

Deloitte Brexit Briefing | 6  
Hard Brexit and the Supply Chain -  
Effects on German automotive suppliers

January 2018

# Deloitte Brexit Briefings

## Perspectives on Brexit

### Deloitte Brexit Briefings Series

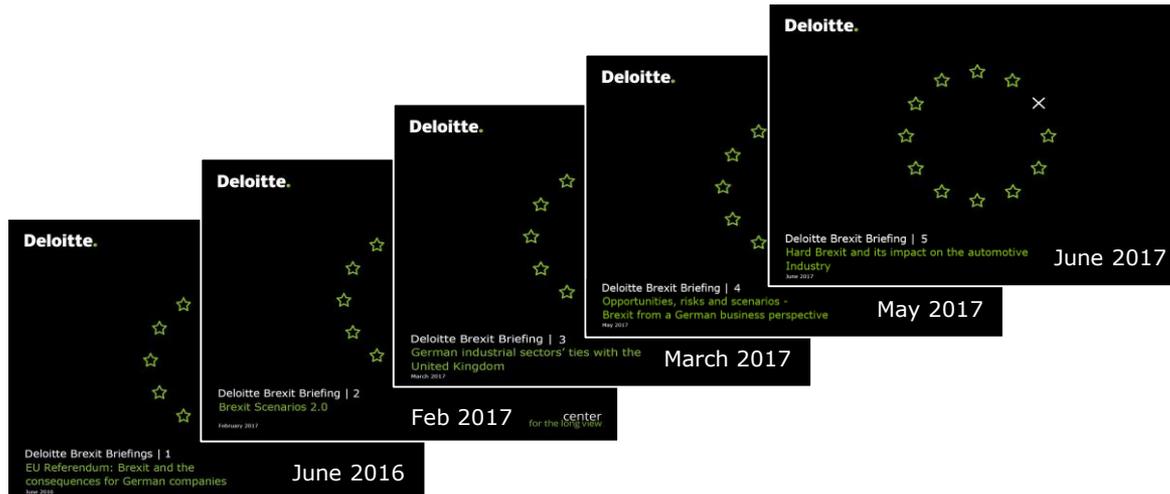
The United Kingdom's decision in June 2016 to leave the EU will have a far-reaching economic and political impact. For German companies, Brexit means a fundamental change in the business environment.

*Deloitte Brexit Briefings* examine the core Brexit themes and risks from economic, strategic, taxation and legal perspectives, and are intended to provide orientation about the complex effects of the Brexit and the Brexit process.

### The current edition

In the current edition, "Hard Brexit and the Supply Chain - Effects on German automotive suppliers", we analyse how a hard Brexit would hit German automotive suppliers. We aim to show the interdependence of the British and European automotive industries, and to illustrate the effects of the Brexit on revenue and employment for German suppliers.

We will make the impact clear by comparing developments in the British automotive market without Brexit against the effects of a hard Brexit at the time of the expected EU exit in 2019 or after transition period.



# Key questions und study design

## Modelling the effects of a hard Brexit on German supply chains

### **Key questions:**

**How are German suppliers interlinked with the United Kingdom?**

**What effect does a hard Brexit have on German automotive suppliers?**

### **Study design:**

#### **1. Illustrating the relevance of the United Kingdom for German suppliers:**

- a. **Direct supplier relationships between German suppliers and automotive manufacturers in the UK**
- b. **Indirect supplier relationships due to delivery of car parts to German and other European manufacturers who export their cars to the UK**

#### **2. Modelling revenue development for German suppliers under a hard Brexit scenario (2019):**

- a. **Using the *Deloitte Automotive Brexit Model*: sales developments for automotive manufacturers in the United Kingdom, Germany and other EU countries with and without Brexit**
- b. **Sales and/or revenue developments for automotive manufacturers are fed into a macroeconomic *Input-Output Model*: this illustrates the manufacturing interdependence between German suppliers and automotive manufacturers in the UK, Germany and other EU countries**
- c. **Comparison of revenue and sales figures between hard and no Brexit shows the effects on revenue and employment for German suppliers under the conditions of a hard Brexit**

# Interdependence | Supplier relationship with UK

The United Kingdom is the most important sales market in the European Union for German suppliers



**Export volume from Germany to UK: EUR 4.6 billion (2016)**

- ▶ **Germany is the largest exporter of car parts to the United Kingdom**



**One in five car parts installed in the UK originates from German manufacture**

- ▶ **UK is the largest sales market in the EU for German suppliers**



**Suppliers in Germany manufacture 50% of the car parts for German export cars and 8% of components for European export cars to the UK**

- ▶ **Revenue of German suppliers from share in car exports to UK (indirect relationship): EUR 9.6 billion (2016)**



**Direct and indirect revenues for German suppliers due to British automotive market**

- ▶ **EUR 16.9 billion (2016)**



**Direct and indirect employment in German suppliers due to British automotive market**

- ▶ **42,500 employees (2016)**

# Summary | Key results of the study

A hard Brexit – without any trade agreement and WTO duties – would decrease the revenues of German suppliers by EUR 3.8 billion in 2019



## **Total effect of a hard Brexit on car sales of European car manufacturers<sup>1</sup> (EU+UK)**

▶ **Around 770,000 fewer cars sold in 2019 or after transition period, corresponding to around 4% of the EU's current automotive manufacture (2016: 17 million cars)**



## **Total effect of a hard Brexit on revenue for European car manufacturers<sup>1</sup> (EU+UK)**

▶ **Revenues for European automotive manufacturers would decline by around EUR 20.0 billion in 2019 or after transition period**



## **Total effect of a hard Brexit on revenue for German suppliers**

▶ **The decline in revenue due to decreased car sales would amount to EUR 3.8 billion, which is 5% of total current sales in the German supplier sector (2016: EUR 76 billion)**



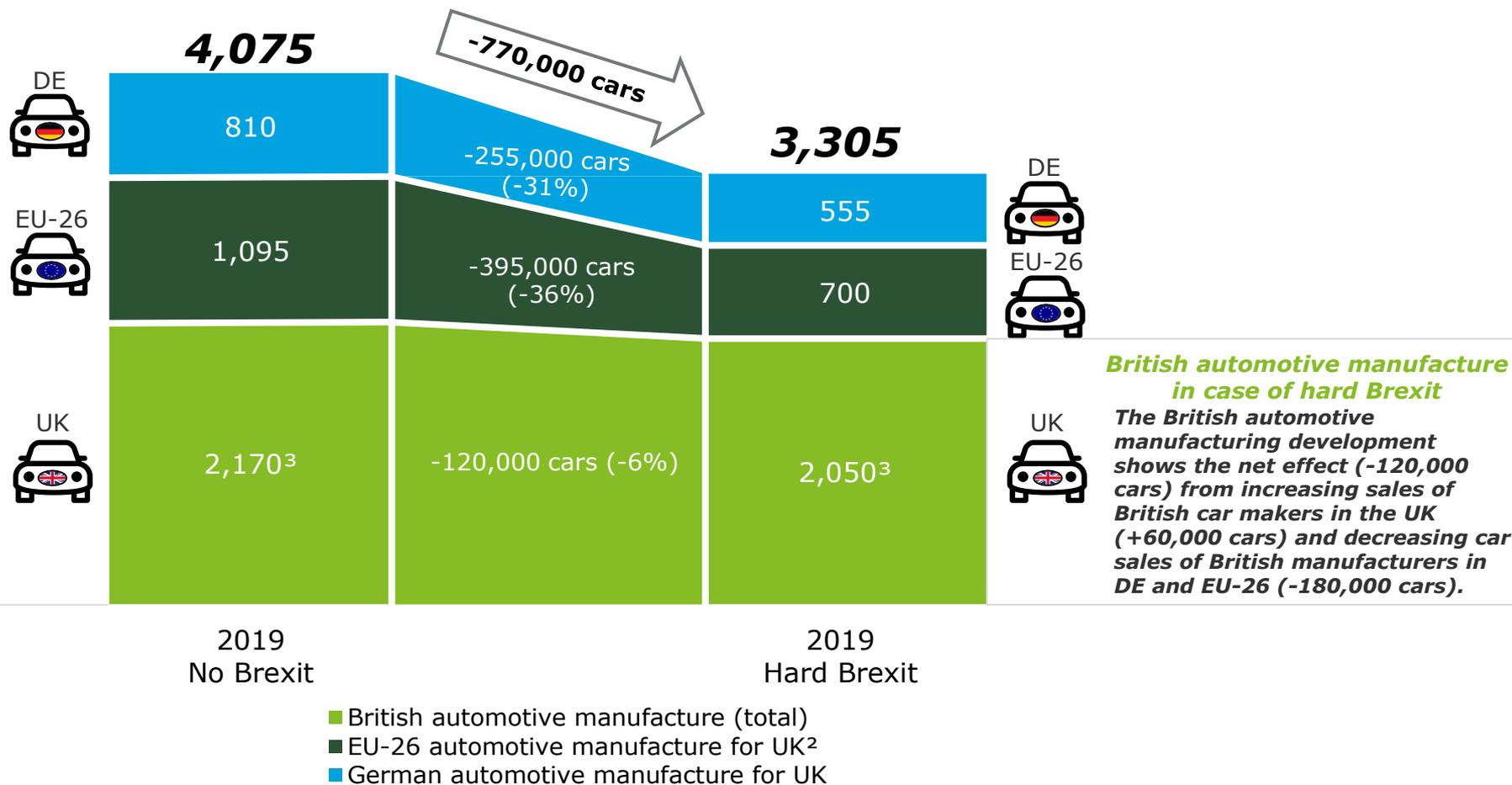
## **Effect on employment in German suppliers**

▶ **The revenue slump for German suppliers in the case of a hard Brexit would threaten around 14,000 jobs in Germany**

# Summary | Effect on car sales and manufacturing in UK

A hard Brexit would mean that around 770,000 fewer cars would be sold in the EU and UK in 2019

German und EU-26 car production for UK and production volume in UK (in thousands)<sup>1</sup>

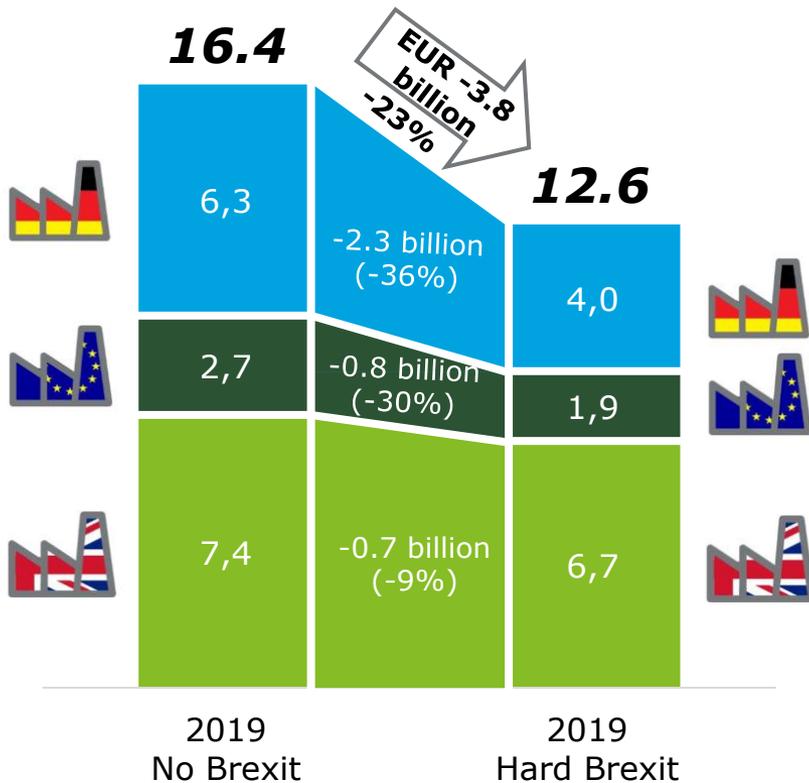


Deloitte 2018 Note: 1) Sales figures include cars and light commercial vehicles; 2) EU-26 refers to all EU Member States excluding Germany and the United Kingdom; 3) Total manufacturing volume in UK (incl. export volume)

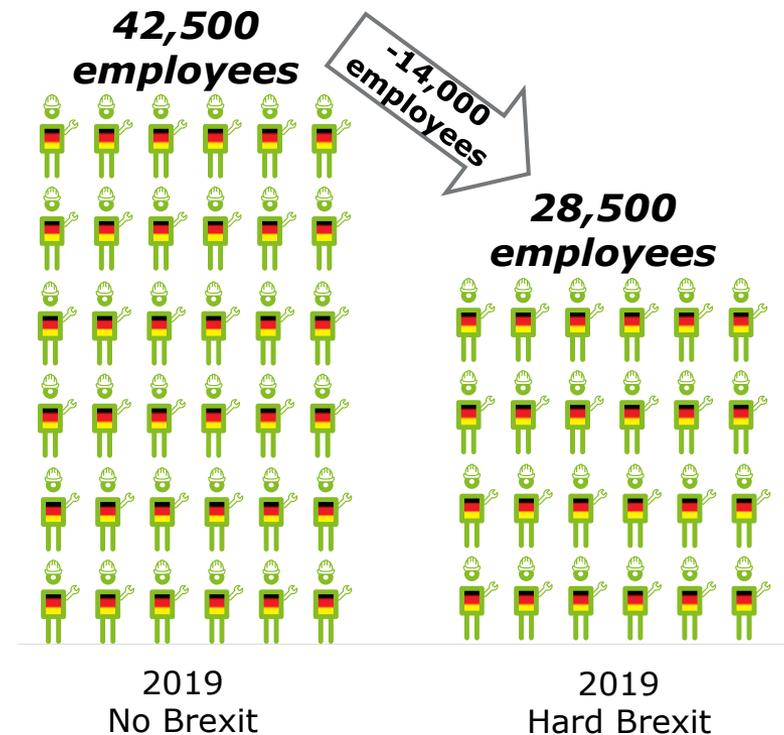
# Summary | Effect on German suppliers

The sales slumps directly affect the supply chain and threaten revenue and employment for German suppliers

Revenue for German suppliers due to British-European trade (in EUR billions)



Employment in automotive suppliers in Germany due to British-European trade



- Revenue from supplier relationship with DE automotive manufacture for UK<sup>1</sup>
- Revenue from supplier relationship with EU-26 automotive manufacture for UK<sup>2</sup>
- Revenue from supplier relationship with British automotive manufacture<sup>3</sup>



# **German automotive suppliers**

Current interdependence with the  
United Kingdom

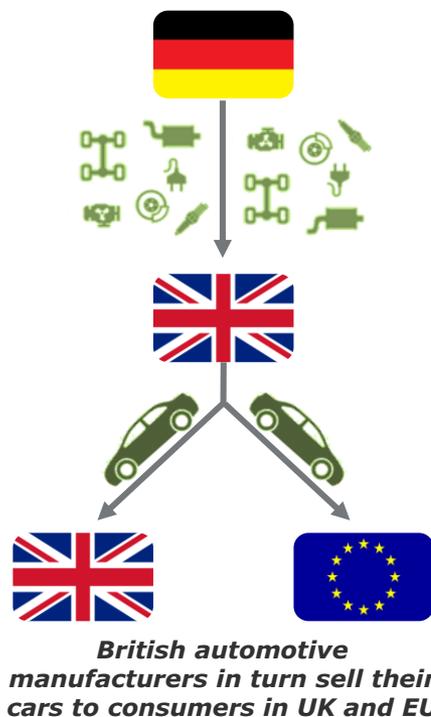
# German supplier sector | Interdependence with UK

German suppliers are interlinked in direct and indirect ways with the United Kingdom

## 1. British automotive manufacturing

### Direct relationship with UK

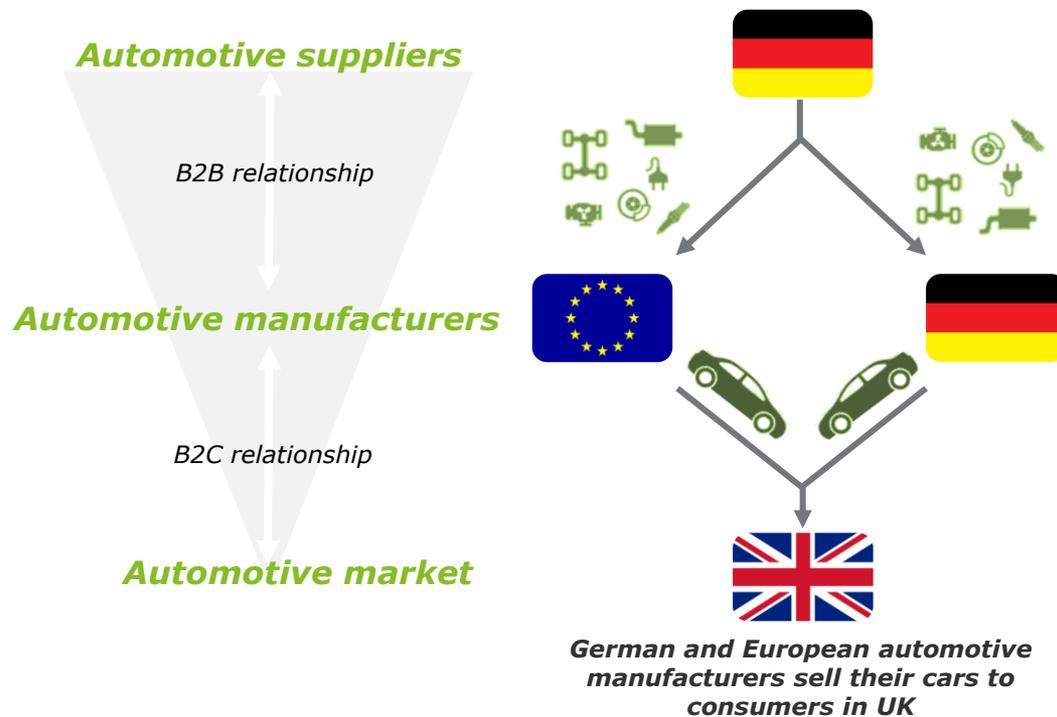
German suppliers deliver car parts to British automotive manufacturers<sup>1</sup>



## 2. British automotive market

### Indirect relationship with UK

German suppliers deliver car parts to German or other European automotive manufacturers

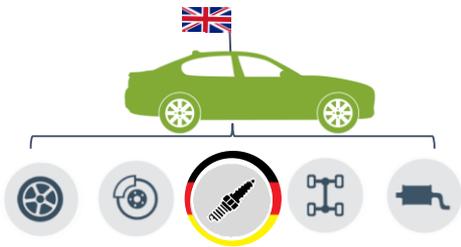


**The rule is: if car sales fall for British and European automotive manufacturers as a result of the Brexit, sales for German automotive suppliers will necessarily fall as well**

# German supplier sector | Direct relationship with UK

The United Kingdom is the largest sales market within Europe for German automotive suppliers

One in five car parts installed in the UK originates from German manufacture (18%)



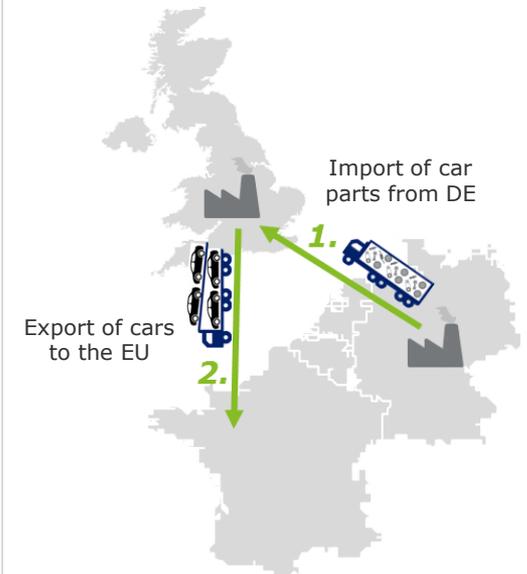
With an import value of EUR 4.6 billion, **Germany is the largest exporter of car parts to the UK**

As well as exporting from Germany, around 30 of the largest German auto suppliers manufacture in the UK



German suppliers located in the UK generate annual revenue of around EUR 2.7 billion

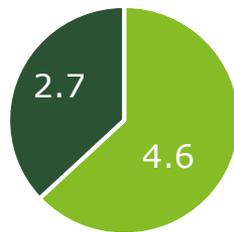
The majority of the 1.8 million cars manufactured in the UK contain car parts from German suppliers



Export of cars to the EU

Import of car parts from DE

Direct revenue of German suppliers from UK automotive manufacture (in EUR billions)



Total sales: EUR 7.3 billion

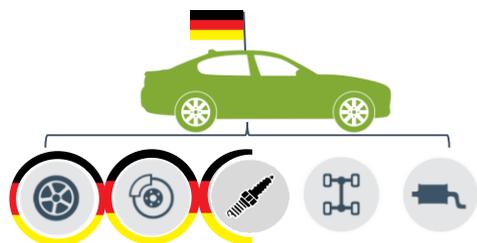
■ Revenue from German exports to UK

Almost half of the vehicles fitted with German car parts are then exported to the EU (44%)

# German supplier sector | Indirect relationship with UK

## Two thirds of new cars in Britain originate in the EU – Almost all of these cars contain parts from German suppliers

**Almost half of the car parts installed in Germany originate from German suppliers (46%)**



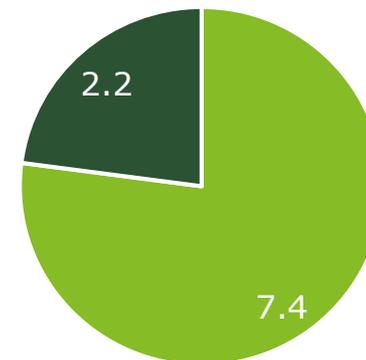
**Of the cars manufactured in Germany, in turn more than one in ten go to the UK (14%)**



**German car exports to the UK generate orders for DE suppliers amounting to EUR 7.4 billion**

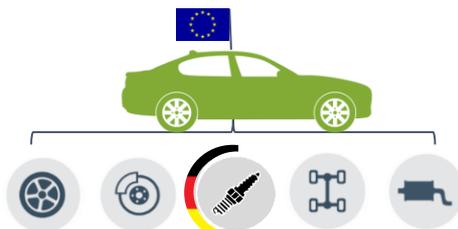
**Indirect revenue of German suppliers due to German and European automotive exports to UK in EUR billions**

**Total sales: EUR 9.6 billion**



- Indirect revenue from German car exports to UK
- Indirect revenue from European car exports to UK

**Around one in ten car parts installed in EU-26 countries<sup>1</sup> originates in Germany (7.5%)**



**Around 8% of cars manufactures in EU-26 are exported to UK**

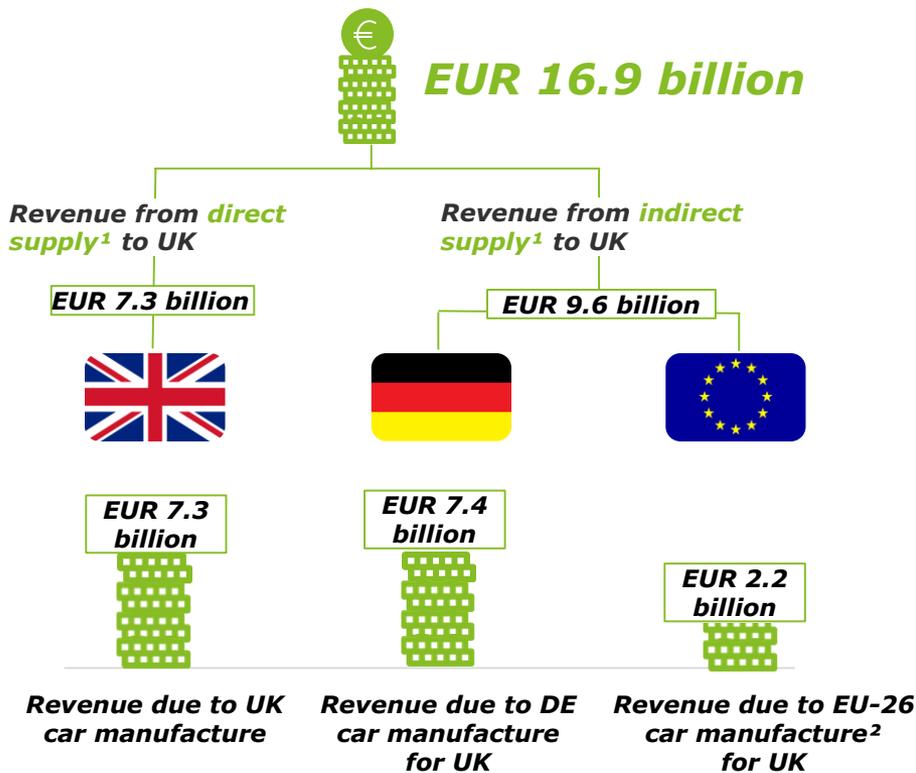


**EU car exports to the UK generate orders for DE suppliers amounting to EUR 2.2 billion**

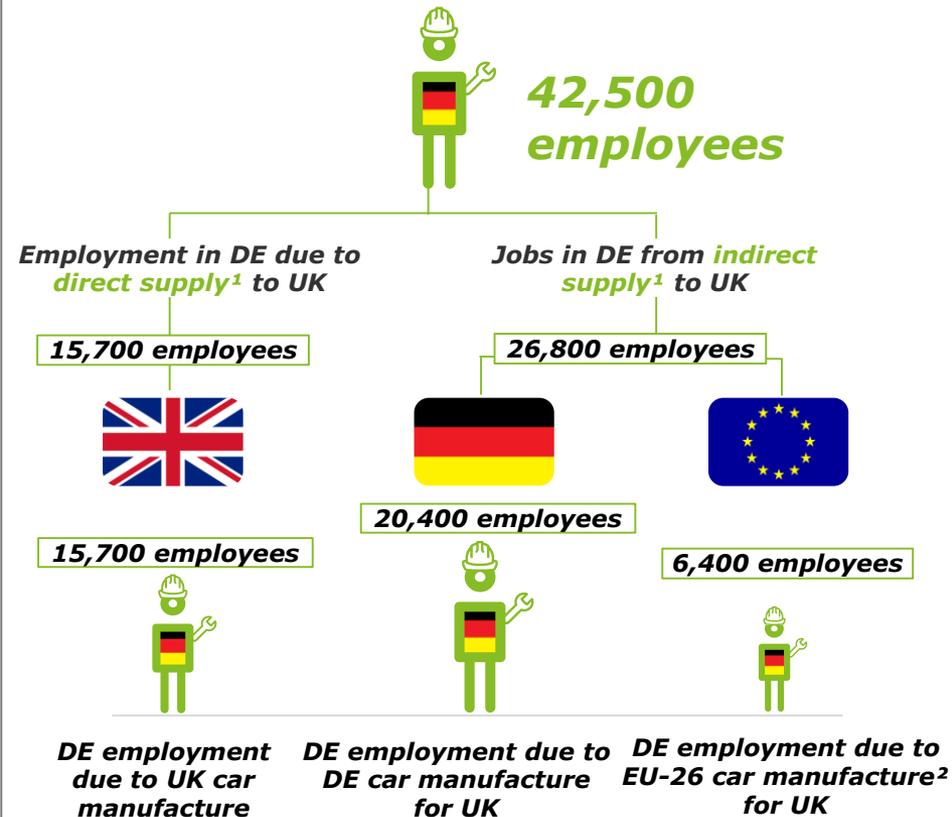
# German supplier sector | UK-dependent revenue & jobs

In Germany, 42,500 employees in the supplier sector depend on trade with the UK

**Revenue for automotive suppliers in Germany based on British-European automotive trade**



**Employment in automotive suppliers in Germany based on British-European automotive trade**



Sources: Destatis, Comtrade, Deloitte; reference year: 2016

Deloitte 2018 Note: 1) Definition of direct and indirect supplier relationships: see slide 9; 2) EU-26: EU Member States excluding United Kingdom and Germany 12



## **Implications**

The effect of a hard Brexit on  
German automotive suppliers

# Automotive manufacturers | Price developments

Due to WTO duties and devaluation of the pound, prices go up for European cars in the UK by 21%, UK cars in the EU by 13%

Average price development in case of a hard Brexit (€ and %)



**Price development UK**  
In case of a hard Brexit, prices of UK cars in DE/EU-26 increase less than car exports from DE/EU-26 to UK. The devaluation of the pound benefits UK manufacturing due to lower labour costs, but they are faced with increased costs of materials and upcoming WTO duties.



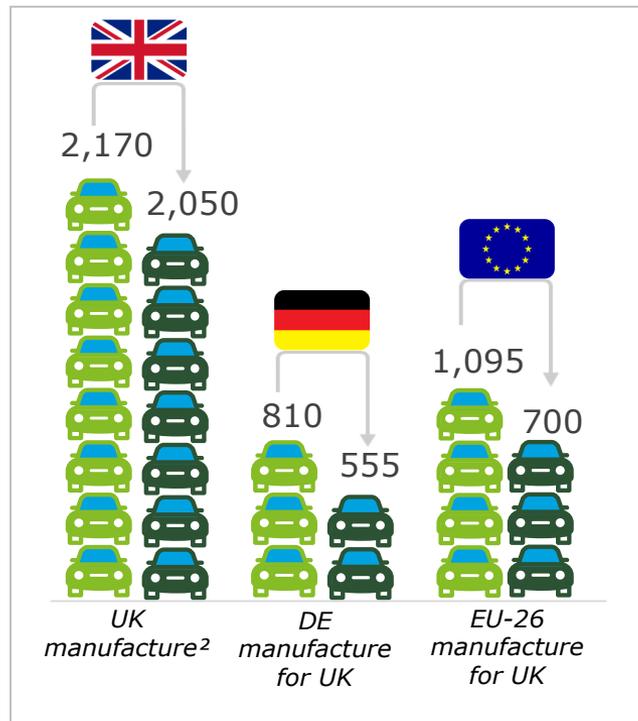
**Price development DE/EU-26**  
Prices for cars from DE and EU-26 increase, particularly due to the strength of the euro against the pound, and additionally due to upcoming WTO duties (+21%).



# Automotive manufacturers | Car sales and revenue in UK

## Increasing prices for export cars first affect automotive manufacturers' sales and revenue

German und EU-26 car *production for UK and production volume in UK* (in thousands)<sup>1</sup>

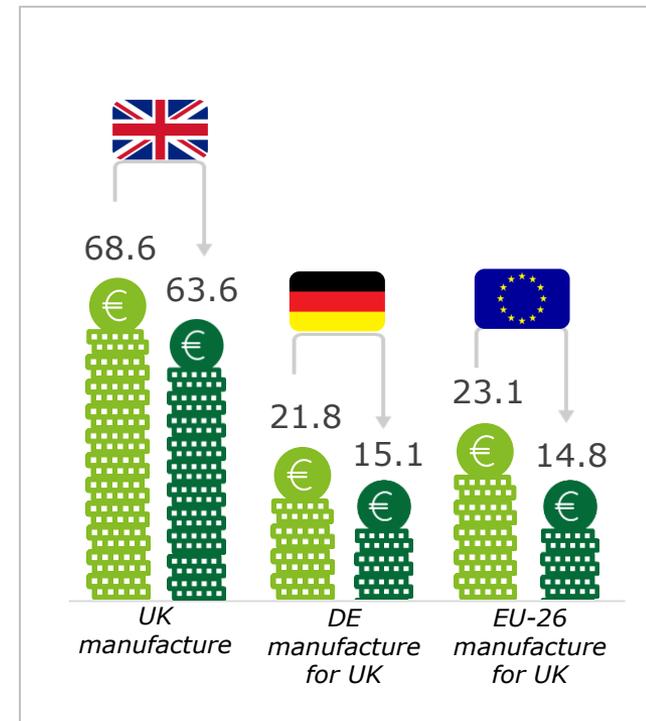


**Total effect on British and European car sales:**

**-770,000 cars**

- 2019 - No Brexit
- 2019 - Hard Brexit

Revenue of *automotive manufacturers* by manufacturing region (in billion EUR)



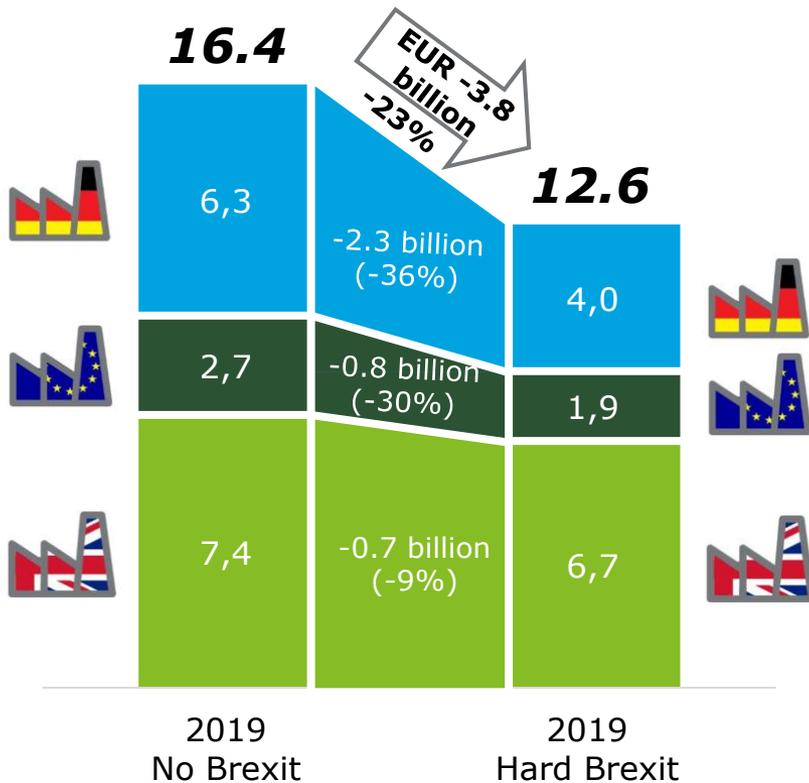
**Total effect on revenue of British and European automotive manufacturers:**

**-EUR 20.0 billion**

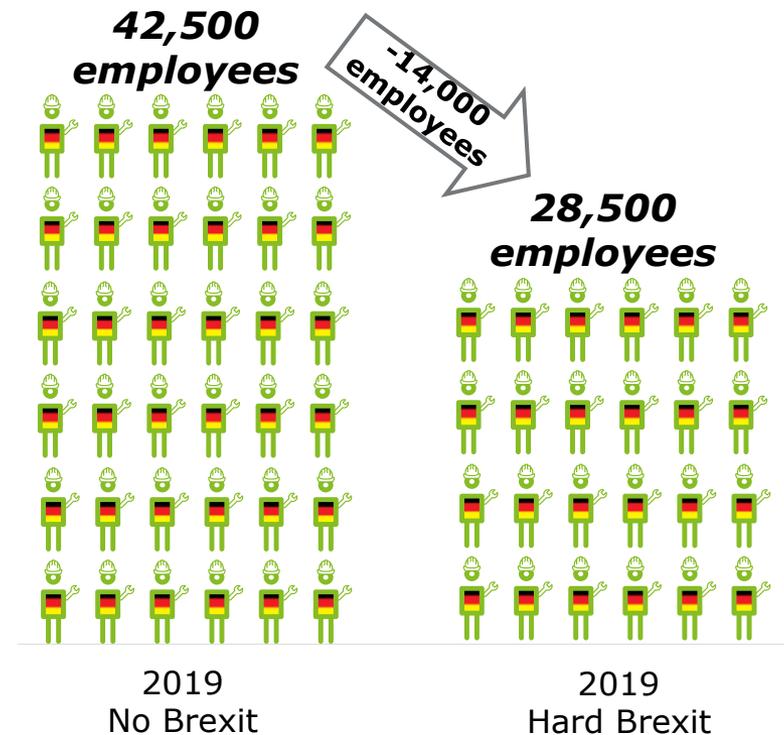
# Automotive suppliers | Supplier job developments

The sales slumps affect the supply chain indirectly and lower revenue and employment for German suppliers

**Supplier revenues in Germany by manufacturing region (in EUR billions)**



**Automotive supplier employment in Germany due to British-European trade**



- Revenue from supplier relationship with DE automotive manufacture for UK<sup>1</sup>
- Revenue from supplier relationship with EU-26 automotive manufacture for UK<sup>2</sup>
- Revenue from supplier relationship with British automotive manufacture<sup>3</sup>

# Automotive suppliers | Further challenges

Apart from sales slumps, many automotive suppliers will be faced with further challenges

## *Short-term challenges after Brexit*



### **Administrative burden**

As well as paying duties, suppliers must take into account increasing administrative costs due to customs clearance. The German Chamber of Commerce and Industry (DIHK) estimates that German companies face approx. 15 million new customs documents and annual costs of EUR 500 million.



### **Delays**

Longer wait times and potential delays in delivery times should be expected due to recurring border and customs controls. Just-in-time deliveries will be threatened by this in future, which is why we recommend building up additional warehouses and inventories.



### **'EU Origin'**

Currently, all components manufactured or processed in the UK are classified as 'local content' for vehicles manufactured in the EU. The proportion of these is critical in the recognition of duty-free products within a free trade agreement. Brexit means the UK exits from all EU free trade agreements and opens the 'local content' of many manufacturers to debate.

## *Medium and long-term challenges after Brexit*



### **Contract negotiations**

In the medium term, there will be further contract negotiations between manufacturers and suppliers. Due to WTO duties and exchange rate fluctuations, suppliers on the other side of the Channel could face price pressure. According to a survey by the Chartered Institute of Procurement & Supply (CIPS), 40% of British companies would replace their EU suppliers with UK ones in case of a Brexit.



### **Regulations**

In the long term, differing product standards in the United Kingdom must be assumed. Companies must factor in rising costs due to different standards, as well as financial and time-related expenses for licensing and patent procedures.

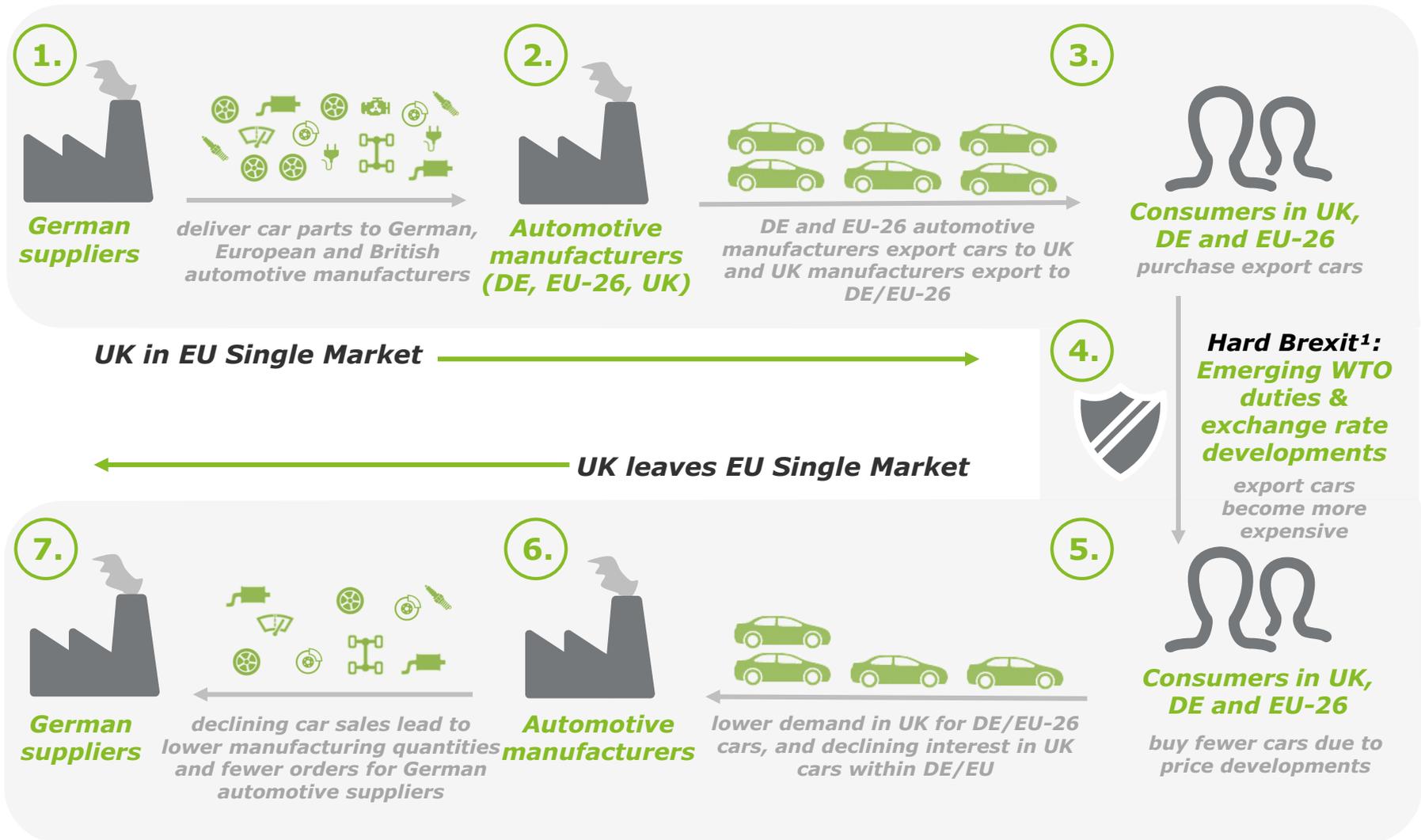


# Methodology and modelling

Market model and  
input-output analysis

# Causality

## Chain of effects from Brexit on German suppliers



# Scenarios

Hard Brexit scenario is influenced by two factors:  
WTO duties and pound exchange rate

## WTO Duties

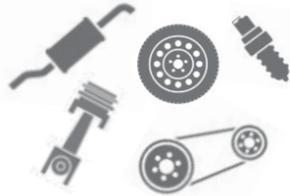
*In the case of a hard Brexit, trade between the EU and UK would initially fall under the customs conventions of the World Trade Organization (WTO):*

### Vehicles



~10%

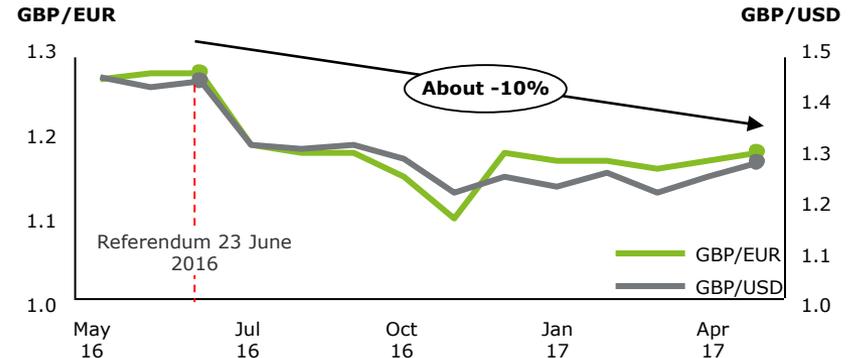
### Vehicle parts



~4,5%

## Development of the pound

*Since the Referendum, the British pound (GBP) has been devalued by approx. 10% on average against the euro and other currencies (e.g. USD).*



## Scenario – No Brexit

### Central assumptions:

*Market development as per forecast by IHS Automotive before Brexit Referendum, i.e.:*

- UK has full access to EU Single Market
- GBP stable at level before Referendum

## Scenario – Hard Brexit



### Central assumptions:

- WTO duties apply between EU and UK: vehicles: ~10% / vehicle parts: ~4,5%
- The exchange rate of the pound remains consistently 10% under the level it was before the Brexit Referendum

# Models

## The two scenarios for German suppliers are modelled in a two-step system

### Step 1: Automotive Brexit Model – Hard Brexit (2019)

Uses modelling results from the previous Brexit Briefing study ([Link](#)):

#### Current prices and price increases



- ✓ Shows prices of all cars traded between UK and DE/EU
- ✓ Hard Brexit: prices for German and European cars in the UK would increase by around 20%, prices of British cars in the EU would increase by only 13% due to a weak pound

#### Consumer behaviour



- ✓ Add price sensitivity of British and European consumers (price and cross-price elasticities)
- ✓ Model shows declines and shifts in demand in UK and EU

#### Sales and revenue development for automotive manufacturers



- ✓ Basis of model: market forecasts from the IHS database on sales developments in EU & UK until 2022 (without Brexit)
- ✓ Adding in price developments and price sensitivity enables modelling of purchase decisions and demand developments of British and European consumers in the event of a hard Brexit
- ✓ Shifts in demand show sales and revenue developments within the British and European automotive markets by manufacturing region (DE, UK, EU, RoW) in case of a hard Brexit

### Step 2: Input-Output Modelling

New: Macroeconomic analysis of German supplier relationships

#### Revenue of automotive manufacturers



- ✓ The model is based on the revenues of German, European and British automotive manufacturers in 2019 without Brexit and with a hard Brexit

#### Industry interdependence between German suppliers and manufacturers



- ✓ The input-output model shows manufacturing interdependences between the European automotive industry and the German supplier sector

#### Sales and revenue development of German automotive suppliers



- ✓ Combining the Deloitte Automotive Brexit Model and the Input-Output Model allows a comparison between German supplier revenues if Britain remained in the EU and the scenario with a hard Brexit. The difference in revenue for the supply sector thus shows the effect of the Brexit

## Your contacts

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