



Changes in the European Car Industry

This Factsheet describes the key trends in the European car industry over the last 10-20 years, and the implications of these changes on people and the environment.

Introduction

The car industry is a key global industry. Some 40 million vehicles are produced globally, and the industry is a major global employer – around 20 million people in component manufacture, production and sales. Car production can be broken down into some basic categories.

1. The production of high volume, mass-market cars in MEDCs and NICs. These are produced by TNCs and both bought in their domestic market and exported to other countries. Examples would be BMW in Germany, Toyota in Japan and Daewoo in South Korea.
2. The production of high volume, mass-market cars for domestic consumption in NICs and LEDCs, e.g. Dacia in Romania or Tata in India.
3. The production of low volume, exclusive cars in MEDCs for domestic and export markets, e.g. Ferrari in Italy or Rolls Royce in the UK.

On a world scale, car production is dominated by ten large TNCs (90% of global production), based in only five MEDCs, which produce and sell cars all over the world. Many European marques are actually part of the Ford and GM empires. European production is more or less all in the hands of five TNCs, which have resulted from recent mergers and alliances.

The way cars are produced has changed hugely in the 100 or so years of their manufacturing history. In the period 1890-1910 all cars were made by craft production; each car was individually made to the customer's specification and production volume was low. Some manufacturers, such as Ferrari and Rolls Royce, still produce cars in this labour-intensive way today. The majority of cars produced today are manufactured in large factories using one of two methods outlined in Table 2.

Table 1 Car industry TNCs.

TNC	Home Country	Other marques
General Motors	USA	Chevrolet, Vauxhall, Opel, Holden (Australia), Saab, Izuzu
Ford	USA	Aston-Martin, Jaguar, Lincoln, Volvo, Land Rover
Toyota	Japan	
Volkswagen	Germany	SEAT, Skoda, Audi
Nissan – Renault	France / Japan	
Fiat	Italy	Alfa-Romeo, Lancia
Peugeot – Citroen	France	
Daimler – Chrysler	Germany / USA	Mercedes
Honda	Japan	
Mitsubishi	Japan	

Table 2 Mass production v. Lean production.

Mass (Fordist) production Pioneered by Henry Ford in Detroit in 1910 Older car factories	Lean production Pioneered by Toyota in Japan in the 1970s Newer car factories
Workers do specific tasks	Multi-skilled, flexible workforce
Workers belong to variety of unions	No unions or a no-strike agreement
Limited range of models produced	Wide range of models produced
Large stocks of component parts	No stocks – use of Just In Time (JIT) system
30 cars per worker per year produced	Up to 50 cars per worker per year produced

European trends

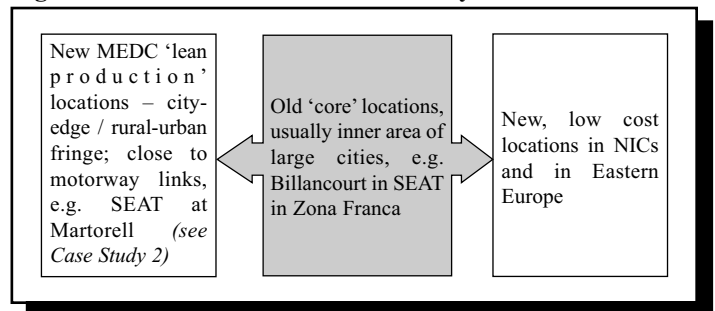
Within Europe, several key trends can be identified:

1. Failure of some companies; particularly ones in the former Eastern Bloc, such as FSO (Poland) and Yugo (Yugoslavia).
2. Mergers / Alliances; smaller producers have tended to join forces to compete with the big global players.
3. Privatisation: once state-owned companies have been sold off to the private sector. Rover and SEAT are good examples.
4. Closure of older, inefficient plants in higher cost areas at expense of lower cost areas in Spain, Czech Republic etc. often resulting in major job losses.
5. Competition between countries to attract new developments, e.g. the new Nissan Micra.

New locations and impacts

The pressure of global competition and the need to be ever more efficient has caused a locational shift in the car industry in Europe (Fig. 1).

Fig. 1 Location shift for the car industry.



New lean production plants in Europe share similar characteristics:

- Large sites, with room for expansion both of the main plant and component suppliers.
- Located on major motorways for lorry access.
- Located near port facilities and/or good rail access for global export.
- Areas of low wages, often without any history of car production.
- Opening new sites and closing old sites has many impacts, some positive and some negative.

Table 3. The impacts of location shift.

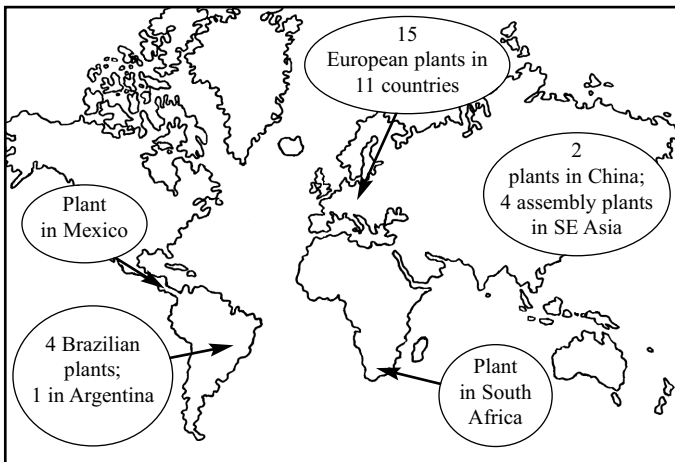
	Social	Economic	Environmental
X	<ul style="list-style-type: none"> • Unemployment. • Younger workers preferred to older ones. • New plants may cause local conflict and NIMBY issues. • Lean production a pressured working environment. 	<ul style="list-style-type: none"> • Job losses at old sites. • Loss of skills, taxes and prestige if old plants close. 	<ul style="list-style-type: none"> • Dereliction – as old plants close. • Air pollution – workers travel by car/bus to city-edge/RUF. • Loss of Greenfield site.
✓	<ul style="list-style-type: none"> • New locations give boost to local services; increase in disposable incomes and opportunities. 	<ul style="list-style-type: none"> • New plants create new jobs. • Most new plants quickly expand; multiplier effect. 	<ul style="list-style-type: none"> • New plants less polluting than old; often landscaped.

Case Study 1: The Volkswagen Group

The Volkswagen group of companies illustrates many of the trends in the European car industry:

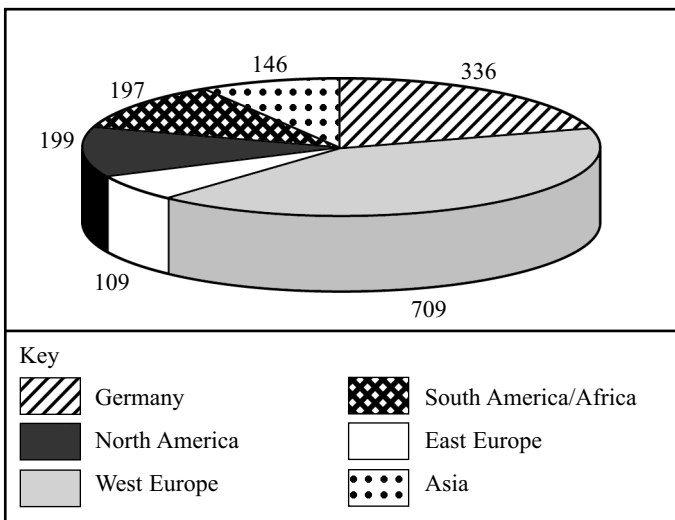
- A global TNC (the 5th largest car manufacturer in the world – selling 12.2% of global sales in 150 countries), which manufactures cars in 41 production and assembly plants in Europe, North and South America, South Africa and Asia. Every 5th car sold in Europe comes from the VW group.
- A merger of several companies from different countries – Audi and VW from Germany, SEAT from Spain, Skoda from Czech Republic, Lamborghini and Bugatti from Italy and Rolls Royce/Bentley from the UK.
- Production that shares parts across the entire model range, which reduces the cost of developing new models and increases customer choice.

Fig. 2. Volkswagen production plants around the world.



Exam hint: There are three annotated maps in this Factsheet. As part of your revision practice your own versions of them. A sketch map is a good way to show your detailed knowledge of case studies.

Fig. 3 VW Group deliveries: January - April 2001 ('000 cars).



Like many TNCs, most of VW's business is outside its home country of Germany, as Fig. 3 shows.

Volkswagen-Audi's global strategy is to produce a large range of cars, for different markets, using a few common floor-plans and engines – called the Module Strategy. Table 4 illustrates this.

Table 4 The VW Module Strategy.

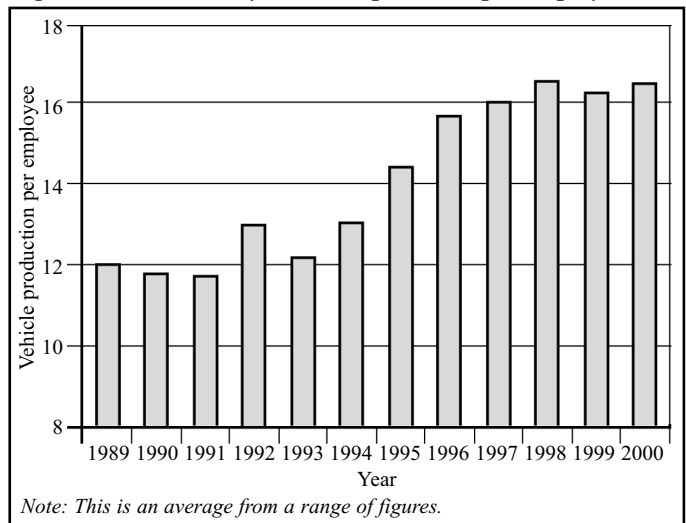
Module →	A0/A00	A	B/C	D
VW	Lupo Polo	Golf Bora Beetle	Passat	
Audi	A2	A3 TT	A4 A6	A8
Seat	Arosa Ibiza Cordoba	Leon Toledo		
Skoda	Fabia Felicia	Octavia	Superb	

The advantages of this strategy are:

- a reduction in the investment needed for new models.
- a reduced number of component suppliers.
- economies of scale.

The Module Strategy has allowed VW to produce cars more efficiently, cut costs and build more automated production lines. This has led to a rapid increase in productivity as Fig. 4 shows.

Fig. 4 VW Productivity (vehicles produced per employee).



Within Europe VW has managed to compete by reducing costs (labour costs fell from 25% of the company's costs in 1993, to 16% in 2000), increasing productivity and seeking out low-cost locations and production strategies.

Under the 'skin', VW Group cars are based on common models, but in terms of image they are very different. Marketing slogans for three company mid brands appeal to very different buyers and strong branding and styling maintains the identity of each once-independent producer:

- Audi – "Vorsprung Durch Technik"
- Skoda – "It's a Skoda, honest"
- SEAT – "Auto emocion"

Case Study 2 looks at one of the VW group factories in more detail.

Case Study 2: The SEAT factory at Martorell

At Martorell SEAT designed their new factory to minimise environmental impact. There are 85,000m² of landscaping and a significant amount of the 5,000 cubic metres of water used each day is recycled.

Car paints are water, not solvent, based and waste liquids are purified before they are discharged. Large car factories are hardly 'green' however. Martorell consumes as much electricity as a city of 100,000 people, and as much water and gas as a town of 40,000.

Fig. 5 Location map of the SEAT factory at Martorell.

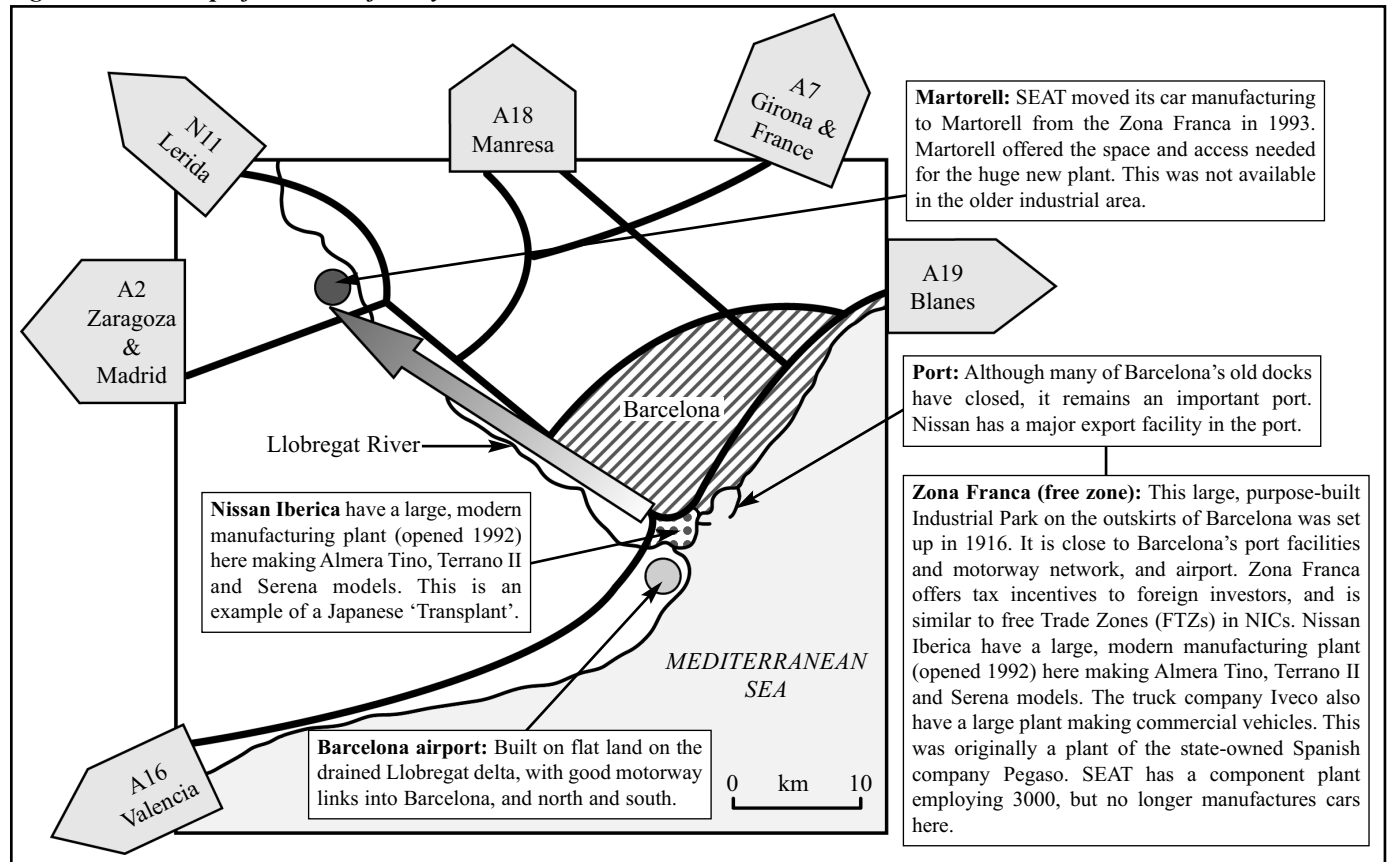
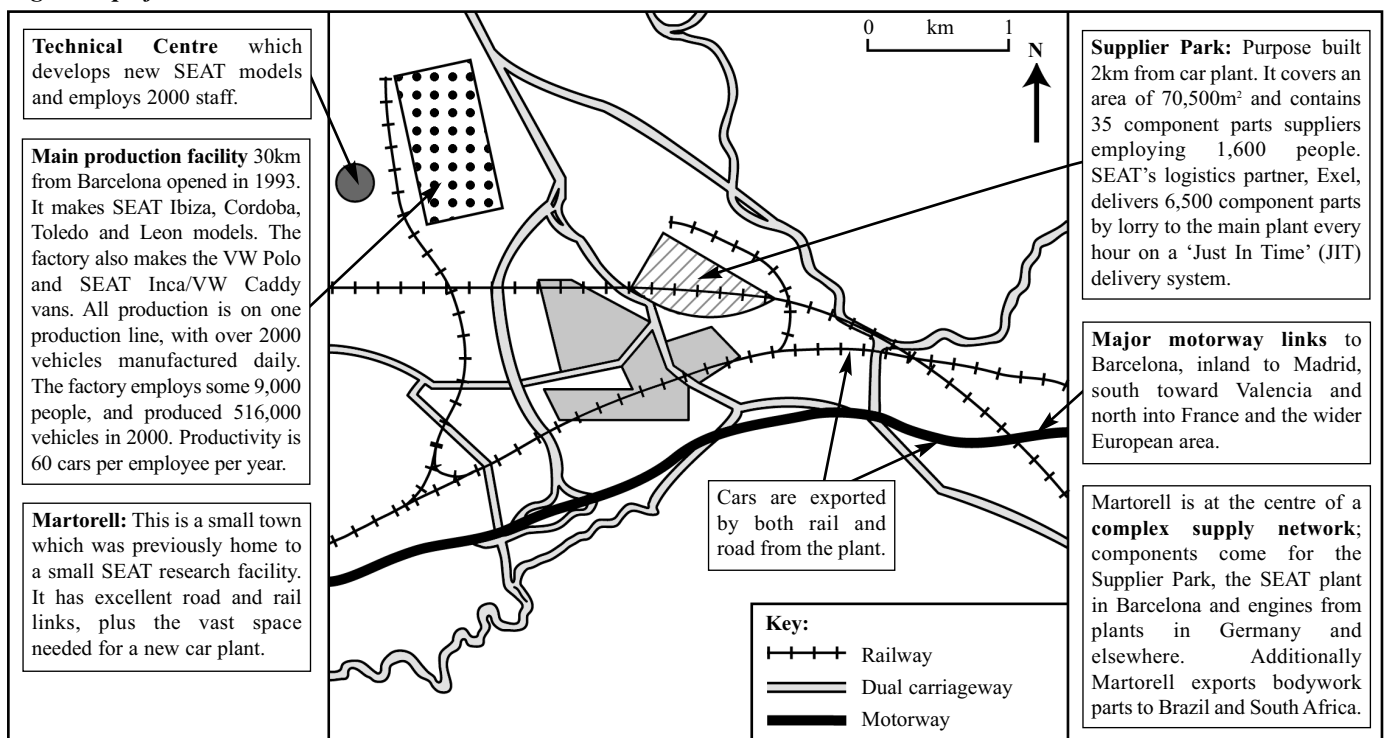


Fig. 6 Map of the Martorell site.



Globalisation V. Glocalisation.

In the 1980s it was common for cars to be manufactured from component parts that came from all over the world. Parts for Ford's escort model came from 15 countries (12 in Europe plus Japan, Canada and the USA). This represented a globalised TNC with a dispersed global network of parts sourcing, manufacturing and distribution.

More recently European and Japanese manufacturers have opened new lean production plants (such as SEAT at Martorell and Nissan at Sunderland) that take a different approach. Parts suppliers are as close as possible to the main production site, allowing for the JIT system to operate efficiently. These sites are 'glocalised' – their car production is not dependant on a complex global supply chain that could be prone to hold-ups, and therefore lost production.

Conclusion

The European car industry has changed remarkably in the last 20 years. Small, often state-owned companies have been privatised and swallowed up by a handful of large companies. The pressures of competition have forced companies to seek new production methods, and this in turn has led to new locations for factories.

In the future, competition is likely to become even fiercer; many of the trends illustrated are likely to continue. Successful companies, and factories, will be those with high productivity and flexibility. Lean production plants such as Nissan in Sunderland and SEAT in Martorell achieve productivity levels of 60+ cars/worker/year; many older European car plants manage under 30.

Exam Questions

1. Define the term 'globalisation'. (2 marks)
2. Referring to an industry you have studied, describe and explain how its location has changed. (10 marks)
3. Using examples discuss the impacts on people and the environment of changing locations of industry. (8 marks)

Answers

1. Definition to include idea of TNCs and global network of operations, taking advantage of low costs and emerging markets.
2. Use *Case Study 1* to show how VW has spread its operations worldwide, from its home base in Europe. *Case Study 2* can be used to show how at a smaller scale, production has shifted from urban to ex-urban locations. Japanese producers (Nissan in Sunderland and Barcelona) have also located in Europe. Explanations should include local factors such as sites, access and labour costs, plus global factors such as competition driving down prices and the need to respond by driving down costs – leading to new 'lean' locations in MEDCs and plants in NICs. Access to restricted markets is a key reason for Japanese transplants in Europe.
3. Both positive and negative impacts are needed here. Structure your answer by using a table or subheadings, to ensure you cover people (social and some economic impacts) and the environment. *Table 3* should give you some ideas, and you can extract factual information from the websites below, both on the new location, for instance Martorell, and areas such as Zona Franca which suffers from plant down-sizing or closure.

Further research

There are several accessible texts on globalisation, all of which deal with the car industry:

Dicken, P. (1992) *Global Shift*. Paul Chapman Publishing.

Nagle & Spencer (1996) *A Geography of the European Union*. OUP.

Knox & Agnew (1998, 3rd ed.) *The Geography of the World Economy*. Arnold.

Useful websites

Many companies have good websites, with details of production, locations and new developments. Often online Annual Reports, in PDF format, are a good source of data.

www.volkswagen.com

www.seat.com

Acknowledgements

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