

Competitive Strategy

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Elective Overview

This elective is about strategic choices. What options do we face? Should we make moves back up the supply chain, or down towards our end customers, or should we stay where we are? Should we stick to our knitting, or diversify into other markets, if so which? What about establishing ourselves globally, should we do it, how can we do it, can we afford to do it, can we afford not to do it? These are examples of dilemmas and decisions that may be encountered in competitive strategy.

This elective looks at alternative *directions* (such as vertical moves, new markets and technologies, international expansion) and alternative *means* for pursuing these directions (such as internal expansion, contract, acquisition, alliance). Competitive Strategy develops a set of analytical approaches and tools to help formulate and evaluate these strategies on a topic by topic basis. The elective as a whole provides a unified and integrated framework to assist in the process of strategy formulation.

Analysis of the Environment

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The module will help set the context for much of the analysis and discussion in later modules. It introduces the basic features of the strategic arena in which the firm operates. We shall first look at the relevance and significance of life cycle effects over time. Then we shall see how the Five Forces Framework can provide a basis for systematically analysing the environment in which the firm operates at any given stage in the life cycle. We also look at how game theory can help provide useful insights to aid strategic thinking, while at the same time warning against uncritical use of this technique in strategic planning.

Learning Objectives

After completing this module, you should be able to:

- explain how critical points in the industry life cycle can transform the competitive environment of the firm;
- understand the implications of different stages in the life cycle for competitive strategy;
- describe the Five Forces Framework and explain its implications for strategy formulation;
- use the Five Forces to analyse the context in which individual competitive strategies are framed;

- explain the contribution and limitations of game theory in strategy formulation;
- describe how strategic moves can help a firm gain an advantage in the competitive battlefield.

1.1 Introduction

In this module we shall set the context for much of our subsequent discussion of competitive strategies. You might say that in this module we are beginning to look at the early pages of the rulebook for a game of strategy – what are the important features of the strategic battlefield, what strategies are possible, what constrains strategies, and so. However, the rulebook for competitive strategy as set out in strategic management textbooks is not as straightforward and clearcut as for other games of strategy such as chess and chequers. This is a rulebook where some rules are quite clear, but others operate some of the time only. It is a rulebook where the interpretation of some rules is hotly contested, and a rulebook where whole sections may be difficult to read or are missing altogether.

Just to make things more difficult, there are competing rulebooks written by different observers, many of which are constantly revised, and some of which are more unhelpful than helpful. It has been remarked, perhaps with some truth, that the worst thing that can happen to a firm is to be cited as an example of the rules that should be followed for competitive success. This often merely precedes the rapid fall from grace of these same firms in the market place.

The history of IBM over the Eighties and Nineties is a good example of the dangers of trying to produce clear and precise rules for competitive success. In the early Eighties IBM frequently appeared on lists of the most excellently managed corporations. Ten years later, its obituary was being written many times, often with stern observations about how the company had become a lumbering dinosaur that was doomed to failure, decline and probable elimination. Ten years later, at the turn of the millennium, IBM was being generally written up as a nimble and thriving company back where it belonged at the forefront of the information revolution.

IBM illustrates the point that firms are often both more vulnerable and more resilient than they appear at first sight. They can be more vulnerable than they appear because the apparently rock solid foundations of their current strategy may be quickly blown away by external forces such as technological change. They can be more resilient than they appear because the essence of a company is not bricks and mortar but people and socially constructed systems. While these systems may often display features that may be more rigid and difficult to change than bricks and mortar, they can also show a flexibility and adaptability that is not captured by the notion that some companies have discovered a recipe for success carefully passed down successive managerial generations. Recipes for success change, and the firm that fails to come to terms with that point is perhaps the only type of firm that is necessarily doomed to failure in the long run.

However, that does not mean to say that it is not possible to develop useful analyses for competitive strategy, merely that we have to be careful about coming

up with the kind of 'ten surefire recipes for success' of the kind that clutter up book stands in airport lounges. What *can* be possible is to establish what conditions are likely to favour what kinds of strategies. It is a bit like earthquake prediction. We might learn from studying the effects of earthquakes what house-building strategies could be adopted in earthquake regions (e.g. build low, build with strong materials, or avoid building anything). However, you have to look at each case in turn to decide which strategy or mix of strategies should be adopted in each case. Also the rulebook can change; e.g. the prohibition 'do not build high buildings in earthquake regions' has been at least partially modified in recent years through innovations in building materials.

Just as the geological environment can have an impact on house-building strategies, so the industrial environment can have an impact on the strategies of firms. Indeed, the environments that may have an impact on strategy do not stop at the boundaries of the industrial environment; social, political and legal environments can all have an impact. However, our main concern in this module is with the effect of the industrial environment on the framing of the strategies of firms.

As we shall see, one of the most important questions that arises in this context is how much discretion firms have in framing strategy, just as house-builders might consider the limited range of options open to them in building houses in earthquake zones. Politicians might describe this as the question of how much 'wiggle room', or room to manoeuvre, there is in framing options. As we shall see, the amount of wiggle room for competitive strategy can vary across sectors, and from time period to time period.

We shall start by exploring wiggle room over time in Section 1.2. This brings in the notion of the industry life cycle, and raises the question of how the nature and range of strategic options open to the firm can vary over the course of the industry life cycle. Then in Section 1.3 we shall look more closely at the question of where firms can wiggle in a particular industry at a particular point in the life cycle. These two big questions will help set the context for the discussion that follows in all the other modules.

1.2 Industries and the Life Cycle

Competitive strategy is about trying to achieve some kind of advantage over competitors. In Module 2 we shall see how this generally involves trying to achieve some form of cost or differentiation advantage over competitors. Ideally, the firm should seek to try to achieve some position that is difficult or impossible for rivals to imitate, such as Coca-Cola with its brand image in soft drinks, Boeing with its advantage of experience and economies of scale in building civil aircraft, or Amazon.com with its strategy of giving book readers information and cheap access through the Internet.

The problem with such successful strategies is that they are based around trying to create a unique source of advantage for the firm. Now 'uniqueness' is something that poses real problems for analysis. If a firm can carve out and defend a unique place for itself in the competitive market place, by definition this is something that may not be applicable to other firms. It is difficult or

impossible to develop a rule-book for creating uniqueness, whether we are talking about a building by Frank Lloyd Wright or a competitive strategy.

As we noted in the first section, the good news is that there are often underlying regularities in the environment that can aid decision-making, whether we are talking about house-building or competitive strategies. A good strategist, like a good architect, is sensitive to the intrinsic design properties of his or her plans in relation to the environment. This means knowing something about the environment, whether it is seasonal cycles for the area in which a building is located, or life cycles in the industry in which the product operates. In both cases, there may be regularities and patterns that planners can draw on to improve their decision-making in the respective contexts.

An important tool in the strategist's armoury is the notion of an *industry life cycle*. Industries may have a life cycle just like biological organisms, though we should be careful not to stretch the analogy too far. The eventual decline and death of biological organisms is inevitable, and indeed statistically predictable using actuarial tables. However, the same cannot be said for social organisations such as firms, or industries (which are simply groupings of firms or parts of firms). Nevertheless, for those industries that do decline it is often possible to identify some features that characterise this stage, just as it is often possible to identify features that characterise other stages in industries' growth and development.

The growth rate of an industry should not be thought of as necessarily a passive element that firms have to adjust to. A firm may be in a position to influence the industry growth rates and the course of the life cycle. Two main techniques for this are the following:

- **Pricing strategies in the introductory phase.** An innovator may decide to go for (low) penetration price and high initial growth, or for (high) skimming price and slower initial growth. A penetration price is more likely if an innovator has a deep pocket and is able to sustain initial losses, and if capturing a high market share is seen as providing a major source of competitive advantage, for example due to economies of scale. Amazon.com has pursued a penetration price strategy in Internet book selling. A skimming price strategy is more likely if firms wish to recoup expensive R&D expenditure and set up costs, and if it is expected that competitors will soon enter this market anyway. Skimming prices are often observed in consumer electronics markets.
- **Life cycle stretching and renewal.** Firms individually or collectively may extend the life of an industry through innovation and marketing improvements. Scotch whisky was a product that has developed a rather dull image over the years and has been generally seen as being associated with older drinkers. The industry has recently developed aggressive new advertising campaigns targeted at younger drinkers in countries such as the UK and Italy in an attempt to freshen up its image and revitalise its life cycle. The invention of the bagless vacuum cleaner by Dyson revitalised a market which had generally been regarded as rather settled and dull for many years.

However, apart from these special cases, firms may have limited opportunities in practice to affect the course of the life cycle and instead may have to learn to adjust to it. The life cycle will typically follow the major stages shown in Figure 1.1, but some cycles may be more erratic and unstable than is suggested by the orderly pattern in this figure. For example, some leisure industries such as professional wrestling and cinema have waxed, waned and waxed again in terms of popularity down the years, with trends often differing according to the national context.

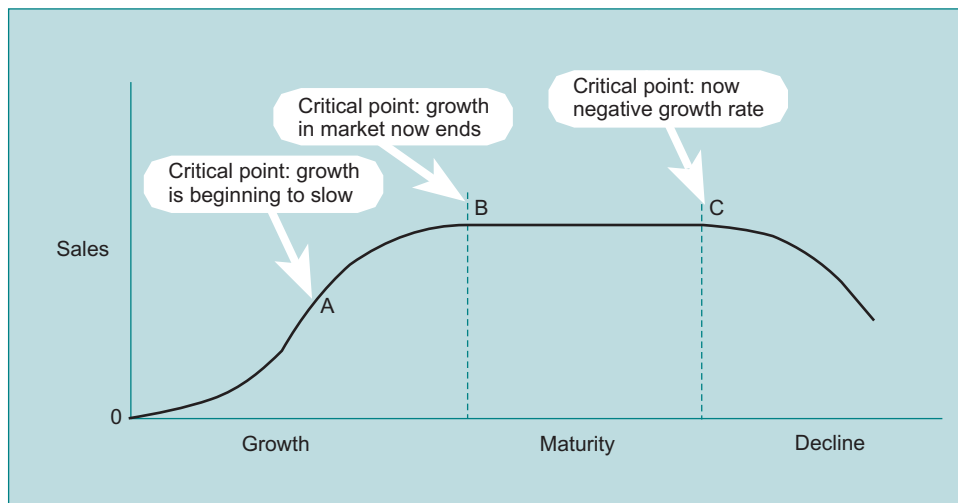


Figure 1.1 The evolution of industries

1.2.1 Critical Turning Points in the Life Cycle

In addition to broadly definable and self-explanatory stages, Figure 1.1 also identifies what may be critical points in the evolution of the industry. They can be especially important where strategists base their plans on recent and current trends and do not properly anticipate what is about to happen in this industry.

- 1 **Critical point A.** This point can represent a major turning point in the evolution of the industry, precisely because it can signal subtle changes and appear very innocuous at the time. After all, A is set about the middle of the growth phase so what is so potentially significant about this point? The significance lies in the fact that in Figure 1.1 the industry has been enjoying stable and predictable growth up to point A, and this has facilitated planning. Now, suppose recent growth has been 10% a year and this has been built into strategists' estimates of future growth and their investment plans. Extrapolating these trends has led to sound investment plans so far, but look what is about to happen at point A. Growth is beginning to slow down, from a regular 10% a year, to much lower growth rates, say 8% and declining. The problem is that if the firms in this industry invest on the basis that they expect growth to continue at the previously unsustainably high rate of 10%, then there will be overcapacity in this industry.

This overcapacity can suddenly change the nature of the competition overnight and can lead to fierce and destructive competition, especially if firms still retain the same growth targets that they have experienced in the earlier stages. But suppose we have a 'wise' firm which has anticipated that the industry is going to meet a turning point in the near future; surely this firm will be well placed to weather the coming storm? Up to a point this may be true; the firm may be able to take measures to protect itself, such as trying to differentiate its product, putting up defences around its existing markets and not overinvesting in new plant. However, even wise firms may be put under pressure for a variety of reasons

- They still invest because they worry about the implications of losing market share to rivals.
- Critical point A may be uncertain and difficult to identify in advance (is the decline in growth this year a temporary blip or the start of a new trend?).
- The intensified competition represented by price wars and battles for market share may still hit them badly, even if they have not overinvested.

Consequently, even though critical point A is still in the growth period of the industry it may represent the start of a shake-out phase which may put wise and myopic firms alike under severe pressure and push out weaker or unlucky firms.

At the same time some factors may counteract any tendency towards overinvestment and shake-out during slowdown in the growth phase. These include the following:

- Risk-aversion in the face of high uncertainty leading to cautious investment plans.
- It can take time before investment plans are put in place (e.g. possibly years for new plant), so investment may still be lagging behind demand growth by the time the turning point A is reached.

- 2 **Critical point B.** Point B represents a more obvious turning point in this industry. The positive growth rates experienced by the industry so far have ended and there is now zero growth (though 'Maturity' and the turning point may not be represented by absolutely static sales, but may more generally be associated with a state in which the market grows no faster than the economy overall). Up until now, firms could grow without necessarily taking market share from each other. The importance of critical point B is that now the only ways that a firm can increase market share are by reducing the number of its rivals (through merger, acquisition or exit of rivals) or through taking market share from its rivals. This is a zero sum game in which the gain to one player represents loss to others, a consideration which can affect the nature and extent of rivalry in this industry.
- 3 **Critical point C.** Critical point C can mark the start of a dog-eat-dog phase. In Figure 1.1, if the firm wishes simply to maintain its current level of sales in the decline phase, it can only do this by actually taking market share from other firms in this industry. The same logic holds for its rivals in the

industry. The fierceness of the resulting struggle will depend on how easy it is for firms to exit the industry. If there is little or nothing else it can do with the assets it has tied up in this sector (i.e. there is little opportunity cost or sacrificed value from continuing the struggle in this sector) then the battle may be long and bloody.

The real significance of each of these critical points is that history no longer serves as a guide to future trends. At critical point A growth begins to slow down, at critical point B growth ceases and at critical point C growth becomes negative. Does that mean that strategists are wrong to base their plans on historical trends? No, because what has happened in the recent past may often be a reasonably reliable source of information about what is going to happen in the near future, and indeed it may be the best information available. Strategists could make worse decisions by ignoring these trends. Also, almost by definition, turning points are extreme and unusual events that may be difficult or impossible to predict before they are encountered. The best that might be hoped for is that the strategists are aware that the turning points will eventually be encountered and that it is necessary to have appropriate strategies in place beforehand. The worst time to think about building a lifeboat is when the ship is sinking.

1.2.2 The Stages of the Life Cycle

The different stages of the life cycle can offer different opportunities and constraints in relation to strategic options. The actual nature and characteristics of the stages depend on actual cases, but the following are frequently observed features and tendencies together with some implications for strategy.

Growth stage

- **Relatively low price elasticity of demand for each brand.** If there is one or a few differentiated brands then price elasticity of demand for each brand may be low because of (a) limited substitutability, (b) user unfamiliarity with respect to what is the 'right' price and ignorance of alternatives, and/or (c) early pioneering users more attracted by novelty and less concerned about price. These issues will tend to reduce user sensitivity to price and give the firm a degree of discretion over pricing policy in the early stages. These influences may be eroded or weakened as the growth stage unfolds.
- **Relatively high price.** Since the user is relatively insensitive to price, the obvious temptation when the demand curve is not very price elastic is to price high to maximise short-run profits. However, as noted above, the firm may price low in order to maximise long-run profits. The problem with a high price in the early stages is that it may (a) send a profit signal that makes the industry look attractive to other firms and encourages entry, and/or (b) slow up growth, delay exploitation of economies of scale and experience curve advantages, and make it easier for other firms to catch up.
- **High level of advertising to create demand for new product.** Advertising has been characterised as informative (letting the potential customer know the product exists, and its characteristics) and persuasive (encouraging the

customer to switch brands). Once the product is established, the firm may be able to concentrate largely on persuasive advertising, but to begin with the firm may have to make considerable investment in informative advertising. Since this can mean having to inform the customer about the new product or service as well as specific brands, many of the gains from this advertising may accrue as external benefits to subsequent entrants who can take advantage of the product awareness created by early advertising. The online services provider AOL has heavily advertised the advantages of electronic mail and other Internet services, and many smaller firms and later entrants have been able to build on the product awareness created by AOL.

- **Profits low or negative to begin with, then increasing.** Scale of the market can be an important influence on profitability. In the early days, low demand means low revenues and is liable to coincide with high investment demands (in physical and human capital, and in advertising). Low scale of output also means high operating costs since economies of scale and the experience curve effects cannot be fully exploited. How long the firm is willing or able to sustain a loss making position depends on a number of factors. One important factor can be the expected time to achieve profitability (which in turn depends on expected market growth and importance of scale effects on costs). The ability of the firm to sustain a loss making position is also important and can depend on the willingness of the external capital market to see the firm through the initial loss-making stages. This may depend on the industry as well as the perceived prospects of the firm (e.g. during the late-Nineties biotechnology and Internet services were looked on favourably by the capital market). Alternatively, a highly diversified firm such as General Electric or 3M may be able to utilise its internal capital market to cross-subsidise loss making in emerging areas that show promise.
- **Variety of product designs.** Fluidity of consumer preferences can create opportunities for variety in design and these tendencies can be reinforced if there is a need to get round patent protection of rivals. In some cases, new opportunities may be perceived and exploited by employees of existing companies leaving to form their own spin-off company (as the history of Silicon Valley and the electronics industry shows). Rapid growth can open up new market niches and these benign conditions can mean that a variety of formats may persist, especially if the strongest rivals find it difficult to meet existing demand.
- **Radical product and process innovation.** R&D can be a major tool of strategy here as firms search for ways to create sustainable sources of competitive advantage. There may be parallel R&D activity in complementary technologies, e.g. the emerging PC industry stimulated much R&D in peripheral equipment such as printers and scanners.
- **Major demands for new investment.** Emerging industries may be able to take little advantage of the current capital investment. Equipment will probably have to be created from scratch, possibly plant also, and if the industry demands quite new skills and techniques, then there may have to be corresponding investment in human capital in the form of training and on-the-job experience. The emerging call centre industry is an example of

an industry that has had to make significant upfront investments.

- **Product can be characterised by frequent bugs and defects.** The novelty of the tasks involved combined with strong pressure to meet rapidly expanding demand can lead to high rate of product failure. This is especially likely to be the case with complex products as in the software industry.
- **Capacity shortages, at least in the early phase.** As we discussed above in the case of critical point A, the supply side may be less flexible than the demand side and this may lead to capacity shortages when the industry is rapidly growing (though there may be a countervailing danger of capacity overshooting after critical point A). If all stages in the industry (such as components, intermediate products and final goods) face similar problems, this has implications for competitive positions since it is a seller's market at each stage; *buyers* may face real difficulties in getting supplies of materials, components and raw materials, while *sellers* find it relatively easy to find a buyer for their relatively scarce product. This can have implications for strategy; for example buyers may vertically integrate backwards to secure supplies. We shall explore this further in Module 4.
- **Ease of entry into this market.** Fluid and rapidly growing markets, and the relative lack of standardisation and brand advantage, can create opportunities for entry.
- **Few firms.** At least in the early stages there may be only one or a few firms, though ease of entry can change this position rapidly.
- **Patchy or limited distribution.** Distribution may be erratic or constrained, for example in the early days of cable television it was generally much easier to put together the programmes than it was to deliver it to a geographically fragmented and heterogeneous market.

During the growth stage, the firm will have to make major choices that can affect its future ability to compete in this market. Some actions, such as R&D strategy and brand image will influence the kind of market segment in which it may be able to achieve competitive advantage. Other aspects of strategy such as investment and pricing decisions may be oriented towards getting the firm into a strong position later in the life cycle. Internet shopping is a sector that is just in the early stages of what is expected to be a period of high growth.

Exhibit 1.1: Organic growth

The early stages of product life cycles are often characterised by high costs, prices and risks. Each of these aspects is illustrated in the emergent organic foods industry. Switching costs for farmers moving into organics can include a two year conversion involving changing to natural pesticides and fertilisers, and crop rotation. Organic farming does not achieve the economies of scale and productivity levels associated with traditional intensive farming. However, by the year 2000, organic farming was achieving a 40% annual growth rate in the UK.

Demand side pressures, plus the higher risks and costs associated with organic farming, were reflected in 25–30% premiums for producers and higher prices in the shops for organic produce. Even this price signal was not sufficient to match domestic production to demand, with the UK importing about 75% of its organic consumption - a large proportion of the imports being produce suited to the British climate.

It is expected that much of the price differential between organic and conventional farming will narrow naturally as crop rotation leads to a rise in soil fertility, and economies of scale begin to be exploited by organics. But one issue that many feel could constrain the growth of organic farming in the UK is early pressure from supermarkets to hold down the retail price of organic produce. If this feeds back up the food value chain in the form of pressure on wholesale prices of organics, it could deter many farmers from switching to organics by increasing perceived risks and reducing expected returns.

- 1.1** If UK supermarkets were to push the prices of organic products down towards the level of conventional goods, what effect do you think this would have on this industry?

Maturity stage

- **Increasing price elasticity of demand.** Better informed consumers, increased competition and moves towards standardisation can all increase the price elasticity of demand, put pressure on margins and increase sensitivity to costs.
- **Falling price.** Costs may fall for a variety of reasons, such as economies of scale, experience curve effects, process improvements and competitive pressures squeezing inefficiencies out of the system. When this is combined with increasing competitive pressure on margins, prices may fall. The PC industry is a good example.
- **Brand advertising important.** Many of the positions and players are well established, consumers are now well informed about the industry and the players, so advertising is oriented to defending and improving on established market bases. If firms are still influenced by the high growth rates that were possible during the growth phase, brand advertising can be expensive and fierce.
- **Profitability begins to decline.** The later stages of the growth phase may have seen firms moving into profitability, but now market entry and increasing standardisation both put pressure on margins.
- **Increased standardisation.** Erosion of patent protection, increasing information about what constitutes the 'best' design, and tightening competition pushing out inferior designs can all contribute to a convergence on an industry standard. This tendency will be reinforced if there are network effects in which there are advantages in having a single technical specification (such as in video cassettes in which the VHS format won out).
- **Mostly incremental innovations, emphasis on process innovation.** The moves towards standardisation tend to have knock-on implications for the

type of R&D activity that firms conduct. A radical product innovation might really differentiate a product from the clones at this stage, but this may be seen by firms as too costly or risky when compared to the cost, price and brand advantages of established designs. This is especially likely to be the case for radical innovations which would require substantial new investment and advertising effort and could burden the firm with uncompetitively high operating costs more normally associated with the early stages of the life cycle.

- **Replacement investment emphasised.** The slowdown in growth and innovative activity means that investment moves away from innovation and towards replacing the existing capital stock as it wears out.
- **Improved quality and reliability of design.** Learning, experience and standardisation translate into improvements in quality and reliability of components and final products. Introduction of new variants may lead to reappearance of bugs and defects in the early stages, e.g. new generations of software packages.
- **Capacity may settle to match demand.** The maturity stage is most likely to characterised by a balance between supply and demand, though there may still be excess capacity if firms have failed to anticipate critical point B and have overshot, or if firms are investing to attempt to capture market share and cancelling out each others' efforts.
- **Entry becomes more difficult and less attractive.** It can now be difficult for potential entrants to match incumbents' advantages of low cost operation and brand loyalty which the latter may have been able to build up over several years of experience and marketing efforts. Increased focus on brand advertising can also help erect and reinforce barriers to entry.
- **Many firms.** The market can now be quite crowded with a number of operators, unless economies of scale or other factors limit the number of firms that can operate in this industry. The tightening competitive pressure may be reflected in the exit of some firms.
- **Well established distribution channels.** The maturity of the market is reflected in the establishment of routine and orderly channels for distribution of the product or service.

In short, at this stage many of the major actors are in place and well established, as are the sources of competitive advantage for many of the products in this industry. Maturity can be characterised by incremental changes, though the tightening competitive environment can still lead to some exits. There is increasing cost sensitivity. The PC market is one that many analysts believe has entered the mature stage. In this sector there is a high level of standardisation across brands and fierce cost competition.

Decline stage

In many respects the decline stage reflects an intensification of pressures and influences which were beginning to make themselves felt in the growth stage. Decline is usually triggered by an external event outside the firms' direct control such as technological substitution (e.g. fiber optics for copper) or changing

demand patterns and government regulation (e.g. tobacco). This lack of direct control over the causes of decline can create difficulties for the firm that wishes to manage and anticipate events during this period. However, it can be a mistake to think that decline here is necessarily marked by the progressive weakening and eventual death that tends to be the fate of biological life cycles. For example, if the source of decline is an innovation, it may be only a partial substitute (e.g. plastics for steel in building products, colour film for black and white film in photography, disposable and electric razors for traditional safety razors in shaving). In each case the new technology effectively replaces the old in parts of areas served by the established technology, leaving niches or segments in which the old technology still dominates.

With these qualifications, the main features of the decline stage tend to be the following:

- **High price elasticity of demand.**
- **Price continues to fall.**
- **Lack of both differentiation and growth creates little role or room for advertising.**
- **Low or negative profits.**
- **Further standardisation.** Although some firms may differentiate in an attempt to stem the decline.
- **Little innovation.**
- **Little investment.** Instead there may be disinvestment and asset sales.
- **Well established design, few bugs.**
- **Overcapacity.** The capacity overhang inherited from the growth phase may be difficult to shift. The firms collectively may perceive it as in their interests to remove excess capacity, but individually may be reluctant to do so since the gains from one firm unilaterally cutting capacity would mostly accrue as external benefits to its rivals. At the same time, the capacity cutter itself could suffer a loss of market share. Governments may intervene to try to clear this log jam, as in the case of the European Commission, which has actively encouraged rationalisation and merger activity in the European chemicals industry.
- **Entry unattractive.**
- **Fewer firms.** However, exit may be slowed because there are high levels of fixed and sunk costs that will not be recouped. Managerial specialisation and inertia may contribute to this stickiness; for example, managers who have spent their working lives in the steel industry may have emotional ties to the industry and also highly specialised skills which may not be easily transferable to other industries. Such managers would be likely to resist considering exit strategies as far as possible.
- **Distribution and access to distribution increasingly important for firms.** Overcapacity can make this a buyers' market at all stages, with sellers discounting and possibly vertically integrating forward to secure access to markets, and buyers being able to play sellers off one against the other.

The decline phase can be marked by relative inertia in terms of technology, advertising strategy and customer base. If firms do not take action to get rid of overcapacity, the industry will become still more unattractive, even for existing firms. Decline is typically marked by low and declining returns. Many commodity markets such as primary metals have entered the decline stage as substitution by new materials robs them of many of their traditional markets and cuts off access to new markets.

Exhibit 1.2: Breathing new life into old sectors

It may seem self-evident that entrepreneurial opportunities are concentrated in high growth emerging markets. But it is also possible to enjoy spectacular success in mature or even declining sectors with the right strategy.

Starbucks and Swatch are good examples of this latter possibility. Buying coffee was perceived a commodity-type activity until Starbucks turned it into a lifestyle purchase with a quality and varied product set in the context of a coffee bar ambience. Starbucks has been able to enjoy high price premiums and profit margins compared to its industry average.

Similarly, Swatch transformed the image of the budget watch as a functional device into a fashion accessory. Before Swatch, industry efforts at this end of the market had focused on performance improvements, e.g. in accuracy. Many people only owned one watch, reflecting its status as a simple time-keeping device. Swatch emphasised fashion and encouraged repeat purchases by consumers.

Both cases indicate how changing the perceived attributes of the product may transform an industry and provide major opportunities for firms.

1.2 Compare the pricing decision for an organic food (Exhibit 1.1) with that for a Swatch.

Porter (1980, pp. 267–73) suggested that there may be a variety of strategies that a firm in the decline stage can pursue.

- (a) *Dominance and leadership.* One way the firm may try to make the best of decline is to try to achieve a dominant position in the market place. In particular, a high market share can give a cost advantage and may allow the firm to exercise some control over price. Its ability to achieve dominance may be aided to the extent its rivals are weakened by the process of decline and/or no longer have a strong commitment to the industry and may be encouraged to exit. On the other hand, if other firms are also trying to achieve dominance it can lead to costly and destructive competition, for example it can trigger price wars. Dominance may be facilitated if the firm can make a *credible commitment* to staying in this industry, e.g. by upgrading plant, aggressive pricing strategies. The advantage of credible commitments is that they may change the expectations and plans of rivals and reduce the perceived attractiveness to them of staying in this industry. We shall look further at credible commitments later in this Module and in other Modules. Dominance can also be facilitated if the firm can assist in *easy exit* for its

rivals, for example, through acquiring others in the industry at terms that are reasonably attractive to its rivals, offering to take over their brands and markets.

- (b) *Niche exploitation.* This strategy identifies a niche that allows continuing high returns and long-term opportunities for the firm. For example, the advent of colour meant a negative image developed for black and white photography generally, but a number of firms defended or created positions in film, books and cameras dedicated to black and white photography for high value artistic and scientific work. Similarly, the Swiss watch industry maintained a strong presence in the luxury mechanical watch market after most other segments in the watch market were saturated by electronic watches produced in the US and Asia. A niche position can also facilitate necessary rationalisation because much or most of the benefits of getting rid of excess capacity will accrue to the firm itself rather than competitors.
- (c) *Harvest.* A harvest strategy maximises short-term cash flow through devices such as limiting variety of models or brands, concentrating on larger customers and cutting investment, maintenance and service costs. It is not a strategy that is indefinitely sustainable and eventually harvest turns into divestment or closure. It is not a strategy that is suitable for all industries and depends on the firm living off the fat created in the past, such as goodwill, brand loyalty and customer inertia.
- (d) *Exit.* It may simply cut its losses and exit. The best time to do this is before decline sets in; if it can anticipate turning point C (for example, by being sensitive to early threats from an emerging technological substitute), then the firm may still realise a good price for its assets. Once decline sets in, the decision to sell should depend not on whether it is still making profits, but whether or not the gains from staying in the industry exceed the opportunity cost (sacrificed value) had it switched its attention and resources elsewhere.
- (e) *Internalise the threat.* The firm may also have the option of *internalising* the source of industry decline, i.e. bringing it in-house and treating it as an opportunity and not merely a threat. This is not a strategy identified by Porter in the context of managing decline, but it is an option that may be open to firms in some industries. It was noted above that industries typically do not spontaneously implode; instead decline is usually triggered by some external threat such as a technological innovation (e.g. TV replacing cinema, plastics replacing steel).

If firms in the threatened industry are able to diversify into the new industry, they may be able to make a transition from the old to the new cycle. Such diversification internalises (and at least partly neutralises) the external threat to the firm's interests. This is what the Swiss watch industry did with the Swatch, a fashion-oriented electronic watch aimed at the young people's market and built around the same technology that had wiped out many of the Swiss watch industry's traditional markets. Whether or not this is a feasible strategy depends on whether firms in the threatened industry have residual strengths and competences that contribute to competitive advantage in the new regime, e.g. brand recognition, reputation, distribution channels,

technology. Since the external threat itself often displays features that are radically different from those associated with the skills and competences in the old industry, firms may often internalise the threat by acquiring new firms based in the emerging sector.

Which strategy the firm in a declining industry adopts in practice will be influenced by the pattern of decline, the nature of its rivals, and its assessment of its rivals' likely reactions to its actions. We shall be looking at the issues and influences that can encourage a firm to adopt a particular strategy in different contexts in the next Module.

The story of the life cycle is of firms' discretion and freedom to manoeuvre being subjected to a progressive squeeze over its course. When the product is about to be introduced, the firm may be faced with almost a blank sheet of paper for many of the strategic choices it faces. There may be considerable scope to decide the pricing policy, design, image and market of the product. However, with time, rivals enter, pressure is put on prices, variety is squeezed as one or a few designs win out, brand image is established and difficult to change, and possible market niches become filled up. These developments can all influence strategy and the ability of the firm to exercise control over the environment around it.

Exhibit 1.3: Five Forces and niche markets

The Five Forces help provide a basis for analysing sectors in terms of forces that might influence the returns that a firm might expect from investing in that sector. However, the Five Forces are not necessarily static but can be influenced by technological trends in a sector.

An example of this is given by recent trends in some sectors of manufacturing. Increased complexity of technology means that many larger companies find difficulty in developing in-house the range and quality of competencies associated with their core technology. This may help create market room and opportunities for smaller, specialist firms.

For example, Tokyo-based Disco Corporation claimed about an 80 percent world market share and a 90 percent Japanese market share in 1999 for high precision equipment for cutting and grinding silicon wafers into semiconductors. Disco's systems cost \$80 000 to \$500 000 and are used by most of the world's semiconductor manufacturers. This is a highly complex and skilled area, with high barriers to entry, few other firms having the requisite skills and interest. Although Disco has several rivals, rivalry and buyer power is muted due to Disco's dominance and lack of interest on the part of bigger firms in moving into this area.

The case of Disco demonstrates how technological change may influence and change the Five Forces in a sector by creating sustainable and defensible niche markets.

1.3 Summarise Disco's competitive environment from a Five Forces perspective.

1.3 The Five Forces Framework

The life cycle framework helps illuminate some features of the firm's environment which may be helpful in analysing the context in which strategy may be grounded. It looks at patterns that may emerge during the development of the industry and the long run dynamics of this evolutionary process. However, in developing and modifying its strategy the firm will also have to be sensitive to the specific features and characteristics that make up its industrial environment at any point in time. The Five Forces Framework provides a route that can help in such strategy formulation.

The Five Forces Framework was first set out in detail by Porter (1980). The logic of the framework is based on the argument that there are five basic competitive forces that together determine the profit potential of an industry. Where the forces are intense, firms may have little opportunity (or wiggle room for strategy) to achieve above average returns in this industry. Where they are weak or absent, above average returns may be more easily achievable in an industry. 'Industry' in the Five Forces Framework is taken to refer to a group of firms producing products that are close substitutes for each other.

Before we look at the Five Forces Framework, to understand its significance properly it is important to look at where it came from, and the nature of the foundation it created for subsequent work in competitive strategy. Until Porter's work, Business Policy or Strategic Management was really a poorly structured and loosely organised discipline. It was characterised by ad hoc use of tools designed to deal with aspects of the strategic problem, extensive use of checklists and case studies. Indeed this approach is still reflected in parts of the discipline today.

The lack of a coherent and integrated analytical framework led to a considerable amount of woolly analysis and advice that was often contradictory or little better than a truism. For example, as we note in Module 7, many of the checklists produced that purported to explain the reasons for firms' pursuing merger, joint venture, or alliances looked remarkably similar and indeed were often effectively interchangeable. But since the reasons given for pursuing these alternatives were supposedly identical, this gave no basis for distinguishing the circumstances in which the firm should choose to pursue, say, joint venture instead of merger.

At the same time, industrial economists had been collecting an enormous amount of empirical evidence and material on which factors actually did affect competitive strategy. The second edition of Frederick Scherer's exhaustive analysis of these factors¹ was published in the same year that Porter's *Competitive Strategy* was published (1980). A prime purpose of this collection of evidence was to provide input into decision-making, but it was not decision-making for strategists to exploit competitive advantage, rather it was decision-making for public policy purposes to control potentially anti-competitive behaviour on the part of firms.

What Porter recognised was that the forces that could eventually facilitate undesirable anti-competitive behaviour on the part of firms, were in many

¹ Scherer has continued to update his text; the 1990 edition was co-authored with David Ross.

cases the same forces that could contribute to legitimate and value-enhancing competitive strategies. Further, industrial economics had effectively provided an extensive databank on where to find these forces, what they were, and their impact. Traditional economics was based on the ideal of competitive markets and tended to regard anything that disrupted the competitive fabric as a potential monopoly distortion and intrinsically undesirable. Porter recognised that these same elements were the basis on which successful firms competed and added value in the market place. The result was that Porter was able to draw on the well-established analytical framework provided by industrial economics,² as well as the body of empirical evidence that applied industrial economics provided.

The Framework was an immediate success and it has become widely used by strategists and other managers involved in the planning process. It is important to bear in mind that its basic structure and content reflect the forces that a considerable volume of research has shown to be important in the analysis of competitive strategies. There are some points that are important in using the Framework.

- In a sense the Framework is the visible tip of an iceberg with the empirical research that backs up the Framework lying below the surface. Since industries are continually evolving and new research results emerging, the Framework should not be regarded as static but as something that is subject to continuous modification and updating.
- Since the Framework signposts the lessons from a large variety of research studies, it does not necessarily lead to clear and unambiguous conclusions. Most practical research is based on a few simple and easily measured variables while the Framework tries to integrate all the major influences of relevance, some of which may be qualitative and subjective. If some elements in the Five Forces encourage one type of strategic option while others are consistent with an alternative, judgement has to be used to assess the overall balance of forces in the framework. Two different analysts faced with the same body of knowledge about an industry may come to different conclusions about the strength and nature of the competitive forces in the industry.
- Even if it is possible to identify clearly the nature of an industry in Five Forces terms, there may still be a variety of competitive strategies open to the firm that wishes to operate in this sector. The Five Forces Framework is more about possible constraints on strategy, less about the particular directions that strategy can take.

² The framework was generally known as the structure–conduct–performance approach. Its theoretical foundations were rooted in the traditional models of perfect competition, monopoly and oligopoly market structures, with *structure* influencing *conduct* (such as pricing policy and advertising and R&D activity) and with consequences for *performance* (such as profitability).

The Five Forces:

- 1 *Threat of new entrants*
- 2 *Intensity of rivalry among existing competitors*
- 3 *Bargaining power of buyers*
- 4 *Bargaining power of suppliers*
- 5 *Pressure from substitute products.*

A firm's industry would be an unattractive environment characterised by low or negative returns given the following conditions.

- New firms are about to enter the firms market.
- There is intense competition from rivals in the same industry.
- The firm faces a powerful set of buyers.
- It also faces a powerful set of suppliers.
- An external threat is about to send the industry into long-term decline.

In practice, few if any industries face such dire prospects. For one thing, the gloomy prospects signalled by Forces 2–5 would probably be enough to dampen or eliminate the threat of entry (Force 1).

By contrast, an industry would be an attractive environment for a firm if the following conditions prevailed.

- There is little danger of entry.
- Competition from rivals is weak or non-existent.
- The firm's buyers are dispersed and weakly organised.
- The firm's suppliers are also dispersed and weakly organised.
- There is no serious threat to the industry.

The firm that is lucky or competent enough to be established in such a benign environment can expect to make above average returns. Firms whose industries at least approximated such a rare combination of favourable circumstances probably included IBM in the Seventies and Microsoft in the Nineties. Such conditions also help to create and reinforce dominance, which in turn can invite accusations of real or imagined abuses by the firm of its competitive advantage (hence the anti-trust investigations of IBM in the late-Seventies and Microsoft in the late-Nineties).

In practice, industries are usually characterised by more complex combinations of Forces. We shall look at the important elements that can influence each of the Forces in turn.

1.3.1 Force One: Threat of Entry

There are a number of elements that can influence threat of entry.

(1) Economies of scale

These refer to declines in unit costs as the absolute volume of output increases in a given time period. There are two elements to economies of scale, the cost gradient and the minimum efficient scale (MES). The MES is the point at which the firm achieves the lowest average cost (AC) of operation in the long run. Cost gradients refer to the steepness of the slope of the AC curve below the MES level. For example, if average cost per unit is 30% higher at an output level that is half of MES, there is a steep cost gradient. On the other hand, if average cost per unit is only 1% higher at an output level that is half of MES, there is a relatively flat cost gradient. Figure 1.2 shows average cost curves with different levels of MES and cost gradients.

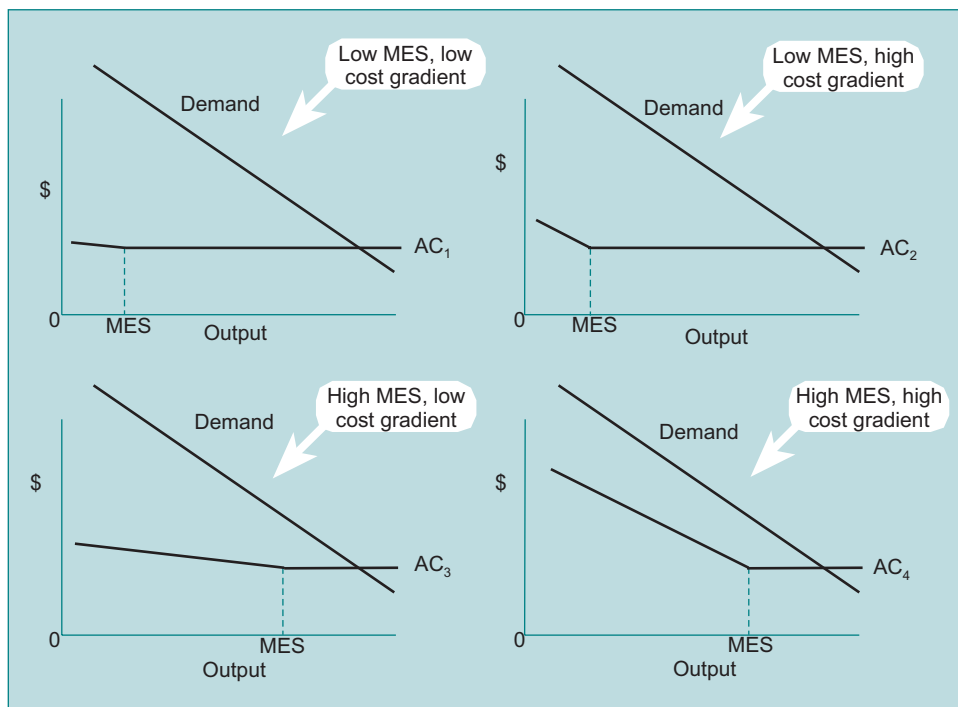


Figure 1.2 Minimum Efficient Scale (MES) and the cost gradient in economies of scale

If an industry is characterised by a high MES and a steep cost gradient, economies of scale may represent a strong barrier to entry. Interestingly, there appears to be little obvious relationship between them: industries that report high MES may or may not report steep cost gradients, while industries with steep cost gradients may or may not have a high MES. Either feature of itself may not be sufficient to constitute an effective barrier to entry; for example brick manufacturing has a very steep cost gradient but a very low MES which allows room for a large number of firms in this industry. Similarly, a high MES may still leave room for a number of firms in an industry if a flat cost gradient means that smaller scale firms do not face a serious cost disadvantage (especially if the

cost disadvantage can be more than compensated for by smaller firms exploiting differentiation or niche opportunities).

In Figure 1.2, the low MES for AC_1 and AC_2 means that there is room for a number of firms in this industry all exploiting MES. Whether or not a steep cost gradient exists as in AC_2 would only really matter for these smaller firms trying to exist on the fringes of the market (perhaps geographically separated from the rest) or those exploiting a market niche.

Cases where MES is only reached where a firm has a high or dominant market share (AC_3 and AC_4 in Figure 1.2) may be associated with strong barriers to entry, especially if the product is relatively standardised and costs and prices are important elements of competition, as may be the case in the later stages of the life cycle. To the extent the product is differentiated and market niches can be exploited, there may be room for a number of firms, with one or a few firms vying for cost leadership. The flatter the cost gradient (as in AC_3 in Figure 1.2) the easier it may be for smaller firms to develop competitive strategies that may compensate for their cost disadvantage relative to larger firms in their industry.

The case of AC_4 in Figure 1.2 is the one that is most likely to lead to dominance by one or a few firms in this industry. Indeed, this structure is the one commonly described as a natural monopoly by economists. One firm may be able to get a first mover advantage on its rivals (and potential rivals) by expanding output rapidly and moving down the steep cost gradient of AC_4 . In doing so it may be able to exploit a virtuous circle of cutting costs, enabling prices to be cut further, stimulating demand and increasing output, which in turn leads to further cuts in costs. This process may continue right down the AC curve with the firm establishing a dominant low cost/low price position which its lower output/higher cost competitors cannot emulate.

In practice, it is not difficult to find examples of natural monopolies, and as their names suggest, they often invite intervention by governments to ensure that one dominant firm does not fully monopolise the industry. They are industries that were often nationalised by governments (e.g. railways and telecommunications). Airbus Industrie was a consortium created by European governments because of concerns that Boeing could finish up as effectively the monopoly operator in the world market for civil aircraft. The global airline industry would almost certainly be dominated by one or a few firms if national governments did not impose restrictions on competition, mergers and acquisitions in this sector.

At the same time, in recent years it has been increasingly recognised that it may be possible for an industry to be a natural monopoly and have a number of operators in it. This may be achieved if the ownership of the physical infrastructure can be separated out from the ownership of the operating companies that use this infrastructure, much like the ownership of roads is generally separated from the ownership of the truckers and other companies that use this structure. This is a device that the UK and some other governments have used in cases as diverse as electricity supply, telecommunications and the railways in recent years. However, this may still involve the need for government intervention and may incur significant administrative costs of regulation.

(2) Economies of scope

Economies of scope (also called *synergies*) can also influence threat of entry. We shall see that they may contribute to competitive advantage, though in the present context we are really concerned with their potential role as a source of barriers to entry. Economies of scope may obtain if the combined costs of two goods are less than the costs of separate and independent production and distribution of these two goods. For example, the disposable pen manufacturer BIC is involved in distinctive markets for pens, razors and lighters. However, it is able to share skills and other resources in R&D, production, marketing and distribution throughout its varied product lines because of similarities in making and selling low-priced disposable products. Sharing skills and resources across product lines means that BIC's overall investment and operating costs are less than would have been the case if its three main product lines were developed, manufactured and sold independently of each other.

Exhibit 1.4: BIC and economies of scope

A traditional view of economies of scale and scope in economics is that higher levels of output enable the firm to introduce capital-intensive techniques and mass production methods that help to push costs down.

However, firms may be able to access sources of economies of scope in addition to those associated with production resources. Intangible resources such as shared competencies may also generate cost savings across product-markets. For example, BIC produces disposable pens, disposable razors and disposable lighters. The markets for these products are quite different and BIC faces a different set of competitors in each market, e.g. Swedish Match in the lighter market and Gillette in the razor market.

Despite these differences, there are strong similarities in the nature of the technologies and marketing skills involved in each product-market. Each of these product-markets utilises technological skills in making light, cheap, disposable plastic and metal products. They tend to be marketed in highly fragmented retail outlets often around impulse buying and point-of-sale marketing. These technological and marketing competencies are at least partially shareable across BIC's varied product lines and have enabled it to move into new areas that draw on these characteristics, and exploit investment and operational economies of scope or 'synergies'.

1.4 How might BIC's diversification into razors help reduce the threat of firms entering its pen market?

The important thing to note about economies of scope is that their sources and effects are the same as economies of scale. There are two main sources for both economies of scale and scope. First, increased output can lead to fuller exploitation of indivisible resources, such as a single plant, a piece of machinery, or a patent. The more that this resource can be spread over higher levels of output, the lower the cost per unit associated with this resource. Second, increased output can also provide opportunities for increasing specialisation

and division of labour. For example, in a small firm with low levels of output, the same manager may have to be in charge of marketing and market research, tasks that may require quite different skills. As the output level increases, adding a second manager to the marketing department may boost productivity because the two managers can be selected and allocated roles according to their natural abilities, and do not have to incur switchover and co-ordination costs that a broad range of responsibilities may entail.

The difference between economies of scale and scope is essentially that the gain from sharing resources over increased output levels in economies of scale is reflected in a move *along* a declining long run average cost curve, while the gain from sharing resources over increased output levels in economies of scope is reflected in a shift *down* in the average cost curve for each of the products that is involved in resource sharing. This is shown in Figure 1.3. For example, BIC may be able to exploit lower costs in the form of *economies of scale* by increasing output levels for a single product, say, disposable pens. However, it should also be able to exploit lower costs in the form of *economies of scope* for any given output level of disposable pens to the extent it is able to share costs (such as plastics R&D, production knowhow, company advertising) across product lines. The effect of such sharing will be to shift average costs down for each business. Any competitor wishing to enter the disposable pen market will have to deal with the ability of incumbent firms such as BIC to exploit cost advantages in the form of economies of scope as well as economies of scale. Consequently, economies of scope may represent a barrier to entry into a market, just like economies of scale.

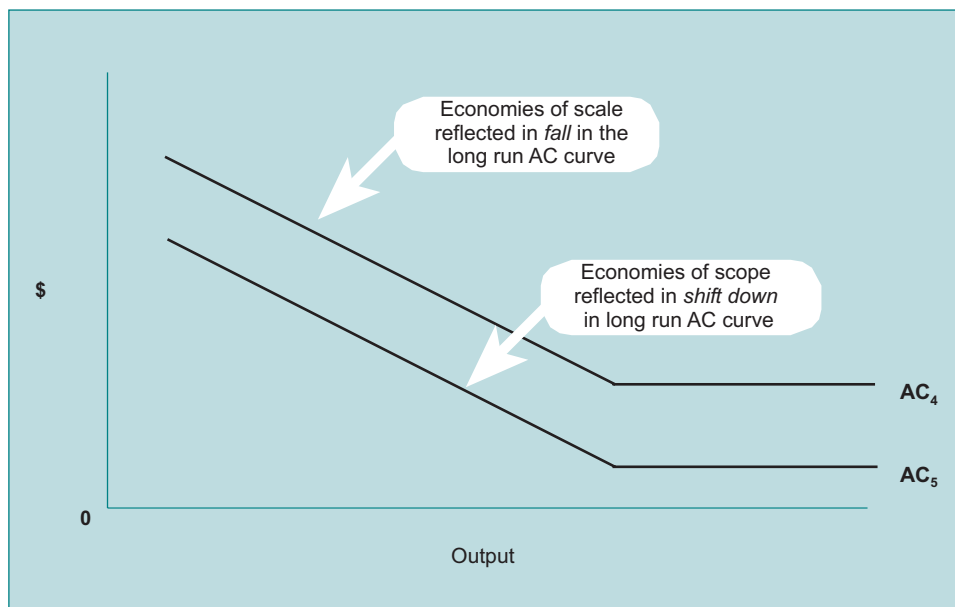


Figure 1.3 The difference between economies of scale and scope

(3) The experience curve

The experience curve differs from economies of scale and scope in that cost per unit falls in relation to the *accumulated* output of a good or service, not in relation to the *level* of output in a given period, as in the case of economies of scale and scope. The experience curve is more likely to constitute a barrier to entry for industries characterised by complex high technology products made in relatively small numbers with a fair degree of standardisation, such as some sectors of aerospace. The greater the output, the greater the opportunities for productivity improvements due to repetition and learning. Management may develop improvements and short cuts in the organisation of production, and workers may improve their skills and speed of work completion with practice and repetition.

Exhibit 1.5: The more you sell, the more you lose

One of the basic principles of economic theory is that profitability tends to be directly related to volume and market share in many markets. Volume may lead to reduced costs, while market share can give firms more control over prices.

These principles can seem rather shaky at times in the new world of Internet retailing. In the first quarter of 1999, the Internet bookseller Amazon.com's revenues more than tripled to \$294m, but its losses increased more than five-fold to \$62m. Analysts have begun to raise doubts as to whether even major Internet retailers such as Amazon and Etoys can achieve profitability, let alone sustain it.

Internet retailing can help economise on some traditional retailing costs (such as investment and operational costs of retail outlets) and it can get sales, technical and related information to a larger number of potential customers. But a fundamental problem is that Internet retailing may substitute traditional costs with other costs, especially in warehousing, marketing (such as Superbowl advertising) and distribution (doorstep delivery). If the product is a traditional one, such as a book or a toy, it may be questioned as to whether the price that consumers will be prepared to pay will be sufficient to generate profits as well as revenues for Internet sales. Some analysts expect that the early years of the 21st century may well lead to a shake-out in Internet retailing, and there is considerable uncertainty as to who the survivors will be, and where the profits are to be found in this most challenging of markets.

1.5 Does the case of Amazon really breach 'the principles of economics'?

(4) Differentiation

If a firm can successfully differentiate its products from those of competitors (for example through brand image), then this may constitute a real barrier to entry. This can hold most strongly in areas where consumer health, safety and welfare may be considerations. The important element here is the extent to which potential entrants perceive that the incumbent is able to defend a differentiated position successfully. The inroads made by own-brand supermarket labels into

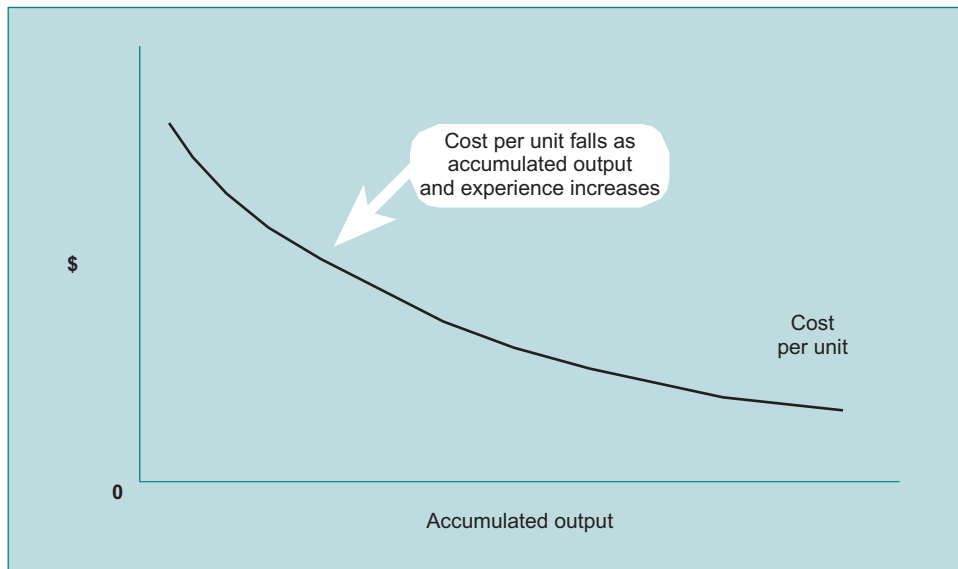


Figure 1.4 The experience curve

many consumer goods markets in recent years has shown that differentiation may be a more shaky barrier to entry in some contexts than was previously thought to be the case.

(5) Risky and costly capital requirement for entry

Entry into an industry may involve substantial upfront investment in tangible assets (such as plant and equipment) and intangibles (such as R&D and advertising). This can constitute a strong barrier to entry, especially if it is combined with a high risk element. One way that firms may try to reduce risks and quickly acquire relevant experience and competences in an industry is by acquiring an established firm already operating in the industry. Any difficulties encountered by potential entrants in finding a suitable acquisition target will merely serve to reinforce barriers to entry.

(6) Switching costs

Firms may be able to create real or perceived switching costs on the part of buyers as far as transferring their custom to another firm is concerned. Not only can this create advantage for the firm compared to rivals, it can collectively help create barriers to entry on the part of potential entrants who may find it difficult to prise away customers from the incumbents. Examples of strategies that may help create switching costs are supermarket loyalty cards, airmiles, and various services offered by banks to continuing customers such as standing orders and direct debits. The more costly and troublesome that customers perceive it to be to extricate themselves from the existing arrangement with the supplier of the service, the more it may constitute a barrier to entry.

(7) Access to supplies and outlets

Difficulties in access to earlier and later stages in an industry may be a barrier

to entry. For example, any firm seeking to enter the refining stage of the oil industry will find that much of the supplies of crude oil are locked up inside the corporate walls of the vertically integrated majors in this industry, as are many of the distribution channels for the refined product. This can leave relatively thin channels of access to supplies and outlets for a potential entrant and may deter firms from putting themselves into such potentially vulnerable positions.

(8) Other cost advantages

There may be particular cost advantages for a firm or firms in an industry relative to potential entrants, such as a particular low cost process (possibly patented or kept secret), special access to or control of supplies (such as De Beers in diamonds), cheap local resources, government subsidy etc. Whether or not such cost advantages for incumbents represent effective barriers to entry depend on the importance of the cost advantage, the extent to which entrants can compensate for the incumbent's advantage, and the possibility of entrants competing on the basis of differentiation rather than cost (whether across the board or in particular niches).

(9) Government policy

Government policy can create barriers to entry, especially in cases involving the licensing of operators or the regulated industries. The airline industry is one in which government policy in many countries has made entry difficult in the past, in part because of the necessity to impose necessary safety and competency levels, but often also because of desires to favour national carriers and 'fly the flag'.

(10) Exit barriers

An issue that has become important in recent years³ is the notion of exit barriers also representing entry barriers. One way of expressing this is to note that an intelligent lobster would always avoid getting into a lobster pot; the barriers to *exit* would constitute a barrier or deterrent to *entry*. Similarly, rule one for hostage negotiations is for the negotiator never to get into a situation where there is no escape route for them, lest they themselves become a hostage. Parallel reasoning can hold for firms. If an industry requires considerable investment that turns out to have little or no value outside the industry, firms should at least be wary of committing themselves and becoming trapped in a situation from which they may not be able to extricate themselves easily or cheaply.

(11) Expected retaliation

If you are thinking of invading a territory, your decision whether to go in or stay out is likely to be influenced by whether or not you think the incumbents are likely to try to repel you, what form this resistance may take, and how effective it is likely to be. This in turn depends on the factors that either do or could influence rivalry in the industry. We shall look at this issue under Force

³ This has been an issue explored in some detail in the theory of contestable markets, first developed by Baumol *et al.* (1982).

Two below. It should be borne in mind that while intense rivalry can make an industry a nasty and unpleasant place to compete in, it may have the mitigating advantage that it can deter outside firms from entering the arena.

1.3.2 Force Two: Rivalry

Rivalry may express itself in a number of dimensions in an industry (1) its objectives (e.g. profitability, market share, growth); (2) its channels (e.g. price competition, competition through advertising and innovation); (3) its strength (e.g. weak or strong, consistent or fluctuating). Whether rivalry in an industry exists and is strong (and what form it takes) may depend on a number of factors, including the following:

(1) Relatively high fixed costs

Capital-intensive industries in particular tend to be characterised by relatively high fixed costs. It would cost a great deal for an aircraft to fly just one passenger or for an oil rig to produce just a single barrel of oil. By contrast, the additional (marginal) costs of adding a second passenger on a flight or producing a second barrel of oil from an oil rig can be extremely low or even negligible. This has important implications for the threat of rivalrous behaviour because it means that the price may sink to very low levels before firms shut down operations or exit the industry. Remember from basic economics that as long as the additional revenues per unit sold exceed the additional costs (marginal costs) of producing that unit, the firm would maximise profits (or minimise losses) by continuing production. Intensity of rivalry can be heightened if the low marginal cost encourages firms to try to operate at (or near) full capacity.

The oil industry has illustrated some of these features. During the Nineties the price of a barrel of crude oil fluctuated from lows below \$20 dollars a barrel to highs around \$40 a barrel during the Gulf War. However, production levels tended to be relatively sticky when the price fell (the short run supply curve was relatively inelastic). The high level of fixed costs associated with investment in some areas such as the North Sea meant that the price would have had to fall below \$10 a barrel for many operators before the shutdown point was reached where price failed to cover the additional (variable) costs of extracting oil. When the price fell during the late Nineties, the pressure on margins was accompanied by competitive pressure from rivals desperately trying to maintain sales for a commodity whose value had been declining sharply.

(2) Low growth

A slowly growing industry is often more likely be characterised by intense rivalry than is a fast growing industry. Suppose firms in an industry typically have a growth objective of 5% a year and industry growth recently has been 7% a year. This means that many of these firms will be able to satisfy their growth objective from the natural growth of the industry and without taking market share from each other. Now suppose growth falls to 3% a year. The only way that the average firm in the industry may be able to achieve its growth objective will be by taking market share from its rivals. This can lead to intensification of

competition as firms indulge in the zero sum game of trying to maintain their own growth levels by taking market share from each other. Clearly it would be more sensible for the firms in the industry to adjust their growth objectives to reflect the new reality, but this may be difficult to achieve quickly if managerial and shareholders expectations are slow to adjust. This can lead to the problems that we discussed under critical points A and B earlier.

(3) High exit barriers

If you want to heighten rivalry and increase the chances of a fight, make sure your rival is cornered with no effective escape route. In the case of firms, this would mean incumbents facing high exit barriers and having little or no choice but to stay in the ring and slog it out with its rivals. This is the issue that we noted above could be a particular problem during the 'decline' phase of the life cycle.

(4) Differentiation and switching costs weak

Rivalry may be heightened if there is little to stop the customer switching from one product or service in the industry. This is the case in petroleum retailing, an industry which has been characterised by fierce price wars in the past, as well as continuing attempts by major firms such as Shell and Exxon to use advertising to create some degree of differentiation in what is essentially a fairly homogenous market.

(5) Absence of a dominant firm

A dominant firm may assist in helping create the competitive rules and parameters around which other firms must adjust, softening rivalry in the process. This may be a strongly positioned firm at the same stage as the other firms, or a user firm or institution whose interests may lie in maintaining a balanced pool of suppliers. For example, many governments have pursued strategies of encouraging rivalry for specific military projects, at the same time trying to ensure that rivalry is not so destructive that competent high quality suppliers exit the industry and prospects of maintaining a balanced pool of suppliers are damaged.

1.3.3 Force Three: Bargaining Power of Buyers

Much of traditional industrial economics was concerned with the relations between buyer and sellers in individual markets and the circumstances which would give one group the power to influence the terms and conditions under which the other side had to trade. Major factors which could augment the bargaining power of *buyers* include the following:

(1) One or a few major buyers

Some industries are characterised by one or a few major buyers and this can lead to substantial power and discretion on the part of the buyers over the suppliers. For example, the global car industry has only a few major players. Where components are made and supplied on a local basis, there may only be one feasible customer for a particular supplier.

(2) The buyer earns low profits

This may appear surprising. How can a firm or group of firms being in a position of financial *weakness* (low profitability) help generate bargaining *strength* (buyer power)? However, Porter points out that this is not only possible but logical. The important point is how low profitability on the part of the buying group may affect the perception of the selling firm of their own freedom to manoeuvre, especially if a further increase in price to the buyers could tip them into closing down operations altogether. At worst, the selling group of firms may have little or no choice but to price low to the buying group of firms if it wants to make a sale at all. However, it is important to note that it is neither necessary nor sufficient for the buying group actually to be making low profits for this stratagem to work.

What the group has to do is *signal* (real or imagined) low profitability to the selling group. And that is why you should always wear rags when you visit the bazaar or when the double glazing salesman comes to call.

(3) The product represents a large proportion of the buyer's overall purchases

The bigger the purchase, the more sensitive the buyer is likely to be to the price, whether it is the final goods to the consumer market or intermediate goods and components to other firms. This is quite natural and rational, partly because of the effect of even minor price fluctuations of expensive goods on the buyer's welfare, but also because the buyer is more likely to be well informed about the prices of expensive goods. Shopping around and making product comparisons absorbs resources, especially time. It will usually only be worthwhile incurring these search costs for expensive products. Consequently, the buyer may be more demanding and informed for goods that constitute a large part of their overall purchases.

(4) Standardised, undifferentiated product with low switching costs for buyers

In these circumstances the buyers can play one seller off against the other. This can be a feature of commodity markets or mature industries, as we noted in the discussion of the life cycle above.

(5) Buyers can threaten backward integration

Suppliers may find buyers may be in a powerful position if these buyers are able to take over production of the product themselves. For example, component suppliers to the big car firms in the automotive industry may find that their ability to exercise control over terms and conditions may be limited by the possible threat of their buyers vertically integrating backwards. Indeed, many of the new opportunities for suppliers in this industry come from the big car firms outsourcing activities they formerly undertook themselves, so the threat of being able to take back in-house production of components if they wish may be a credible one. Car producers can also keep some production of a particular component in-house to ease full in-house manufacture of the component should it become necessary. In turn, this can increase the buyer's power by making full backwards integration of the component an even more credible threat.

1.3.4 Force Four: Bargaining Power of Suppliers

On the other side of the buyer/seller divide, sellers or suppliers may be able to exercise power over the buying group of firms. This reasons for this may include the following:

(1) The supplying group has only one or a few firms

This may allow the firm (or group of firms) to exercise control over the prices and conditions under which it (or they) will deliver services.

(2) There are no close substitutes for the supplier's products

Microsoft has substantial power in supplying to the PC industry, not only because there is limited competition to it within the industry, but also because there is limited competition from substitutes outside the PC sector. Apple is the closest substitute but its market share has been consistently much less than that of the PC market in recent years.

(3) The product is an important input into the buyer's business

In recent years, Microsoft Windows and Intel chips have both been integral components of most PCs, giving the respective firms considerable power and influence in this industry.

(4) The buyer industry is not an important customer

If the buyer industry is the sole or most important customer, supplier power may be weakened due to its dependence on the fortunes of the industry. If an electricity supplier sells to many customers, it may be able to afford to be insensitive to the effects of its policies on an individual buying industry. If the electricity supplier is a hydroelectric power station selling most of its output to an aluminium smelter, it cannot afford to ignore the effects of its policies on this user.

(5) The supplier's products are differentiated or there are switching costs for buyers

The suppliers power will be enhanced to the extent that it can lock in customers. For example, customer loyalty or inertia is an area where banks have been able to exercise some degree of seller power. The UK banking sector is an example of this, with banks frequently being able to charge premium prices for financial services such as mortgages and personal loans, compared to many alternative suppliers of these services.

(6) The supplier can threaten forward vertical integration

As with the threat of backward integration by buyers, the supplier group will be more able to threaten 'take it or leave it' if they have a realistic alternative of moving downstream into the buyer's stage themselves.

Exhibit 1.6: Internet procurement and the supply chain

The introduction of online exchanges on the Internet offers the chance to introduce stronger competitive forces into areas of corporate purchasing through electronic 'procurement hubs', 'online exchanges' or 'trading communities'. The cheap and flexible trading platform provided by the Internet allows geographically spread buyers and suppliers to use dedicated web sites to examine supplier catalogues, bid, or place orders. This may reduce supplier power, particularly for local suppliers in high cost countries, by increasing the number and range of potential suppliers of a good or service.

This holds especially for products and services that can be commoditised and reduced to a set of specifications that can be transmitted via the Internet. This can include non-production goods such as office stationery and some kinds of furniture, and production goods such as nuts, bolts and clips. Some analysts believe that the resulting price pressure in some supplier segments will lead to consolidation by suppliers due to bankruptcy, exit, and search for economies of scale. This might lead to suppliers regaining some of the power that they are in danger of losing with the introduction of Internet procurement.

- 1.6** The Exhibit discusses how online exchanges may reduce supplier power of high cost local suppliers in cases where they widen the pool of potential suppliers. From the information given, can we say anything about how the other Five Forces may change in such circumstances?

1.3.5 Force Five: Pressure from Substitute Products

The last of the Five Forces is pressure from substitute products. These depend on the substitute being able to perform similar functions to the industry in question, and its price/performance characteristics compared to that industry. In some cases, there may be few if any close substitutes for the industry in question, in others there may be a number of competing substitutes (e.g. the various fuel industries). In some cases the substitute industry may involve quite different activities, technologies and marketing channels from the traditional industry (e.g. videoconferencing as a partial substitute for executive travel, Internet retailing for high street retailing).

1.4 Game Theory Perspectives

Game theory has been hailed as a revolution in the analysis of competitive strategies. In reality, it has in some quarters been one of the most oversold techniques in the history of this subject, itself no stranger to overselling.

Having said that, it has produced important insights which can be of real value in the analysis of competitive strategies. The important thing is to sort out what is potentially valuable from what is patent nonsense. We shall start out by using one of the most celebrated models in game theory to explore these points.

1.4.1 The Prisoners' Dilemma

The Prisoners' Dilemma has been used to analyse competitive strategies in a variety of contexts. First, let us look at it in its original context as shown in Figure 1.5.

Joe and Pat have just committed a bank robbery and have been pulled in by the police who suspect that they did the job, but do not have sufficient proof. They are put in separate cells and not allowed to communicate with each other. The expected outcomes of different combinations of confess/don't confess are shown in Figure 1.5. If both confess they get ten years jail each. If one turns States evidence, turns his partner in, confesses while his partner does not, he is freed but his partner gets 15 years. If neither confesses, all they can be done for is a stolen get away car and they get one year each. They are being quizzed by the police separately and have to decide how to plead before they know the other's decision.

PAT \ JOE	Confess	Don't confess
	Confess	Don't confess
Confess	Ten years each	Fifteen years for Joe, Pat freed
Don't confess	Fifteen years for Pat, Joe freed	One year each

Figure 1.5 The Prisoners' Dilemma

What should our two reprobates do? We can analyse what each can do, *given the other's possible choices*. Suppose Pat works out what he should do if Joe confesses. If Pat was also to confess in such circumstances, he would get ten years, like Joe. But if he didn't confess he would get fifteen years. Clearly in such circumstances Pat would be better off confessing. Now suppose Joe did not confess, what should Pat do? If he did not confess in such circumstances he would get one year in jail. But if he did confess he would go free. So if Joe refused to confess, Pat would be better off confessing.

In short, Pat would be better off confessing, *whatever Joe decides to do*. In game theory terms, confessing is a *dominant strategy* for Pat: no matter what Joe does, Pat will be better off confessing. What about Joe? Exactly the same logic holds because he faces exactly the same set of choices and pay-offs as Pat; the matrix in Figure 1.5 is symmetrical. Confessing would be a dominant strategy for Joe as well. That being the case, confess/confess (the top left box of outcomes in Figure 1.5) would be the rational outcome.

The trouble is that, while rational, this is not the best outcome for the two if they could somehow collude and make a binding agreement not to confess. In that case, they would only get one year in jail each instead of the ten years they have now got for themselves by confessing. But if there is no reason to trust the other person, and no means of communicating, the logic of the Prisoners' Dilemma is that considering both the options in turn suggests that the rational thing for both prisoners to do would still be to confess. This holds even with them knowing they would be better off if they both kept their mouths shut.

What are the implications for competitive strategy? These are almost endless if we are to believe some of the literature in this area. We can demonstrate how the model may be translated into the strategy field with a simple advertising decision in Figure 1.6.

JoeCo PatCo	Advertise	Don't advertise
	Advertise	Don't advertise
Advertise	\$10m loss each	\$15m loss for JoeCo, PatCo breaks even
Don't advertise	\$15m loss for PatCo, JoeCo breaks even	Lose \$1m each

Figure 1.6 An advertising Prisoners' Dilemma

In the above example, PatCo and JoeCo have 100% of the market. They are considering advertising to arrest market decline. If they both decide not to advertise, they both expect to incur a loss of \$1m this year. If they both decide to advertise, they simply neutralise each other's marketing efforts and keep the same market share and sales. Problem is, advertising costs money, so if they both advertise their losses shoot up to \$10m a year each. If one advertises but the other does not, the firm advertising will increase its market share at the expense of the non-advertising firm. In this case, the advertising firm increase in sales is sufficient to cover more than its advertising costs and return it to breakeven. But in this case the firm that has not advertised suffers a major loss in market share and now makes a loss of \$15m.

What should the two firms do? The answer is straightforward. If you look at the pay-offs in each case the structure and pay-offs for PatCo and JoeCo are exactly the same as for Pat and Joe in Figure 1.5, except that for every year of jail in Figure 1.5, we have \$1m loss in Figure 1.6. The results parallel the results for our original Prisoners' Dilemma; both PatCo and JoeCo have a dominant strategy, which is to advertise. If JoeCo advertises, PatCo would be better off advertising than not advertising (\$10m loss compared to \$15m loss).

If JoeCo does not advertise, PatCo would still be better off advertising (breaks even rather than incurring a \$1m loss). The same logic holds for JoeCo given PatCo's options. And just as in the original Prisoner's Dilemma example, both PatCo and JoeCo finish taking heavy losses (\$10m each) when they would both have been much better off had they made an agreement to avoid expensive and wasteful advertising (\$1m loss each in that case).

The basic structure of the Prisoners' Dilemma has been associated with a wide variety of strategic situations, including advertising, pricing, innovation and investment decisions. It has an impeccable logic, it is based on rational decision-making, and it is now a classic model of decision-making, replicated even in introductory textbooks. It shows how rational decision-making can result in counterintuitive behaviour and surprising results. So where is the problem with this most fundamental of game theoretic models?

The problem can be summarised in one phrase – life tends not to be like that.

More specifically, even situations that – superficially – appear to have a Prisoners' Dilemma structure often betray this when they are examined more closely. And even when every effort is taken to make sure that the stringent assumptions of the Prisoners' Dilemma apply (as in laboratory experiments of the model), people more often than not tend not to behave as the model predicts.

In the Prisoners' Dilemma, the following specific conditions must be met.

- Simultaneous decision-making by both players
- Accurate knowledge of the pay-offs attached for each set of choices
- No communication between the players
- No social ties and obligations
- No history to the game, no past until this situation, and no future beyond outcomes identified in the game.

In reality, strategic decisions do not take place in a social vacuum. Suppose Pat and Joe had taken a vow of silence such as the code of 'omerta' practised by the Mafia. Same structure, different outcome – both would refuse to confess and would get off with one year in jail (and in turn avoid being concreted in the latest freeway project run by their associates). Or suppose both PatCo and JoeCo build up strong brand loyalty through their respective advertising campaigns. Then what may appear to be a foolish strategy leading to short-term losses could be in fact a sensible long-term strategy that builds up barriers to entry to this market. Or PatCo and JoeCo could both decide to wait and see what the other does before taking any action themselves, in which case the crucial advertising war might never come about.

The point about these examples is that it can take just a single deviation from the basic assumptions for behaviour to change dramatically. Worse, it can be difficult or impossible to verify in advance whether the assumptions do hold where they relate to subjective intentions, attitudes and values held by the parties (How would you verify Pat and Joe have a code of silence? How could you be sure before the game has been played that both PatCo and JoeCo will not adopt a wait-and-see policy?).

Even more seriously, the Prisoners' Dilemma tends not to provide a good explanation of behaviour even when every effort is made to make sure the

assumptions hold, as in laboratory experiments when its highly restrictive assumptions (simultaneous decision, no communication etc) can be replicated (Argyle, 1991, pp. 25–27). If it does not provide a good explanation in this context, then there would seem to be even less hope for it in real world contexts where its basic assumptions are more likely to be breached. Unfortunately many basic textbooks still serve up the Prisoners' Dilemma as self-evidently a description of actual behaviour without giving it the reality-check it so richly deserves.

And even within the Prisoners' Dilemma frame of reference there are recognised to be problems in predicting what will happen. The models we looked at in Figures 1.5 and 1.6 were one-shot models; the players had to make one decision and that was it. This may seem realistic in the case of Pat and Joe (unless they are serial offenders), but it is less likely to be so in the case of firms facing each other in a competitive battlefield. Firms rarely have one-off decisions to make about strategic variables; instead they may play *repeated games*. For example, in the case of PatCo and JoeCo, both firms may make decisions about whether or not to advertise every month. Since one month's decision cannot be treated in isolation (one firm advertising this month may invite retaliation next month), future possible outcomes may influence present decisions. Unfortunately for predictions about behaviour, different kinds of outcomes can be rational and possible depending on the nature of the repetition.⁴

In short, the Prisoners' Dilemma does not deserve to be regarded as more than a very special case that may have limited implications for competitive strategy, even though it makes a nice story. But it is also one of the simplest game theoretic models, and many of the criticisms that have been levelled at it here can generally be found to hold at least as strongly for more complex game theoretic reasoning. The most interesting point about the Prisoners' Dilemma is the one that is most often overlooked; even when a situation looks superficially like a Prisoners' Dilemma, actual behaviour often is quite different from that predicted by the model. Repetition, familiarity, negotiation, trust, loyalty, kinship, social pressure and personality are all real life features that can lead to co-operative and mutually beneficial outcomes in practice, contrary to the outcome suggested by the model.

Beyond that there is a further problem with game theory modelling in that it can be used to explain just about any kind of behaviour. The economist Richard Rumelt once argued that a game theory model could probably be produced to explain a bank manager burning his trousers in the street as a rational strategy, and a game theorist promptly obliged with just such a model.⁵ The problem with such explanation is that, if it can explain just about any behaviour after

⁴ Those familiar with game theoretic modelling will know that at this point we might expect to move into a discussion of finite versus infinite games, and the logic of backward induction in obtaining solutions to finite games. However, at this point, it is felt that the discussion would run into diminishing returns. They may also wonder why I have not already introduced the notion of Nash Equilibrium. The reason is that competitive strategy is more about disequilibrating forces, less about equilibrium situations. Nash Equilibrium is not something that is particularly useful for the analysis of competitive strategy.

⁵ See Rumelt (1990) and Postrel (1991).

the event, then how do we know what game theory model to use to predict or advise on behaviour before the event?

So a health warning should be attached to game theory models being applied to analysis of competitive strategy. However, there are valuable lessons that can be learned from game theoretic reasoning, though it tends to have the status of insights and principles rather than being associated with any one model or set of models.

1.4.2 Strategic Moves

Even if it may be difficult to apply individual game theoretic models to competitive situations, there are still important strategic principles which have been explored by game theory. Indeed, many of these principles preceded the development of game theory, which has merely formalised and demonstrated the applicability of these principles in different contexts.

One important concept which game theory has developed is that of the *strategic move*. A strategic move is something that is intended to alter the beliefs or expectations of others in a direction favourable to you. Its fundamental characteristic is that you deliberately limit your freedom to manoeuvre. Game theory models can be used to demonstrate the logic and implications of different types of strategic moves in principle. For our purposes, it will be sufficient to outline some of the general lessons that can be learnt from this analysis

A central issue that game theory has helped to illuminate is that of credibility. Suppose you are considering entering a market that is dominated by one firm. You receive a warning from the incumbent that if you do move into its territory, you can expect to face a ruinous price war. What should you do?

The answer to that is to consider what would be in the best interests of your rival, *once you have entered the market*. Threats may be easy to make – cheap talk – but expensive to carry out. Your potential rival may bluster and threaten in the hope that it will deter you from entering. What you should do is consider whether your rival will find it in his or her interests to carry out the threat once he or she is faced with the fait accompli of you having entered. If it would not then be in his or her interests to carry out the threat, it is an *empty threat* and should be disregarded.

An example of an empty threat was lobbyists' dire prediction of major job losses if the European Commission carried out its threat to abolish duty free privileges for internal travel within the European Union. In the event, duty free was abolished for internal EU travel in 1999 but the threatened major job losses did not materialise. In many cases retail outlets at airports and other travel terminals simply absorbed the price rise and reduced their margins.

There is the parallel problem of empty promises, such as the manager who promises a singer preferential treatment and star billing if he will only sign on with her. The questions to ask are the same as these for empty threats. Would this person be expected to say this, even if it is not true? What is to make them keep to their word in the future?

Empty threats and promises may actually damage the credibility of those making them, rather like the case of the boy who cried 'wolf'. They are more

likely to lead to threats and promises made in the future being disbelieved if those making them have been guilty of empty threats in the past.

So the intangible asset of credibility can be an important element in strategic battles. If a firm can make its threats or promises credible, it may be more likely to exercise control over a market and its rivals. How can credibility be won – and maintained?

There are many ways that this may be achieved; the following are just some examples.⁶

Reputation

This is perhaps the most obvious way that credibility can be built up for a firm. One of the most celebrated corporate libel cases in recent years involved McDonalds, the fast food chain, in what became known as the McLibel case. Two anti-McDonalds activists were taken to court in the UK by McDonalds for allegedly libelling its reputation. The case took six years to settle and the court verdict was mixed, though mostly in McDonalds' favour. Reputation had an obvious part to play in the McLibel trial since McDonalds was clearly defending its reputation as a responsible commercial organisation. But one other thing that McDonalds was doing in this context was communicating a determination to protect its reputation at all costs – a reputation for defending its reputation, if you like. Had McDonalds ignored the attack on its reputation by the 'McLibel Two', then other groups and individuals might have felt encouraged to attack McDonalds. By communicating a determination to incur major legal costs and possible bad publicity, McDonalds was attempting to send a credible threat to any other groups who might consider attacking its image.

Yet this was a case in which it could be argued that the strategic move backfired. McDonalds was not prepared for the two penniless defendants to be prepared to resist the legal threats from such a wealthy and powerful corporation. The trial itself damaged McDonalds' reputation, with much adverse publicity concerning McDonalds' slaughter of its animals, treatment of its workers, and influence on children's minds. Rather than deterring future corporate campaigners, it could actually have given heart to others who want to see increased corporate accountability in the future.

Contracts

One obvious way that credibility can be created is by signing a contract committing a party to a certain specified course of action. This may be effective, especially if the contract involves the trading of an easily specified commodity – such as paper or grain. The problem is that it can be difficult, expensive or impossible to specify fully a contract in many commercial contexts. The agreement may be about a product that is unique or highly differentiated from others in its class (such as an interior decoration contract for a building), or one that is highly complex, innovative and/or uncertain (e.g. to develop a new weapons system for a government). In such circumstances there may still be room for misrepresentation, cheating and opportunistic behaviour. This leads

⁶ Some of the following examples are based on Dixit and Nalebuff (1991).

to *transaction costs* and *principal-agent problems* which we shall explore in later modules.

Specialisation

Polaroid is a company that pursued a strategy of specialisation in instant photography for many years, even though many elements of its technology (chemicals, electronics, optics) provided routes which could have allowed it to diversify if it so wished. As Dixit and Nalebuff (1991, pp. 154–55) point out, specialisation provided a credible statement of the company's commitment to this market; potential rivals knew that Polaroid would be likely to respond fiercely to any market entry, since an attack on the instant photography market could signal an attack on Polaroid's very existence.

Specialisation is one variant of a range of strategies which communicate a credible commitment to a specified course of action by deliberately restricting the options open to the company. In the Polaroid case, the company had no option but to stay and fight off entrants, at least in the short term, because it had nowhere else to go (later it would diversify as other innovations nibbled away at its instant photography market).

This strategy is similar to that of burning your bridges in war; if your rival knows that you have deliberately cut off your escape routes then this communicates a determination to stay and fight, the 'flee' option having been consciously sacrificed.

Investment

Major investment by a firm in a particular business area can be a credible signal that a firm is committed to that market. Rivals are less likely to think that a firm can be easily chased out of a market if they have seen the firm just commit major resources to it. However, the form the investment takes can be important. Suppose, for example, a bus company invests in a fleet of new buses to service a regional market. Since the buses are mobile assets that can be easily redeployed overnight, such investment may not in itself be regarded as necessarily signalling a credible commitment to that particular market. Easy exit does not make for credible commitment.

What can signal a credible commitment is if the investment entailed a significant element of *sunk costs*. Suppose a company invests \$10m in new machinery to produce a particular drug. The machinery cannot be used for anything else and would only have a scrap value of \$100 000 if the firm was to pull out of this market. The firm's investment in this market therefore represents a considerable level of non-recoverable sunk costs. If the firm's rivals know this, it will communicate the firm's commitment to this market; a sensible firm would not have tied up such major resources if it did not expect to maintain a significant presence in the market. And of course, once the costs are sunk, the firm will be more likely to be seen as having little to lose from fighting its ground in this market, whatever its rivals throw at it. All this can serve as a warning or deterrent to other firms that the firm is going to be a persistent and serious competitor in this market.

Incrementalism

One way to build up credibility and trust is to build up a relationship over time. Suppose two firms are thinking about forming a global alliance to develop a particular market. It might be regarded as highly risky to commit to this whole venture to begin with, especially if one partner could easily withdraw and leave the other stranded. One solution can be to build up commitment slowly, say by co-operating in developing one region of a national market, then slowly expanding. Neither partner may have to commit themselves heavily to begin with, but as they deepen and broaden their commitment, both may have more and more to lose from the collapse of the partnership, and more and more to gain from its maintenance. In this way, both firms can build up confidence that their partner is committed to the venture.

Hostages

The companies Daimler-Benz and Mitsubishi developed a whole series of co-operative agreements during the 1990s involving a number of their subsidiaries and businesses. Such arrangements or alliances are quite common now in industry; but why did Daimler-Benz and Mitsubishi not simply seek out the best partner on a business-by-business basis? Just because you have co-operated with a firm in the past or the present does not necessarily mean that it is going to be the most suitable partner in other areas in which you have interests. Why this clustering of co-operative agreements around one preferred partner?

One answer is that clustering agreements with a preferred partner can provide the credible reassurance that partners are more likely to adhere to the letter and the spirit of individual agreements if it knows the other has co-operative agreements that can be used as 'hostages' in the event of any breach of faith. That is one reason why towns, cities and universities twin with a restricted number of preferred partners. An institution, whether a university or a firm, may be less likely to act opportunistically regarding one specific agreement if it could have damaging implications for other agreements signed with the other party.

Social context

Diamond dealers in New York tend to make trades with each other based on verbal assurances. If a diamond dealer were to break his word, he could find his reputation and ability to function commercially irretrievably damaged. Hollywood producers have also been known to make verbal assurances and promises, but a breach of faith by them is less likely to damage their career permanently, indeed it may even be accepted as par for the course.

The important point is that credibility (for example that a person's statement can be treated as honest and reliable) may be influenced by the social context in which actions take place. The significance of social or environmental ties in creating and communicating credibility may vary from market to market.

1.5 Conclusions

In this module we have analysed some of the major features and elements of potential relevance to strategy formulation in the various types of industrial environments that the firm might encounter. The life cycle and Five Forces models help provide organisational frameworks that can assist in the development and evaluation of the strategic options open to the firm. The life cycle model provides insights that can chart the changing features of the industrial and technological landscape over time. The Five Forces Framework helps establish the context in which the strategic game may be played by firms and rivals at particular points in the cycle. Finally, while game theory may be overhyped in terms of its ability to provide useful models to analyse competitive situations, it has provided insights which may help identify useful strategic concepts and principles. In the modules that follow we shall build on the foundation that these approaches help to provide.

Review Questions

1.1 Recognised strategies that may help provide long-term solutions for dealing with the decline stage of the industry life cycle include:

- I Niche exploitation
 - II Harvest
 - III Internalising the threat
 - IV Dominance and leadership
- Which of the following is correct?

- A I, III and IV.
- B All of the above.
- C I only.
- D I, II and IV.

1.2 Forces in the Five Forces Framework include:

- I Rivalry
 - II Entry
 - III Economies of scale
 - IV Buyer power
- Which of the following is correct?

- A I, II and III.
- B All of the above.
- C I only.
- D I, II and IV.

1.3 Which of the following is **not** likely to intensify firm rivalry in an industry?

- A Increase in the number of sellers.
- B Elimination of excess capacity.
- C Deregulation of the industry.
- D All of the above.

1.4 Which of the following is a strategic move?

- A Some first mover advantage on the part of a firm.
- B Something which is intended to alter the beliefs or expectations of others in a direction favourable to you.
- C The construction of a business plan.
- D Replying tit for tat when a rival attacks your market.

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