



TRUMPING THE SUPPLY CHAIN

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Trumping the Supply Chain

To say that supply chains are being disrupted, modified, changed and re-modelled is re-stating the obvious; we see transformation happening around us and for a number of reasons and factors. The drivers for change we can see and touch. The need for instant supply, technological advances, the sharing economy, the circular supply chain, re-shoring and the overwhelming movement to localisation is becoming far more apparent, but the whole disruption in supply chains is under-pinned by the macro-economic environment. Countries and governments are taking a more protectionist stand and distancing themselves from globalisation. America First, Brexit, the emergence and in some countries dominance in nationalist views for example, the Five Star Movement in Italy coming to the fore on a nationalistic ticket, the popularity of far-right parties in The Netherlands, France and Austria, even internal breakdowns between Northern and Southern Europe within The European Union, Czexit being talked about. The Donald Trump walled vision of the US, the breakdown of the Trans Pacific Partnership and increasing trade tariffs all mean that the political environment is set to enable and encourage supply chains to transition back to localisation on the wave of nationalism that signals the end of the globalisation that we have grown comfortable with over the last 40 years or more. The renowned Harvard Economist Dani Rodrik in his 2018 book, *Straight Talk on Trade*, summed up the situation...*'As the world reels from Brexit, Trump's victory, and other shocks, it is dawning on economists and policy makers that they severely underestimated the political fragility of the current form of globalisation. The popular revolt that appears to be underway is taking diverse, overlapping forms: reassertion of local and national identities, demand for greater democratic control and accountability, rejection of centrist political parties, and distrust of elites and experts.'*

Local Heroes

The reasons are well known how and why we moved to an elongated, take-make-dispose global supply chain, with centralised manufacturing in low labour cost geographies, where China became the World's manufacturing centre with transportation and distribution networks largely filled with finished goods. We also know how the complete model works and the valiant efforts made to chip away at lead times, inventory, transportation and storage costs. Improvements in demand forecasting, sourcing, procurement and transparency have all been focussed on and incremental improvements made to the overall model. But this model is too rigid, inflexible and out-dated to satisfy current trends and demands. That is not to say that there isn't a place for the elongated, existing supply chain set up we are used to, after all it is a well developed, mature and in some instances an optimised supply network, but a significant proportion of it will be supplanted by a more dynamic, flexible and localised model. Manufacturing is moving away from the elongated, take-make-dispose supply chain to one that is distributed, localised and circular in nature. Doctor Finbarr Livesey of Cambridge University in his 2017 book, *From Global to Local, The Making of Things and the End of Globalisation*, puts an estimate of anything between a 20% to 30% fall in global merchandise trade over the next ten years, an assumption taken across a broad manufacturing sector and largely built on technology adoption such as automation, robotics and new manufacturing techniques. We are already experiencing a 'New Industrial Revolution' as Peter Marsh's book published in 2012, *The New Industrial Revolution; Consumers, Globalisation and The End of Mass Production*, goes into some detail to define...and note he calls it the Fifth Industrial Revolution, not the Fourth that the Industry 4.0 bandwagon jumpers claim we are experiencing. He not only elaborates about the shift to localised manufacturing but also describes how this leads to '*clusterisation*,' whereby industries will flourish in many localised areas as skills are developed and concentrated, but also due to components further down the supply chain being sourced and manufactured locally, a consequence of which is that more manufactured goods will come out of the global supply chain. Olivier Scalabre's TED talk is a good summary of why manufacturing is localising and with it the supply chains that need to be re-established.

https://www.ted.com/talks/olivier_scalabre_the_next_manufacturing_revolution_is_here.

Whilst we see the effects of the technological changes such as artificial intelligence, advanced robotics, real time data analytics, machine-to-machine communication, cognitive learning, additive manufacturing, open source software, the rise of the maker movement all making the transition to localisation of manufacturing much easier. We also have the circular economy regenerating products extending use and life-cycles, products becoming more personalised as mass customisation becomes the norm and the increasing 'expectancy of immediacy' of demand, then this all goes in favour of having localised supply chains and localised sourcing as a consequence as we move away from globalisation. Further discussion around the circular supply chain can be found by following the below link.

<http://www.cardiff.ac.uk/the-panalpina-centre-for-manufacturing-and-logistics-research/research/publications/industry-insights>

However, underpinning all of the above that sets the framework for allowing the increase in localised and distributed manufacturing is the macro-economic environment.

The Economic Landscape

Reshoring or nearshoring are terms we have heard often in the past and are still talked about. David Cameron was bullish about the subject during his speech at the Davos World Economic Forum in 2014, promoting reshoring in Britain and setting up an Advisory Service called Reshore UK to help Companies bring manufacturing back. Made in Italy was high on the Five Star Agenda, and we know Donald Trump's view on bringing manufacturing jobs back to the US and imposing tariffs to help the situation along. Some may argue that this blocks free trade, but it appears Trump's view is that free trade isn't necessarily fair trade when it comes to US jobs and the average working family paying the price in their quality of life to fund the manufacture of cheap, low labour cost imports.

It is still uncertain how Brexit will pan out and what this means for trade agreements and the Customs Union for the UK, is it a hard or soft Brexit? How does it affect the flow of goods, labour, services and capital, the four pillars that support the European Union? Will it restrict trade? One of the main criteria that the UK voted for exclusion from the EU was on the back of immigration and tighter border controls, which is seen as another fundamental objective across the nationalistic politics of Europe and the US. But moreover, is Brexit another manifestation of the rejection of Globalisation? When Theresa May at the 2016 Conservative Party Conference said, "*If you believe you are a citizen of The World, you are a citizen of nowhere,*" it was aimed at the way the liberal establishment and how they are perceived to have lost the connection with national identity and that it was better to be nationalist than globalist.

In his 2017 book *Grave New World. The End of Globalisation, The Return of History*, Stephen D. King, The Senior Economic Advisor to HSBC, argues that the growth in globalisation based on capitalism and free market economies that prospered and grew after the Second World War, are now regressing and the institutional bodies designed to regulate that growth such as the IMF, GATT or latterly the WTO and the EU are losing influence. He foretells the imminent collapse of globalisation which is all but impossible to avoid and states that global economic collaboration and integration relies on broad structured support. He goes on to elaborate that global unity is not about technological advances but is dependent upon the ideas and institutions that create politics and economies both locally and globally.

We cannot ignore the trade stand-off between the US and China. China who has benefitted enormously from globalisation in terms of international trade, foreign direct investment and a rising middle class want to see it all continue. Xi Jinping was heralded as the Champion of Globalisation at the WEF in Davos in 2017 - notable by his absence in 2018! The China 'One Belt, One Road' (OBOR) initiative is a means to foster greater global integration by connecting links over land and ocean from China to Europe, Middle East and Africa. But as King points out, this has the benefit for China to expand manufacturing into the poorer provinces and away from the more prosperous industrial areas of eastern China, OBOR opens access to trade with the western provinces. The US, under Donald Trump have lived up to pre-election promises and Trump's zero-sum game in terms of trade is causing ripples around the world, not just between China and the US. Trade tariffs on industrial staples such as steel have captured headlines, but it is a much broader with products such as electronics

and advanced medical devices that will be subject to tariffs as the US targets products that are encompassed in the 'Made in China 2025' initiative – manufactured products in which China want to be global leaders. It appears this may have spilled over into a 'tech' war not just a trade war as the US recently imposed a ban on US component supply to ZTE, China's second largest Telecoms Company. It all goes to highlight the fragmented, protectionist, even isolationist actions we are seeing contrary to harmonious global trade.

What's Next?

The macro-economic environment isn't the only reason for the move from global manufacturing to more regional or localised manufacturing with the obvious knock-on effect this has on supply chains. However, it appears only too clear that the political and economic landscape is not only easing the transition, but positively encouraging it. It remains to be seen what the impact would be if the US and China entered into a trade war. The two largest economies in the world at each other's throats will have major repercussions on all aspects of global trade and economic stability. Trade wars, however they pan out, won't stop the migration of manufacturing and supply chains from becoming regional and local, this is happening and will continue. We will certainly have to manage the implications of this in terms of skills and infrastructure. The manufacturing roles created locally won't be the blue-collar jobs that left when manufacturing headed east, as manufacturing will return in the shape of robots, highly automated processes, new production methods and techniques. The skills required will be in engineering, science and IT and we already have a shortage of skills in these areas, so demand will easily and quickly outstrip the supply of skills.

Localised, distributed manufacturing won't necessarily mean centralised, specialised huge campus facilities that we see today in China, for example. But much more dynamic, flexible and responsive factories that can produce products as a one-off, personalised item. We are starting to see the emergence of micro-factories close to the point of product consumption. Digital production techniques such as additive manufacturing means the product be manufactured practically anywhere. It also means that inventory can be stored digitally and not held within the supply chain. Components, finished goods, semi-knocked down products and sub-assemblies can be manufactured as and when required which means less product will be transported or stored. Items can be designed, manufactured close to demand and shipped to customers with much reduced lead-times.

Finally, and Importantly, we need to understand that as low-cost labour is no longer the prime consideration in manufacturing, and with accelerated technology, more urgency from consumer demands and expectations together with societal changes meaning more manufacturing in the digital age will be undertaken locally and distributed within Country - does this promote further national independence and in itself have a self-perpetuating acceleration effect on the deterioration of globalisation? Only time will tell.