SCS // ERP

Shockproof your global supply chain

Whether the shocks come from natural or political earthquakes, companies need to act quickly to protect from tremors being felt across their supply chain.
This Access Group whitepaper looks at how organisations can manage and mitigate the impact of global disruptions.

Contents

Introduction

Over the last year, the world has witnessed a rise in nationalism and a retreat from the principles of free trade. We've seen Britain vote to leave the EU and the US withdraw from the Trans-Pacific Partnership, following the election of Donald Trump.

The consequences of these decisions have already had a very real impact on global supply chains, with both Pound Sterling and the Chinese Yuan crashing against the US dollar. Uncertainty and confusion remain over the implications these decisions will have on future tariffs, taxes and quality standards, however.

Over the next few years, manufacturers will be forced to continuously recalculate how volatility will increase the tendency for disruptions, affect their production costs and their ability to get finished products to market. It's little wonder that global supply chain risk was found to have reached its highest level in 24 years at the **end of 2016**[1], according to the CIPS Dun & Bradstreet Risk Index.

How businesses respond remains to be seen but it is highly possible that increased political tensions and protectionism globally will exacerbate the trend towards local sourcing. Supply chain thought leaders have also highlighted a rise in the 'digitisation' trend, as companies seek to manage and mitigate global supply chain disruptions.

This paper will examine the impact of global shocks on supply chains and will share advice from **Geraint John**,[2] supply chain risk expert at Gartner's SCM World, on how organisations can prepare for uncertainty.

Global supply chain risk at its highest level in 24 years

The impact of global disruption

The consequences of a break down in free trade arrangements are already being felt in the world economy. The Organisation for Economic Co-operation and Development **(OECD) has reported**[3] that international trade slowed in 2016, and claimed there was little sign of a strong rebound this year.

OECD chief economist Catherine L. Mann said: “While weak demand is surely playing a role in the trade slowdown, a lack of political support for trade policies whose benefits could be widely shared is of deep concern.”

Organisations are likely to feel the repercussions across their supply chains in three ways: (i) currency fluctuations, (ii) tariffs, local tax and regulations and (iii) the inevitable confusion and delays.

i) Currency fluctuations

Major political or supply chain shocks have immediate impact on currencies, as forex traders look to hedge their positions against the potential implications. The ramifications of Britain’s EU exit vote were instant, with Pound Sterling falling almost 10% against the dollar. The election of Trump in the US also saw the Chinese Yuan fall to an eight-year low against the dollar.

The implications of currency fluctuations are of course both positive and negative, with British exports gaining a boost. However, we’ve also seen import **costs for raw materials**[4] and components from abroad rise by more than 20%. This is having a major effect on import costs – leaving businesses with major decisions to make on whether to absorb these costs or pass them on to customers.

Import costs have risen 20%

II) Tariffs, taxes and regulations

With 57.5% of UK exports heading to the EU any future tariffs post-Brexit will be keenly felt. Many sectors have supply chains that criss-cross European borders.

The CBI's **Making a Success of Brexit**[5] report states: "There are many prominent examples of these [integrated supply chains] in aerospace, automotive and life sciences. This integration is even more significant for companies set up to treat the UK and Republic of Ireland as a seamless market."

For a sector like the chemical industry, the average EU tariff is 4.6%. But if a Brexit agreement cannot be reached the sector may have to default to the levels laid out by the World Trade Organisation (WTO). This would see tariffs rise to 10%. While for a sector such as life sciences, which relies on the EU for much of its regulation, there could also be added costs involved if UK quality standards diverge in the future.

With the US also abandoning free trade agreements, commentators such Verisk Maplecroft have suggested that increased tariffs could be accompanied by tax and regulatory relief in the **US**[6]. And that this could also lead to reciprocal actions being taken by major trading partners, such as Mexico and China – exacerbating the move towards protectionism.

iii) Confusion and delays

As organisations transition to new arrangements, complexity around importing and exporting will increase. This will be felt acutely in the transport and logistics sectors which will need to comply with tighter border controls and customs checks. According to research from global logistics company Agility, more than two thirds (69%) of logistics professionals are now worried about the global retreat from **free trade**[7].

Political tensions also have the potential to destabilise **regions**[8], such as the Balkans and the South China Sea, increasing the likeliness of shipment delays. Manufacturers could suffer severely as a result of any disruption this creates.

For instance, if the UK's aerospace manufacturing industry is going to protect its position as the second largest in the world, it can ill afford for deliveries of parts and raw materials to suffer delays. Avoiding any disruption of this nature is especially important when you consider that the Business Continuity Institute has calculated that supply chain disruptions cost one in three businesses more than **€1m last year**[9].

2/3 worried about
a global retreat
from free trade

A retreat from globalisation?

With so much uncertainty surrounding global supply chains, one way to reduce potential risks by sourcing closer to home. The **'local-for-local'**[10] trend, which predates the Brexit and Trump shocks, has been noticeable within the food and drink industry in particular. But we've also seen tier 1 suppliers moving closer to their customers in recent years. This is evident in Mexico where numerous **suppliers have set up shop**[11] to be closer to the major automotive manufacturers.

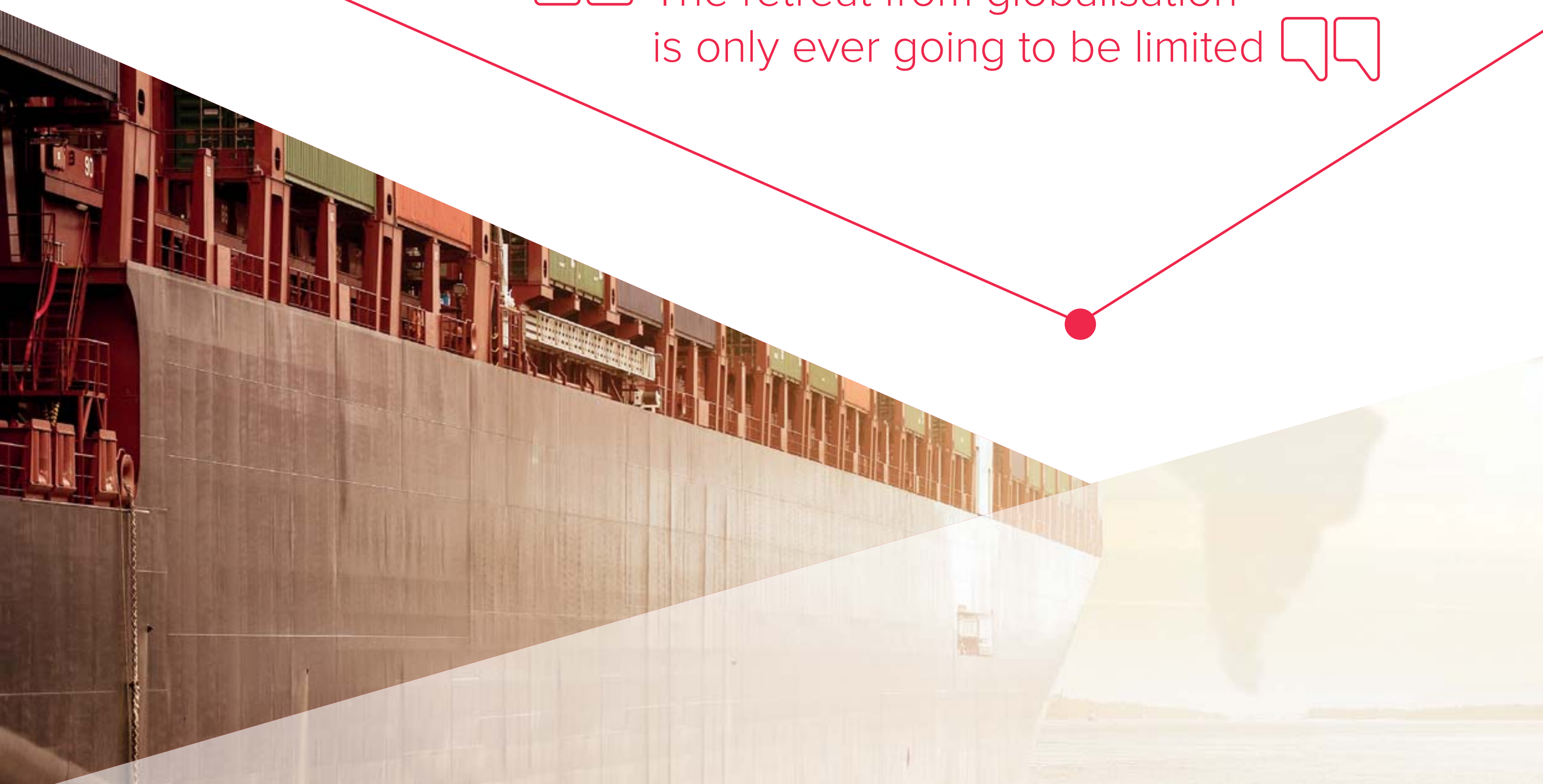
Could growing protectionism exacerbate this trend? Geraint John, supply chain risk expert at Gartner's SCM World, claims there is a distinct possibility. But he also asserts that things need to be put into perspective.

"The retreat from globalisation is only ever going to be limited. Regardless of currency fluctuations and other disruptions, there will always be reasons for businesses to source from and manufacture all over the world," he explains.

"For example, a manufacturer that supplies batteries to the automotive industry will not have much choice or alternative as to where it sources cobalt – more than 50% of the world's total production is mined in the Democratic Republic of Congo."

A consultant to the world's supply chain leaders, John advises organisations to limit their exposure to global supply chain shocks in two key ways.

"The retreat from globalisation is only ever going to be limited"



1. Source from multiple suppliers

John says: “Manufacturers need to limit the extent to which they are reliant on one source, especially for materials which are strategically important. They may also want to have safety stocks of semi-finished or easy to finish inventory in different regions to give themselves flexibility in the event of disruption.”

2. Increase supply chain visibility

“Supply chain leaders want visibility so they can spot problems early,” John explains. “Some will also want traceability, where brand reputation is front of mind, but for most it is about monitoring the flow of material from suppliers. The heavy equipment manufacturer Caterpillar, for example, now has a dedicated facility to monitor its supply chain 24/7. It’s about assurance of supply.”

With both strategies, John claims supply chain leaders are increasingly expecting tier 1 suppliers to make data available in real time and connect with their tier 2 suppliers to extend visibility further down the supply chain.

“The emergence of the cloud and the Internet of Things, has made data more ubiquitous than ever. It’s still early days and it won’t happen overnight but we’re seeing more tier 1 suppliers having to integrate or update to cloud portals on a daily basis.”

As global sourcing is a multi-faceted agenda – not just about raw materials but also local labour, exchange rates, etc. – understanding what is happening in your supply chain is crucial for all companies.

John said: “The ground can shift from under you at any time. Digitisation is helping organisations to re-plan and restock. It makes it possible to track inventory and shift production, to other parts of the world if necessary.”

> Digitisation is helping organisations to re-plan and restock

Digitisation provides an answer

In its **Future of the Supply Chain**[12] report, SCM World declared ‘digitisation’ to be the most important trend shaping supply chains today. It said: “[Digitisation is] enabling breakthrough innovation not only in business process, but also in business models… we’re also seeing an explosion in the set of tools available to make the most of their supply chains.”

The term ‘digitisation’ encompasses a range of nascent technologies which include advanced robotics, the Internet of Things (IoT) and 3D printing. Many organisations will have already begun to digitise, however, through management systems such as enterprise resources planning (ERP) systems.

The primary reason for deploying such systems will have been to facilitate higher volumes of transactions without having to rapidly increase headcount – by automating and streamlining processes. These systems, however, also provide a platform through which companies can roll out further digitisation and protect against supply chain risk – be they due to political tensions or another form of disruption.

Here are five key ways in which management systems are helping businesses to manage and mitigate risk and disruption in their global supply chains:

1. Forecasting

The ability to anticipate demand based on sales trends or external data sources, such as weather forecasts, is helping manufacturers get goods to market quicker. But these management systems also allow a business to assess its capacity to fulfil demand. Companies can analyse whether: (i) they have the inventory available, (ii) they can access the necessary parts or raw materials through their supply chains, (iii) fulfilment will be profitable.

It’s vital that companies can see the overall ‘landed’ costs of their imported materials and how currency fluctuations or tariffs will affect their bottom line.

2. Logistics

The ability to track and manage container shipments in transit may be possible using spreadsheets when company revenues are under £1m, but it’s not when businesses are turning over £50m. To prevent container tracking from becoming unwieldly, an organisation will need to have container management software in place. If shipments are delayed for any reason, be that in customs checks or adverse weather, organisations need to know as soon as possible, in order to calculate the implications on production schedules and order fulfilment.

3. Workflow

Research by the Business Continuity Institute has found that the number of organisations enduring 11 or more disruptions annually rose to 22% last **year**.[13] Whether this is due to a flood in Thailand or an earthquake in Japan, delivery delays can be damaging, especially for companies adopting 'just-in-time' production methods. Planning and scheduling tools allow businesses to amend workflow and communicate the fulfilment implications to customers.

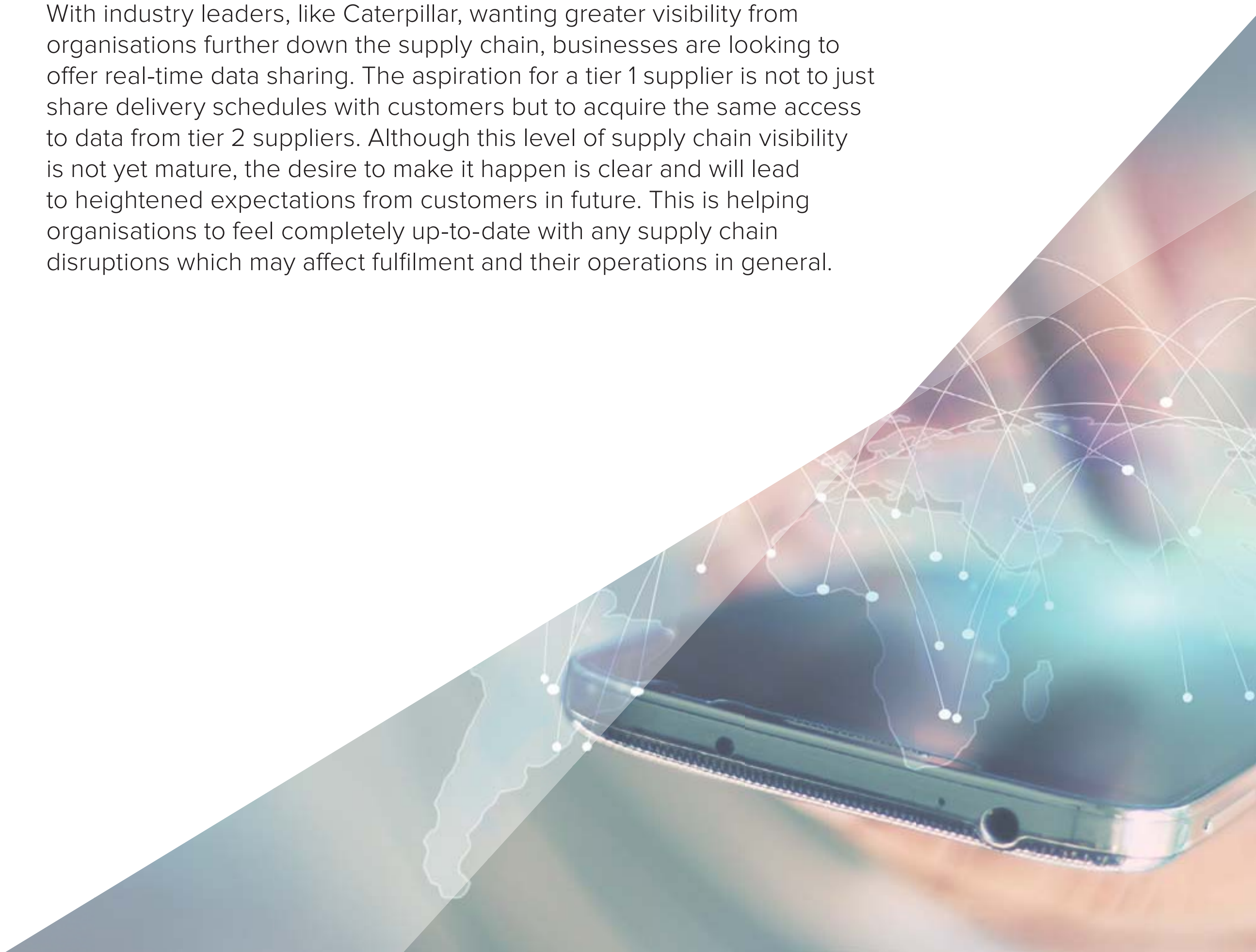
4. Tracking and traceability

Accurately keeping track of inventory is crucial for businesses looking to mitigate the impact of any supply chain disruption. A warehouse management system (WMS), for instance, enables companies to know where all materials or parts are held and whether they have sufficient quantities.

The importance of track and tracing the receipt of batches of goods into a warehouse has also grown as a result of supply chain scandals – notably the **horse meat scandal**[14] and the **Rana Plaza disaster.**[15] Corporations are seeking to protect their reputations want to eradicate dubious sourcing. If slave labour is found to be in use in certain regions of the world, for example, it could create a major supply chain disruption – especially given the impact of 24-hour news cycles and the viral effect of social media. Organisations need robust traceability, while the ability to record material certification, using document management tools, is helping organisations manage these requirements at scale.

5. Real-time data sharing

With industry leaders, like Caterpillar, wanting greater visibility from organisations further down the supply chain, businesses are looking to offer real-time data sharing. The aspiration for a tier 1 supplier is not to just share delivery schedules with customers but to acquire the same access to data from tier 2 suppliers. Although this level of supply chain visibility is not yet mature, the desire to make it happen is clear and will lead to heightened expectations from customers in future. This is helping organisations to feel completely up-to-date with any supply chain disruptions which may affect fulfilment and their operations in general.



Conclusion

Supply chain disruption can result from any number of factors – be that natural disasters, an ethics scandal or regional conflicts. Heightened political tensions are only set to exacerbate the level of risk for businesses reliant on global supply chains.

The retreat from free trade will have long term implications for production costs, tariffs and regulation changes, but this is also being felt in the short term through currency fluctuations. Organisations looking to efficiently navigate any unexpected complications this imposes in their global sourcing will need to track volatility so they can analyse the implications and react quickly. To do this they will need to have the right tools in place.

"It's all about managing and mitigating risk," says Geraint John. "It's about sensing and seeing what's going on so you can forecast better and put plans in place. Digitisation is making all this possible, whether that's helping organisation to track inventory or shift production quickly to other regions, potentially using 3D printers.

"It's still early days for many, but the technology supporting digitisation has become more cost effective in the last few years, and this is providing companies with the data they need to respond to disruption early."

For many organisations, there are aspects of digitisation, such as manufacturing via 3D printing, which may be further off than others. But for companies looking to scale up their operations without increasing headcount, management systems, such as a scalable ERP system, are providing a platform from which advanced supply chain solutions can be built – benefitting manufacturers now and futureproofing them against inevitable disruptions, as and when they may occur.

With thanks to Geraint John, research vice president, SCM World.

Geraint is a procurement specialist and leads SCM World's research coverage on sourcing and procurement, supplier management, and supply chain risk. He also regularly contributes to articles in the media in both the US and the UK.

Geraint holds a degree in Economics and Politics from the University of Warwick.

1 https://www.cips.org/en-GB/supply-management/news/2017/february/risk-reaches-height-of-1990s-global-recession/ **2** http://www.scmworld.com/power-of-the-profession-opinions/geraint-john/ **3** http://www.oecd.org/economy/oecd-warns-weak-trade-and-financial-distortions-damage-global-growth-prospects.htm
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