

1 Introduction

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Europe is on the move. Automotive mobility is part of European everyday life: on the job and during vacation, with friends or family, from Poland to Portugal. The importance of the European automotive industry runs much deeper. The automotive industry is one of Europe's key industries. There can hardly be any doubt about the important role of this sector as an engine for employment, growth and innovation in Europe. Given its importance, menaces and barriers to its competitiveness cannot be neglected. A number of challenges such as new technologies, overcapacity, the need for cost reductions and sluggish market growth are currently at the top of manufacturers' and suppliers' agendas. Besides, the industry has undergone major structural and organisational changes, most notably eye-catching mergers such as the one by DaimlerChrysler as well as the abortive acquisition of BMW and Rover. However, there are still a number of issues which need to be considered with regard to the present and future of the industry:

- What is the impact of reorganisation in the industry?
- What are the consequences of reorganising the value chain for the innovation capabilities in the automotive sector?
- Are there new players on the market or just new markets?
- What is the impact of the EU enlargement on the European automotive industry?

The purpose of this report is to draw a broad picture of the *European automotive industry – competitiveness, challenges and future strategies*. The intention is to offer an overview of the industry and its sources of competitiveness as well as the challenges it faces and to outline policy implications.

Today the term “competitiveness” is widely used in various contexts and with sometimes ambiguous definitions. In its most general form competitiveness is defined here as the ability to defend and/or gain market share in open, international markets by relying on the price and/or the quality of goods. This ability is affected by a wide range of factors, frameworks and conditions. Hence, one has to look at a multitude of indicators to assess competitiveness ranging from production costs to technological and organisational innovation, from the regulatory framework to macroeconomic conditions. Given this variety competitiveness cannot be expressed in a sole number or ranking. Instead, our approach is to compare a wide set of indicators internationally and assess their development over time, too.

The research framework, and subsequently methods and data, rests upon six chapters which determine the competitiveness of the European automotive industry. Following this introduction chapter the analysis sets the stage by presenting the economic importance, the industry structure and the major players in the automotive industry. Chapter 3 focuses both on international and domestic mar-

kets as an indicator and source of competitiveness. Chapter 4 pays closer attention to the innovation aspect of competitiveness while the following part highlights the same context with regard to the impact of regulation. Eventually, the report closes with a summary of major results and conclusions.

The new member states (NMS) are already an important part of Europe's automotive system. The report emphasises their special role wherever appropriate. Besides, for stylistic reasons the report occasionally uses the term "motor vehicle industry" instead of automotive industry¹, both terms are considered synonyms and should not be interpreted as factually different.

The report comprises the following chapters:

The European Automotive Industry in a Global Context

By means of a detailed analysis of different economic indicators the economic activity of the automotive industry is described. The report covers key data which highlights the importance of this industry and its dynamic developments. The chapter provides industry specific indicators such as value added, employment as well as capital stock and investment. The significance of the automotive industry indicators is emphasised by drawing comparisons with other sectors and countries dynamically over time. An industry profile carries the chapter forward. The purpose of this section is to present both the market players and the industry itself. The industry is divided into *car, truck and bus* segments. Each segment is analysed in a *global and a European context*. The underlying indicator of this analysis is the output of the manufacturers which is measured in terms of production units. The global view describes the distribution of output volume between America, Europe, Asia and Africa.

The European view covers the EU member states and as far as possible the new member states as well. A ranking of the leading manufacturers is given for each segment. The section also includes a description of the *supplier* industry and its important role for manufacturers. Different supplier strategies and a ranking of the top supplier firms highlight their crucial role in this industry. A deeper analysis of the suppliers is provided later in the report. Furthermore, the document contributes to discussion of the internationalisation strategy of the automotive companies. The

¹ Passenger cars are motor vehicles with at least four wheels, used for the transport of passengers, and comprising no more than eight seats in addition to the driver's seat. Light commercial vehicles are motor vehicles with at least four wheels, used for the carriage of goods. Mass, given in tons (metric tons), is used as a limit between light commercial vehicles and heavy trucks. This limit depends on national and professional definitions and varies between 3.5 and 7 tons. Minibuses, derived from light commercial vehicles, are used for the carriage of passengers, comprising more than eight seats in addition to the drivers seat and having a maximum mass between 3.5 and 7 tons. Heavy trucks are vehicles intended for the carriage of goods. Maximum authorised mass is between 3.5 to 7 tons. They include tractor vehicles designed for towing semi-trailers. Buses and coaches are used for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass between 3.5 and 7 tons. The industry includes also component suppliers.

discussion points out the *globalisation* trend in the industry and the closely connected restructuring process among manufacturers and suppliers. Besides pointing out mergers and acquisitions, the demonstration of the spread of intra-industrial connections represents the current picture of the automotive industry. Finally, the chapter tackles the issue of capacity utilisation.

Competitiveness: A Market Perspective

This chapter starts by focusing on measuring competitiveness of the European automotive industry on international markets. World market shares and revealed comparative advantage (RCA) numbers are presented to assess competitive performance and potential. The subsequent section emphasises foreign direct investments (FDI) as the second major instrument in internationalisation strategies both on a country and firm level. Additionally, the chapter analyses two specific promising emerging markets, China and Russia, in more detail. Finally, the chapter turns to the European home market to identify sources of competitiveness from domestic demand. Apart from market size and growth special attention is paid to market segmentations and brand esteem in the passenger car and commercial vehicles segment.

Innovation and Competitiveness

Competitiveness can hardly be described as a static concept. Innovation and R&D activities pave the way for future success. Those projects reflect a company's assessment of its future prospects and its willingness to exploit market opportunities by investing in new technologies. Necessarily, the chapter starts with a broad examination of productivity. Subsequently, we focus on skilled labour, R&D expenditures as well as patents and emphasise the relevance of innovation patterns and research networks in the automotive sector. While innovation is often confined to technical innovations we extend this view towards organisational aspects especially in the automotive value chain.

Regulation and Industrial Policy

The automotive industry is more and more affected by regulation at the EU level. In general, this regulation can foster competitiveness on the one hand by increasing competition within the sector and may induce new innovation trajectories. On the other hand regulation also might pose a threat as it can be seen as a major driver of additional costs and may point innovation activities into dead ends where global demand will not follow. This chapter points out the importance of the transportation system as well as its social costs and the major elements of regulation initiatives which affect the automotive industry. This section highlights specific regulations e.g. Block Exemption or end of life vehicle as well as the efforts of the industry to take the environmental challenges into account. Therefore, the report provides a deeper look at the sustainability endeavours of the automotive industry.

Challenges and Opportunities for the European Automotive Industry

Consequently, the report reaches its final stage: the *SWOT Analysis*. The SWOT Analysis provides a systematic overview of strengths (S), weaknesses (W), opportunities (O) and threats (T). It is a well established and straightforward concept which is helpful in matching an industry's resources and capabilities to the competitive environment in which it operates. The aim is to conclude from each section mentioned above the strength, weaknesses, opportunities and threats of the European automotive industry. To extend the scope of this analysis into the future while still providing meaningful results an additional scenario analysis is conducted to highlight major connections and interactions among SWOT factors in a best and worst case scenario. These steps lay the groundwork for the formulation of implications and policy issues.