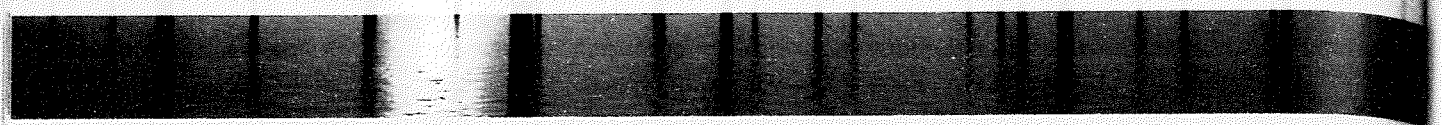
INTEGRATIVE CASE 6

CARS MADE IN BRITAIN, POST-BREXIT



Klaus Meyer
Ivey Business School

While government officials of the UK and the EU were haggling over their future relationship, business leaders had to make strategic decision on how to compete in the future. In particular, the UK car industry was concerned about their ability to move components and finished goods without delays at the border between their factories across the continent. Yet, the extent of such border controls dependent not only on the negotiated agreement between the EU and the UK, but also on the efficiency of the customs authorities to handle controls. Yet, in 2018 neither the agreement not its practical implementation was clear. An interim agreement secured that after March 2019, the existing rules would stay in place for all EU-UK business interactions until December 2020. While negotiations were ongoing, and outcomes were uncertain, executive in the car industry had to make strategic decisions and allocate resources to compete post-Brexit in the UK and/or the EU.

THE UK CAR INDUSTRY

The automotive industry was strategically important for the British economy, notwithstanding that all major producers in the UK were in fact foreign owned. The industry produced 1.82 million vehicles, generated a turnover in 2016 of GBP 77.5 billion, and employed 814,000 people.[1] The largest manufacturer was Jaguar Land Rover owned by the Indian Tata group, which had steadily grown its production and overtook Nissan (from Japan) as the largest producer of cars in the UK in 2017 (Table 1). Other major manufacturers were BMW from Germany, Toyota and Honda from Japan, and Vauxhall, which was sold by General Motors (USA) to PSA (France) in 2017.

UK car makers exported 1.34 million vehicles, and generated export revenues for cars and car components of £35 billion, accounting for about 12% of total UK goods exports. Of the exported cars, 53.9% went to the EU in 2017, including Germany (8.6%), Italy (7.2%) and France (6.7%). The most important

markets outside the EU were the USA (15.7%), China (7.5%) and Australia (2.9%).[2] In addition, car makers produced 2.72 million car engines in the UK, including major engine factories of Ford and BMW that build engines for a range of cars assembled in the EU and elsewhere (Table 2). In the short run, UK exports of cars and car components benefitted from the weaker pound, which lost 15% of its value after the Brexit vote in 2016. Yet, in the longer run, the industry was concerned about possible tariffs and other trade barriers.

Table 1 Major car makers manufacturing in the UK

Jaguar Land Rover	Tata (India)	Halewood, Solihull	532 107	150 000	310 000
Nissan	Nissan (Japan)	Sunderland	495 206	270 000	140 000
Mini	BMW (Germany)	Oxford	214 885	85 000	85 000
Honda	Honda (Japan)	Swindon	164 160	70 000	65 000
Toyota	Toyota (Japan)	Burnaston	144 077	105 000	5000
Vauxhall	PSA (France)	Ellesmere Port, Luton	104 000	30 000	5000
Bentley	VW (Germany)	Crewe	8500	5300	1500
Aston Martin	Independent	Gaydon	4500	1500	1500
Rolls Royce	BMW (Germany)	Goodwood	3600	2200	1100
Total			**1 671 000**	**719 000**	**615 000**

Sources for Tables 1 and 2: (1) Society of Motor Manufacturers and Traders, 2018, SMMT Motor Industry Facts 2017; (2) company websites; (3) Export data are approximated based on percentages reported in Deloitte, 2017, Navigating Brexit in the Automotive Sector, July, P. Campbell & K. Inagaki, 2017, Toyota and Nissan take different roads to Brexit, Financial Times, March 16, and news reports. Columns do not add up, as estimates are rough approximations.

Table 2 Engine manufacturing in the UK

Ford	Dagenham, Bridgend	1 600 000
Nissan	Sunderland	270 000
BMW	Hams Hall	260 000
Toyota	Burnaston	240 000
Jaguar Land Rover	Castle Bromwich, Wolverhampton	200 000
Honda	Swindon	130 000
Total		**2 722 000**

The UK car market was one of the largest in Europe with 2.7 million new car registrations in 2016, though falling to 2.5 million in 2017. About 80% of cars sold in the UK were imported. The leading importers were Ford (287 000 cars sold in 2017), followed by Volkswagen (208 000), Mercedes-Benz (181 000), BMW (175 000) and Audi (175 000). Of the imports, 69% came from the EU, including cars by Ford and BMW that used engines made in the UK. Vauxhall was the leading brand with a final assembly line in the UK (195 000 cars), followed by Nissan (151 000) and Toyota (102 000).[3] With Brexit, British motorists faced the prospect of only paying higher prices for imports due to the weaker pound, but in addition paying 10% tariffs if no new free trade arrangement was negotiated.

The EU charged import tariffs of 10% on cars, of 2.7% on car engines and of 3.0% to 4.5% on other car components.[4] Under WTO rules, these tariffs would apply equally to all trading partners that are WTO members because of the most favoured nation principle. Thus, if the UK and the EU did not agree a free trade area or customs union, these tariffs would apply to all exports and imports between the EU and the UK. Yet, this was a worst-case scenario, as there was still hope that a trade agreement was reached. However, even without tariffs, border inspections to verify country of origin and/or regulatory compliance would substantially reduce the flexibility and efficiency of their European supply chains.

One motivation for Brexit was for the UK to regain control over regulation of issues such as product safety and labour standards. However, if the UK was, for example, changing regulation of vehicle safety or emission standards to deviate from EU rules, then it was no longer secured that UK-made cars could automatically be sold in EU markets. Without an alignment of standards between the EU and the UK, shipments between the two territories would require extensive documentation that would have to be checked when crossing borders. These procedures were expected to significantly increase to the risk of supply chain disruptions, a major challenge in an industry that pioneers just-in-time supply chain management practices. Thus, like other car industry representatives, Honda was lobbying the government to retain EU standards or to create an EU-recognized certificate stating that vehicles are cleared for sale in the EU.[5]

The automotive industry was more than other industries concerned about the prospect of border checks because it had come to rely on pan-European supply chains. Production units in different countries were specializing on different components or product types, with extensive flows of both components and completed cars across borders. At the same time, operations were tightly with integrated operations based on the principle of 'just in time' delivery of components to the plant where they were needed. Arguably, the UK automotive industry had been one of the main beneficiaries of the EU common market because it was effectively accessing resources and markets across Europe.

Cars made in the UK on average contained only 44% of components made in the UK. Of the remainder 79% were imported from the EU and 21% from other countries such as Japan.[6] A frequently cited example was the journey of a crankshaft across Europe for a Mini car. The cast for the crankshaft was made by a supplier in Haute-Marne in France, and then shipped to Hams Hall in the UK for the casting of the crankshaft, which was shipped to BMWs engine plant in Steyr, Austria. The complete engine was then shipped to Oxford to be fitted into a Mini car. If that Mini were then sold to the EU, the crankshaft would cross the English Channel for the fourth time.[7] Another example is a bumper for Bentley cars, a premium brand owned by VW. It was made in Eastern Europe, then processed first in the UK and then in Germany before returning to the UK where it became part of a luxury car.[8]

Disruptions to this supply chain would arise not only from tariffs but from border controls on trucks crossing the border. For example, Honda estimated that a 15-minute delay to each truck at the border in Dover would add £580 000 to its operating costs.[9] Moreover, Honda predicted that it would need much large storage facilities to secure smooth operation of the production line. Its warehouses near Swindon stored parts to keep the production running for 36 hours, and 2 million parts arrived every day. If supplies from the EU needed longer to arrive, and scheduling became less predictable due to border controls, Honda would have to increase its warehouse capacity to nine days of supply, which would require a warehouse the size of 42 football pitches.[10] Thus, both the fixed costs of warehouse infrastructure and the working capital tied up in inventory would increase, making Honda's UK operation more costly.

One option would be to localize the supply chain. Nissan's senior vice president Colin Lawther argued that the ability to source components within the UK was a key constraint to maintain its operations in the UK. This would however require substantive investments by these suppliers in setting up operations in the UK; Lawton suggested a need of £100 million in subsidies for this supply chain localization.[11] For labour-intensive processes, the cost increases might be small due to lower labor costs in the UK after the currency devaluation and rising labour costs in Eastern Europe. Yet, the new UK supplier plants would enjoy much lower economies of scale and hence higher unit costs then components made in a specialist plant serving all of Europe – especially for capital intensive manufacturing processes.

Market access to the EU for the finished product was a particular concern for Japanese car makers Toyota, Nissan and Honda, who had developed their UK operations as platforms to serve markets across the EU. Of the cars they produced in the UK, Toyota exported 75% to the EU while Nissan exported 55% to the EU (Table 1).[12] The issue was of such concern to Japanese manufacturers that Prime Minister Shinzo Abe raised the prospect of them relocating in case there was no viable deal between the EU and the UK. Japan's ambassador Koji Tsuruoka added on the BBC "*if there is no profitability of continuing operations in the U.K. - not Japanese only - no private company can continue operations. It's as simple as that. These are high stakes that I think all of us need to keep in mind.*"[13] Nissan's CEO Carlos Ghosn met with Prime Minister Theresa May already in October 2016 and obtained a written assurance – details of which were not published – that Nissan would enjoy the same trading conditions as before Brexit.[14] How the government was to ensure this was subject to speculations in the media.

Similarly, Ford was concerned about the viability of its UK engine and transmission plants, which supplied engines to its assembly plants in Germany, Spain, Turkey and other locations. Ford had closed its mini-van assembly line in the UK in 2013 and concentrated all mini-van production for European markets in Ford Otosan, a joint venture in Turkey. This arrangement benefited from the customs unions between the EU and Turkey: engines were shipped from the UK to Turkey, where labour costs were much lower. Completed vans were then shipped from Turkey to customers across Europe. If the UK was no longer part of that customs union, the viability of the business model was in question. Another concern was that UK-made engines would no longer count as EU-content as required to avoid tariffs when exporting from the EU under bilateral trade agreements to, for instance, Switzerland and South Africa.[15] Adding up the various costs, Ford's European CEO expected a huge bill under the worst case scenario: '*If we went to WTO levels of tariffs plus the other costs that would come into the system through the increased inventory and the friction at the border and everything else, the annual cost to us would be getting up toward $1 billion worth of tariffs.*'[16]

In response to possible trade barriers, car makers were considering to move some of their production to elsewhere in the EU, and to serve the UK market either through imports of finished cars, or through sub-scale local plants. This would increase the costs of cars for UK consumers, but facilitate sales in the much

larger EU market. The issue was particularly pressing for Vauxhall. Along with Opel in Germany, Vauxhall had been owned by General Motors since the 1920s. Yet, in recent years, the European operations had failed to achieve profitability despite repeated restructuring initiatives. Thus, General Motors sold both Opel and Vauxhall to PSA of France in 2017. The new owners were determined to turn around the companies. One way to enhance efficiency would be to reduce the number of production sites across Europe. In this situation, UK workers feared to be in a weaker bargaining position than their German counterparts. In late 2017, Vauxhall laid off 650 people at its plant in Ellesmere Port (near Liverpool).[17] Yet, workers had not given up hope. They were lobbying PSA to locate the production of the next Astra model in Ellesmere Port.

Sources: (1) Economist Intelligence Unit, 2018, A year to go: How Brexit will affect UK industry, www.eiu.com, accessed May 2018 (page 22); (2) Society of Motor Manufacturers and Traders, 2018, 2017 UK car manufacturing declines, January 31; (3) www.Best-Selling-cars.com, accessed June 14, 2018; (4) European Commission, 2018, Market Access database, http://madb.europa.eu/madb/euTariffs.htm, accessed June 2018; (5) Economist Intelligence Unit, 2018, A year to go: How Brexit will affect UK industry, www.eiu.com, accessed May 2018 (page 23); (6) Economist Intelligence Unit, 2018, A year to go: How Brexit will affect UK industry, www.eiu.com, accessed May 2018 (page 25); Society of Motor Manufacturers and Traders, 2018, SMMT Motor Industry Facts 2017; (7) S. Ring & C. Jasper, 2018, Layoffs arrive in Brexit Britain, and auto workers are up first, Bloomberg, February 16, www.bloomberg.com, accessed June 16, 2018; (8) G. Ruddick & P. Oltermann, 2017, A Mini part's incredible journey shows how Brexit will hit the UK car industry, The Guardian, March 2017; (9) P. Campbell, 2017, Carmakers fear Brexit customs checks will cost 'tens of millions', *Financial Times*, November 9; (10) A. Barker & P. Campbell, 2018, Honda faces the real costs of Brexit in a former Spitfire plant, *Financial Times*, June 26; (11) G. Ruddick & P. Oltermann, 2017, A Mini part's incredible journey shows how Brexit will hit the UK car industry, The Guardian, March 2017. (12) P. Campbell & K. Inagaki, 2017, Toyota and Nissan take different roads to Brexit, Financial Times, March 16; (13) BBC News, 2018, Japan's ambassador says Brexit is high stakes for his country's investors (Video), February 8. www.bbc.com/news/av/business-42991307/japan-s-ambassador-says-brexit-is-high-stakes-for-his-country-s-investors; (14) P. Campbell & K. Inagaki, 2017, Toyota and Nissan take different roads to Brexit, Financial Times, March 16; (15) P. Campbell, 2017, Carmakers fear Brexit customs checks will cost 'tens of millions', Financial Times, November 9; (16) C. Pitas, 2018, Ford calls for Brexit clarity to help it make UK investment decision, Reuters, March 5; (17) S. Ring & C. Jasper, 2018, Layoffs arrive in Brexit Britain, and auto workers are up first, Bloomberg, February 16, www.bloomberg.com, accessed June 16, 2018.

As CEO of UK operations of a car maker (Jaguar, BMW, Nissan or Vauxhall), how would you handle the following challenges?

- The next generation model of your best selling car is due to be introduced in one year. To remain on schedule you need to take a decision now whether to invest in upgrading your UK factories. How would you argue with corporate headquarters not to delay the decision?
- Global headquarters are planning to introduce electrical engines, and are looking for proposals from country managers where to locate the engine plant. How are you going to convince corporate headquarters to choose your UK plant rather than a plant in Slovakia?
- What initiatives would you take to ensure that your supply chain will remain efficient and reliable after Brexit?
- How should you set up your European organizational structures to compete in both UK and EU markets in the future?