

# Manufacturing heading out, distribution moving in – the effects of Brexit

The latest book in our Bite-Size Brexit range is now published! 'Carmageddon?: Brexit & Beyond for UK Auto' looks at the manufacturing industry at the heart of the issues around Brexit, with the industry's sophisticated just in time and other major logistical challenges.

The book, edited by Professor David Bailey, Professor Alex De Ruyter, Neil Fowler and John Mair, brings together a wide spectrum of industry experts and world-renowned auto industry figures, providing a real perspective on Brexit at the raw edge. Contributors include leading auto analysts, top automotive journalists, politicians and academics.

Today, we are delighted to share Hamid Moradlou, Hendrik Reefke and Heather Skipworth's contribution to the book.

## **Manufacturing heading out, distribution moving in – the effects of Brexit**

**Hamid Moradlou, Hendrik Reefke and Heather Skipworth explain the reasons why Brexit may mean an increasing level of manufacturing may be offshored to Europe, while distribution centres head in turn to the UK.**

How has the prospect of the UK leaving the European Union affected the location decisions of UK manufacturers and distributors with customers in the EU? How has Brexit influenced supply-chain decisions regarding supplier location? And which individual factors – or drivers – feature most prominently in influencing these decisions?

A survey study conducted at the School of Management, Cranfield University, provides answers to these questions.

Surveying a panel comprising experts selected from various economically important industries (such as automotive, aerospace,

and FMCG), as well as consultancies, governmental organisations, and academia, respondents were taken through four iterative rounds of data collection, also called Delphi research approach (Reefke & Sundaram, 2017, 2018), between December 2018 and November 2019, with each round influencing the research outcomes and direction of the following rounds.

## Uncertainty shaping decisions

The first finding was that despite government protestations to the contrary, industry was far from sanguine about the impact of Brexit – Brexit (and Brexit uncertainty) was indeed shaping corporate thought processes. Followings are number of viewpoints reproduced in Figure 1 below:

*“For price-sensitive products, companies are actively investigating alternative suppliers, due to concerns over such things as tariffs and Country of Origin rules.”*

*“Decisions on where to (re)locate manufacturing facilities are currently being delayed, and investment decisions are being postponed.”*

*“Companies are relocating manufacturing, but are not always directly attributing the reason solely to Brexit. Brexit has played at least some part in the decision to cease manufacturing in the UK, but there are additional factors.”*

*“Actually, in the short and/or medium term — within a year, say — securing and switching to alternative suppliers is not really an option.” [NB: Quotation edited for clarity and grammatical accuracy.]*

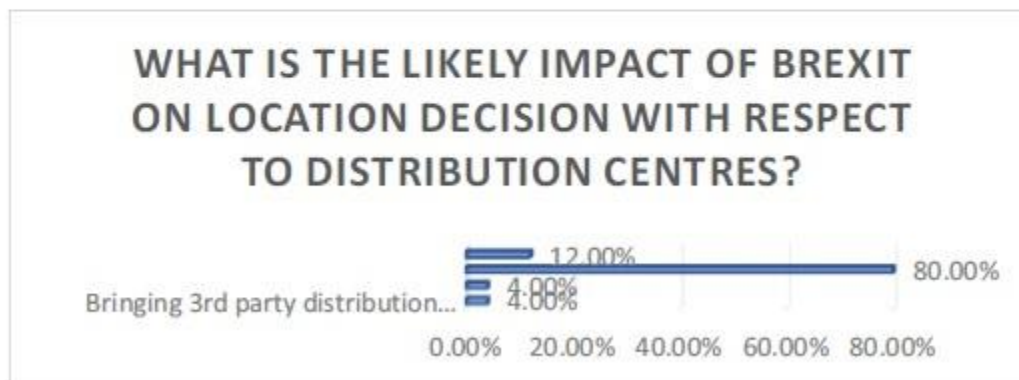
**Figure 1: Representative respondent viewpoints**

In deciding whether to relocate or add manufacturing facilities or distribution centres in response to Brexit, it is clear that manufacturers and distributors face subtly different challenges. Distributors, for example, are expected to face a lower overall capital cost of adding or moving a location, as well as a lower level of complexity—particularly if they choose to use the services of a third-party service provider. Whereas manufacturers also have the option of contract manufacturing, the costs and complexities of this are much higher.

Figures 2a and 2b respectively present the likely impact of Brexit on manufacturers' and distributors' location decisions. As the results indicate, it is likely that Brexit will lead to more manufacturing companies shifting their facilities to the EU, in other words offshore their manufacturing activities (Moradlou & Backhouse 2016), while for distributors it appears that Brexit will result in more distribution centres coming to the UK. This can be seen as reshoring strategy (Moradlou, et al. 2017).



**Figure 2a: Impact of Brexit on manufacturing location decisions**



**Figure 1b: Impact of Brexit on distribution centre location decisions**

Which factors ('drivers') are taken into consideration, and how do they rank against each other? Undoubtedly, moving—or adding—a manufacturing location is not a decision to be taken lightly.

In order to arrive at such decision number of factors will play important role (Tate & Bals 2017). Here are the results from the Delphi study: Table 1 ranks the drivers behind the shift in manufacturing production from the UK to EU, based on their relative importance. The top five drivers motivating companies to move out of the UK are access to the

EU market; potential delays in product delivery due to new border controls; higher costs through new tariffs of import/export to the EU; access to international markets through EU trade deals; and proximity to customers in the EU.

On the other hand, the least important five factors influencing the relocation of manufacturing facilities to the EU are lower cost of manufacturing in the EU; access to research and development; access to skilled labour; government incentives offered by EU countries; and declining demand and unprofitable plants in the UK. The top five drivers for keeping the production in the UK are proximity to customers in the UK; the avoidance of non-tariff costs (such as border delays and inventory levels) of importing to the UK; the high cost of transferring operations; the avoidance of tariff costs when importing to the UK; and access to R&D.

	<b>Drivers for moving manufacturing to the EU</b>
1	Access to the EU market
2	Delays in product delivery due to new border control
3	Higher costs through new tariffs of import/export to the EU
4	Access to international markets through EU trade deals
5	Proximity to customers in the EU
6	Higher non-tariff costs, such as inventory levels, of import/export to the EU
7	EU approval procedures (e.g. for medicines/drugs) and respective access to market
8	Uncertainty and fear
9	Uncertain regulations with respect to customs arrangements
10	Access to suppliers
11	Market competition forces/encourages a move to the EU
12	Favourable currency conditions (exchange rates, stability, same currency trades, etc.)
13	EU standard regulations
14	Higher stability (political, financial, regulations, etc.) of the destination country
15	Business consolidation to other facilities
16	Declining demand and unprofitable plants in the UK
17	Government incentives offered by EU countries
18	Access to skilled labour
19	Access to research and development
20	Lower cost of manufacturing in the EU

**Table 1: Drivers for moving manufacturing to the EU**

<b>Drivers for keeping manufacturing in the UK</b>	
1	Proximity to customers in the UK
2	To avoid non-tariff costs (such as border delays and inventory levels) of importing to the UK
3	High cost of transferring operations
4	To avoid tariff costs of importing to the UK
5	Access to research and development
6	Customer service agreements
7	Access to suppliers
8	Uncertain regulations (customs arrangements)
9	Government incentives offered by the UK
10	Possible removal or lowering of taxation
11	UK Research & Development taxation regulations
12	Access to labour
13	Lower cost of manufacturing in the UK

**Table 2: Drivers for keeping manufacturing in the UK**

Conversely, the least important five drivers for retaining manufacturing in the UK are seen as a lower cost of manufacturing in the UK; access to labour; access to UK R&D taxation incentives; and the possible removal or lowering of other taxation and location incentives offered by the UK government.

Considering the bottom drivers for both leaving the UK and staying in the UK, it is evident that the least important drivers for moving facilities in this scenario are around the cost of labour and cost of production, indicating that these type of costs are not driving manufacturing facility location decisions.

Hence companies are actively looking for ways to create customer value as well as increase their profit rather than merely considering the cost savings aspects (Ellram et al. 2013). This is also in contradiction to what is traditionally known to be the main reasons behind offshoring decisions (Moradlou & Tate, 2018). On the other

hand, market access and uncertainties regarding tariff barriers are seen as very important in the location decision.

Finally, Table 3 presents the most impacted industry sectors, as perceived by respondents. Notably, the pharmaceutical, automotive, healthcare and food industries are consistently seen as industries in which every part of the supply chain—manufacturing, distribution, and the supplier base—is likely to be impacted by Brexit. These findings are in line with studies done by Hendry et al. (2019) focusing on food supply chain and Bailey and De Propris (2017) focusing on automotive sector.

## Conclusion

It is clear that Brexit, in the interval between the 2016 referendum result and our final Delphi survey in November 2019, has shaped corporate decision-making processes regarding the location of supply chain activities. For the first time in more than 40 years, manufacturers and distributors have had to contemplate tariff barriers, non-tariff barriers, and the fundamentals of market access in their UK-EU trade deliberations.

	<b>Manufact'g</b>	<b>Suppliers</b>	<b>Distribution</b>
1	Pharmaceut'l	Pharmaceut'l	Pharmaceut'l
2	Automotive	Automotive	Healthcare
3	Healthcare	Food	Automotive
4	Food	Healthcare	Food
5	Aerospace	Aerospace	Aerospace
6	FMCG	Electronic	FMCG
7	Electronic	FMCG	Electronic
8	Fashion	Fashion	Fashion

**Table 3: Industries mostly impacted by Brexit**

One consequence, as these survey findings make clear, is that some manufacturing activity is likely to move offshore, away from the UK and to the EU. Equally clearly, companies serving the UK directly from the EU are likely to invest in UK-based distribution centres and inventory holdings. In both cases, the overall consequence is likely to be some erosion of manufacturing economies of scale, due to increased production fragmentation, and lower levels of inventory turn.

Finally, in contrast to economic theory, the relative cost of labour and the relative cost of production appeared to have little influence on the EU-UK location decision. Instead it is issues such as market access, trade frictions, and potential tariffs that are seen as more important. Whatever the exact nature of EU-UK trade relations going forward, post-Brexit, the implications for policymakers are clear.

**‘Carmageddon?: Brexit & Beyond for UK Auto’ is available NOW, in paperback and digitally, [here](#).**