



case four

Ford and the World Automobile Industry

TEACHING NOTE

SYNOPSIS

Founded in 1903, Ford Motor Company has encountered and survived numerous crises for more than a century. During 2001–3, Ford entered a new period of crisis, with the ousting of its CEO and reassertion of family control, declining market share, and dismal financial performance.

The case addresses Ford's situation in early 2004 from the point of view of Ford's newly appointed chief strategy officer, Bruce Blyth. However, as is quickly pointed out, the focus of the case is not Ford's competitive position within the auto industry, but the prospects for the auto industry itself. For the purposes both of issuing financial projections to investors and formulating strategy for the next four-year period, the future direction of the world auto industry is of crucial importance to Ford. The problems that Ford has encountered during recent years are not unique to Ford. The world automobile industry as a whole has experienced intense competitive pressure and low margins for several years. Ford's ability to engineer a turnaround in its performance will depend critically upon the state of the world automobile industry over the next few years.

Hence, the focus of the case is more on the future prospects for profitability among all of the global auto makers rather than specifically Ford's position. The case examines the evolution of the world automobile industry and shows how the structural

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trends of the past two decades have increased the intensity of competition and depressed profitability. On the basis of information on historical and current trends and the strategies being pursued by the companies, students are required to predict the future evolution of the industry and the associated implications for competition and profitability.

Generally auto makers face a poor outlook for profitability, so establishing competitive advantage will be vital for any firm trying to earn a return on capital in excess of its cost of capital. Given the trends in the industry, what will be key success factors over the medium term, and what do these imply for which of the auto companies will be most successful?

TEACHING OBJECTIVES

The purpose of the case is for students to gain practice in applying industry analysis to a complex, global industry. The case is designed to facilitate the application of Porter's Five-Forces framework to analyze the linkages between firm structure, competition, and the level of industry profitability.

The central issue is predicting industry profitability in the future. To do this, students need to first address the reasons why the average level of profitability has been low for most of the past decade. Such analysis will allow students to gain expertise in identifying the key features of industry structure and analyzing their implications for competition and profitability.

The case also requires students to examine industry evolution over time. Industry structure has changed as a result of globalization and maturity. Both forces have increased competition: globalization has brought geographically separated firms into close competition and increased industry capacity; maturity has caused market saturation and reduced product differentiation. The fact that the industry is international in scope has important implications for the analysis of competition. In particular, it requires students to think about the appropriate level of aggregation at which to analyze the industry (national, regional, or global) and requires them to examine the implications of internationalization on the intensity of competition.

The critical challenge for students is looking into the future. This requires students, first, to make predictions about the changes in industry structure they expect and, second, to identify the likely impact of these structural trends on competition and profitability. Given the uncertainties concerning the future, the case lends itself to the use of multiple scenario analysis to explore industry futures.

The case discussion can be extended to the analysis of competitive advantage. What have been key success factors in this industry in recent years? Clearly economies of scale have been critical to survival and success. But even among the biggest companies, performance differences have been substantial. What other factors determine which firms are most successful? Looking ahead, a key strategic issue is whether the key success factors of the past will be the key success factors of the future, or whether changes in industry structure, consumer demand, and technology will transform the foundations of success.

POSITION IN THE COURSE

I use the case to accompany the teaching of industry analysis. It draws upon the concepts and frameworks of Grant, *Contemporary Strategy Analysis*, chapter 3 (“Industry Analysis: The Fundamentals”) and also on parts of chapter 4 (“Further Topics in Industry and Competitive Analysis”), specifically in the areas of segmentation and competitor analysis.

The case can also be used later in the course. The emphasis on the historical evolution of the automobile industry and on future developments means that the case can be used to illustrate and apply the concepts and ideas in chapter 10 (“Industry Evolution”). The case also has a strong international dimension. To this extent it can be used as a case on global industries and global competition, applying concepts and frameworks from chapter 14 (“Global Strategies and the Multinational Corporation”), especially pp. 412–29.

ASSIGNMENT QUESTIONS

1. During 1965–72 the average return on equity of the world’s 12 biggest auto manufacturers was about 10 percent; during 1993–2003 it was about 4.5 percent. What changes in the structure of the world auto industry have caused profitability to decline?
2. How is the structure of the world automobile industry likely to change over the next 5 years?
3. As a result of these changes, is the industry likely to be more or less profitable over the next 5 years as compared with the last 5?
4. Which companies are likely to be most successful over the next 5 years?
5. What should Ford do to improve its profitability over the remainder of the decade?

READING?

R. M. Grant, *Contemporary Strategy Analysis* (5th edn), Blackwell Publishing, 2005, chapters 3 and 4.

CASE DISCUSSION AND ANALYSIS

Although it looks at the industry environment from the viewpoint of Ford Motor Company, the primary focus of the case is the automobile industry and the application of industry analysis to it. The key point here is forecasting profitability in the future. To do this it is important to first analyze the past.

The Evolution of the Industry Since the Late 1960s

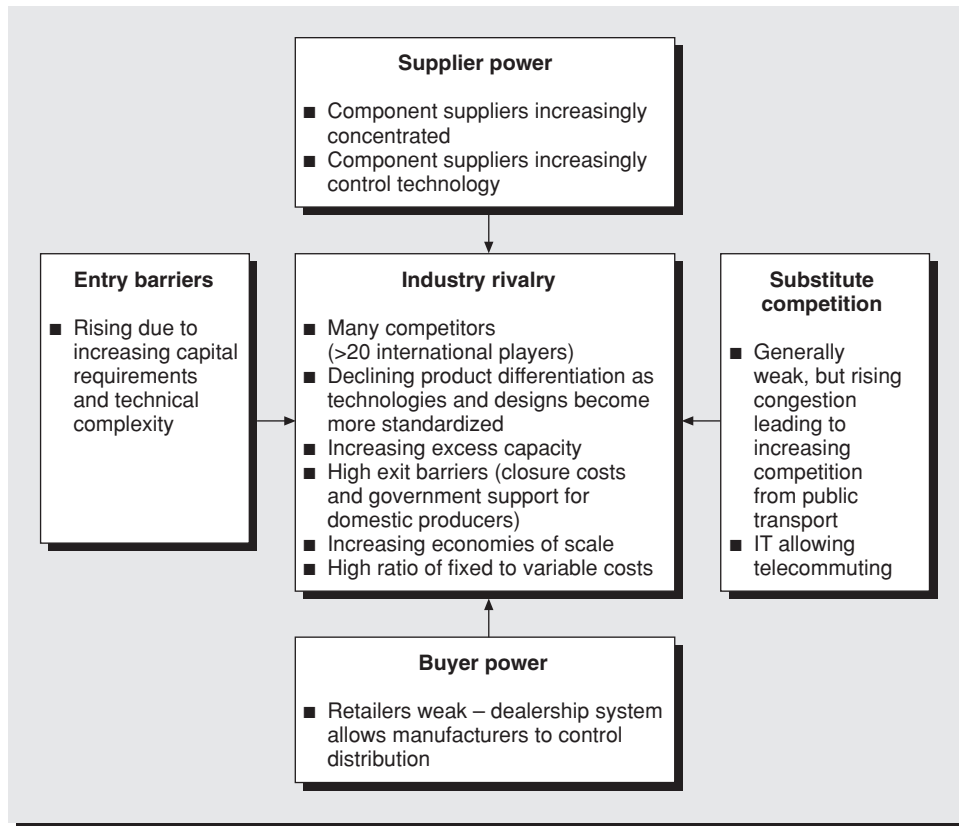
The challenge here is getting students to fit the Porter Five-Forces framework to the particulars of the automobile industry, then to interpret what it means for competition and profitability.

I get things rolling by asking whether the world auto industry has been a good industry to be in during the past eight years or so. Some companies have earned decent profits – the US Big Three each earned a reasonable average ROE over the period – but, across all the main players, the average ROE for 1993–2003 was less than 5 percent. Was this good or bad? Clearly it depends upon the industry's cost of equity capital. A digression on calculating cost of capital is possible at this point; however, it's probably best simply to acknowledge that any reasonable calculation of cost of equity would put it at 10 percent or above (the auto industry is cyclical with high operating leverage – hence beta coefficients tend to be above 1). In short, the industry has been performing badly.

I then note that profitability has declined substantially since the late 1960s and early 1970s and ask why. A range of points typically emerge: internationalization, market saturation, rising cost of new product development, etc. Students need to fit these into the Porter Five-Forces framework. For example:

- Internationalization has reduced seller concentration in national markets (in the 1960s, the US market was dominated by the US Big Three, Italy was dominated by Fiat, etc.). Now everyone plays in everyone else's backyard (see table 4.13). The paradox here is that while the total number of auto firms has fallen, competition between them has increased as each has become less geographically differentiated. Most internationalization has occurred through foreign direct investment – all these new plants have increased industry capacity, exacerbating problems of oversupply.
- Market saturation is evident from the flat trend of auto production in the US, Western Europe, and Japan (see table 4.15). Demand has been depressed by the fact that cars are lasting longer (see table 4.3). Increasing production (see above) combined with low growth in demand has resulted in excess capacity (see tables 4.2 and 4.11). Excess capacity encourages aggressive competition, including price cuts, as companies are willing to take on additional business at prices that only cover variable costs.
- Increased product development costs (see table 4.7) doesn't necessarily reduce margins – if every firm experiences increased costs, then these costs can be passed on to the customer. The key, however, is what these costs mean for scale economies and therefore for competition. Huge new product development costs are the major source of scale economies in the industry – amortizing these costs requires a large volume of sales. With every producer attempting to expand sales in order to spread the growing costs of product development, the result is intense competition, with strong price competition (typically through discounts, trade-in allowances, and low-interest credit).

The use of the Five-Forces framework to explain falling profitability over the past few decades is shown in the figure below.



When applying the Five-Forces analysis, students may encounter some issues over industry definition. In particular, are we looking at a single global industry or a collection of regional/national markets? It is simpler to view this as a single global industry. However, if we identify a single global industry, why is it that the intensity of competition has increased if the total number of auto producers has fallen? The answer is declining geographical differentiation. Internationalization by the main producers has meant that each company sells cars in every major national market. As a result, concentration ratios in most national markets have declined substantially.

With regard to products too, the industry's boundaries are far from clear-cut. Official statistics distinguish between cars (automobiles) and commercial vehicles (trucks and buses). Clearly cars and large commercial trucks are distinct products; however, cars are often close substitutes for light trucks (e.g., pickup trucks).

Industry Profitability in the Future

Looking ahead to the future, I ask: "Will the world auto industry be more or less profitable over the next 5 years (2004–8) than over the past five (1999–2003)?" The stock market's verdict is clear: the fact that most of the leading US and

European auto makers were selling on P/E ratios of between 5 and 11 during the early months of 2004 (as compared with an average P/E for the S&P 500 of over 20) indicates that earnings of the auto companies are expected to decline.

Class discussion of the likely direction of industry profitability typically fails to elicit a clear consensus. Hence, I proceed by making a list of the factors that are likely to impact industry profitability over the next 5 years (or so). These can be categorized into those forces which are likely to have a positive impact on profitability, and those with a negative impact:

| FACTORS TENDING TO INCREASE PROFITABILITY | FACTORS TENDING TO REDUCE PROFITABILITY |
|--|--|
| <p><i>Mergers:</i> increase seller concentration and assist reduction of excess capacity</p> <p><i>Revival of demand:</i> despite the sluggish Japanese and European economies, Asia and the US were growing strongly in 2004. Will the world economy continue to revive?</p> <p><i>New opportunities for product differentiation:</i> can the auto makers escape from commoditization by novel forms of differentiation? New designs of small cars offer some hope (e.g., SmartCar, BMW Mini)</p> | <p><i>Continuing overhang of excess capacity:</i> continued investment in new plants in the US, Asia, and E. Europe</p> <p><i>Increased product standardization:</i> trend towards standardization of automotive technologies and basic features of product design continuing</p> <p><i>Increased substitute competition:</i> congestion and pollution result in regulation of auto use in urban areas and increased use of public transport</p> <p><i>Increased power of suppliers:</i> auto manufacturers increasingly relinquishing technology and manufacture to suppliers; component suppliers continuing to consolidate</p> <p><i>Increased power of buyers:</i> emergence of powerful distributors outside the traditional dealership system (e.g., CarMax and Auto Nation in the US). Internet encourages geographical expansion and consolidation among dealers</p> |

Scenario Analysis

The further one looks into the future, the greater the range of outcomes possible for the likely structure of the world automobile industry. To deal with these different outcomes without getting bogged down in a multiplicity of alternatives, it can be useful to formulate a few discrete scenarios. (Chapter 10 of *Contemporary Strategy Analysis* discusses scenario analysis.) Possible scenarios might include:

- A “continuity scenario” in which technology progresses in a slow, linear pattern and the key drivers continue to be the quest for scale economies and the problems of excess capacity.
- An “environmental shock scenario” in which problems of pollution and congestion result in restrictions on the use of private cars, increased use of public transport, and perhaps the displacement of the internal combustion engine by electric motors.

- A “re-invention scenario” in which new approaches to design and development (and possibly new technologies too) radically reduce new model development costs and offer a range of new opportunities for innovative product differentiation.

Such an analysis provides a basis for crystallizing alternative views of the future evolution of the industry and for identifying in a precise manner the critical developments that will be responsible for pushing the industry down one evolutionary path or another.

However, the key issue that we want our scenario analysis to answer is: What are the implications for industry profitability? For example, would the “environmental shock scenario” be good or bad for the industry? Clearly, momentous technological changes and restrictions on private car use would result in massive costs and constrained demand. However, it might also result in the industry’s life cycle becoming rejuvenated and trigger a new wave of consolidation as medium-sized producers exit. The important issue here is to ask how these anticipated changes would impact upon the different forces of competition.

Key Success Factors

In the past, competitive advantage has been driven primarily by scale. Large scale has been vital to competing on costs and competing on innovation – R&D and new products depend critically upon the ability to produce and market huge volumes. This in turn has required breadth of scope – to be successful, auto makers have been forced to compete globally and across all main product segments.

Which companies will be most successful over the next 5 years? This will, in part, depend on which scenario emerges. However, some success factors are likely to be common to all scenarios, namely: low costs (through scale economies, high productivity, and low labor costs); the flexibility to adapt to different market circumstances; the ability to develop new products with customer appeal and embodying leading-edge technologies (including safety features). These success factors point to the need for companies to combine multiple capabilities – the scale to achieve low costs and support large R&D efforts; the design and technical capabilities to create innovative, attractive new models; the flexibility to respond quickly to changing circumstances.

At the same time, it is interesting to note that several companies have been successful while defying the conventional view that size, full product range, and global presence are essential to success. BMW and Peugeot are medium-sized players that since 2000 have earned rates of profit well above the industry average.

This raises the issue of whether, in the future, the capacity for innovation, design flair, and the ability to respond to emerging environmental issues could become more important than the traditional success factors of scale economies through volume and standardized platforms.

Segmentation

The industry also offers the opportunity to explore issues of industry and market segmentation. A starting point is to develop a segmentation matrix for the industry.

While there are many variables upon which the industry can be segmented, the most useful are those that identify market segments based upon product types and geographical regions. Thus, the figure below offers a fairly simple initial approach to segmenting the industry.

| | | REGIONS | | | | | | |
|----------|------------------|-------------|----------|----------|------|--------------|-----------|--------|
| | | US & Canada | W.Europe | E.Europe | Asia | Lat. America | Australia | Africa |
| PRODUCTS | Luxury cars | | | | | | | |
| | Full-size sedans | | | | | | | |
| | Mid-size sedans | | | | | | | |
| | Small sedans | | | | | | | |
| | Station wagons | | | | | | | |
| | Passenger vans | | | | | | | |
| | Sports cars | | | | | | | |
| | Sports-utility | | | | | | | |
| | Pick-up trucks | | | | | | | |

In the past, particular segments have offered margins well above the industry average – notably luxury cars, passenger vans (“minivans”/“people carriers”), and sport-utility vehicles. These segment differences provide an opportunity to explore the sources of such profitability differentials through applying the Porter Five-Forces analysis to individual segments. For example, during the 1990s, sports-utility vehicles were especially profitable, first, because there were few companies competing in this segment, second, because their different products were highly differentiated, and third, because demand was high relative to production capacity, resulting in a capacity shortage and firm prices.

However, it is also interesting to note that differences in margins between segments tend to be eroded quickly because of low barriers to mobility between segments. Thus, the more platforms and components become standardized between segments, the easier it is for companies to enter specific segments.

Increasingly, firms are seeking to open up profit opportunities by creating new product segments – typically by combining the product features of several existing product segments. For example, compact sports-utility vehicles, luxury sports-utility vehicles, luxury small cars, and so on.

The industry can also be segmented vertically: using Bain & Company’s *profit pool analysis* it would appear that automobile manufacturing is much less profitable than a number of downstream services – consumer and dealer financing in particular (see *Contemporary Strategy Analysis* (5th edn), chapter 4, figure 4.6). This raises the issue of whether Bill Ford was right in reversing Jacques Nasser’s strategy of forward integration.