

Challenging times for extended supply chains

Liberalisation of trade has enabled companies to reap the benefits of extended supply chains, but with protectionism on the rise could the golden age be coming to an end, asks **Malory Davies**.

Economist Professor Patrick Minford sent shockwaves through the motor industry six years ago when told the House of Commons Foreign Affairs Committee that leaving the European Union could mean that the industry would have to be run down.

"It is perfectly true that if you remove protection of the sort that has been given particularly to the car industry and other manufacturing industries inside the protective wall, you will have a change in the situation facing that industry, and you are going to have to run it down," he said.

"It will be in your interests to do it, just as in the same way we ran down the coal and steel industries."

The UK motor industry currently turns over some £82 billion and employs 856,000 people according to the SMMT. And no industry highlights the complexity of modern extended supply chains better.

Not only is 80 per cent of the UK's car production exported, the European Automobile Manufacturers Association (ACEA) says that 14.1m auto parts and components, worth €11.4bn, were imported from the EU27 by the UK in 2017 – 78.8 per cent of the value of the UK's total part and accessory imports.

At the same time, the United Kingdom exported 21.7m auto parts and components to the EU27, with a total value of €4bn (or 68.3 per cent of the UK's global part and accessory exports value).

These figures highlight the global nature of automotive supply chains and the potential damage from a bad Brexit.

But, at the same time, the growth of trade protectionism is having an impact, and motor manufacturers will be watching the US negotiations with China particularly carefully.

The US imported \$1.3 billion worth of cars from China in 2018 – not a huge figure. But it also imported \$20.1 billion worth of automotive parts, according to figures from the US Department of Commerce International Trade Administration. At the same time it exported \$6.2 billion worth of cars to China, along with \$3.6bn of automotive parts.

According to the US International Trade Commission, the US could increase tariffs on the import of Chinese car parts by ten to 25 per cent.

Of course, the Trump administration is not just in conflict with China and its approach is exemplified by its ambitions for the USMCA (United States – Mexico – Canada Agreement) which were



set out by vice president Mike Pence in an opinion piece for "The Detroit News" (24th April). Under the old NAFTA agreement, he said, "companies can buy a significant share of auto parts from China or Europe, assemble them into a vehicle in Mexico, and sell them into the United States duty free".

The USMCA will require at least 75 per cent of a car to be built with parts genuinely made in North America for it to be sold duty free in the US. It will also require at least 40 per cent of a duty-free car to be made by workers earning at least an average of \$16 an hour, said Pence.

It's worth pointing out that Trump's protectionist strategy has strong support from America's United Auto Worker's union which argues that American workers have been harmed by decades of offshoring. Commenting on the Pence's NAFTA comments, UAW president Gary Jones said: "We need a strong, enforceable and

Six critical capabilities

The measures to mitigate risk in global supply chains require six capabilities, says Professor Richard Wilding. It is these capabilities that are the critical success factors

1. Total Acquisition Cost Management

The ability to analyse and predict the total cost-to-serve from the source of supply to its final point of sale. The capability in this analysis is not to simply build up the logistics costs by differentiating the physical characteristics of the freight and the duty and customs regimes that are applicable. It is important to analyse and build into the costing the inherent markdown and lost sales risk of

the product by developing and applying a "market verses cost verses risk" profile. The inventory holding cost through the chain must also be factored in. Experience has shown that this analysis identifies products that should never be traded on a long lead-time, or that should be the subject of a postponement strategy. It is also likely to show that there are some products where actions to reduce lead-time and increase flexibility will justify a higher initial purchasing cost.

2. One touch information flow

To avoid double entry, duplication, mistakes and inconsistency as the same transaction moves through the



University, found that 44 per cent of UK manufacturing companies identify Asia as their focus for the future, as well as the Americas, Africa and the Middle East.

Justin Sadler-Smith, head of UK & Ireland at SAP Ariba, says: "Today, protectionism is being expressed in such varied ways. The dynamics of a trade war in the traditional sense is demonstrated between the US and China but there are new forms of socio-political forces causing disturbance; such as Brexit, perhaps the biggest form of protectionism in British history," says Sadler-Smith.

"Naturally, increased uncertainty in any situation means challenges ensue, growth can be hindered and business communities can become more cautious in their decision-making. When a change in tariffs, sanctions or similar is expected, businesses are often concerned about the security of the supply of goods and services. While this can mean higher costs, it is generally required to keep supply flowing, such as increased warehousing space for stock-piling of critical components, alternative sourcing channels which may come at higher costs, or production shutdown causing larger ripples in an extended

“ Global sourcing implies long distance supply chains with extended lead times that have major implications for security of supply...

Professor Richard Wilding

impactful agreement that saves and creates good paying jobs right here at home."

Of course, it is not just the motor industry that has embraced global sourcing and supply, and factors such as Brexit and trade protectionism will have an impact on all extended supply chains.

For example, the decision to leave the European Union is likely to cause orders from EU-based countries to decline dramatically, points out Jon Moody, chief Executive of software provider SSG Insight.

A research paper, *Harnessing Brexit, Technology and Insight*, produced by SSG with Sheffield Hallam



supply chain," says Sadler-Smith.

"Change however, even in the form of protectionism, can also create conditions for innovation and other benefits, such as minimising risks or exploiting opportunities such as finding alternative sources of supply.

Even if unit costs are higher, the search for new supplier partners may uncover new ways of working, innovations, and efficiency gains that may reduce the overall total cost of ownership or create a competitive advantage in the overall value chain. Brexit for example, ►

many points of contact in the chain. Accuracy of information is a precondition of pro-active management and the ability to exercise risk mitigation measures. This capability is systems enabled; it is critical to have the widest view of the total chain on one information platform with the ability to recognise inconsistencies.

3. Total product identification and compliance

To ensure fast accurate product and handling unit identification that feeds the "one touch information" requirement immediately. The use of bar codes, RFID (Radio Frequency Identification) and even blockchain to the correct standards are the enabling technologies; but this needs to be quality assured and enforced

on the ground across many sites with failures being fixed where they occur.

4. Real time routing through dynamic transparency

The capability to see through the chain, know what is coming, and test for events that have not happened as planned; to interpret the implications of failures in a pro-active way and make decisions to minimise their impact. This is the 'traffic control' of global supply chain management; it must be managed transparently and with the proactive co-operation of all the parties in the chain. Monitoring of social media, weather and geological survey feeds may also be useful in maintaining transparency.

5. Vendor development

The capability to understand

and improve the long-term performance of vendors in terms of cycle times, timeliness, sustainability, quality and accuracy is central to risk reduction. Based on historical performance of the end-to-end chain it is possible to identify improvements programmes to develop supplier reliability.

The ultimate goal is to issue orders and schedules on shorter lead times, reflecting real demand or more accurate forecasts.

Understanding the underlying performance of the vendor and their category of products in the marketplace is the starting point for this; it is dependent on information across the chain.

6. Information platform to provide consistent and timely information

The capability to put in place, operate and maintain a full supply chain visibility solution. All of the above capabilities are anchored by operational skills to secure and maintain the information backbone with the diverse data structures that are needed by each supply chain function.

Both members and corporate members of the Chartered Institute of Logistics and Transport are increasingly recognising that their decisions have impact not just on profits but the environment and society as a whole.

As the Institute continues to professionalise the profession in its 100th anniversary year, the challenges of global sourcing in 2019 are very different to 1919.