve and Scale Economies



A Price-Cost Relationship



Learning curve

•Although researchers have long observed that **manufacturing costs** seem to fall with **cumulative experience** and not just with product scale.

•Only recently have they studied this phenomenon carefully and quantified it

(Yelle 1979).

Learning curve

•Initially people **believed** that only the

labor portion of manufacturing costs decreased with **cumulative productions**.

•The commander of the Wright-Patterson Air Force Base noted in the 1920s that

the number of hours required to assemble a plane decreased as the total number of aircraft increased.

•The relationship between **cumulative production** and **labor costs** became known as the **learning curve**.

Experience curve

•The Boston Consulting Group (1970) showed that each time the cumulative volume of

product production **doubled**,

total **value-added costs-sales**, **administration**, and so on **fell**

by a **constant percentage**.

•This relationship between total costs and cumulative

production became known as the **experience curve**.

Cost decline by innovations & economies of scale

Alberts (1989) contends that most cost declines are **caused**

partly **by innovations** and

partly **by economies of scale**.

Cost decline by innovations

Innovation-based causes of cost reductions include

1. **Operator innovations,** in which **workers figure out how to** procure, manufacture, and distribute goods **more efficiently** with current technology.

2. **Management innovations**, in which **supervisors and managers figure out how to** improve operations with existing technologies.

3. **Process innovations**, in which new technologies for procurement, assembly order processing, and distribution lead to increased efficiency.

Cost decline by Scale-based causes

Scale-based causes of cost reductions include

1. **Reduction of excess capacity** which reduces the ratio of fixed costs per unit of production

2. **Scale-dependent substitutions**, in which larger assembly, procurement, and distribution systems are more cost-effective per unit

3. **Increased procurement power**, in which increases in procurement volume lead to better deals and lower unit prices

Experience hypothesis

In **experience** "**hypothesis**" of Alberts(1989),

he contends that

neither repetition nor growth "cause"

process innovations rather they arise through **R&D investments** that may or may not be linked to volume or experience.

Opportunity for cost declines

- According to Alberts, **experience** provides the opportunity for such **declines**.
- Many of the effects of experience (work specialization, for example) may become possible because the size of the operation increases, and therefore they are part of a scale effect.

Process innovations

- Growth in experience usually occurs at the same time the size of an operation grows.
- **Process innovations** will not just happen. They come from an **R&D program targeted at such cost reductions**.

Experience concept application

Experience concept application in a model requires to

(1) **adjust prices** for inflation

(2) plot **cost versus experience** (not time)

(3) **consider cost components separately**, because each may have different learning rates

(4) **correct** for **shared experience**, where two or more products share a common resource or activity

(5) **adjust for different experience rates** between competitors

(6) **begin at the right starting point** choosing n and Cn in Eq. (5.15)

Experience concept application

(7) **measure costs properly** over a reasonably long time frame

(8) **properly define** the **unit of analysis**

(a firm may have a large share of a small market yet have less experience than a competitor with a small share in a much larger markets)

(9) **treat process innovation effects as separately** budgeted effects

For more practical considerations, refer to:

Abell and Hammond (1979), The Boston Consulting Group (1970),Hax and Majluf (1982), Day (1986), Day and Montgomery (1983), and Alberts (1989).

Experience-curve concept

- The **experience-curve concept** is

of **strategic importance** in business planning for many inductries.

- In **stable industries**, where profit margins remain at a constant percentage of cost,

the **experience curve allows for long-range projections** of cost, price, and profit.

Market-dominance strategy

- **phase A** … costs exceed prices, as is often the case in a start.up situation.
- **phase B** … the market leader maintains a price umbrella over higher-cost producers entering the market, trading future market share for current profit.
- **phase C** … the shake-out period, one producer begins lowering prices at a faster rate than costs are declining, perhaps because of overcapacity.
- **phase D** … stability occurs when profit margins return to normal levels, paralleling industry costs again.

SUMMARY

- We introduced the **notion of marketing strategy** as an **umbrella concept** within which firms must make marketing decisions.
- We stressed the **interconnectedness** of all these decisions (particularly functional interactions, synergism between marketing-mix elements, and functional interactions).

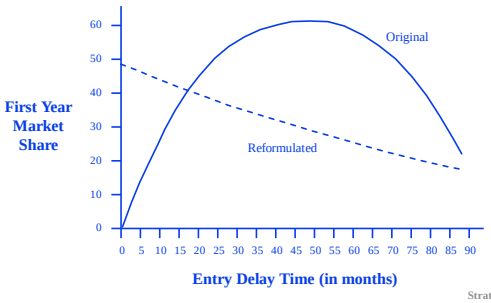
SUMMARY

- To devise a marketing strategy, we must **define a market appropriately** and **assess and forecast** the demand for that market.
- We outlined the **most common** and **emerging methods of forecasting sales** for established products.

SUMMARY

- The structure and dynamics of markets have led marketer to develop two other key planning concepts: the **product life cycle** and **cost dynamics**
- The **product life cycle** makes using traditional time-series and econometric **forecasting methods difficult**.
- The dynamics of **product costs** vs. the **experience-curve** effect affects market strategy and planning.

New Product Success vs Entry Time



Decision Analysis

- ❑ Structuring the problem
- ❑ Assigning probability
- ❑ Assigning payoff
- ❑ Analyzing the problem

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McKinsey/GE Approach

- Two key strategic dimensions:
  1. Industry attractiveness
  2. Business strength
- Decompose dimensions into key drivers
  - Evaluate SBUs by driver
- Use "map" to drive strategy

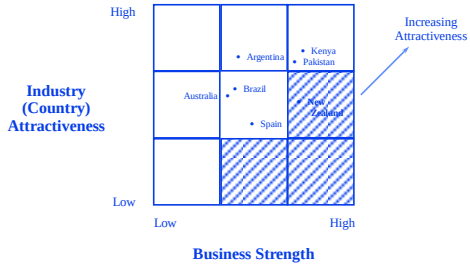
Steps in Process

- **1. Specify drivers of each dimension.**
- **2. Weight drivers**
- **3. Rate Segments/Products (SBU) on each driver**
- **4. Multiply weights times rates for each SBU.**
- **5. View resulting graph**
- **6. Review/sensitivity analysis**

The McKinsey/GE Business-Assessment Array

		Industry Attractiveness		
		Low	Medium	High
Business Strength	High	Selectivity (Y)	Selective Growth (G)	Investment & Growth (C)
	Medium	Harvest (R)	Selectivity (Y)	Selective Growth (G)
	Low	Harvest (R)	Harvest (R)	Selectivity (Y)

McKinsey/GE and Country Entry for Ford Tractors



Possible Business Strategies Guiding New Product Development

Source: Booz Allen & Hamilton Inc..

A Price-Cost Relationship