



# **GROWING THE AUTOMOTIVE SUPPLY CHAIN**

## **LOCAL VEHICLE CONTENT ANALYSIS**

**MATTHIAS HOLWEG  
PHILIP DAVIES  
MARTIN WOOD**

June 2017

# Local Vehicle Content Analysis

---

## 0. Key findings

- The amount of locally sourced parts is a **key measure of success** for the UK automotive industry as the majority of the sector's value-added is created in the upstream supply chain.
- In value terms, the parts sourced by UK car manufacturers from UK first-tier suppliers has increased **from 36% in 2011, to 44% in 2017**.
- In addition to the relative growth in local vehicle content, passenger car production in the UK grew by 38% during that period. This leads to a **compound growth of 60%** by value sourced from UK first-tier suppliers between 2011 and 2017.
- The overall growth in UK parts production (domestic and export volumes) is also reflected in the official ONS turnover and trade statistics.
- There are no valid data points to benchmark the UK's position against its peers, although anecdotal reports suggest that countries such as Germany and France achieve up to 60% local content. This is likely to be the highest level of local content that is realistically achievable.

## 1. Purpose

A strong, innovative, and responsive supply chain is central to maintaining the competitiveness of the UK automotive sector. The local content of UK assembled passenger cars was assessed during the first Sourcing Survey in 2011.<sup>i</sup> That report established a baseline for the degree to which UK car manufacturers sourced their parts from UK-based suppliers. This level was found to be 36% by value.

To determine the effectiveness of initiatives to increase local sourcing, a survey of UK car makers was conducted in 2015,<sup>ii</sup> finding that this had increased to 41% by value. Since then, more supply chain investments have been made so this report seeks to assess the level of re-shoring now achieved.

Raising the local vehicle content from UK suppliers is a key performance measure for the UK automotive industry. The two key industry-level performance metrics for the UK automotive industry are; 1) the number of vehicles produced in the UK, and 2) the value of parts sourced from UK suppliers to meet the parts demand for these vehicles. The latter is referred to as the 'local vehicle content', which is the proportion of value spent by the car maker on parts bought from UK suppliers, as a fraction of the total value of all parts bought.

The low degree of local sourcing by UK vehicle manufacturers was identified as a concern in both the initial NAIGT<sup>iii</sup> report of 2008, and again by the Automotive Council in 2011.<sup>iv</sup> It was therefore decided in 2015 that a new survey was needed to assess the development of local content sourced by UK car manufacturers over time. This is the third report in that series.

In collaboration with the Automotive Investment Organisation (AIO), the local content was reassessed and this report updates that 2015 study to measure progress. For consistency with the previous reports a survey of all vehicle manufacturing operations was conducted with a focus on passenger cars. We gratefully acknowledge the support of the purchasing departments of the vehicle manufacturers that have responded to our request. We would also like to thank SMMT for providing detailed UK production data.

For the purpose of this analysis, 'local vehicle content is the proportion of the materials and parts purchased for vehicle assembly operations that were sourced from UK-based suppliers, measured in terms of value. Non-production related expenditure such as capital investment, plant maintenance and other services is excluded from this analysis.

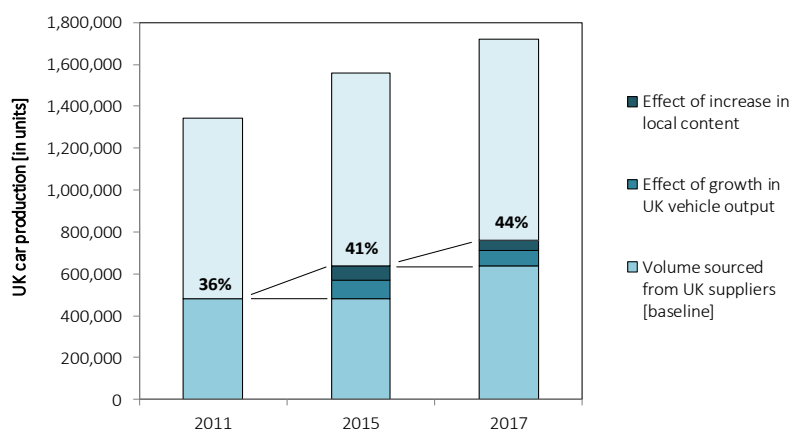
It should be noted that the methodology used for this report is one of several possible methodologies that could be used to assess local vehicle content. Our metric is designed solely as an indicator of the geographical source of UK car industry purchasing volume. The specific UK content of individual models will vary, and **this report cannot be used as a definitive source when considering trade and tariff issues such as WTO rules of origin/and/or originating content.** It is, however, believed to be a reliable indicator of the degree of progress towards overall re-shoring objectives, and should be viewed in that context alone.

## 2. Survey findings

The current UK-supplied parts content for UK car assembly operations is **44%** by value. This figure is based on a response rate equivalent to 99% of UK passenger car production at the time of the survey in May 2017. This compares with local content of **36%** in 2011.

In addition to the relative increase in UK content, the absolute number of cars produced has also increased by 38% between 2011 and 2017, from 1.34 million to 1.76 million units.<sup>v</sup> The UK supply chain is thus benefitting from these two distinct developments (see Figure 1). Taken together, the compound growth in automotive parts sourced locally by UK car manufacturers is calculated to be 60% during the period of 2011 to 2017.<sup>vi</sup>

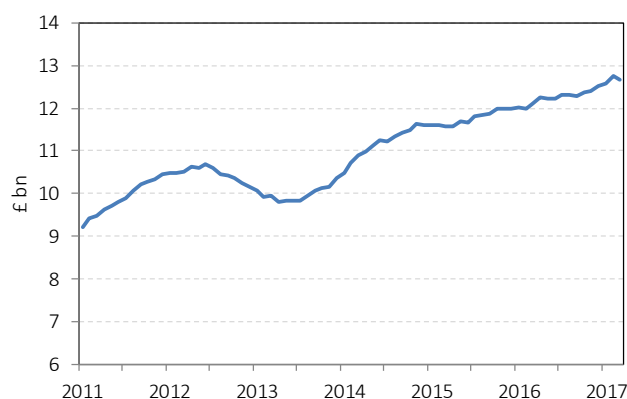
Figure 1: Two factors drive compound growth in the UK automotive parts sector



### 3. The findings in context

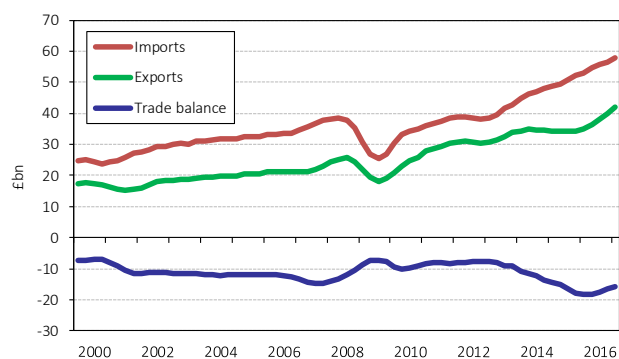
To verify the survey findings, we analysed sector turnover data ('TOPSI')<sup>vii</sup> provided by the Office of National Statistics.<sup>viii</sup> Considering the output of the UK automotive parts sector (SIC 29.3<sup>ix</sup>), annual turnover has increased from £9.0 billion at the start of 2011 to £12.7 billion currently<sup>x</sup> (including both home and export sales) as shown in figure 2. It should be noted that analysis of SIC29.3 data gives only a partial view of the supply chain as some suppliers will be categorised elsewhere, including commodities such as plastics, metal forming and various raw materials. Thus the figures quoted here will understate the true value of purchasing from UK suppliers. However, the figures are all on a consistent basis, giving an indication of the rate of growth, which is positive in cash terms despite continuing cost-down which for most customers will be in the range 2% to 5% per annum.

Figure 2: Automotive parts sector turnover. Annualised volumes in SIC 29.3. Source: ONS TOPSI



The overall automotive sector trade situation is also improving. Despite continued strong sales of imported cars, recent growth in output of UK-made cars and parts both for home sales and exports is starting to reduce the trade deficit, which stood at a record £18.2 billion at the start of 2016, but which currently stands at £15.7 billion.<sup>xi</sup> Figure 3 below shows this in graphical form, with sector exports up 21% for the 12 months to March 2017 by comparison with the same period last year. Again, this demonstrates the improving health of the UK automotive sector.

Figure 3: UK automotive trade since 2000. Source ONS Trade in Goods



Ideally the UK's local vehicle content would be reviewed in relation to its peer group. Unfortunately there are no reliable sources available to establish valid benchmarks. While national statistical data does provide data on sector turnover by SIC code, the actual sourcing patterns of local manufacturing firms can only be established through surveys. Despite the fact that many countries demand the disclosure of the degree of local content for tax and duty purposes, to our knowledge comprehensive comparative data of local vehicle content at country level does not exist.<sup>xii</sup>

However, anecdotal reports from vehicle makers suggests that a 60% degree of local content marks an upper boundary; a higher degree of local content – on aggregate across all vehicles offered by a vehicle manufacturing firm – is seen as unlikely due to the global dispersion of the supplier base, which means that invariably a considerable amount of parts have to be imported. From a UK perspective, given the ownership structure of the tier-1 supply base, 50% local content by value is regarded as a more plausible target for the overall UK car industry.

#### 4. Case Studies

Growing the UK automotive supply chain has been at the heart of the work of the Automotive Council, the Automotive Investment Organisation (AIO) and the Society of Motor Manufacturers and Traders (SMMT). A range of activities have been undertaken since the inception of the Automotive Council in 2009.

For example, since 2010 SMMT has organised nine 'Meet the Buyer' events, facilitating more than 2,500 one-to-one meetings between potential suppliers and buyers, with some 2,400 active participants. Equally, the Automotive Investment Organisation has had considerable success in encouraging global first-tier suppliers to invest in UK facilities to supply their customers. Amongst £2 billion-worth of investments announced in the past three years, a sample of projects already committed illustrates progress to date. Three recent examples include:

**Magna Cosma International**, a wholly-owned operating unit of Magna International Inc., specialises in providing a comprehensive range of body, chassis and engineering solutions to its OEM customers. In May, 2016 Magna announced that it will build a new world-class aluminium casting facility in the UK. The new facility will be launched in November, 2017 and will create up to 295 jobs at full capacity. The Department for International Trade and the Automotive Investment



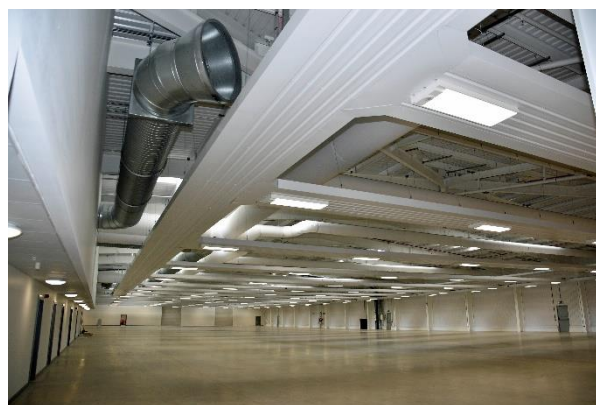
Organisation, along with financial support from the UK Government's Regional Growth Fund, helped secure this project. Because of the highly capital-intensive nature of the foundry industry, there had been no significant new investments in the UK's aluminium foundry capacity for 20 years. Magna's investment demonstrates that casting production in the UK is economical long term.

**Polytec Group** is an Austria-based leading developer and manufacturer of high quality plastic parts, a full service provider in the field of injection molding and a specialist in fibre-reinforced plastics supply. In January 2017 Polytec announced that it will build an additional manufacturing site.



The new factory will be constructed over three phases, starting with the new paint plant and assembly hall then progressing to manufacturing facility and finishing with an additional assembly hall. The initial stage will create as many as 100 jobs. Polytec UK is currently based in Bromyard, Herefordshire, but due to several new contracts with a number of major vehicle manufacturers in the UK, the company is no longer able to supply from the existing facility.

**ZF TRW** has opened an expanded plant at Rainton Bridge, Sunderland, investing in additional production and assembly lines to support new electrically powered motor business. The original plant was established in 1989 to manufacture switch controls and in 1999 started producing electric motors for the automotive industry. It now manufactures motors (power packs), printed circuit boards and components for both hydraulic and electrically powered steering systems.



## 5. Concluding remarks

Following a period of supply chain ‘hollowing out’ and the realisation that action was needed to reverse this trend, concerted and joint action by industry and HM Government has resulted in significant investment by global suppliers into their UK operations. Plants have been expanded, and new ones built as global corporations have recognised the advantages of investing in UK and the growth in UK car output has made local supply more viable through increased volumes. We see the results in a continued growth in both the relative and absolute value sourced from UK suppliers for UK-assembled vehicles since measurement began in 2011.

Finally, it should again be re-iterated that this study gives an indicative overview of the extent to which efforts to grow first-tier supply within UK have progressed. It does not offer a definitive view on the degree of UK-sourced upstream supply into the first-tier supplier community, nor can it be used in any way to inform the country of origin of any particular product, for the purposes of establishing likely tariffs under WTO rules or any other trade agreement that UK may make with any other nation following departure from European Union.

## Contact

For more details please feel contact:

Professor Matthias Holweg	Philip Davies C Eng, MRAeS	Martin Wood
University of Oxford	PMDAnalysis	Automotive Investment Organisation
E: <a href="mailto:matthias.holweg@sbs.ox.ac.uk">matthias.holweg@sbs.ox.ac.uk</a>	E: <a href="mailto:philip@pmdanalysis.co.uk">philip@pmdanalysis.co.uk</a>	E: <a href="mailto:Martin.Wood1@trade.gsi.gov.uk">Martin.Wood1@trade.gsi.gov.uk</a>
T: +44 (0)1865 614 675	T: +44(0)7512 715638	T: +44 (0)7471 021652

## Acknowledgements

The authors wish to thank all those who contributed to the writing of this report, in particular the respondents to the survey, and the members of the Automotive Council Supply Chain Group, AIO, and SMMT who assisted in preparation of the report. Thanks also to Diana Bura for reviewing the report from a wider business perspective.

## Endnotes

---

<sup>i</sup> Holweg, M., Y. Tran, P. Davies, and S. Schramm. (2011) "Growing the Automotive Supply Chain: The Road Forward.", Automotive Council UK.

Note: Further updates to this report were published in 2012, 2014, and 2015 respectively:

2012: <http://www.automotivecouncil.co.uk/wp-content/uploads/2012/08/GROWING-THE-UK-AUTOMOTIVE-SUPPLY-CHAIN-Aug-2012.pdf>

2014: <http://www.automotivecouncil.co.uk/wp-content/uploads/2014/11/Growing-the-Automotive-Supply-Chain-2014-0411141.pdf>

2015: <http://www.automotivecouncil.co.uk/wp-content/uploads/2015/03/Growing-the-UK-auto-supply-chain-March-2015.pdf>

<sup>ii</sup> Holweg, M.; Davies, P.; Padgett. T. (2015). Growing the Automotive Supply Chain: Local Vehicle Content Analysis

<sup>iii</sup> New Automotive Innovation and Growth Team

<sup>iv</sup> Holweg, M., Davies, P., & Podpolny, D. (2009). *The competitive status of the UK automotive industry*. Buckingham: PICSIE Books.

[http://www.innovation.jbs.cam.ac.uk/research/downloads/holweg\\_competitive\\_status.pdf](http://www.innovation.jbs.cam.ac.uk/research/downloads/holweg_competitive_status.pdf)

and Holweg, M., Y. Tran, P. Davies, and S. Schramm. (2011) "Growing the Automotive Supply Chain: The Road Forward", Automotive Council UK.

<sup>v</sup> Passenger car output for the 12 months to March 2017, compared to the 12 months to January 2011.

<sup>vi</sup> January 2011 to March 2017.

<sup>vii</sup> Turnover Of Production and Service Industries

<sup>viii</sup> Source of data: ONS TOPSI

<sup>ix</sup> We use data for SIC 29.1 and 29.3., which include the following:

SIC 29.1. "Manufacture of motor vehicles" includes the manufacture of: passenger cars, commercial vehicles: vans, lorries, on-road tractor units for semi-trailers etc., buses, trolley-buses and coaches, motor vehicle engines, chassis for motor vehicles, other motor vehicles: snowmobiles, golf carts, amphibious vehicles, fire engines, street sweepers, travelling libraries, armoured cars etc., concrete-mixer lorries, and ATVs, go-carts and similar including race cars

---

SIC 29.3. " Manufacture of parts and accessories for motor vehicles" includes the manufacture of: motor vehicle electrical equipment, such as generators, alternators, spark plugs, ignition wiring harnesses, power window and door systems, assembly of purchased gauges into instrument panels, voltage regulators, and diverse parts and accessories for motor vehicles: brakes, gearboxes, axles, road wheels, suspension shock absorbers, radiators, silencers, exhaust pipes, catalytic converters, clutches, steering wheels, steering columns and steering boxes, parts and accessories of bodies for motor vehicles such as safety belts, airbags, doors, bumpers, and car seats.

See <http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/sic2007---explanatory-notes.pdf> for more details of the SIC codes used by ONS.

<sup>x</sup> For the 12 months leading up to April 2017.

<sup>xi</sup> Based on data as of March 2017

<sup>xii</sup> The US market marks an exception here, as data on local vehicle content per vehicle model has to be made available under Part 583 of the American Automobile Labeling Act (AALA):  
<http://www.nhtsa.gov/Laws+&+Regulations/Part+583+American+Automobile+Labeling+Act+%28AALA%29+Reports>