AQA

A-level
ECONOMICS

Paper 3 Economic Principles and Issues

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The UK automotive industry

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Extract A: The importance of the automotive industry for the UK economy

The automotive industry includes businesses that are involved in the design, development and manufacturing of motor vehicles and their components. In the middle of the 20th century, the UK's automotive industry was the second largest in the world but, in 2022, seventeen countries produced more cars than the UK. Nevertheless, the automotive industry is still an important part of the UK economy. In 2022, the industry produced 876 614 cars and commercial vehicles, 1.5 million engines and employed around 780 000 people. About 80% of the cars produced in the UK are exported. There are approximately 3500 enterprises in the industry. However, most major car manufacturers in the UK are owned by companies based overseas, for example, Jaguar Land Rover is owned by the Indian Tata Group, Nissan and Toyota are Japanese firms and Mini is owned by the German firm BMW.

Source: News reports, January 2024

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Extract B: Selected economic indicators for the UK car industry

Figure 1: Total production, domestic sales and exports of passenger cars manufactured in the UK, number of cars (000s), 2015 to 2023

	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Total production	1587.7	1722.7	1671.1	1519.4	1303.1	920.9	859.6	775.0	905.2
Domestic sales	359.8	373.3	336.6	281.8	247.1	171.9	153.8	168.2	191.3
Exports	1227.9	1349.4	1334.5	1237.6	1056.0	749.0	705.8	606.8	713.9

Source: Statista and SMMT, January 2024

Figure 2: Gross value added (GVA) by motor vehicles manufactured in the UK, £ million, and UK gross domestic product (GDP), £ billion, at current prices, 2015 to 2023

	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
GVA by motor vehicles (£m)	14 929	16 440	17 334	16 340	16 051	13 383	14 702	15 773	–
UK GDP (£bn)	1 916	1 992	2 082	2 152	2 234	2 104	2 284	2 506	2 690

Source: ONS

Figure 3: Number of people employed in the UK automotive industry (000s), 2015 to 2023

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of people	799.0	814.0	814.0	823.0	823.0	864.3	781.8	780.0	–

Source: Statista

Figure 4: UK exports and imports of motor vehicles, £ million, 2015 to 2023

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Exports (X)	34 293	40 110	44 110	44 257	43 579	32 405	35 542	38 574	47 183
Imports (M)	51 915	56 062	57 706	57 991	58 944	44 870	46 103	56 681	68 089
Balance (X–M)	–17 622	–15 952	–13 596	–13 734	–15 365	–12 465	–10 561	–18 107	–20 906

Source: ONS, February 2024

Figure 5: Balance of trade in goods for the UK, £ million, 2015 to 2023

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Balance of trade in goods	–125 318	–139 331	–139 822	–141 290	–144 997	–127 413	–163 426	–217 045	–188 813

Source: ONS, February 2024

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Extract C: The trade in motor vehicles in the UK is evolving

The UK has a persistent deficit on its balance of trade in motor vehicles. The size of the deficit varies and is affected by the macroeconomic environment in domestic and overseas markets. The European Union (EU) is the largest market for UK car exports and the largest supplier of cars imported into the UK. Despite a free trade agreement negotiated when the UK left the EU, complying with EU regulations increases firms' costs.

In the 1980s, Japanese firms such as Nissan, Toyota and Honda were given subsidies by the UK government to persuade them to locate in the UK and were encouraged by the ability to trade freely with other countries in the EU. In 2019, Honda decided to close its plant in Swindon and stop manufacturing cars in the UK.

The UK car industry faces competition at home and overseas. Cars produced in Europe by manufacturers such as Volkswagen, Ford, Renault and BMW, account for the largest share of UK sales. However, cars produced elsewhere are also major players. The South Korean firms Kia and Hyundai are popular in the UK and, more recently, Chinese manufacturers such as MG have gained an increasing share of the UK market. The growing popularity of hybrid and electric vehicles has affected the market and benefited new entrants such as Tesla.

The oligopolistic automotive industry is very competitive. Price matters and is affected by costs of production and exchange rates, but price is not all that matters. Manufacturers differentiate the vehicles they produce. The style of car, its features, warranties, reputation and reliability influence consumer choice.

Source: News reports, January 2024

Extract D: Electric vehicles are the future

Electric and hybrid vehicles accounted for over 30% of the cars manufactured in the UK in 2022, and over 50% of the new cars registered in the UK. By 2035, the sale of new petrol, diesel and hybrid cars in the UK will be banned. In 2020, the government announced it would provide the automotive industry with £2.8bn to support the transition to electric vehicles (EVs). This includes support for investment in the production of batteries, which account for between 30% and 50% of the cost of an EV.

Gigafactories are used for the large-scale production of batteries. It is estimated that the UK's automotive industry will need 100GWh (GWh = Gigawatt hour, a unit of energy) of battery manufacturing capacity by 2030 and 200GWh capacity by 2040. To support the transition to a greener economy, batteries will be required in other industries such as aviation, shipping, rail, energy storage and construction. The UK already has a 2GWh gigafactory in Sunderland but relies heavily on imports for batteries. In 2022, the UK imported £1.8bn worth of lithium-ion batteries, of which around £0.9bn came from China. Some believe that higher government subsidies in other countries deter investment in the UK.

In July 2023, Tata, the owner of Jaguar Land Rover (JLR), announced it would set up a new battery gigafactory in the UK. It is believed that a government subsidy of around £500m, towards a total investment of £4bn, persuaded Tata to locate its gigafactory in Somerset rather than Spain. The factory will create 4000 jobs. It is reported that the Chinese company AESC, which produces batteries in Europe and the USA, will be involved in the project. The expected output of the factory is 40GWh and it will produce batteries for a variety of uses, not just for JLR.

In November 2023, Nissan announced that it will manufacture two new EV models in Sunderland and is investing in a second gigafactory in the area with its partner AESC. Government subsidies will help finance the new gigafactory, which will have an initial capacity of 12GWh.

Lithium-ion batteries are expected to dominate the battery market for the next decade, but it is difficult to predict how changes in technology will affect the market in the long run. Some believe that governments are not good at 'picking winners' and that subsidies distort markets, resulting in inefficiencies and a misallocation of resources. In 2022, UK government debt and the budget deficit were over 100% and 4.7% of GDP, respectively. Is spending to support private sector firms in a high-risk sector of the economy an appropriate use of government funds? Firms manufacturing EVs in the UK could continue to import batteries from Europe and China, but this could make UK vehicle manufacturers less competitive. A domestic supply of batteries would also enhance national security and reduce emissions from transporting batteries produced overseas.

Source: News reports, January 2024

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