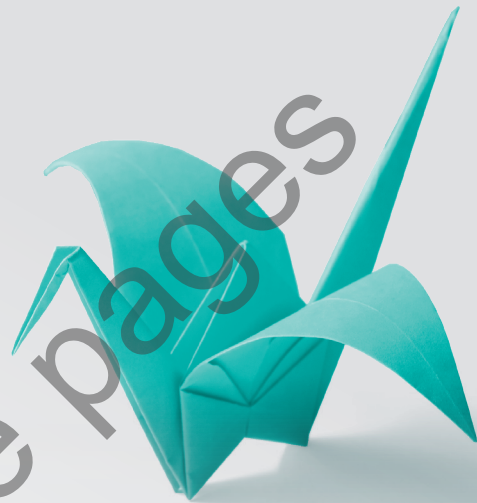


# CHAPTER 3

## Analysing the external environment



**Your learning objectives for this chapter are to be able to:**

- LO 3.1** define what an industry is and identify the industry in which various organisations operate
- LO 3.2** analyse the factors in the macro-environment that influence future industry growth
- LO 3.3** explain what the five forces model is and identify the key criticisms of the model
- LO 3.4** describe how the five forces model can be used in strategy development
- LO 3.5** recognise the implications of industry turbulence and life-cycle stages for business strategy

- LO 3.6** identify the benefits of scenario planning as an alternative to the five forces model
- LO 3.7** describe the differences between markets and industries as a basis for strategic analysis
- LO 3.8** explain how the diamond model can be used to analyse international competitiveness and its implications for organisations
- LO 3.9** describe how the five forces model can be applied to public sector and not-for-profit organisations

## How a changing environment has affected the iron-ore industry

The extraction and export of iron ore from the Pilbara area of north-west Australia has been an important component of the Australian economy since the 1960s. By the mid 1970s, production had reached 100 million tonnes a year (up from around 10 million tonnes a decade earlier). Production remained relatively constant through the 1980s as the industry was beset with pressures coming from two sides. The main buyers at this point were the Japanese steel mills and they acted as an oligopoly, allowing one player (often Nippon Steel) to negotiate the price for the year on behalf of the entire Japanese industry. This kept the price low—generally in the mid-US\$20 per tonne range. At the same time, the industry was beset with industrial disputes. These were creating significant issues for the main miners in the region, who often built in overcapacity of around 30 per cent just to ensure they would be able to meet their contractual obligations. This changed in 1986. Cliffs Robe River (which was later taken over by Rio Tinto) suffered a 30 per cent decline in production between March and July 1986 due to industrial action (which was an extreme outcome given that not a single month in the preceding year had been free from strike action). All employees were dismissed but they were offered new individual contracts. Unsurprisingly, these were rejected and a period of tension followed, with demonstrations and very limited activity on the mine site with only a skeleton workforce in place. By 1987, employee levels had risen back to one-third of the original levels and this eventually increased to approximately two-thirds of the original numbers. Productivity, however, doubled per worker. Following the changes at Robe River, similar changes were made across the big players, BHP and Rio Tinto.

By the late 1990s, there was talk of significantly increased volumes on the basis of the growth of the Chinese economy. The demand coming out of China was growing significantly every year, though at this stage this had made little difference to the price, which was still stuck at little more than US\$20 per tonne. In an effort to improve the bargaining position of the iron-ore miners, there was considerable consolidation to the point that by the time Norths was acquired by Rio Tinto in 2000, Rio Tinto and BHP were the only sizeable producers operating in the Pilbara. Along with CRVD (today known as Vale), these three producers controlled more than 80 per cent of ship-borne exports (mainly to Japan, China and Korea).

By 2005, Japanese and Chinese buyers were seeking supply from limited producers and prices were more than US\$50 per tonne. These desirable industry conditions attracted interest from other parties such as Fortescue and even very small players such as Atlas. The production of these smaller players and the expansion efforts of BHP and Rio saw massive increases in supply and a subsequent softening in the price.

By 2015, demand from China had levelled out and the price was headed down into the US\$50 per tonne range, eventually bottoming out at US\$40.8 per tonne in December that year. Many smaller players exited the industry and while demand remains strong, the level of demand from China is keeping prices down from the highs of 2011 to 2013. Today, the future is very much tied to further infrastructure development in China (as the biggest buyer of iron ore) and the level of competition in the industry similarly varies according to the prevailing spot prices and forward projections.

In this chapter we analyse the external environment. As we showed in the model in Chapter 1, we regard the 'external environment' as those factors *outside* the organisation that influence its strategy. Most people find this the most difficult part of the analysis for two reasons. First, the breadth of the analysis required and the uncertainty and ambiguity that exists due to the many signals that are received from the environment make interpretation difficult. Second, it deals with issues that the organisation cannot control, so management wonders why the organisation should be concerned with it. However, some of the most profound influences on an organisation's strategy come from environmental factors (e.g. changes in regulations, rapidly emerging online technologies and increasingly uncertain climate patterns), so we *have* to conduct this element of the analysis. These factors have been shown empirically to have a significant impact on firm profitability, with their impact (depending on the industry, country and how the data was collected) being estimated as contributing to between 20 and 40 per cent of the variability in performance of firms.<sup>1</sup>

### macro-environment

Those general influences that affect an industry.

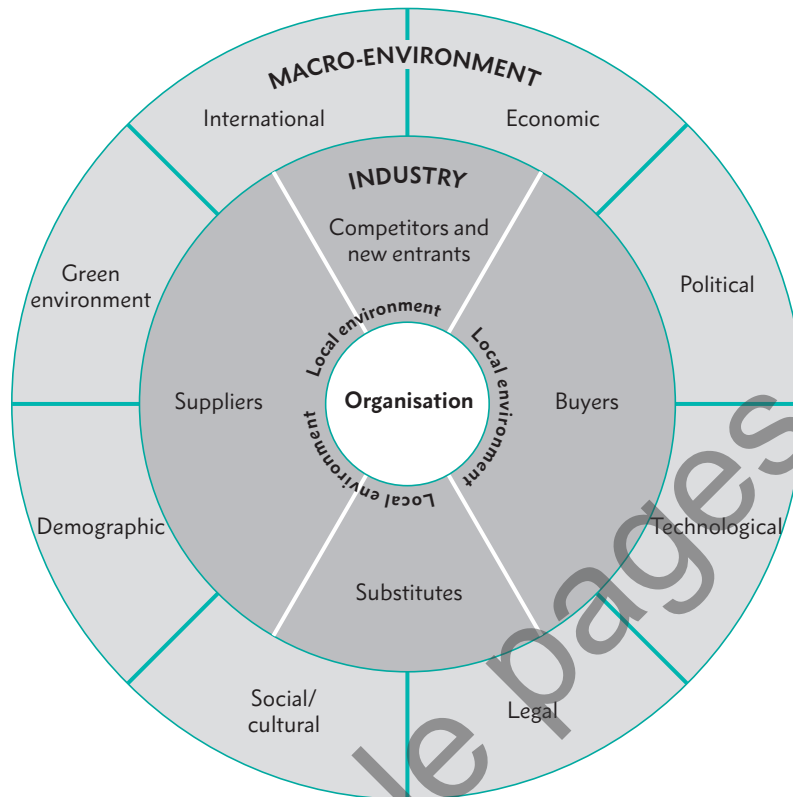
We break the external environment into two sections: the *macro*-environment and the *industry* environment (see Figure 3.1). The **macro-environment** includes those general influences that affect an industry. Macro-environment issues tend to affect many industries, but we are concerned with their effect on the growth of the *particular* industry we are analysing. For instance, the setting of interest rates is a macro-economic policy lever designed to influence the general level of economic activity. However, for the housing industry, interest rates are a prime determinant of the demand for new housing. Hence, organisations in the housing industry must carefully monitor and forecast interest rates, and particularly the home loan mortgage rate, to assist them to predict future housing demand.

### industry environment

Factors within an industry that affect both its profitability and the competitive position of organisations within it.

In the **industry environment**, we consider those factors within the industry that affect both its profitability and the competitive position of organisations within it. Our consideration of the industry includes analysing not only the organisation, its competitors and strategic groups, but also their buyers (customers), suppliers, substitutes and potential new entrants. We also consider the role of government, which is particularly important in small economy countries, as well as the role of complementor organisations. Then we turn to the dynamic issues of industry turbulence, industry life cycles, scenario planning, clusters and networks. Finally, we consider industry analysis for internationally competitive industries and for the public sector and not-for-profit (NFP) organisations.

FIGURE 3.1 The external environment



## Defining the industry

From a practical perspective, to ensure that our analysis is consistent, it is very important to define the industry we are dealing with. An **industry** is defined as a group of organisations or business units producing close substitutes. The concept of 'industry' is actually a perception, not a reality.<sup>2</sup> For instance, a private girls' school may define itself as being in the 'girls' school' industry as it perceives its competitors to be other girls' schools. However, parents may be choosing between a girls' school, a co-educational private school and a government school. Co-educational schools, which are also seeking girls, may define themselves as being in the 'schools' industry.

The industry definition should also include a geographic element. This leads to clearer thinking about who the real competitors are. For instance, most schools compete in closely defined geographic areas or areas defined by public transport systems. The analysis of the 'Sydney girls' schools' industry is different from the analysis of the 'Eastern Suburbs girls' schools' industry, the latter being more likely to be a true indicator of the main set of close competitors. A narrow definition makes it easy to analyse the industry but runs the risk of missing new trends, which often come from new entrants or substitutes. A wide definition makes it harder to analyse because it is easy to become lost in the mass of data. However, as Figure 3.2 shows, the definition is not

### LO 3.1

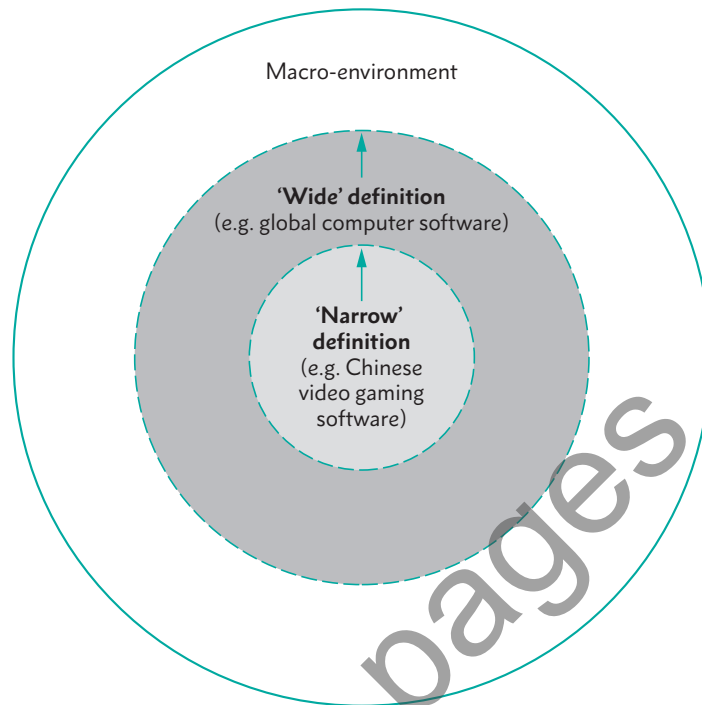
Define what an industry is and identify the industry in which various organisations operate.

### industry

A group of organisations or business units producing close substitutes.

FIGURE 3.2

Wide and narrow definitions of an industry



right or wrong. It simply determines what information is analysed under each particular heading. Under a narrow definition of the industry, competing products from outside the narrow definition are not ignored but are handled as substitutes or new entrants in the industry analysis framework (see next section). The important issue is to be consistent throughout the analysis. Our experience in strategy planning workshops is that failure to define the industry clearly at the start of the analysis is a major trap.

Defining an industry can be difficult if the organisation is competing internationally (e.g. in Australia, Singapore and China). If the industry is defined geographically as 'the international xx' industry, a common problem is that the different countries have different environments and cannot be generalised. Therefore, in practice, it is best to conduct country- or region-specific analyses rather than one generalised 'international' analysis.

The best approach is to define an industry through the eyes of its customers. For example, an Australian flying from Sydney to London for a holiday has literally dozens of options—from inexpensive 'flag carriers' like Philippine Airlines or Vietnam Airlines, to full-service, first class offerings from airlines like Emirates and Qantas. Most customers will have criteria to limit their choices (and make their decision easier). For some it will be as simple as 'whichever is cheapest'. For customers such as these, a small number of carriers will be considered, and could thus be seen to be in direct competition for these consumers' dollars.

Other consumers will look for an airline with a good safety record, good in-flight service and speedy connections through Asia or the Middle East on their way to Europe. These types of customers will compare what is on offer from airlines like Qantas, Singapore Airlines or Cathay Pacific (for example).

## Analysing the macro-environment

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**LO 3.2**

Analyse the factors in the macro-environment that influence future industry growth.

In analysing the macro-environment, many analysts forget the purpose of the analysis. We are interested in answering two questions:

- 1 What are the major trends affecting the future growth of the industry?
- 2 In summary, will this industry grow faster or slower than average industry growth rates?

Note that the analysis is being conducted at the industry level, not the organisation level. The specific effects on the organisation can be addressed later, but we are concerned primarily with the issue of expected future industry growth rates, and the driving forces of that growth. How far into the future should we look? Since we are undertaking strategic analysis, our time frame of analysis should be consistent with our definition of 'long term' for our particular industry—three to five years in most cases.

To make analysis of the macro-environment a little easier, we divide it into several types of trends that might have an important impact on the industry. These are economic, political, legal, technological, sociocultural, demographic, green environment and international trends. For any particular industry, one or more types may be very important, while others may be of little importance. While we have found that these headings work well for most situations, in making your analysis you may find other headings that are even more useful, as this is a practical framework rather than a theoretical framework. We consider each of these areas below.

### Economic trends

Economic indicators that might affect an industry could include gross national product and personal disposable income growth rates, inflation rates, unemployment levels, interest rates, exchange rates, taxation rates and wage rates. For instance, the demand for international airline travel is highly affected by growth in personal disposable income; that is, as individuals' disposable incomes increase, their demand for international airline travel increases even faster. International travel also tends to increase when the home currency is strong (e.g. Australians tend to travel more when the Australian dollar is very strong).

While general economic trends are important, often a specific indicator would be more relevant for future growth (e.g. mortgage rates are more relevant than general interest rates for the housing industry; exchange rates heavily impact Australian and New Zealand wine exports). Economies also have cycles of growth and recession. It is important to be aware of this, rather than simply extrapolating future growth from past data. The more knowledge you have of the industry, the more specific will be the macro-environmental factors that you identify.

### Political trends

Since industries in most smaller economy countries such as Australia, New Zealand and Singapore are affected intimately by political influence and legislation, this area is likely to contain several key trends. One political trend is the provision of health services. Most countries in the OECD (outside of the USA) have variations of a single payer system whereby the government funds most basic health care at some base level. However, as the population ages, the proportion of GDP that is expended on health care increases every year (also coupled with the fact that advances in health care in terms of equipment and medication invariably add further expense to the system). The result is that different countries are developing new policies such as co-payments, limits,

encouraging elements of private insurance, and so on, as ways to limit their expenditure. These changes create opportunities for some organisations, such as private health insurance funds, but restrict opportunities for other organisations, such as those that make pharmaceutical products that are not subsidised through the government-funded Pharmaceutical Benefits Scheme.

Governments influence organisations and entire industries not only through legislation, but also through government agencies and government administrative regulation. For instance, the Australian Competition and Consumer Commission has been a very active enquirer into industry practices and has caused substantial changes in many industry structures and practices, as well as preventing a number of planned industry consolidations that it felt would reduce competition, such as in the Australian banking industry. Table 3.1 shows some major future government issues for most countries.<sup>3</sup>

**TABLE 3.1** Major government issues for the future

Debt/income levels	Pension funding
Immigration policy and management	Healthcare funding
Free trade vs. national workforce support	Climate change adaptation
Worker/retiree ratios	Old-age/end-of-life medical and ethical management

## Legal trends

In addition to specific legislation that comes from political influences, developments in the legal system can also have an important influence on an industry. For instance, the increased willingness of courts to award damages against professionals for malpractice has led directly to the move by professionals away from partnership structures with unlimited personal liability, towards corporate structures with limited liability. Gradually, over the past decades, the legal responsibilities of company directors have increased such that directors can be held responsible (and even jailed) if shown to be negligent in respect of conditions that led to workplace deaths or other occupational health and safety issues. The introduction of US-style class action litigation in other countries has made it easier for individuals to pursue actions against organisations, particularly those in the consumer products area. Food contamination, tobacco and asbestos health suits, chemical leaching and utility disruptions are some examples. Some legal firms, including Slater and Gordon, and Maurice Blackburn, have built their business strategy and reputation on pursuing such actions in Australia. The responsibility of the fast-food industry for the obesity epidemic, the US Environmental Protection Authority decision that carbon dioxide is a health hazard (just as it decided tobacco was almost 50 years ago) and the Australian Government's carbon tax and requirement for plain, unbranded packaging for cigarettes are recent examples of emerging legal issues at the industry level.

## Technological trends

The world is in the midst of a series of technological revolutions. Most industries are affected. Online technology for purchasing—and selling—goods and services has changed convenience levels and expectations, introduced international/global customers, suppliers and competitors to



industries, and created untold new products and services (e.g. apps, social media) that are a direct result of the technology. Cloud computing, WiFi, cheap global communications, global outsourcing, and so on, are also impacting the internal operations of most organisations and changing the value chain and consequent business model. Many print media sources (e.g. *Harvard Business Review*, *Fortune*, *BOSS*) publish annual lists of 'big ideas' that organisations may need to consider in their future plans. Table 3.2 lists a variety of technologies that are expected to have wide-ranging effects on various industries in the future.

**TABLE 3.2** Important technologies of the future

3D printing	Laparoscopy
Artificial intelligence	Nanotechnology
Cloning and bioengineering	Neuroscience
Fast broadband/mobile communications	Robotic-mediated software
Fracking	Social networking
Genetic engineering	Solar power
Holographic radiation	Voice-activated computing

## Sociocultural trends

Sociocultural trends are often difficult to capture in strategic analysis because they change almost imperceptibly. Nevertheless, spotting trends and understanding new attitudes is important for future success. For instance, changing marital/partner and working relationships have created new markets and new needs, such as the demand for more convenience foods, longer shopping hours/online shopping, smaller houses, increased child care and online dating. The role that social media, such as Facebook, Twitter and LinkedIn, as well as many other online channels, plays in influencing customer attitudes and decisions remains widely underestimated and misunderstood by many traditional organisations.<sup>4</sup>

Cultural issues reflect the fact that, as a society becomes more multicultural through more varied immigration sources, assumptions about what is 'normal' or 'acceptable' become less clear. One area where this has shown up is in the food industry. Supermarket product ranges now offer a vast variety of food choices. Indian, Chinese, Thai, Greek, Italian, Japanese, Korean, Malaysian and Indonesian cuisines, among others, have changed what is eaten, when it is eaten and how it is eaten. The different attitudes and behaviours of Generations X and Y have also led to significant changes in the products and services valued and purchased, as well as employment expectations. Table 3.3 (overleaf) gives some examples of major global sociocultural issues.<sup>5</sup>

## Demographic trends

Demographics are often forgotten in strategic analysis. Organisations assume that their market will simply grow by  $x$  per cent each year. But the key drivers are population growth, plus inflation, plus some real increase in performance. For instance, assumptions of 2 per cent population growth, 3 per cent inflation and a real increase in volume of 1 per cent leads to a 6 per cent future growth rate being assumed.<sup>6</sup> However, growth in the general population may not translate to



**TABLE 3.3** Major global sociocultural issues

Aged care	Immigration management
Environmentalism	Labour/people mobility
Flexibility of employment conditions	Obesity
Global issue mobilisation	Social networking
Growth/size of population	

growth in a specific population for a particular industry. For instance, a reducing birth rate will result in less demand for primary schools (and eventually high schools and universities) and products associated with children. On the other hand, the number of elderly people is rapidly expanding as life expectancies increase. This has implications for industries such as hospitals, retirement villages, home builders and medical businesses, to name a few. Changes may extend beyond age distributions as it is the increasing urbanisation that may explain the falling demand for new cars in the USA.<sup>7</sup>

Much of the demographic data are available so that its influence, if it is important for an industry, should be quite predictable. For instance, only 2 of the 20 richest nations have birth rates approaching the replacement rate of 2.1 children per woman: the USA and Iceland. The implications are already clear. Immigration will become a major—and popular—source of working populations in many countries. Table 3.4 gives some examples of demographic trends in Australia.

**TABLE 3.4** The challenges with making long-term projection

Australia's population is expected to increase by 50–100 per cent by 2050. This would seem to be a very large margin of error, but the Australian Bureau of Statistics has developed models based on high, moderate and low assumptions. If migration increases to 22 000 people per year and the number of children born per female increases from approximately 1.85 at present to 2.0, and furthermore, life expectancy at birth continues to extend, then Australia will have more than 40 million people in 2050.

However, at the low end, if migration drops away (possibly due to government policy), fertility drops down to 1.6 births per female and life expectancy only increases marginally, we will have a population of around 30 million. In all cases, the proportion of the population that is over 65 is going to increase, with the moderate assumptions seeing an increase in this age demographic by 60 per cent.

Outside of population projections, our extraction of many key minerals and fossil fuels (e.g. iron ore, natural gas, bauxite) will continue for many decades to come, but other resources such as lead, zinc and crude oil will be dwindling. We will remain food secure, but agricultural trade is expected to drop due to a drop in output on the basis of climate change.

Economically, growth is expected at 2.5 per cent per year (slightly lower than previous decades) with a shift towards services and away from primary and secondary industries such as agriculture and manufacturing. Our largest trading partners are expected to be China, India and Indonesia.

Sources: Fulton, B 2013, 'Where is Australia headed? Some future projections', *The Conversation*; Australian Bureau of Statistics 2014, 'Does Size Matter?—Population projections 20 and 50 years from 2013'.<sup>8</sup>

Strategy @ work 3.1 gives some of the views of one of management's best thinkers—Peter Drucker—on the importance of demographic factors for the future.

### Strategy @ work 3.1

### DRUCKER'S VIEWS ON THE FUTURE IMPACT OF DEMOGRAPHICS

Writing in 1997, Drucker believed that the dominant macro-economic factor for business for the next 20 years would be demographics, not economics or technology. He said the dominant factor would be the underpopulation of developed countries, not the overpopulation of underdeveloped countries, and the mix of that population—specifically, the inability of the working population of the future to support the retired population. Drucker believed this would have the following effects:

- Actual retirement age would increase to 75 for healthy people.
- Economic growth would come only from increasing knowledge work productivity and the number of knowledge workers.
- There would be no single dominant world power because no developed country would have the population to support such a role.
- The world economy would continue to be highly turbulent, highly competitive and prone to abrupt shifts.
- The information needs of companies would change to capturing new knowledge from outside the organisation rather than from inside—that is, from customers, suppliers, competitors, etc.
- Knowledge workers would be highly valued and highly mobile, and would not fit into

conventional organisations—they would be contractors and consultants.

- There would cease to be one concept of 'organisation': 'organisations' would differ according to the context and situation.
- 'Management' would be required in all types of 'organisations', not just in businesses.

Many of these projections were fairly radical at the time, as the USA had been a world power since World War II and discussions around populations tended to centre on overpopulation and the challenges that this would bring. Certainly not all projections were correct (e.g. the USA remains the dominant world power); however, many of these projections were headed in the right direction (e.g. the massive challenges countries such as Japan, Germany and Italy face due to very low birth rates; and the fact that people are working longer, and in Australia the age at which people currently under 50 of age can access their superannuation has already increased to 67). It will be interesting to see whether demographics, technology or economics are the underlying drivers of change over the next two or three decades.

*Source:* Based on Drucker, P 1997, 'The future that has already happened', *Harvard Business Review*, September–October: 20–4.

## Green environment trends

Increasingly, industries are facing the unsustainability of existing commercial practices in terms of their effects on the natural environment. Lack of water, water quality and salinity, increasing greenhouse gas emissions, deforestation, global warming and decreasing non-renewable resources are just a few of the major problems facing the world, its industries, its businesses and its people. Most of the changes required will likely be forced by governments or powerful single-issue lobby groups because organisations don't include all of the social and

environmental costs of their actions in their costings and because they don't want to incur extra costs when competitors in other locations don't have to follow suit. However, we are starting to see a trend where organisations' policies are also making a difference. The biggest four banks in Australia have all ruled out financing the Adani coal mine and Westpac has introduced specific criteria that will see it only consider funding coal mines that rate in the top 15 per cent of coal in terms of its thermal qualities. Consequently, even though the Paris climate change agreement may fail to be as effective as hoped, the choices by individual organisations may have a lasting impact.

Consumers are also moving down this path with the choices they make. Electric cars, home solar panels for electricity generation and even the growth of cycling as a transport option are fundamentally changing the opportunities in certain industries. Table 3.5 gives some examples of how industries are being affected.

**TABLE 3.5****Indicators of the impact of green environment issues on industries**

- McKinsey found that the most cost-effective greenhouse gas reductions can be made by using existing low technology in building insulation, fuel efficiency in vehicles, lighting, air-conditioning and water-heating systems, sugar-cane bio fuel, electricity standby and forestation.<sup>9</sup>
- Fossil fuel power without carbon capture and storage will decrease from 65% to 35% by 2030.
- Renewables are expected to increase from 18% to 32% of power generation by 2030.
- Toyota's choice of hybrid technology over hydrogen fuel cells was based on a 50-year assessment of the vehicle industry.
- China, which became the world's leading carbon emission emitter in 2009, and California introduced regional emissions trading schemes in 2013.
- Since 2011, all major Australian cities have desalination plants for part of their water supply.<sup>10</sup>

## International trends

Different industries are susceptible to different levels of internationalisation. Primary (e.g. agriculture) and secondary industries (e.g. manufacturing) tend to be quite international in the way they operate. However, the service sector constitutes the largest part of most first-world economies and here some industries are likely to be subjected to high levels of internationalisation (e.g. consulting and banking) whereas others are primarily local in orientation (e.g. hairdressers, legal services). Overall, industries are becoming more international in their orientation, with even traditionally local industries such as legal services starting to feature some multinational players. Certainly, across all industries, international trends are becoming more important. Suppliers, competitors and customers are all becoming more international in scope across many industries. Thus, the reductions of trade barriers, differential labour rates between countries and the increased speed, availability and low cost of international communications are some of the key international trends impacting many organisations.

Becker and Freeman found six trends that were thought to be likely to impact on the size of international business: increasing numbers of customers in emerging economies; a shift of

activities between and within regions; greater ease in obtaining information and developing knowledge; increasingly flexible international labour markets; increasing constraints in supply or usage of natural resources; and increasing communication as a result of technical innovation.<sup>11</sup>

## Summarising the analysis of the macro-environment

The purpose of analysing the macro-environment is to form a view about the likely future growth rate of the industry and to identify the key drivers of that growth. A useful way to do this is to:

- Assess each issue identified as having a significant positive (+) or significant negative (–) effect on the growth of the industry, compared with the average growth of industries in general. For instance, if the ‘average’ industry is expected to grow by 5 per cent p.a. over the next three to five years, and a particular factor in this industry is expected to make it grow faster than that average, assess the factor as (+).
- Summarise the +s and –s of all the trends identified, having regard to the relative importance of each factor. For instance, there may be an equal number of +s and –s, but if all the *major* factors are +, the conclusion would be that the industry would be expected to grow faster than average.
- Identify the key opportunities and threats arising.
- Write down the summary, listing the major reasons for your conclusion.

Unless these steps are followed, the analysis simply results in a long list of factors that cannot be easily understood by anyone else who reads it now or later. Summarising forces the analyst to integrate the factors, and to realise what information is missing or is actually perceived to be crucial in reaching the conclusion. Table 3.6 (overleaf) summarises a macro-environment analysis for the Australian wine industry.

While the quantity of information available for analysis has rapidly expanded, an emerging issue is the quality of that information and the judgements made by ‘experts’. Tetlock has summarised large numbers of expert views on a wide range of future outcomes occurring. He concluded that experts are no more expert, on average, than non-experts in terms of successfully predicting political outcomes—in fact, the more famous the expert, the less well they performed.<sup>12</sup>

Factors favouring future growth include increasing disposable income in Australia, China and Asian countries; the continued exposure to ‘fresh’, ‘clean’ and ‘innovative’ value-for-money wines from Australia; technology changes in production that improve production efficiency, quality and consistency; and Australia remaining fashionable and desirable worldwide. However, increasing disposable income is not being replicated in the major export markets of the USA, UK and some European countries. Prices will be low due to continued worldwide grape surpluses. There will be increasing legal pressure on alcohol-related industries to encourage responsible use. The low population growth in major target markets—except for China—will also dampen future growth prospects. Lack of water availability and pressure on irrigators in the future will substantially reduce future supply. There will be an increase in the importance of marketing skills, through branding, promotion, direct sales and customer relationship programs. In summary, average growth is expected, due exclusively to high export growth in Asian and other developing markets.

TABLE 3.6

A macro-environment summary for the Australian wine industry

Factor	Issue	+/- Effect on growth
Economic	Increasing disposable income in Australia	+
	Variable international economic growth	+ (China/Asia)/ - (rest of the world)
	Worldwide grape surpluses	-
	Many international lower cost competitors emerging	-
	A high A\$	-
Political	Free trade agreement with China	+
	Wine equalisation tax	-
Legal	Increasing emphasis on drink-driving	-
Technological	Increased variety of wine products	+
	Better water use, conservation image	+
	More application of marketing concepts	+
	Increased focus on quality control	+
Socio-cultural	Quality wine becoming more fashionable worldwide	+
	Australia seen as desirable worldwide	+
	More eating out	+
	Australian wine is fashionable overseas	+/- (varies by country)
	Wine is fashionable compared with other drinks	+/- (varies by market maturity)
	Water and other non-alcoholic alternatives seen as healthier	-
Demographic	Low population growth in Australia and identified markets	-
Green environment	Increased water controls reducing irrigation water availability	-

## LO 3.3

## Industry analysis: the five forces model

Explain what the five forces model is and identify the key criticisms of the model.

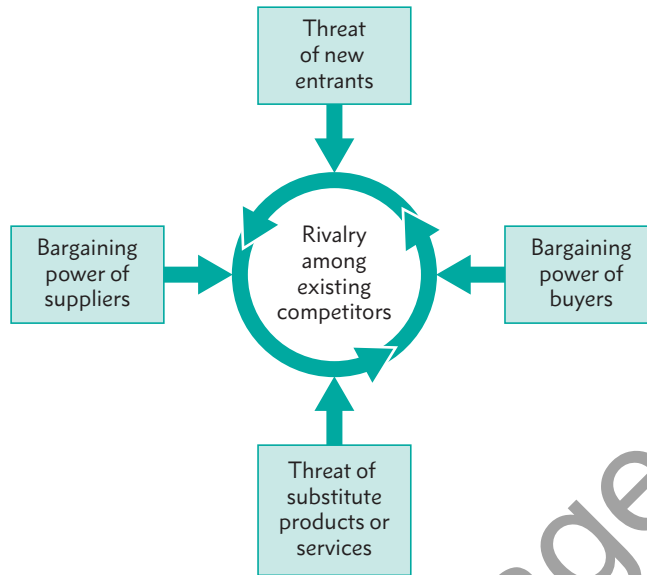
The second stage of external environmental analysis is to assess the industry environment. The aim of industry analysis is to answer the following questions:

- What is the current profitability of the industry?
- What is the expected future profitability of the industry?

Porter developed a framework for analysing five forces that affect industry profitability. This technique, referred to as the **five forces model** goes beyond the conventional idea of simply considering the positions of competitors. (Porter termed this 'industry rivalry'.)<sup>13</sup> The analysis also includes the threat of new entrants, the relative power of suppliers to the industry, the relative power of buyers (customers) from the industry, and the power of substitutes. Figure 3.3 illustrates the model.

FIGURE 3.3

The five forces model



Source: Reprinted by permission of *Harvard Business Review*. Adapted from Michael E Porter, 1998, 'The Five Competitive Forces That Shape Strategy', January, p.4. © 1998 Harvard Business Publishing; all rights reserved.

### five forces model

Analysis of the impact of the threat of new entrants, suppliers, buyers, substitutes and rivals on profitability in an industry.

The five forces model is designed to explain why certain industries are more profitable than others. For instance, why is it that the prescription pharmaceutical and petroleum industries are consistently very profitable, while the agriculture and travel agency industries are much less profitable? Porter found that, by using these five forces, consistent differences in industry profitability could be explained. Industry profitability will be very high if:

- 1 the threat of new entrants is low
- 2 the power of suppliers is low
- 3 the power of buyers is low
- 4 the power of substitutes is low
- 5 industry rivalry is low.

An excellent example of this situation is the global prescription pharmaceutical industry, as shown in Strategy @ work 3.2 (overleaf).

It is useful to consider the full list of factors that Porter developed as potential influences on each of the five forces. Although not every factor will be important to any particular industry, the list covers not only well-known economic factors but also many factors that reflect the competitive behaviour, psychological makeup and values of the organisations in industry.<sup>14</sup>

### Threat of new entrants

Factors that influence the threat of new entrants to the industry include:

- *Economies of scale*. Perhaps the most obvious barrier to entering an industry is where there is a need for large-scale production in order to be cost-efficient (e.g. in the motor vehicle industry).

## Strategy @ work 3.2

## WHY IS THE PRESCRIPTION PHARMACEUTICAL INDUSTRY SO CONSISTENTLY PROFITABLE?

The prescription pharmaceutical industry has long been one of the most profitable industries in the world, earning around double the median US return on invested capital (11 per cent) for more than 40 years.<sup>15</sup> How does the five forces analysis explain this?

The threat of new entrants is low because of the very high costs of research and development and the long time-scales for gaining government approval of any drugs that are developed. Furthermore, the intellectual property rights of existing firms are protected through the patent system, preventing the replication of existing drugs.

Supplier power is low because the main suppliers are the researchers and the suppliers of the raw materials of the drug. In general, there are many eager researchers compared with the number of prescription pharmaceutical firms. Also, the raw materials are usually quite cheap.

Buyer power is low because once the very difficult process of finding the right combination of materials is discovered and a drug is developed, it usually meets a specific need. Buyers have shown they are prepared to spend vast amounts of money to improve their health.

Power of substitutes is low because there are few effective substitutes for the drugs, though

there is a trend for people to seek alternative medicinal approaches, such as natural therapies, Chinese medicines or acupuncture. However, for serious conditions, most people rely on proprietary drugs from pharmaceutical companies.

Industry rivalry has been quite low. While many prescription pharmaceutical companies appear to be industry rivals, because of the costs of research and development each competes only in a small number of therapeutic areas so that, within each therapeutic area and for each particular type of drug, there are usually only a few competitors.<sup>16</sup> In fact, the drugs that are responsible for the majority of pharmaceutical firm profits are protected by patents and so often have no real rivals for dealing with a particular illness. Furthermore, there have been a large number of mergers and acquisitions (38 in the last 20 years of a value of greater than US\$10 billion) limiting head to head competition. For example, Glaxo acquired Wellcome and then this company (Glaxo Wellcome) merged with SmithKline Beecham to form GlaxoSmithKline. With low rivalry, low buyer power, low supplier power, few substitutes and low threat of new entrants, pharmaceutical companies are very powerful. And very profitable!

- *Proprietary product differences.* Where existing products are unique in some way and these differences cannot be replicated, it is difficult to enter the industry. Prescription pharmaceutical company patents on new medicines prohibit competitors from producing similar products for a long time.
- *Brand identity.* If existing producers in the industry have established their brands (e.g. as Microsoft has been able to do in the computing software industry), this can be an effective barrier to entry. Usually, brand identity is related to proprietary product differences that have created the brand.
- *Buyer/customer switching costs.* If it is difficult to switch from an existing producer to a new entrant, even if the new entrant's product is superior, this can be a significant barrier to new entrants. For instance, once a software application (e.g. an SAP or PeopleSoft system) is installed in an organisation and tailored specially for the organisation, it



becomes very difficult to switch suppliers at a later stage because of the uniqueness of the software.

- *Capital requirements.* Related to the economies of scale argument, high capital requirements limit the number of potential new entrants (e.g. to the resources and chemical industries). New entrants with good ideas but without finance are unable to break into these industries.
- *Access to distribution.* Inability to distribute the product can kill even the best products. For instance, independent movie producers find it difficult to gain good access to the public because most movie theatres are controlled by a small number of chains—Hoyts, Village Roadshow and Greater Union in Australia—which purchase packages of films direct from the major US distributors.
- *Absolute cost advantages.* Clearly, if existing organisations have absolute cost advantages over new entrants, new entry is difficult. Such cost advantages may be built up through production experience, resulting in efficiencies that are difficult to replicate, control over cheap raw materials, and/or low-cost design, operation or distribution (e.g. production of computer chips)—or they could simply derive from superior resources (such as a mine with higher grade ore).
- *Government policy.* This remains a barrier in many small-economy or developing countries such as China and India. Airlines, post, radio, TV, telephones, energy utilities, water suppliers, banking and education are just some of the industries that have either been government owned or have been highly regulated by government. Government policy on foreign investment in some countries can also prevent foreign firms entering these markets.
- *Expected retaliation.* One of the most important barriers to entry in our view is retaliation from existing competitors. Retaliation by Qantas and Ansett in 2000 to the entry of Impulse and Virgin to the Australian domestic airline industry led to two of the four firms exiting the industry in just 12 months, as fares were dramatically cut by all four competitors.

## Bargaining power of suppliers

A good way to identify the important suppliers is to consider the industry cost structure. Table 3.7 shows the typical airline cost structure.

**TABLE 3.7** Typical airline cost structure

Labour	28%
Fuel	35%
Maintenance	16%
Depreciation	5%
Aircraft leasing	3%
Other	17%

Sources: Demir, R 2014, 'Aviation industry and MRO sector trends Q1 2014', In SlideShare, 2 April, accessed 12 April 2018.

Factors that influence the power of suppliers to the industry include:<sup>17</sup>

- *Differentiation of inputs.* If a supplier's input is crucial to the final product, that supplier will have power. For instance, when buying computer packages, customers have come to value the software more than the hardware. Consequently, the key software suppliers have been able to maintain their prices much better than hardware suppliers, whose inputs are not perceived to be differentiated as much as they were.
- *Switching costs of suppliers and firms in the industry.* The cost of switching suppliers may be high if these supplies are unique and require specialised support. For example, an airline acquiring a new Airbus series of aircraft that had previously only used Boeing aircraft would need to train its pilots on these new aircraft, obtain new spare parts and train its engineers in the new systems, thereby creating very significant switching costs to move to a new aircraft manufacturer.
- *Supplier concentration relative to industry concentration.* A small number of suppliers means that suppliers will have power. Car manufacturing is done by only 10 to 20 manufacturers globally, yet there are hundreds of component manufacturers. Obviously, manufacturers will have a lot of power over component suppliers, other things being equal.
- *Importance of volume to suppliers.* If the volume being sold to the industry is important to suppliers, they will be concerned about it and therefore willing to bargain. Supermarket chains have a great deal of power over suppliers.
- *Cost relative to total purchases in the industry.* If the supplier's cost is a small part of the total cost of supplies, the industry will not be too concerned about it, giving suppliers the power to raise prices and increase margins without experiencing retaliatory action. However, as organisations geographically diversify their operations, long distance and international telephone charges become an important cost and telcos are forced to offer lower prices to try to avoid major customers switching suppliers or utilising new technologies such as Voice over IP.
- *Information about supplier's product.* If the supplier's product is complex, intangible or unique, the industry may have difficulty understanding exactly what it is buying and may be wary of substitutes. Prescription pharmaceutical products are a good example. These give suppliers power relative to the situation where the industry knows exactly what it is buying and how it works.
- *Supplier profitability.* If suppliers are unprofitable, they will be unable to bargain and are likely to make close to their best offer at the first opportunity. The reverse will be true for very profitable suppliers.
- *Decision makers' incentives.* Often, in purchasing, there are incentives for the purchasing decision maker (e.g. free tickets, free trips, conferences in exotic locations to learn about the supplier's product). The aim of this, and its likely effect, is to give power to the supplier over the decision maker, regardless of the relative merits of the individual supplier's product.
- *Threat of forward integration.* If suppliers are large organisations relative to those in the industry and/or if suppliers have the power to enter the industry, they will have considerable power. For instance, petrol refiners are able to operate their own petrol retailing outlets, giving them a role in setting retail price benchmarks and also providing them with information on the real cost structures of the retailer.

## Bargaining power of buyers

The bargaining power of buyers from the industry is essentially the mirror image of the bargaining power of suppliers to it. This time the industry is the supplier, not the buyer, in the transaction. Therefore, we simply list here the factors, framed in words that reflect the industry's position:

- differentiation of outputs
- switching costs of buyers
- industry concentration relative to buyer concentration
- importance of volume to buyers
- cost relative to total buyer purchases
- buyer information about the industry output
- buyer profitability
- decision makers' incentives
- threat of backward integration.

## Power of substitutes

Even organisations that are able to monopolise industries have substitutes. For instance, postal organisations in most countries have a monopoly on some or all aspects of the postal service. However, courier services, email and online distribution of bills are increasingly effective substitutes for most of what postal organisations have a 'monopoly' on. The power of substitutes depends on the following factors:

- *Relative price/performance of substitutes.* All substitutes have a price and a performance level. For instance, in the alcoholic beverage industry, non-alcoholic beverages are substitutes. If the performance demanded of the alcoholic beverage is that the drinker becomes more relaxed, the performance of soft drink, water, coffee, tea and fruit juice is poor. However, if the performance demanded is refreshment, the non-alcoholic beverages may perform this function well. Each substitute also has a price. The non-alcoholic substitutes are quite cheap, so their price performance for refreshment is actually better than that of the alcoholic beverages. The picture is less clear if alcoholic performance is demanded—you pay more for alcohol and it gives better performance. As price changes and performance of substitutes changes relative to products within the industry, the threat of each substitute will also change.
- *Switching costs.* How easy is it for buyers to switch from the industry product to a substitute? For instance, most canned beer comes in aluminium cans, for cost reasons. However, when the cost of aluminium escalated rapidly, steel became more economical for can making. Both can makers and beer producers could switch, but the switch did not take place because of the potential disruption and upheaval to purchasing relationships, production schedules and changed operating conditions.
- *Buyer propensity to substitute.* It may make economic sense for buyers to switch, but in some industries they don't. For instance, parents who decide to send their children to private schools could easily switch schools if they were unhappy. However, to switch would be explicit recognition of an earlier error, it would break parental and children networks, which may be personally socially valuable, and it would require a degree of time, effort and risk that many are not prepared to take. Once enrolled, it is usually a five-year commitment, or longer!

## Intensity of industry rivalry

The fifth and final force in Porter's model is the degree of industry rivalry. We have left this to last because it is the most obvious of the five forces to consider in analysing competitive position. Factors that need to be considered are:

- **Industry growth rate.** If the industry is growing fast, the amount of industry rivalry will be relatively low because there is room for most or all organisations to prosper (e.g. the funds management industry). On the other hand, if there is no industry growth, as occurs in mature or declining industries, growth for one organisation can only come at the expense of another organisation—a win–lose situation that will create severe industry rivalry (e.g. cigarettes or (non-craft) beer).
- **High fixed costs.** If fixed costs are a high proportion of total costs, there are opportunities for marginal cost pricing (pricing below full cost) and these will be marginally profitable, at least in the short term, for competitors. So, high fixed costs will tend to lead to high rivalry. The hotel industry is a great example of this. Much of the cost of a room is fixed so there is great opportunity (and temptation) for hotels to sell off unsold rooms quite cheaply (via Wotif, Expedia or similar online discounters) because any revenue obtained for a room is better than an empty room.
- **Intermittent overcapacity.** In some industries (e.g. aluminium smelting), capacity must be added in large lumps. Such industries experience periods where demand exceeds supply, followed by expansion of capacity of many competitors simultaneously (all see the excess demand and all make the same decision to increase capacity rather than lose market share). This results in severe rivalry during the period of supply exceeding demand and the industry is characterised by periods of large profits and large losses.
- **Product differences.** Rivalry between competitors can be reduced to the extent that their products are differentiated, resulting in market segmentation. On the other hand, if product differences are virtually non-existent, as for instance in petrol or milk brands, competition can be extreme.
- **Brand identity.** If brands are important, it generally reflects perceived product differences between competitors and this assists in reducing competition within the industry. People will, for example, still buy Coca-Cola over cheaper brands even if they cannot tell the difference.
- **Switching costs.** If it is easy for buyers to switch from one competitor's product to another, industry rivalry will be increased. For example, tyre retailers generally have low switching costs and are generally very competitive.
- **Informational complexity/asymmetry.** If products in the industry are complex or it is difficult to ascertain value (as a function of price versus quality), buyers will find it difficult to differentiate, reducing rivalry. For instance, when seeking legal advice, a large national law firm will invariably cost more than a smaller practice operating outside of the CBD. Whether or not the more expensive option will deliver a better result is very difficult to gauge.
- **Concentration and balance.** If there are relatively few competitors (i.e. the industry is concentrated) and each competitor is satisfied with its position in the industry (i.e. balance exists), industry rivalry will be relatively low. On the other hand, if there are many competitors and/or some competitors are not happy with their position in the industry, rivalry will be significant.
- **Diversity of competitors.** Coupled with the point above, if competitors have different backgrounds and interests, they are likely to have different views of the industry. Typically,

in Australia and other small-economy countries, industry competitors will include a multinational, a national, and one or more regional or local competitors. Where there is high diversity in respect of competitors, at least one player is likely to revert to competing on the basis of price (as least when they come under pressure) and unless there is extensive differentiation, other players may get caught up in this price-based competition, suggesting high levels of rivalry.

- *Corporate stakes.* A related issue is the commitment of competitors to the industry. Some organisations are divisions of diversified conglomerates, and their parents may not be committed to the industry if financial results are poor. However, single-business firms may be prepared to live through poor results because this is their only reason for existing and the productive resources of the company are unable to be utilised elsewhere. Microsoft, for example, saw that there was convergence in a range of technologies in the home—TVs, DVD systems, video game systems and computers. They believed there would be a central computer style device in most homes in time that would link to various devices and be central to the operation of the home. So, even though the Sony PlayStation dominated the video game console market at the time, Microsoft was willing to take huge losses to establish a foothold in this industry with its Xbox as it felt that this device was likely to take on an increasing range of activities. Initially, Microsoft took a loss on every single sale, but as this was just a small part of its overall business, it continued to invest in subsequent versions (Xbox 360 and Xbox One) to ensure it built market share.
- *Exit barriers.* If it is difficult or costly to withdraw from an industry, competitors may decide to stay, even if they are making losses. For instance, BHP decided to withdraw from steel-making because the returns were unsatisfactory. It then found it difficult to find a buyer for its plant. Rather than write off large amounts of its investment, it continued to operate at low levels of return rather than exit the industry. Eventually it floated the operation as OneSteel (now Arrium), with existing management taking a significant stake. Arrium continued to struggle and even went into voluntary administration in 2016.

In a practical analysis of industry rivalry, virtually every organisation believes it faces ‘intense’ or ‘high’ rivalry. Apart from the obvious point that, under the law of averages, this is highly unlikely to be true, it should be clear from the list of factors here that many industries do not really face high rivalry. Where growth is high, products are differentiated and there are few competitors, it is unlikely that rivalry is actually high. Be wary of simply assuming that rivalry is high without undertaking rigorous analysis.

### Summarising the analysis

At the end of the analysis of each section of the five forces, it is useful to summarise the relevant factors and conclude whether the power of each force is high, average or low. This compels managers to reach conclusions and integrate factors, rather than simply make a long list of unconnected points. Having done this for all five forces, a conclusion can then be drawn about the current profitability of the industry. For instance, if all five forces are rated high, industry profitability should be very low. Conversely, if all forces are rated low, industry profitability should be very high. Most industries, of course, will be somewhere in the middle, but the sources of power have been identified and these can then be addressed in later strategic action.

As well as current profitability, the analysis should be used to consider changes in the driving forces for the industry and the consequent effect on future profitability. For instance, an industry with many competitors that has low profitability but where the competitors are consolidating will, other things being equal, become much more profitable in the medium term. Large numbers of bottle shops selling similar products kept profitability in this industry on par with many other small owner-run retail businesses. As the supermarket chains of Woolworths and Coles have acquired more and more businesses (such that they control more than two-thirds of the industry between them), they have been able to force down the prices they pay to smaller suppliers (mainly wineries) and reduce head-to-head rivalry. The profitability of the bottle shop industry has increased (though the profitability of the wine industry has suffered).

There is a danger when summarising that people want to play safe and draw a middle-of-the-road conclusion. We would discourage you from taking this approach. Draw a good conclusion, not just a safe one.

The conclusion that an industry has high or low profitability does not mean that all organisations in the industry will be similar. Organisational profitability will depend on its position within the industry and internal efficiencies. An organisation's position should be assessed in the context of the industry profitability and after industry profitability has been assessed. For instance, a good performer in an unprofitable industry (e.g. SIA or Cathay Pacific in the international airline industry) could have quite low absolute profitability.

### Criticisms of the five forces model

There is a natural attraction to the five forces model. It is relatively easily understood; able to be deconstructed and applied to a wide range of industries; and, applied to the right industries, it makes a compelling case concerning profitability. However, some challenges or criticisms are often levelled at the five forces model.

- *It only explains a relatively small amount of profit variance.* Different studies (using different methodologies and alternative dependent variables) have produced a range of results, but the most respected studies tend to show these industry effects as contributing somewhere in the region of 20 per cent of profit variance, where internal factors (culture, structure, capabilities, etc.) is likely to explain approximately 40 per cent of the variance. Even studies specifically of Australia tend to replicate this 2 to 1 ratio.<sup>18</sup> In essence, it provides only a partial explanation for performance.
- *It encourages anti-competitive behaviour.* Using the five forces model, the scenario that would lead to high levels of profitability would be when the industry had high power of suppliers and buyers, there is no threat of substitution or new entrants and where rivalry is very low. In essence, the industry environment you would face as a monopolist. Yet most developed economies have anti-monopoly legislation and in fact government policy is enacted to try and encourage competition within industries to benefit consumers (and the overall economy).
- *It lacks the necessary dynamism.* The underlying logic of the five forces model can be traced back to research undertaken in the 1930s to 1950s, a time when the business environment looked very different from what we see today. The model suggests that we make strategic choices on the basis of the environment we face. However, the rate of change (international competitors entering new markets, convergence of technologies, liberalisation of different economies) has radically increased competition, the homogeneity of buyers and the

availability of suppliers. In essence, the stability of any industry structure analysis is limited due to this hypercompetition.<sup>19</sup> Coupled with changing competitive dynamics (e.g. the growth of inter-firm alliances) and the fragmenting of markets, the five forces model struggles to accurately reflect the true dynamics of an industry and how this industry structure may impact industry profitability.

## Strategic analysis and the five forces model

The five forces model provides a basis for strategic analysis that will highlight key considerations as part of the strategy development process. Some forces will prove to be more important than others and warrant additional attention. It is possible that there is an opportunity to actively alter other forces to increase profitability. The analysis may also highlight that the industry is relatively heterogeneous and that the analysis needs to consider specific subsets within an industry. Not only are there different subsets, but the industry level analysis may be supplemented by a competitor analysis that considers specific competitors rather than the industry as a whole. In this section we also consider how industries do not operate within a vacuum and thus the role that complementors and governments play in fostering attractive and unattractive industry structures along with how changes and trends may create a level of dynamism in the industry analysis.

One of the major outcomes of industry analysis is that we can determine the major drivers of competitive success in an industry. These are called the **key success factors** (KSFs) or **critical success factors** (CSFs) and will vary across industries. For instance, in the motor vehicle industry, one of the key drags on performance have been the massive up-front capital costs, coupled with over-capacity in the industry. This has led to price discounting, particularly during periods of low demand. A key success factor has thus become the management of the up-front capital costs. This is being managed through modular designs such as the Volkswagen A5 platform, which is used in more than 12 different vehicles ranging from the Audi TT to the Volkswagen Tiguan and the Skoda Yeti. In the case of breakfast cereals, a critical key success factor are the distribution channels. With large supermarkets wanting to deal with a limited number of large suppliers, getting shelf space for smaller players under the majors, such as Kellogg's and Uncle Toby's, can make it virtually impossible for smaller boutique brands.

KSFs vary from industry to industry. In our experience, in practice there are rarely more than a few that are really important. However, KSFs simply determine what the organisation needs to do well to survive in the industry. In order to have a sustainable competitive advantage, the organisation not only has to address the KSFs, but also has to develop something that is distinctively better than that of competitors (see Chapter 2).

### Understanding competitors: competitor analysis

While the industry rivalry section of the five forces model analyses the degree of rivalry of the industry competitors in general, it is also important for an organisation to have a very good specific profile of each of its major competitors. The following information should be gathered on each major competitor:

- What is its business strategy? How does it create value for customers?
- What are its capabilities?
- What is its current organisational performance?

#### LO 3.4

Describe how the five forces model can be used in strategy development.

#### key success factors/critical success factors

The critical drivers necessary for competitive success in an industry.



- Who are its key stakeholders and what are their expectations of the organisation?
- What gaps exist between the organisation's strategy and its actual capabilities and organisational performance?

Table 3.8 illustrates a brief competitor analysis worksheet that can be expanded or adjusted to capture the above information in the most useful format. Documenting the process is an extremely useful exercise for getting implicit understandings out on the table for discussion within an organisation. This provides a forum for debating and agreeing on important assumptions, information and facts. It is very useful in discovering both what is agreed and commonly shared about competitors within the organisation and what is not agreed and not known.

TABLE 3.8

Competitor analysis worksheet—Australian domestic airline industry

<b>Organisation</b>	Virgin Australia
<b>Products and services</b>	Economy and business class. Major trunk routes, but has picked up some charter style routes for mining companies in Western Australia. Internationally it flies a very limited set of routes (mainly to the USA), but has developed alliances with Etihad, Singapore Airlines and Delta.
<b>Strategy</b>	Morphing from low cost into part of the industry duopoly as a broader range, fuller service airline, but is still not as widely recognised as Qantas in the premium segment. Purchase of control of Tiger Airways in 2013 provided an opportunity to directly match itself against the Qantas group.
<b>Capabilities</b>	Marketing and promotion. International alliances.
<b>Performance</b>	Financially the performance has been poor with only one profitable year since 2012. The costs of upgrading the Virgin experience to that of a full service airline has been enormous and required further capital raising in 2016.
<b>Key stakeholders and their expectations</b>	CEO John Borghetti is ex-Qantas. Aim is to beat Qantas. SIA wants indirect entry to Australian market and a domestic partner of some quality in Australia for its own customers. Etihad and Air New Zealand want route extensions/more sales.
<b>Gaps</b>	The domestic market is a very challenging environment and so the new focus is on China and the surrounding region. This cost of further expansion will be high.
<b>Comment</b>	Aggressive, but predictable and reliable competitor, and is now established as part of the 'traditional' industry. It is becoming a sizeable international operator.

## Competitive positioning: strategic groups

In an industry, not all competitors compete directly with each other. There are several different groups of competitors. These groups are called **strategic groups** because each group consists of competitors competing on similar strategic dimensions (e.g. product quality, range or geographic scope), whereas other organisations in the industry have either a different strategy or a different target product-market.<sup>20</sup>

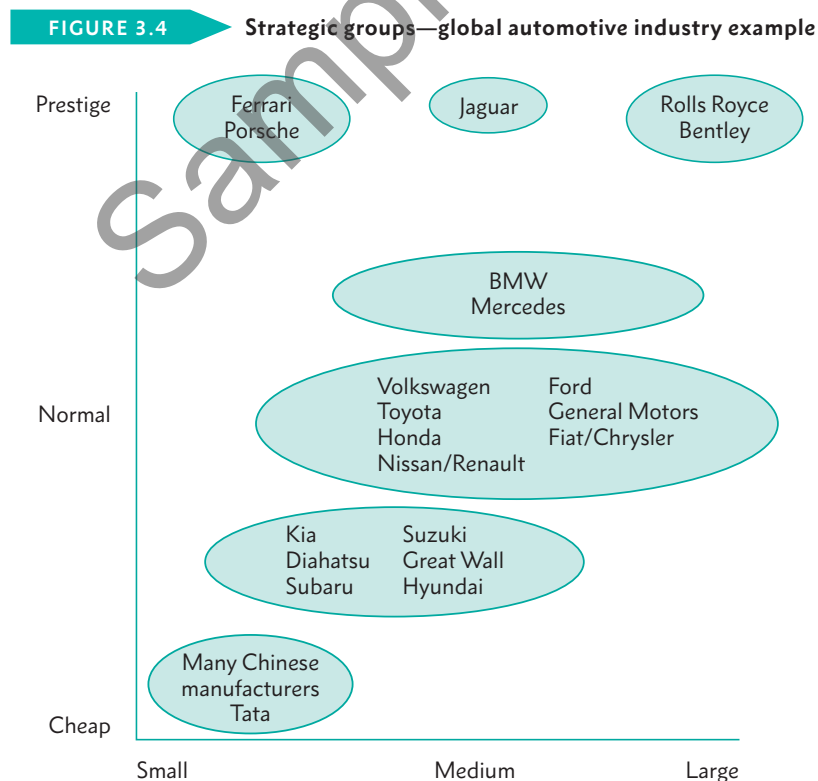
Firms generally stay within their strategic groups due to various mobility barriers. For example, for many years in the airline industry, large full-service carriers lagged low-cost carriers in terms of profitability. However, the inability to change various asset-based fixed costs (e.g. airport terminal costs), variable costs (e.g. labour rates and conditions) and service offerings (e.g. frequent flyer programs, airport lounges) has precluded them from migrating to the low-cost model. Another

### strategic groups

The competitors within an industry that compete closely against each other.

example is the global car industry (see Figure 3.4). Here we see that, although there are many major competitors, they can be split into at least four or five different strategic groups, using only two axes—size of car and pricing/image. To carry out a competitive positioning exercise to see what strategic groups exist in an industry, it is important to use axes that are not correlated (e.g. avoid using geographical spread of outlets and sales volume) because the aim is to find groups of competitors that compete using fundamentally different approaches. The exercise can be used to see how different groups will be affected by or react to industry forces or to any specific changes from individual competitors in the future. It is useful to consider, too, how significant the mobility barriers are between the groups—that is, to what extent an organisation in one strategic group might enter another group.<sup>21</sup>

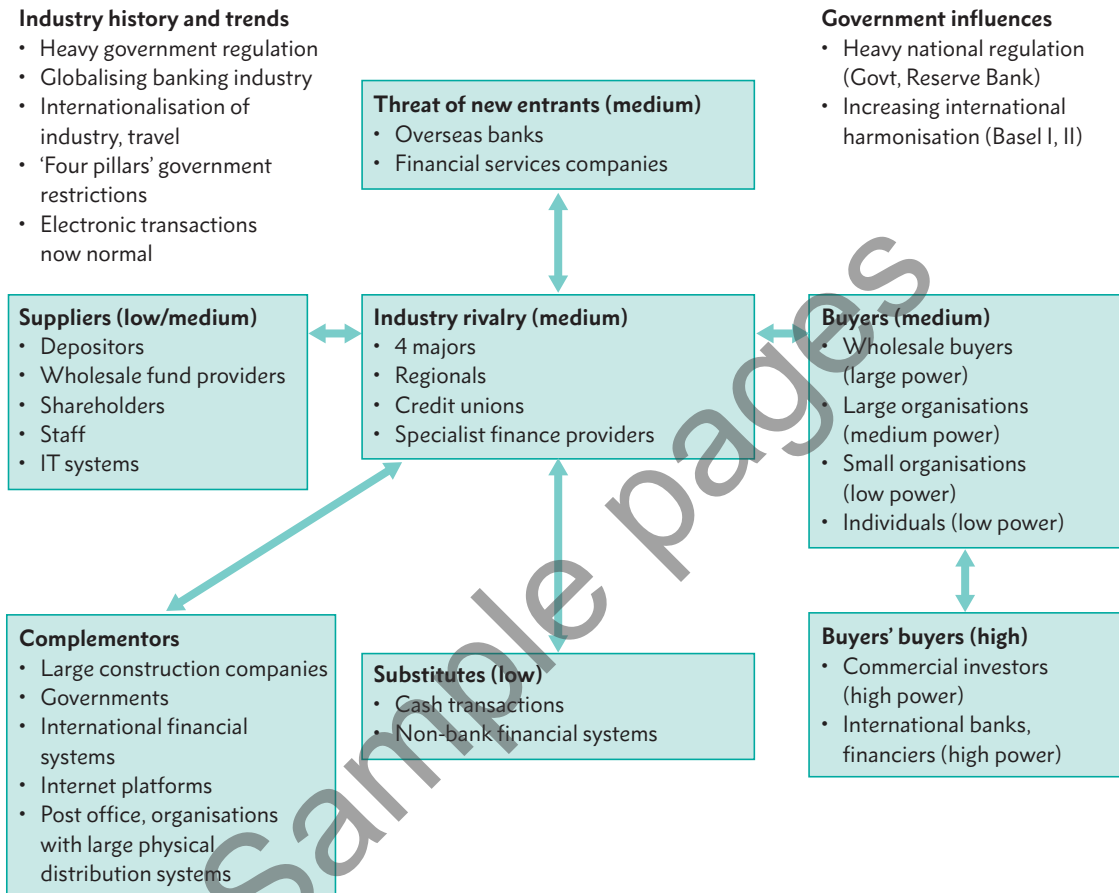
It is proposed that firms in the same strategic group are less likely to direct their competitive energies towards members of the same strategic group and instead focus their energies on members of other strategic groups. The logic for this is that firms in the same strategic group that are pursuing the same basic strategy and are likely to have similar resource endowments will struggle to knock such a competitor out of the market and instead it is possible that some form of implicit collusion may even occur. For example, in the Australian banking industry, the big four banks form one strategic group. As these banks have rationalised their branch network there has been some signalling that allowed one or two banks to leave a particular region (maybe a suburban shopping centre or a small town), but then other banks left other regions. The result was that most regions retained at least one or two banks, but these would differ across each region such that each bank covered just some areas (with limited competition in that area) but removed itself from other areas.<sup>22</sup> At their heart, strategic groups are a recognition that industries are often not homogeneous and that rivalry and the other elements of the five forces model may vary significantly among strategic groups.



## Extending industry analysis

The basic five forces model provides a snapshot of the industry at the current time. We have found that several extensions should be considered to get the best value out of it (see Figure 3.5).

**FIGURE 3.5** Extended industry analysis worksheet—Australian banking industry



### Industry historical background and trends

It is useful to include a consideration of the recent history and background of the industry to understand just how it got to its current position and to identify trends that might be important in influencing the future direction of the industry. This emphasises that the current position has arisen from the previous dynamics of the industry—that is, the driving forces identify the factors that are likely to affect future developments in the industry. Strategy @ work 3.3 shows how the international power generation industry has developed over time.

### The role of government

While the five forces model identifies government as a factor affecting new entrants, it is our experience that the role of government is pervasive in business in smaller countries. Therefore, we

**Strategy @ work 3.3****THE EVOLUTION OF THE POWER GENERATION INDUSTRY**

Power generation has traditionally utilised fossil fuels in Australia with some limited hydroelectric power. Most power generation operations were government owned and the government similarly owned the distribution infrastructure (i.e. the poles and wires). Initially the different east-coast networks were interconnected and many power generation assets were either privatised or new generation was allowed to develop that was funded and owned privately. There was an increase in the use of gas-fired plants and post 2000 some use of renewables (mostly in the form of wind farms). As the government increasingly removed itself from power generation, there was also a need to split the ownership of power generation (which could be done by many players) and the management of the infrastructure that delivered the power (which would best be done by a single player).

The challenge with large-scale power plants is that they tend to add capacity in large blocks. Obviously, many plants (such as gas) do not need to be run at full capacity, but their economic viability relies on a particular load factor. Recently there has been an exponential level of growth in the domestic use of solar panels as part of a photovoltaic system. This reduces daytime load,

with many systems producing more than they require and feeding excess power back into the grid. Yet consumers expect to have power available at all times so there are increasing differences between average daytime loads and what is required at peak times, making the delivery of appropriate economic returns increasingly challenging for large-scale generators.

Further changes in technology create additional challenges for traditional power generators. There is now some uptake of battery technology at a domestic level, which could well smooth out some of the peaks and troughs that power generators currently experience. But new technologies such as electric cars will increase the demand for electricity and if these cars tend to be recharged overnight, the smoothing of the demand cycle that is possible via the use of domestic batteries may well be undone. Overall, with the extent of change that is possible over the next decade or so, it is difficult to even define the industry in terms of where the boundaries lie versus what is a substitute, where the new entrants will come from, how much demand there will be from buyers and even who the suppliers will be with the changing technology mix.

add a 'government' box to the five forces model so that the analysis specifically addresses government issues in the industry.<sup>23</sup> Government may well be a significant buyer or supplier in an industry or it can affect any of the other five forces through regulations. This specific inclusion enables a clear and transparent understanding of the government's role or roles in an industry and what it is trying to achieve (e.g. raising entry barriers, increasing buyer power, increasing competition), and makes it clearer what organisations have to do to manage government for their best interests.

For instance, in the prescription pharmaceutical industry, the government in many countries is actually the key buyer, or key determinant of buying patterns. In Australia, if a product gains entry to the government's Pharmaceutical Benefits Scheme, the government effectively agrees to purchase it for the whole country or subsidise its cost to users. If not, the full cost of purchase is paid by the consumer, making it very expensive to the user and decreasing volumes dramatically. As such, government policy can be a key determinant of the profitability of prescription pharmaceuticals.

### The role of complementors

A recent addition to industry analysis has been the recognition that industries often work with other industries to deliver a suite of products or services: to deliver greater value to end customers.<sup>24</sup>

**complementors**

Firms that offer complementary products or services to an industry which add value to the industry.

**Complementors** are firms that offer complementary products or services to an industry which add value to the industry. They are in complementary industries, with products that customers generally need in conjunction with one another. For instance, airlines work with a wide variety of non-competing, but complementary, partners through their frequent flyer programs and online booking links to offer more value to airline passengers by allowing them to complete whole travel packages and also earn more points through these purchases (e.g. rental cars, hotels, insurance, retail purchases).

**Extending the value chain/business system**

The five forces model suggests that a simple supplier–producer–buyer relationship exists. However, buyer behaviour often depends on the buyer's own customers (i.e. the buyer's buyers, or what is sometimes called the end-customer market). For instance, the existence of wholesalers in between manufacturers and supermarkets in the retailing industry, the existence of brokers in between insurance companies and final consumers in the insurance industry, and the existence of travel agents in between final consumers and travel providers in the travel industry makes the actual relationship more complex than the five forces framework assumes. It is also possible that buyers' buyers can avoid the buyers and go direct to the producers. For instance, consumers can avoid travel agents and go direct to the airlines. The same situation occurs for suppliers' suppliers. Retailers may buy direct from manufacturers or go through wholesalers.

This extension of the five forces model moves it more towards the value chain or business system framework, recognising that, whatever the industry definition chosen, it is part of a chain of business activities that are closely connected. We considered the issues of value and value chains within the organisation in detail in Chapter 2.

An understanding of this chain is useful when carefully considering the position of the industry under analysis. Consequently, we often find it helpful to add boxes in the value chain to recognise these relationships. The factors for both sets of buyers and suppliers are similar, but this double consideration of the buying and supplying complexity adds insight to the analysis and is particularly important where the industry has two channels of either suppliers or buyers.

**Green sustainability and industry analysis**

Green sustainability is a good example of how a macro-environment issue impacts on industry analysis. The introduction (or banning) of specific technologies, new entrants and exits that arise from these changes, changes in buyer/customer values, the need for different types of components from suppliers to match changing customer values, changing government rules around emissions of all types from operations, and recycling requirements, for example, are just some of the many changes that will affect the makeup (individual competitors, strategic groups) of the industry, the size of the industry and the resulting industry profitability. Strategy @ work 3.3 (on page 87) shows how trends in sustainability (at present being driven at the household level) are fundamentally changing the dynamics of the power industry.

**LO 3.5**

Recognise the implications of industry turbulence and life-cycle stages for business strategy.

**Industry change and evolution**

So far we have concentrated on analysing the current situation for the industry. But industries change over time and we are interested in the future, which may be different from the past. In this section we concentrate on those aspects of industry analysis that specifically focus on change.

### Industry turbulence levels

Ansoff argued that it is important to consider the different levels of turbulence in industries.<sup>25</sup> He classified turbulence into five different levels (see Figure 3.6). *Level 1 turbulence*, the least turbulent environment, is termed a ‘repetitive’ environment, one in which past events are simply repeated. Such a system could rely on past precedent and seek to minimise change, since the same decisions and the same processes could be invoked each year. An example of this might be the legal industry, which relies very heavily on precedent and tradition for its procedures and operations.

**FIGURE 3.6** Matching turbulence, aggressiveness and responsiveness

Environmental turbulence	REPETITIVE Repetitive	EXPANDING Slow, incremental	CHANGING Fast, incremental	DISCONTINUOUS Discontinuous, predictable	‘SURPRISEFUL’ Discontinuous, unpredictable
Turbulence level	①	②	③	④	⑤
Strategic aggressiveness	STABLE Stable based on precedents	REACTIVE Incremental based on experience	ANTICIPATORY Incremental based on extrapolation	ENTREPRENEURIAL Discontinuous New based on observable opportunities	CREATIVE Discontinuous Novel based on creativity
Organisational responsiveness	STABILITY SEEKING Rejects change	EFFICIENCY DRIVEN Adapts to change	MARKET DRIVEN Seeks familiar change	ENVIRONMENTALLY DRIVEN Seeks related change	ENVIRONMENT CREATING Seeks novel change
Responsiveness of capability	CUSTODIAL Precedent driven	PRODUCTION Efficiency driven	MARKETING Market driven	STRATEGIC Driven by the environment	FLEXIBLE Seeks to create the environment
	Suppresses change	Adapts to change	Seeks familiar change	Seeks new change	Seeks novel change
	Seeks stability		Seeks operating efficiency		Seeks creativity
	Closed system				Open system

Source: Based on Ansoff, I 1990, ‘General management in turbulent environments’, *Practising Manager*, 11(1):6–27.

*Level 2 turbulence* is called an ‘expanding’ environment, where the expansion is slow and incremental. An example of this level might be the building and construction industry. In this environment, change is predictable and the aim is to absorb change while improving the efficiency of the existing systems.

*Level 3 turbulence* is called a ‘changing’ environment. Here, change is still incremental, but the rate of change is faster. This is a more market-oriented industry, as it seeks to cope with the rate of change being forced upon it. An example might be the financial planning industry as it

struggles to cope with large increases in numbers of people seeking to take charge of their personal investment positions, with the rules being changed continuously. The industry is still concerned with operating efficiency, which is even more important than at Level 2 since the rate of change is more rapid. Also, the industry seeks to maintain what it is familiar with. It is not the nature of change, only the growth rate, that is hard to cope with. No particular new skills are required.

*Level 4 turbulence* is characterised as 'discontinuous'. The past can no longer be relied on to provide guidance for the future. Now the industry—and its organisations—have to look outside themselves for new ways of coping, and for the new skills that are required. There is a need to acknowledge the role of environmental factors. It is no longer good enough to try to use internal efficiencies to cope with the level of change. An example might be the water industry. Concerns about sustainability have led to the single concept of 'water' being replaced by pure rain water, grey water, recycled water, desalinated water and black water. New private sector competitors are emerging and water trading has begun. What was banned is now promoted!

*Level 5 turbulence* is termed the 'surpriseful' environment. Not only is it discontinuous, but it is also unpredictable. Change may come from several directions simultaneously (e.g. technological change as well as political change). Indeed, part of the change may be initiated by organisations within the industry. The skills needed in this industry now need to be somewhat generic—for example, flexibility, ability to manage change, creativity and innovation—rather than only technically based capabilities. An example of this might be the multimedia industry.

For each level, Ansoff noted what is required for an organisation to match its strategy to the turbulence level, as well as what the organisational response is likely to be. What we see is that different types of strategies and capabilities are required, depending on the turbulence level. This becomes particularly important when the turbulence level changes, so that the organisational capabilities and strategy of the past are no longer appropriate (e.g. in the media industry).

Some people in such industries call for a return to the 'old' values, systems and procedures. But unfortunately, the past is never able to be recaptured and it is much more important to recognise the need to develop new capabilities. For instance, daily newspaper circulations have been in continuous decline for 10 years, yet, until 2012, few saw online versions as more than add-ons, seeking instead to have 'better' print versions with better reporting. Finally, it became clear that the future of news is online and online capabilities will determine whether or not current print papers continue to exist or will be replaced by new media such as *The Huffington Post*, *Crikey* and *The Conversation*. Those organisations that moved early are better placed to develop the capabilities required to succeed in the new technological environment.

## The industry life cycle

Most industries have a life cycle similar to a product life cycle (see Figure 3.7). There is empirical evidence to support the view that the life cycle of the industry is an important factor in formulating organisation strategy.<sup>26</sup>

Industry life cycle (ILC) models aim to explain organisation and industry growth and decline over time. While numerous ILC models have been proposed, with varying numbers of stages,



FIGURE 3.7

## Organisation size and industry life cycle



Source: Hubbard, G, Pocknee, G & Taylor, G 1996, *Practical Australian strategy*, Prentice Hall Australia, p. 12. © 1996 Pearson Australia. Reproduced with permission.

they all assume heightened risk and uncertainty during early stages, leading to more stable firm and market dynamics during late stages. Decisions taken earlier by organisations impact their later roles and success as the industry emerges, through the processes of accumulation of organisational competencies on the one hand and sunk costs on the other. As a result, ILC models have significant implications for organisational strategies.<sup>27</sup> ILC models also argue that scale and dominance by organisations are cyclical and often transitory (i.e. different stages can have different leaders), and technological changes have a major role to play in the shaping of organisational success.

In the start-up stage of an industry, the organisations may be quite small. Typically, at this point of the industry there are many different visions (from the organisations) of how the industry will develop, and many different approaches to the industry in terms of product type, features, performance, target markets, and so on. For instance, when the internet industry began, there were many different models suggested for operating travel sales sites. Some were built on the basis of buying blocks of rooms in bulk and selling these; some sold last-minute rooms for large providers either with or sometimes without making the actual establishment known to the buyer. Travel review sites such as TripAdvisor moved into sales, and more recently, due to the proliferation of travel sites, there are aggregators that search all the travel sites to determine which one has the best price.

As the industry becomes established and standards of operation emerge, it tends to grow rapidly. For instance, mobile phones have settled on touch technology as the standard (and the battle is now over other issues, while usage continues to soar). Although most customers are new, and not familiar with the performance characteristics of the industry, many are attracted to it. High growth rates enable most organisations to survive, and organisations now have some experience themselves enabling them to project sales, costs and budget for profits. Cash, however, is short, as funds are needed for investment to cater for the high growth rates and expansion plans. Organisations are primarily concerned with keeping up with current demand, not looking towards the future.

As growth plateaus towards more normal rates, the industry will mature. The market will become more knowledgeable and demanding, and not all the original products, organisations or strategies will survive. For instance, in mobile communications technology, it is not clear whether the smartphone, the mini-tablet, the tablet or the netbook will become the dominant product, but not all will be equally successful. Eventually, a shakeout will occur. Some organisations will withdraw because the return on investment is unsatisfactory. A small group of organisations will begin to dominate the industry, often through takeover as much as through dominance of their own products. As firms become more sophisticated and the competition more intense, the use of strategic management concepts will be required to enable organisations to build and protect their position.

If the industry enters the decline stage—and here industry life cycles differ from product life cycles in that industries survive for much longer than any individual products—strategy becomes even more important in deciding how to maintain a unique position in a win–lose environment. Sales for one organisation can come only at the expense of other organisations in the industry.<sup>28</sup>

## An alternative approach to industry analysis: scenario planning

### LO 3.6

Identify the benefits of scenario planning as an alternative to the five forces model.

The five forces model as a rational approach to analysing the external environment has been criticised as leading to only one view of the future.<sup>29</sup> Critics see this as inflexible and unrealistic, particularly given the high degree of complexity and uncertainty in most environment analyses now. Even if we can clearly articulate a particular industry structure for our industry today, it is likely that there will be significant change in at least one of the five forces going forward that will reduce the power of the five forces model to inform the strategy development process. New competitors, alternative suppliers, changes in customers and their preferences and fragmenting of the industry are changes that can be seen in many industries. Where there is significant change, rational/planned analysis is unlikely to be accurate and in such cases scenario planning may open the minds of decision makers to a broader set of possibilities concerning the future and thus the strategic challenges that they may face.

**Scenario planning** is an alternative approach in which several different scenarios are developed so that an organisation can consider how it would position itself under each.<sup>30</sup> This enables the firm to prepare itself for a variety of futures, rather than just one. Shell became famous for introducing and using scenario planning in the late 1960s and early 1970s, a technique that it still used. Scenario planning is most useful in industries where there is rapid change, so that past data are of limited value and future uncertainty is very high.

Scenario planning tries to build plausible alternative views of the future for the industry, based on identifying the key environmental influences and drivers of change, but configuring their importance differently in each scenario. For instance, one approach might be a no change–incremental change–rapid change set of scenarios. Another might be a customer-driven–technology-driven–regulation-driven set. Recently, firms in industries such as telecommunications, banking, entertainment and computing have used scenario planning.<sup>31</sup> Strategy @ work 3.4 gives two scenarios for the global energy industry, which is undergoing significant change.

### scenario planning

Different scenarios are developed for an industry's future.

## Strategy @ work 3.4

## SCENARIOS FOR THE ENERGY INDUSTRY TO 2100

Royal Dutch Shell, after consulting with 300 outside experts and 150 of its own employees, has attempted to predict how the world will source its power, based on quite different base assumptions.

**Scenario 1: 'Mountains': a gas-based industry**

In this scenario, it is assumed that those in power in major countries remain in power, that stability is considered important in society and that market forces become less important. Under this scenario, gas (particularly through shale gas) becomes the pre-eminent energy source, taking over from oil and coal, but net carbon emissions do not drop to zero until 2100.

**Scenario 2: 'Oceans': an oil-based industry**

In this scenario, power is spread more widely and politics are less stable, but this results in government policy becoming less important and market forces more important. As a result, productivity surges. Oil and coal remain dominant until 2070, when solar power takes over. Again, net carbon emissions do not drop to zero until 2100.

Which scenario seems more appropriate now?

Source: Based on Murphy, J 2013, 'Mountains v oceans', *Australian Financial Review*, 3 May: 44–5.

## From industry to market analysis

There is often confusion about the difference between an 'industry' and a 'market'. We define an industry as a group of organisations or business units producing close substitutes. However, those organisations often do not compete head to head in all areas. Within an industry, there are often several markets, a **market** being defined as a group of consumers with similar needs. For instance, the fast-food industry includes some or all of the hamburger, pizza, fish and chip, chicken, sandwich, sushi, Chinese, Indian and other national cuisine markets (see Figure 3.8).<sup>32</sup> Industry

**LO 3.7**

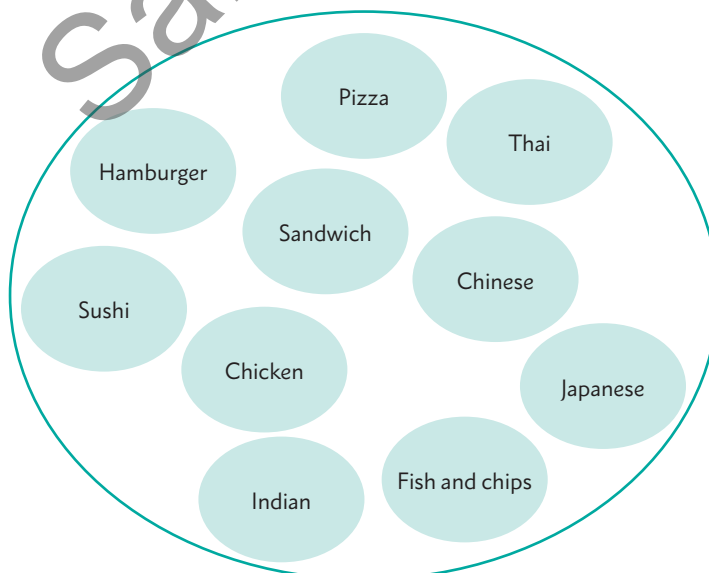
Describe the differences between markets and industries as a basis for strategic analysis.

**market**

A group of consumers with similar needs.

FIGURE 3.8

Some markets in the fast-food industry



analysis considers the suppliers, the competitors and the customers that form the market, whereas market analysis is focused on the size and scope of particular sets of customers with similar needs.

The following questions can assist you in gaining a deeper understanding of the industry and a better knowledge of just how each particular market within the industry actually works.

- What is the growth rate of the industry? In total? By market segments?
- What is the size of the key market segments?
- What value does each market segment seek?
- What are the key features that each segment seeks?
- What is the buyer decision process?

An illustrative worksheet (see Table 3.9) shows how each of the main markets for an industry might be characterised and analysed. For instance, each market is likely to seek slightly different characteristics to provide value. Analysis of what products each market uses and what the key features are of those products to the market can assist in understanding segmentation. Also, the current market share of each market and the importance of that market now and in the future, when put on paper (as opposed to being inside executives' heads), can be illuminating.

TABLE 3.9

**Market segment worksheet—office products example**

Segment	Description	Value provided	Product used and key features	Market share and importance to business
Individuals	Students Employees of other businesses	Price Range	Stationery Computer ancillaries	5% estimated—not important
Small businesses	One- or two-person businesses Businesses with <100 employees	Price Range Convenience	Computer ancillaries Office furniture Electrical equipment Stationery Copying	20% estimated and growing—very important
Large businesses	Businesses with >100 employees	Convenience, including internet, ordering, delivery, frequency Range Price	Complete range	5% estimated and growing. This market is being defended well by existing large-scale suppliers who have increased service and reduced prices to match.

## Understanding customers

Following this detailed consideration of the market characteristics, it is often useful to consider also who the key customers or customer types are, what they use the product for, and what its key benefits and buying features are to them. We discussed these issues in Chapter 2. This provides further detailed insights into specific segments compared with the more generalised industry analysis.

## Assessing international competitiveness: Porter's diamond model

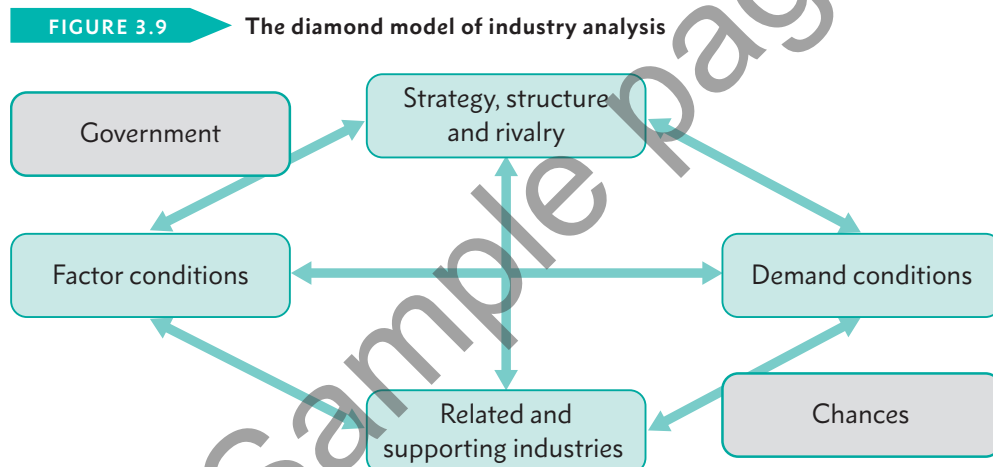
To explain how several strong global competitors have emerged from the one country in many different industries, and to assess the potential for a domestic industry to be internationally competitive, Porter developed a different industry analysis framework.<sup>33</sup> This **diamond model** framework (see Figure 3.9) is based on empirical analysis of 10 major countries' internationally competitive industries. It highlights the counterintuitive proposition that, for an industry to develop to a world-class level in a country, organisations need to be prodded and pushed by competitors and customers, and have suppliers and a supporting infrastructure that enable them to deliver world-class products. The framework also highlights the role of government—a parameter that we have already mentioned should be added to industry analysis—and the role of chance—in particular, the timing of events. While it is extremely unusual for strategists to admit that chance, luck or timing is important, our experience is that this is a very important practical issue in implementing strategy.<sup>34</sup>

### LO 3.8

Explain how the diamond model can be used to analyse international competitiveness and its implications for organisations.

### diamond model

A framework developed to explain the cooperative and competitive development of clusters of organisations in a country, leading to international success for the industry.



Source: Based on Michael E. Porter, 1990, 'The Competitive Advantage of Nations', *Harvard Business Review*, March–April.

The diamond model helps us to explain why some industries prosper in some regions/countries.

- **Demand conditions.** High levels of demand or unique demand patterns help to create strong local competitors that can then develop both the scale and the capabilities to compete on the world stage.
- **Factor conditions.** The presence of supporting factor conditions can help provide an environment that will support the development of a local industry. Factor conditions comprise any macro-environmental factor that sits outside of the broader industry and as such can include the availability of capital, national culture, the institutional environment and the education system.
- **Related and supporting industries.** We recognise that, for an industry to flourish it needs its supplier and ancillary industries (e.g. communications, transport, education, legal) to

be able to support it and in some cases the strength of these related or supporting industries may actually form a basis for increased competitiveness among the focal industry firms.

- *Strategy, structure and rivalry.* The overall industry structure and the nature of the strategy pursued also have an impact on the potential of a successful industry developing in a country or a region. Where an industry structure is highly competitive, forcing firms to be efficient and very competitive, such firms are likely to succeed on a global stage. However, it is also possible for firms that face limited competition locally to benefit financially from this limited competition and if they use these profits to invest in world-class capabilities or technologies they may be well placed to succeed internationally.

The other elements in the model are government support and chance: the government may implement policies that artificially drive up demand or create more favourable factor conditions; and, sometimes, there may simply be an element of luck. These four components from Porter's original diamond model, along with government policies and luck, provide a basis for understanding when industries in some countries will be globally successful whereas others will be weak and will likely succumb to competition for international competitors.

In comparison to the five forces model, which suggests that there are benefits to obtaining power over buyers and suppliers, in the diamond model, for an industry to flourish, it has to work with its suppliers and buyers (and perhaps even with its competitors, in terms of encouraging them to compete). Strong related and supporting industries can be critical. In respect of strategy, structure and rivalry, Porter argued that firms which succeeded on the world stage had encountered vigorous competition in their domestic environments before going into international markets. This argument flies in the face of the 'national champion' concept implicit in the industry policies developed in many countries. Porter suggested that 'national champions' that did not face vigorous competition at home would, despite their size, be unprepared for the much higher and tougher level of international competition. There are obvious exceptions to this (often in capital intensive industries such as aircraft manufacturing, or early stage R&D intensive industries), but overall, domestic organisations might be better off actually seeking good local competition rather than trying to undermine or weaken it.

Porter suggested that organisations should seek out difficult-to-please customers, since meeting their needs would force the organisation to raise its standards and thereby become better placed to handle international customers. The success of the Japanese laptop computer industry derived partially from the demand by Japanese consumers for ever smaller and more powerful computers given the space restrictions in some key Japanese cities.

Regarding the presence of factor conditions, some situations will benefit industries more in one country than another. The success of second generation digital mobile phones in Europe (e.g. Nokia and Ericsson) versus the failure of players in the USA can be partially explained by factor conditions. In Europe, after the challenges of the first generation (i.e. analogue mobile phones), which used different frequencies in different countries, it made sense to have a pan-European standard (which was the GSM standard) but in the USA, there was no common standard and at one point there were four different standards operating, meaning that the phones often could not be used across state lines. In Europe, there was a history of timed phone calls so people were used to this concept, but in the USA, local calls were generally free with landlines so consumers struggled to make use of their mobile phones except when absolutely necessary. Many telecommunications

markets had been deregulated, allowing for multiple competitors, whereas in the USA the break-up of the telecommunications monopoly to create AT&T and the 'baby Bells' only occurred in the 1980s. Along with other factor conditions (history of working with repeater technology) and availability of capital, the result was a set of conditions that heavily favoured the development of a European mobile phone industry. Interestingly, with the next generation of phones, which were close to mini-computers, the strength of the US computer industry, the creation of apps via small providers in Silicon Valley and the availability of venture capital to make this happen saw the pendulum swing back to the USA with the development of the iPhone and other smartphones.

## **Clusters and networks**

The diamond model leads to the suggestion that it is valuable for groups of competitors to exist, spurring each other on to higher levels of performance. Porter's evidence also showed that these competitors worked with each other as well as competing. They were closely connected geographically, and many of them had arisen from working in the same organisation at one time. Silicon Valley in San Francisco is the best example.<sup>35</sup> The Hollywood movie industry is another example of a geographical cluster of competing and cooperating organisations.

The realisation that many benefits can be derived from having several organisations in an industry located in the same place now affects government policies worldwide. For instance, Ireland encouraged high-tech firms to locate their manufacturing bases there and built related and supporting infrastructure as well as providing incentives to do so. China's special economic zones did the same thing, providing superior support and infrastructure in particular geographic areas. Finland created an innovation and technology agency, a venture capital fund and a group of business accelerators to counter the decline of Nokia (which represented 4 per cent of the country's GDP in 2000). This has resulted in a video games industry, including Rovio (maker of Angry Birds) and Supercell (maker of Clash of Clans), 300 start-ups by former Nokia employees and many others in many industries.<sup>36</sup>

The concept of working together has also been applied in the development of networks that may not be geographically based. For instance, in the airline industry, British Airways formed a global alliance of eight airline partners (now 12) to service the whole world ('oneworld'). No single airline has the ability to offer all the routes that customers want to fly, as government policy in most countries has prevented takeover of rivals or internal route development (another example of macro-environmental factors influencing strategy). Star Alliance, headed by Lufthansa and United Airlines and now including 28 partners, was formed to counter oneworld.

## **Network effects**

Many high-technology industries are characterised by network effects.<sup>37</sup> These are present where the value of the network to users (and hence owners) increases exponentially as new users commit to the technology; for instance, global auction site eBay's millions of members offer goods for sale to one another. The multiplicity of sellers means that buyers will generally find what they are looking for, while the large number of buyers means that sellers will expect that there will be one or more buyers for most offerings. If either party were to look to smaller auction sites, they would generally find the number of transactors smaller and thus both would be less likely to be satisfied.

When a new technology emerges, there is generally competition among different technological options. In the case of mobile phones, the rapid increase in touch smartphones as the preferred



technology meant more applications were developed for them and less and less attention was given to developing alternative technologies, resulting in a declining community of users, as both Nokia and Blackberry found by not being able to match Apple's massive volume of applications, or apps, in a timely fashion. Once a critical mass of consumers emerges, more users and more complementary products are attracted, magnifying the critical mass. The attainment of this critical mass is called the tipping point—where the decline of competitors accelerates and the winning technology establishes its leadership.

Microsoft is excellent at forming relationships with organisations that have leading technologies which might be incorporated into its Windows and Office software packages. Organisations that become linked to Microsoft have a vested interest in Microsoft succeeding. Hence the Wintel (Microsoft's Windows plus Intel's microprocessor) network has become very strong, as Microsoft has consistently added new technologies to its range and has pre-installed them for the consumer's benefit. Google has a vast number of 'affiliates' that work with it to develop search links, increasing the value of the combined network. These types of developments are very important. They suggest that industry analysis may need to be performed at the network level, rather than the previously assumed organisation/firm level.

## The five forces model for the public and not-for-profit (NFP) sectors

### LO 3.9

Describe how the five forces model can be applied to public sector and not-for-profit organisations.

The five forces model was initially developed for the private sector and it tends to work well in competitive markets where there are a number of suppliers, operators within the industry and buyers. The model does well in providing a basic understanding of which parties will benefit the most from transactions and therefore attain high profits. But in cases of the public sector and the NFP sector, these criteria are often not met, and in many parts of the public sector there may be natural monopolies in action. The following section details how the five forces model may be applied to the public and NFP sectors of the economy.

### The five forces model—the public sector

Public sector organisations and their strategists often query whether the five forces model outlined above is appropriate.<sup>38</sup> In Chapter 2, we noted three different types of public sector organisations: those with policy-making aims and no products or services, those implementing a strategy where the product is not priced, and those with products and services, with or without competitors.

The five forces model can still be applied, particularly where there are substitutes for the product or service (e.g. Australia Post). However, where a public sector organisation has a legislative monopoly on its product or service (e.g. Taxation Office, Department of Justice, Civil Aviation Safety Authority) and there are no clear substitutes, a slightly different framework may be more appropriate.

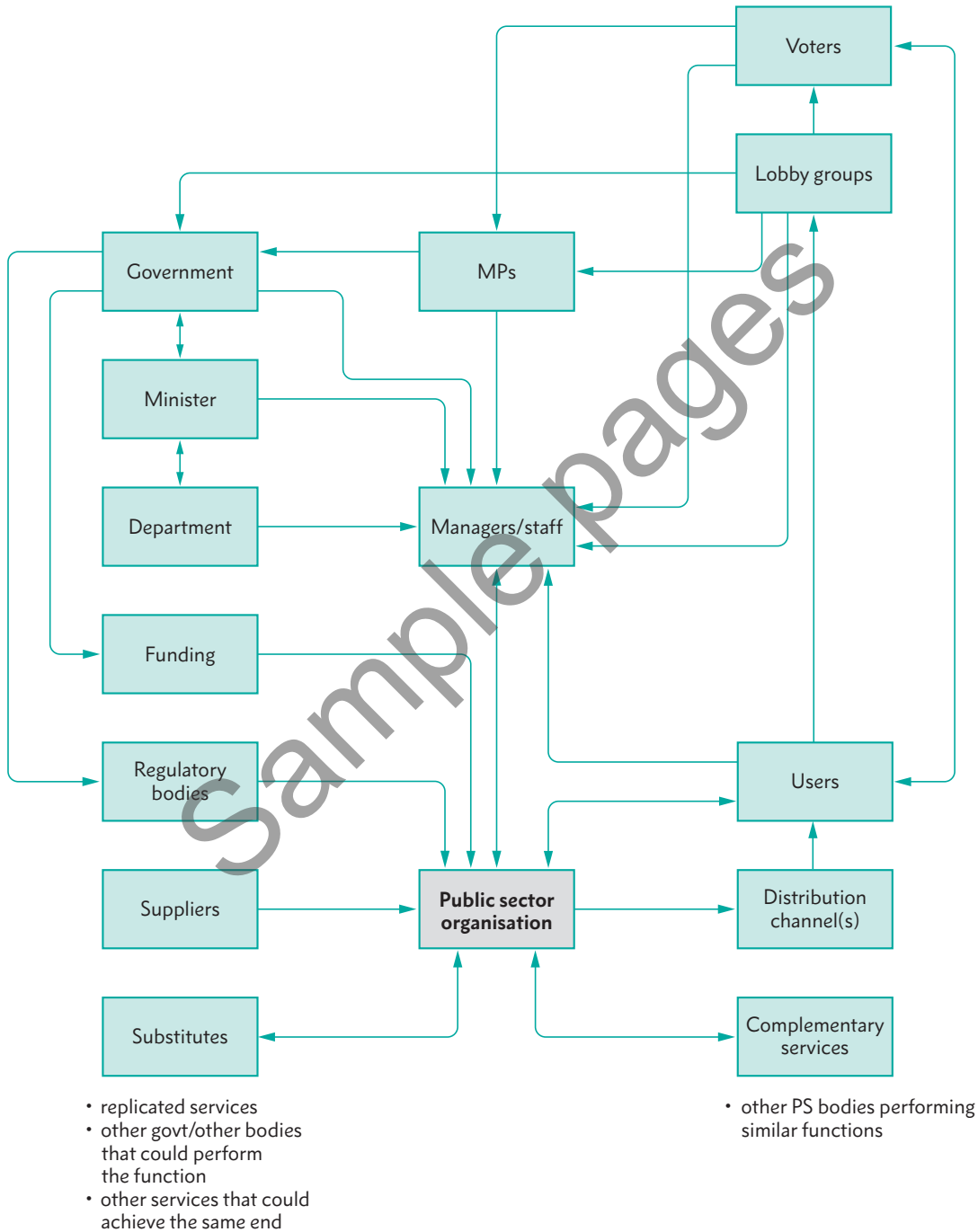
While there are still 'suppliers' to such public sector organisations, there is no 'industry rivalry', little or no chance of 'new entrants' or 'substitutes', and the 'buyers' do not have a choice. Further, no clear overall goal exists for the organisation, making it susceptible to the political persuasion of different interest groups and their particular sets of values and interests.

In such cases, the 'organisation' is effectively the 'industry'. The analysis must focus on the key stakeholders; that is, the individuals and groups that influence the opportunities for, and constraints on, the operation of the organisation. This 'influence system' of organisations



must be documented in the same way that the business system exists for a competitive organisation. An example of such a system, based on the Australian political system, is illustrated in Figure 3.10.<sup>39</sup>

**FIGURE 3.10** Public sector industry analysis



Source: Hubbard, G, Pocknee, G & Taylor, G 1996, *Practical Australian strategy*, Prentice Hall Australia, p. 67. © 1996 Pearson Australia. Reproduced with permission.

Having documented the system, we are then interested in the same issues as in the five forces framework—that is, which of the key forces (stakeholders) have power and influence, and why. A set of questions to pose for a public sector organisation and each of its influence groups includes:

- Why does this stakeholder group affect our organisation (e.g. legal obligations, lobby group (on behalf of whom?), desire of key individuals in the stakeholder group)?
- How does this stakeholder group affect our organisation?
- How powerful is this stakeholder group? What gives it this power?
- What factors might affect that power in the future?

For example, let us consider the case of a department of social security, which is responsible for issuing pensions. Pensions are one of the largest costs to a government and they are expected to increase dramatically over time. Therefore, the government has an interest in closely monitoring, and reducing, the total dollars spent here. Yet, because many voters are pension recipients, pension reduction is likely to be very unpopular. (For example, in the USA, where it has become clear that the country cannot afford to pay the unfunded pensions that have been built up, the government has had to start changing the benefits it will agree to deliver. This is proving extremely unpopular with existing retirees, who assumed the benefits would continue or increase over time.)

However, pension recipients are older members of the community who may be less likely to be politically active. Each pension payment is a small amount, so, unless pension recipients become organised, they have little individual power. The major power they have lies in attracting the attention of their local elected representatives. Separately, the pension fund industry, banks and other types of investment managers are key stakeholders as they have an interest in building their own industries around this particular product. Strategy @ work 3.5 shows a worked example for the government department responsible for pension decisions.

### Strategy @ work 3.5

### A WORKED EXAMPLE OF PUBLIC SECTOR ANALYSIS

From an employee perspective, the area of social security is not generally an attractive one within the public service. Despite the large amount of funds handled, it is often a rather mechanistic, procedural operation, not likely to attract the best public servants (areas such as Treasury and Foreign Affairs are generally much more highly regarded). As to substitutes, charity bodies or banks could perhaps also perform the function.<sup>40</sup> Charities have the same welfare aims, and banks have online and physical distribution systems that could be very effective in issuing payments.

To summarise briefly, we can see that individual recipients (users) have little power, except in the role of voters. The government has a lot of power, due to the huge sums of money spent here, while managers and staff are likely to have limited power,

since they are unlikely to be in high demand elsewhere in the public service. There are substitutes, though their power is unclear. In this case, there are no important regulatory bodies. We have established where the power lies, and why. Determining a strategy for the department provides a brief framework for considering how to manage 'industry' forces. The department needs to provide the service efficiently (minimum cost for number of pensions handled) and effectively (minimum errors, avoiding unfavourable publicity, and ensuring the correct recipients receive the correct amounts while providing reasonable service levels to pensioners/voters). If it continues to do this, or finds a better way to achieve it, and its approach is better than those of substitutes, the government will continue to fund the department.<sup>41</sup>

The case of local councils is interesting. A local council can be treated as a geographic monopoly in competition with other geographic monopoly councils for funds from the common provider (the next tier of government above them). In this case, the analysis in Strategy @ work 3.5 can be applied. However, local councils can also be seen as a mixture of monopoly legislative services (e.g. the power to charge rates and fees) and a corporation administering businesses in a variety of industries (e.g. waste collection, road maintenance, recreation centre provider), all of which have private sector competitors that could do the job. Under this view, corporate strategy principles should be applied at the council level, and business strategy principles, including standard industry analysis, at the level of each of the business units within the council.

### The five forces model—the not-for-profit sector

Not-for-profit (NFP) industry analysis is different from both profit-based industry analysis (the 'normal' assumption) and public sector analysis. NFPs (e.g. the credit union industry, charities, professional sports industries) are based around economics—they have products or services to sell, at a price that needs to cover costs. However, since they do not aim to make a profit, but only to cover costs, the question of the overall goal(s) of the industry, and the organisations in it, is less clear (e.g. is it industry wellbeing, break even, best outcomes for customers?).<sup>42</sup>

Standard industry analysis can be used to assess industry forces that will affect industry future growth and economic wellbeing (a substitute for profitability) as in most cases there is a competitive element with other NFP organisations seeking funding, skilled employees, and so on. However, the key difference is the role of key stakeholders and the impact that their interests have in positioning the specific organisation. For instance, a credit union, being a cooperative, exists for the benefit of its members, who are also its customers, rather than its 'shareholders'. Charities do not want to be perceived to be competing, but in practice they compete with hundreds of organisations promoting alternative charities (e.g. Red Cross, World Vision, the Salvation Army, Greenpeace) for revenue for worthy causes, though each has a significantly different 'product' or 'service'. Professional sports clubs want the industry to do well, but their individual aim is to beat competitors and at least make the finals each year.

For NFP industries, the key is to understand both the direct or close industry rivals and the huge number of substitutes that exist, and then to recognise at the organisational level that the objective is not the highest economic results for (often non-existent) shareholders, but the outcomes determined by key executives, donors or customers.

## Summary

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In this chapter we considered two major elements of the external environment—the macro-environment and the industry environment—as the second part of our business strategy model of analysis. The analysis performed under these headings is of factors outside the organisation, but these factors can often be more influential for organisation strategy (and opportunities and threats to that strategy) than are the more easily focused-on internal issues. The aim of this analysis

is to understand the expected future growth and profitability of the industry and its drivers in the future. The identification of key competitors and strategic groups within the industry segments competitors into more meaningful groupings for analysis.

The analysis is complex, uncertain and difficult to integrate. It can be done for all types of organisations, not just publicly listed or private sector profit-oriented ones. We have provided frameworks for all types and all situations. We have expanded the standard industry framework—the five forces model—to consider historical background and trends, the roles of government and complementors, industry evolution and scenario planning. The diamond model considers the local industry's potential for successfully competing internationally. Finally, we have considered industry analysis for public sector and NFP organisations.

## End-of-chapter questions

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- 1 Consider the 'national accounting services industry'. What other definitions might there be for organisations competing in this industry? Why might different definitions be chosen?
- 2 What is the difference between an 'industry' and a 'market'? When could an 'industry' be a 'market' and vice versa?
- 3 In what industries does government play a big role? In what industries does it have a small role? How is the government role changing over time? Why is this?
- 4 What are some of the key technological factors that may impact an industry of your choosing over the next decade?
- 5 Which macro-environmental factors are likely to be most important in the supermarket industry in the coming years?
- 6 What are the factors that determine rivalry when considering an industry structure?
- 7 Is industry profitability likely to be high or low when the threat of new entrants is high? Why?
- 8 What are the key criticisms or limitations of the five forces framework? Why is a competitor analysis a separate step from the five forces analysis and how does it provide additional insight?
- 9 Name one industry in your locality that might qualify as having a 'cluster' or 'network' of competitors. What reasons might explain the existence of this network or cluster?
- 10 What are the advantages of undertaking a strategic group analysis? Under what circumstances would such an analysis be useful?
- 11 How does scenario planning provide additional insight around an industry analysis that cannot be captured in a traditional five forces analysis?
- 12 What are the limitations of applying industry analysis to public sector organisations? Can these be overcome?
- 13 How might we explain the success of Japanese consumer electronics companies (such as Sony, Canon, Sharp and Panasonic) in industries such as cameras, headphones and TVs?
- 14 Considering Porter's diamond model, what industries might Australia or New Zealand be leaders in?

## Endnotes

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- 1 See Schmalensee, R 1985, 'Do markets differ much?' *American Economic Review*, 75:341–51; Rumelt, RP 1991, 'How much does industry matter?' *Strategic Management Journal*, 12:167–85; Powell, TC 1996, 'How much does industry matter? An alternative empirical test', *Strategic Management Journal*, 17:323–34.

- 2 See Bettis, R 1998, 'Commentary on "Redefining industry structure for the Information Age by J Sampler"', *Strategic Management Journal*, 19:357–61, for a variety of different ways to define an industry.
- 3 See also the recent report by the Business Council of Australia 2013, 'Action plan for enduring prosperity', and Dodgson, M, Hughes, A, Foster, J & Metcalfe, S 2011, 'Systems thinking, market failure and the development of innovation policy: the case of Australia', *Research Policy*, 40(9):1145–56 as examples of issues that governments can focus on to address economic outcomes.
- 4 Divol, R, Edelman, D & Sarrazin, H 2012, 'Demystifying social media', *McKinsey Quarterly*, 2:67–77 provides a framework for how organisations can use social media to influence consumer decision making.
- 5 For further reading, see Salt, B 2006, *The big picture: life, work and relationships in the 21st century*, Hardie Grant; and Bonini, S, Mendonca, L & Oppenheim, J 2006, 'When social issues become strategic', *McKinsey Quarterly*, 2:20–32.
- 6 In fact, it would be more than 6 per cent, due to the compounding factor ( $1.02 \times 1.03 \times 1.01$ ).
- 7 Gross, D 2017, 'It's time to get worried about the auto industry and the economic havoc its problems could wreak', slate.com, 3 May, accessed 12 April 2018
- 8 ABS, [www.abs.gov.au/ausstats/abs@.nsf/Lookup/4102.0main+features82014](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4102.0main+features82014), accessed 6 April 2018.
- 9 Enkvist, P-A, Nauc ler, T & Rosander, J 2007, 'A cost curve for greenhouse gas reduction', *McKinsey Quarterly*, 1:35–45.
- 10 Ioffe, J 2009, 'A green city blooms in the desert', *Fortune*, April: 13:40–4.
- 11 Becker, W & Freeman, V 2006, 'Going from global trends to corporate strategy', *McKinsey Quarterly*, 3:17–21, or see the full survey at [www.mckinseyquarterly.com/links/22697](http://www.mckinseyquarterly.com/links/22697).
- 12 Tetlock, P 2005, *Expert political judgment: how good is it? How can we know?* Princeton University Press.
- 13 Porter, M 1980, *Competitive strategy*, Free Press.
- 14 This section draws extensively on Porter 1980, op. cit., pp. 3–33. Those seeking a full understanding of this framework are encouraged to read the original.
- 15 Jiang, B & Koller, T 2006, 'A long-term look at ROIC', *McKinsey Quarterly*, 1:14–17.
- 16 Cost pressures on buyers have forced prescription pharmaceutical companies to reduce margins and have resulted in slower growth (but still high relative growth). Coupled with the escalating costs of research and development, industry competitors have been acquiring and merging to cover more therapeutic areas and share research and development costs.
- 17 For issues in managing suppliers, see 'Managing supply chains', *Harvard Business Review*, 2011.
- 18 Rumelt, RP 1991, 'How much does industry matter?', *Strategic Management Journal*, 12:167–85; Powell, TC 1996, 'How much does industry matter? An alternative empirical test', *Strategic Management Journal*, 17:323–34; McGahan, AM & Porter, ME 1997, 'How much does industry matter, really?' *Strategic Management Journal*, 18(S1):15–30; and Galbreath, J & Galvin, P 2008, 'Firm factors, industry structure and performance variation: new empirical evidence to a classic debate', *Journal of Business Research*, 61(2):109–17.
- 19 D'Aveni, R 1994, *Hypercompetition: Managing the dynamics of strategic maneuvering*, Basic Books, New York, NY.
- 20 See Foreman, P & Westgren, R 2012, 'The role of resource profiles in creating competitive heterogeneity within strategic groups', *Journal of Management*, 13(5):173; and Mas-Ruiz, F & Ruiz-Moreno, F 2011, 'Rivalry within strategic groups and consequences for performance: the firm-size effects', *Strategic Management Journal*, 32(12):1286–308, for recent empirical applications of the theory of strategic groups.
- 21 Some discussion of strategic groups includes Cool, K & Dierickx, I 1993, 'Rivalry, strategic groups and firm profitability', *Strategic Management Journal*, 14:47–59; Ade Olusoga, S, Mokwa, M & Noble, C 1995, 'Strategic groups, mobility barriers and competitive advantage', *Journal of Business Research*, 33:153–64; Bogner, W, Thomas, H & McGee, J 1996, 'A longitudinal study of the competitive positions and entry paths of European firms in the US prescription pharmaceutical market', *Strategic Management Journal*, 17:85–107; and Houthoofd, N & Heene, A 1997, 'Strategic groups as subsets of strategic scope groups in the Belgian brewing industry', *Strategic Management Journal*, 18:653–66.
- 22 Tywoniak, S, Galvin, PG and Davies, J 2007, 'New institutional economics' contribution to strategic groups analysis', *Managerial and Decision Economics*, 28:213–28.
- 23 Porter's diamond model in Porter 1990, *The competitive advantage of nations*, Free Press, discussed later in this chapter, includes a 'government' box, which supports our inclusion of it here.

- 24 Brandenburger, A & Nalebuff, B 1996, *Coopetition*, Currency Doubleday, first recognised the value of complementors.
- 25 Ansoff, I 1990, 'General management in turbulent environments', *Practising Manager*, 11(1):6–27.
- 26 See Dosi, G & Nelson, R 2009, *Technical change and industrial dynamics as evolutionary processes*, Laboratory of Economics and Management, Sant'Anna School of Advanced Studies and Columbia University; and Giachetti, C & Marchi, G 2010, 'Evolution of firms' product strategy over the life cycle of technology-based industries: a case study of the global mobile phone industry, 1980–2009', *Business History*, 52(7):1123–50.
- 27 Klepper, S 1996, 'Entry, exit, growth, and innovation over the product life cycle', *The American Economic Review*, 86(3):562–83.
- 28 For a discussion of life cycle models, see Peltoniemi, M 2011, 'Reviewing industry life-cycle theory: avenues for future research', *International Journal of Management Reviews*, 13(4):349–75; and Lei, D & Slocum Jr J 2005, 'Strategic and organizational requirements for competitive advantage', *The Academy of Management Executive*, 19(1):31–45.
- 29 Mintzberg, H 1994, *The rise and fall of strategic planning*, Free Press, is a major critic of 'rational' planning.
- 30 See Varum, C & Melo, C 2010, 'Directions in scenario planning literature: a review of the past decades', *Futures*, 42(4):355–69; and Lindgren, M & Bandhold, H 2009, *Scenario planning: the link between future and strategy*, Palgrave Macmillan.
- 31 Lawson, M 2002, 'What if?' *Boss*, January: 21–5. See also Smith, F 2009, 'Office trends emerge from the ashes', *Australian Financial Review*, 20 October; and Quitner, J 2010, 'The future of reading', *Fortune*, 1 March: 35–45.
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- 33 A good summary of the book of the same name exists in Porter, M 1990, 'The competitive advantage of nations', *Harvard Business Review*, March–April: 73–93.
- 34 Mintzberg's emergent approach to strategy, the behavioural theory approach, and the evolutionary and chaos theory approaches discussed in Chapter 1 would all find luck or chance an acceptable explanation.
- 35 For an excellent analysis of Stanford University's role in bringing high-technology, intellectual capital and venture capital together, see Aley, J 1997, 'The heart of Silicon Valley', *Fortune*, 7 July: 66–74.
- 36 *The Economist* 2013. 'Cold inspires hot run on high-tech', *The Australian Financial Review*, 5 February: 26.
- 37 For a recent review, see Czernich, N, Falck, O, Kretschmer, T & Woessmann, L 2011, 'Broadband infrastructure and economic growth', *Economic Journal*, 121(552):505–32; and Kretschmer, T 2008, 'Splintering and inertia in network industries', *Journal of Industrial Economics*, 56(4):685–706.
- 38 Petris, S 2003, 'Three new perspectives on strategic analysis in the public sector', *Mt Eliza Business Review*, 6(1):75–81.
- 39 Different political systems may require some adaptation of this model, which is adapted from Hubbard, G, Pocknee, G & Taylor, C 1996, *Practical Australian strategy*, Prentice Hall.
- 40 This was demonstrated in Australia in 1998 when the government outsourced the work of the Commonwealth Employment Service, which provided jobs and benefits for unemployed people, to a series of private providers.
- 41 This assumes that no innovative and creative strategic thinking occurs that develops a better and different solution to the issue of providing income for retired people.
- 42 Oster, S 1995, *Strategic management for the non-profit sector*, Oxford University Press.