case four

Ford and the World Automobile Industry

TEACHING NOTE

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■ SYNOPSIS ■

During its century-long history (Ford was founded in 1903), Ford Motor Company has encountered and survived a number of crises. During 2001–6, market share and financial performance deteriorated sharply. CEO Jacques Nasser was ousted and replaced by Chairman Bill Ford, who then reverted to the role of Chairman in favor of outsider Alan Mulally.

The case addresses Ford's situation in early 2007 from the point of view of Ford's newly appointed CEO Mulally. However, as the case quickly points out, the focus of the case is not Ford's competitive position within the auto industry, but the prospects for the auto industry as a whole. For the purposes both of issuing financial projections to investors and formulating strategy for the next four years, the future direction of the world auto industry is of critical importance to Ford. The problems that Ford has been experiencing during recent years are not unique to Ford. The world automobile industry as a whole has suffered intense competitive pressure and low margins for several years. Ford's ability to engineer a turnaround in its performance is critically dependent on the state of the world automobile industry over the next few years.

To help assess future prospects for profitability in the world automobile industry, the case examines the evolution of the world automobile industry and shows how the structural 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 major companies, I ask students to predict the future evolution of the industry and its implications for competition and profitability.

Given the generally poor outlook for profitability, establishing competitive advantage will be critical for a firm 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 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 key to changes in industry profitability is the evolution of industry structure. 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 for 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 on the concepts and frameworks of Grant, *Contemporary Strategy Analysis*, Chapter 3 ("Industry Analysis: The Fundamentals"). It also draws 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 and Strategic Change"). In addition, the case 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").

■ ASSIGNMENT QUESTIONS ■

1. During 1965–72 the average return on equity of the world's 12 biggest automakers was about 10%; during 2000–6 it was about 4.2%. 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 five years?
3. As a result of these changes, is the industry likely to be more or less profitable over the next five years as compared with the last five?
4. Which companies are likely to be most successful over the next five years?
5. What should Ford do to improve its profitability over the remainder of the decade?

■ READING ■

R. M. Grant, *Contemporary Strategy Analysis* (6th edn), Blackwell Publishing, 2008, 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 six years or so. Some companies have earned decent profits (e.g. Toyota, Renault/Nissan, PSA (Peugeot), BMW); however, averaged across all the main players, the average ROE since 2000 is poor, especially when the massive losses by GM and Ford in 2006 are taken into account.[1] Evaluating the adequacy of profitability ratios depends on benchmarking against cost of

[1] Table 4.A2 shows ROE, which tends to be volatile for many companies (especially Ford and GM) because of their narrow equity base. In 2006, the problems got even bigger – the losses of Ford and GM meant that their shareholders' equity became negative.

capital. This also means taking account of international differences. Thus, although Toyota's return on equity (in the low teens) seems modest, this must be evaluated in relation to Toyota's cost of capital, which is low because of low Japanese interest rates. In noting that profitability has declined substantially since the late 1960s and early 1970s, I ask: why? A range of points typically emerges: internationalization, market saturation, rising cost of new product development, etc. The challenge is for students to fit these into the Porter five forces framework. For example:

- Internationalization has reduced seller concentration in national markets – the US market was dominated by the US Big Three, Italy was dominated by Fiat, etc., while now everyone plays in everyone else's backyard (see Table 4.6). 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 specialized. Most internationalization has occurred through foreign direct investment – all these new plants have increased industry capacity, exacerbating problems of excess capacity.
- Market saturation is indicated by the declining trend of production in the US, Western Europe, and Japan (see Tables 4.8 and 4.9). Demand has been depressed by the fact that cars are lasting longer (see Table 4.1). Increasing capacity (see above) combined with low growth in demand has resulted in excess capacity. Excess capacity encourages aggressive competition, including price cuts, as companies are willing to take on additional business at prices that only cover variable costs.
- Increasing product development costs (see Table 4.2) don'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 implies 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).

Use of the five forces framework to explain falling profitability over the past few decades is shown in the figure below.

Application of the five forces analysis may encounter a question concerning industry boundaries. 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); moreover, SUVs are classified as trucks in some countries.

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 five years (2007–11) than over the past five (2002–2006)? The stock market is pessimistic: the fact that most of the leading US and European automakers have P/E ratios that are well below the average for the market index suggests that significant profit growth is not anticipated.

An initial poll among class members of whether industry profitability is likely to increase, decline, or remain about the same typically fails to elicit a clear consensus. Hence, I proceed by making a list of the factors that are likely to have an impact on industry profitability over the next five years (or so). These can be categorized into those forces that 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
Mergers: increase seller concentration and assist reduction of excess capacity	*Continuing overhang of excess capacity*: Continued investment in new plants in the US, Asia, and E. Europe by established producers
Increasing world demand: Strong demand in China, India, and other emerging economies. High fuel prices make motoring more costly, but boost demand through replacement of gas guzzlers by fuel-efficient cars	*Expansion of emerging market producers*: Growing presence in international markets by producers from China, India, and elsewhere
New opportunities for product differentiation: Can the automakers escape from commoditization by novel forms of differentiation? New designs of small cars offer some hope (e.g., SmartCar, BMW Mini). More flexible production systems lower costs of differentiation and customization	*Increased substitute competition*: Congestion and pollution result in regulation of auto use in urban areas and increased use of public transport
	Increased power of suppliers: Component manufacturers consolidating and controlling increasing proportions of automotive technology
	Increased power of buyers: 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

These factors can then be configured into a five forces framework (see next page).

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* (pp. 281 and 282) discusses scenario analysis.) Possible scenarios might include:

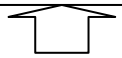
- A "continuity scenario" in which technology progresses in a slow, linear pattern and the key drivers continue to be the quest for scale economies and the problems of excess capacity.
- An "environmental shock scenario" in which problems of pollution and congestion result in restrictions on the use of private cars, increased use of public transport, and perhaps the displacement of the internal combustion engine by electric/fuel cell/hybrid 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 on the future evolution of the industry and for identifying in a precise manner the critical developments that will be responsible to 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 affect the different forces of competition.

may allow new entry
(e.g. electric motors
replacing gasoline)

- New technology may change cost structures (scale less critical)



Buyer Power
(STRENGTHENING)

- New types of retailer and internet increases power of retailers
- Customers better informed and more price sensitive

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). With sharing of components, designs, plants, and technologies across multiple models, economies of scope have become increasingly important – total volume has been the key factor. Other key cost variables include costs of inputs (labor in particular) and government influences – including taxes and subsidies and regulations that tend to impose costs.

If scale is a key driver of unit costs, what determines volume of production? Clearly it is volume of sales. Selling cars depends critically on product differentiation: attractive design, quality, technology, and availability of after-sales services.

Maybe these differentiation variables are the most important determinants of profitability directly rather than through their influence on sales volumes. The appendix shows that some of the most profitable producers – Nissan, Renault, BMW – are not the giants of the industry.

The relative importance of different KSFs will depend on the scenario that emerges in the future. “Environmental shock” implies that producers that have invested most heavily in new technologies and which are quickest and most adept at introducing those technologies are likely to be most successful. Despite GM and Ford’s massive investments in new technologies, doubts remain as to whether they are as nimble as Toyota or Honda in introducing those technologies. A “re-invention scenario” would favor firms with the greatest design flair and capability in innovative new product development. Such a scenario might favor some of the European manufacturers: Daimler, Peugeot, possibly even Fiat.

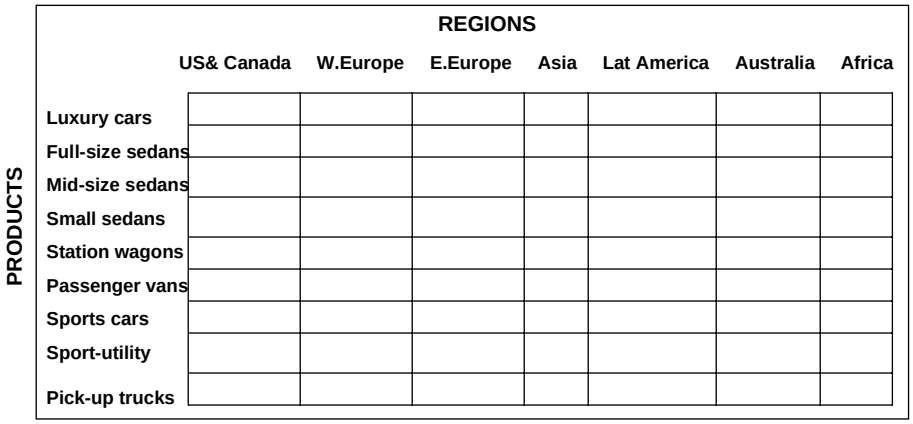
However, some success factors are likely to be common to all scenarios, namely: low costs (through scale economies, high productivity, and low labor costs); the flexibility to adapt to different market circumstances; the ability to develop new products with customer appeal and embodying leading-edge 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.

Currently, the company that most effectively combines multiple capabilities is Toyota. As the industry environment continues to evolve – possibly placing greater emphasis on the capacity for innovation, design flair, and the ability to

respond to emerging environmental issues – other companies may be able to create combinations of capabilities that fit even better with the future KSFs.

Segmentation

The industry also offers the opportunity to explore issues of industry and market segmentation. A starting point is to ask: How should the world automobile industry be segmented? While there are a many variables upon which the industry can be segmented, the most useful are those that identify market segments based on product types and geographical regions. Thus, the figure below offers a fairly simple initial approach to segmenting the industry.



The question to ask is: "Which segments have offered superior profit margins in recent years?" While the case does not include information on this issue, it is generally recognized that luxury cars, passenger vans ("minivans"/"people carriers"), SUVs, and sports cars have delivered above-average margins. Exploring the sources of such profitability differentials requires applying the Porter five forces analysis to individual segments. For example, during the past decade, SUVs were especially profitable, first, because there were fewer companies competing in this segment (compared with standard family cars), 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. As "platforms" and components become standardized between models, so *barriers to mobility* between segments are lowered.

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 sport-utility vehicles, luxury sport-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*, 6th edn, Chapter 4, pp. 116–17).

■ KEY TAKE-AWAYS FROM THE CASE DISCUSSION ■

1. Global industries are more complex than domestic industries – but the same principles apply: *industry structure* drives *competition*, which determines *industry profitability.*

2. Internationalization increases competition by:
   - increasing the number of firms competing in each national market,
   - increasing the diversity of competitors, and
   - increasing production capacity (where internationalization occurs through foreign direct investment).
3. Predicting industry profitability requires dealing with two main problems:
   - How will industry structure change in the future? Where fundamental technological or regulatory changes are likely, *scenario analysis* can be a useful tool.
   - Where different structural changes are pulling in opposing directions (i.e. some causing competition to increase, others to decrease), how do we assess the net effect? We have to rely on our *judgment* in these instances.
4. At what level of aggregation do we perform industry analysis? When most of the leading producers are supplying most of the countries of the world, the industry is *global*. But for many strategic decisions firms may wish to define markets more narrowly. *Segmentation* (by country and by product type) provides the basis for more finely grained strategic decisions.