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## FROM GLOBALIZED MANUFACTURING TO LOCALIZED REMANUFACTURING

- Keypoint Intelligence's Deborah Hawkins identifies 6 signs of the looming evolution



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# From Globalized to Localized Re -6 Signs of the Looming Evolution

#### KEYPOINT INTELLIGENCE

Deborah Hawkins has a history of more than 30 years in the document industry, which saw the shift from analogue to digital, standalone to networked, the emergence of solutions, and most recently a push into IT services. As one of the subject matter experts at Keypoint Intelligence, Deborah has extensive consulting skills and has helped major industry brands expand strategies and explore new ground. Deborah also possesses a broad knowledge base of market research with experience including market sizing, forecasting, and competitive analysis.

# Manufacturing manufacturing

#### 🖉 Deborah Hawkins

The dynamics of manufacturing are undergoing a profound transformation as industries adapt to changing consumer demands, technological innovation, the growing importance of sustainability and, of course, some unforeseen and initially turbulent rifts brought on by the COVID-19 pandemic. A notable shift toward more localized manufacturing is taking center stage and the once-dominant model of distant and outsourced production is gradually giving way. In this article, we will delve into six telltale signs that illustrate how manufacturing is embracing a "think globally, manufacture and/or remanufacture locally" mindset. From the resurgence of small-scale production to the integration of advanced technologies, these signs herald a new era where proximity and efficiency are at the forefront of the manufacturing renaissance.

#### Geopolitics and the changing relationships between global superpowers

The BRICS countries (Brazil, Russia, India, China, South Africa) are seen as emerging economic powerhouses with growing influence over the global manufacturing landscape, especially considering their combined GDP in 2020 surpassed that of the G7, and their interactions with G7 nations and each other can impact the entire localization vs. globalization equation.

BRICS nations collectively represent a significant portion of the world's population, and their large and diverse consumer bases offer substantial opportunities for companies to tap into expanding markets and reach a wide range of potential customers, not to mention their impressive economic growth being indicative of a rising middle class and increased purchasing power. The growing prevalence of e-commerce business tools also plays a role here, helping businesses to overcome the geographical challenges of traditional brick-and-mortar retail while providing data-driven insights to modify their offerings to effectively meet the needs and preferences of BRICS consumers. As BRICS countries continue to develop their manufacturing capabilities and technological advancements, coupled with their potential to access large consumer markets, they become more attractive hubs for investment and could encourage multinational corporations to consider localized manufacturing in those regions.

The flip side is that, as their economies grow, so might labor costs, altering the cost advantage that once drew companies to outsource labor-intensive tasks to these very geographies. The advancement of technology, automation, and digitalization might change the nature of labor outsourcing altogether, putting greater focus on more specialized and high-skilled tasks.

#### Chips: better when made locally?

Semiconductors have become a strategically important lever as technology enters every part of our daily lives. The Taiwan Semiconductor Manufacturing Company (TSMC) is the world's largest manufacturer of semiconductors. South Korea, Japan, and the USA follow with China accounting for 24% of global production. However, the relationship between China and Taiwan is strained and just one pandemic and the resulting cessation of Taiwan's semiconductor production caused shockwaves around the world and was a major contributor to the limited availability of tech goods for many months.

So concerned are many countries that when everything from cars to heart pacemakers and kettles were in such precarious supply, countries decided semiconductor production needed to be repatriated or localized. The new news is massive investments in semiconductor production around the world. For example:

- TSMC recently announced a deal with the European Union to build a chip factory in Berlin, Germany.
- Intel also announced it is to build two manufacturing plants in former Eastern Germany.
- TSMC will also build two manufacturing facilities in Arizona, USA.

The net result, in addition to meeting increased demand & faster reaction to demand fluctuations, will be that, should further Geopolitical shocks such as Russia's special operation in Ukraine or even, China decide to make a move on Taiwan, then the global supply of semiconductors would be less vulnerable. Also of benefit are the chance for workforce growth and carbon footprint reduction from the transportation of chips from overseas.

### Shipping Containers: are they the "necessary" evil in the supply chain?

Shipping containers play a crucial role



in the global supply chain. While they have contributed to the offshoring of manufacturing to lower-cost regions, they also play a notable part in the opportunities for revitalizing local manufacturing ecosystems.

Discretionary spending has taken shape in line with the state of inflation across developed economies. With consumers forgoing spending on non-essential goods to combat the challenges brought on by continued price hikes, container demand and volume has been brought to new lows , all while new vessels continue to flood shipyards. Maersk, which holds around 17% of the container shipping market share, reports a 6% drop in containers loaded onto ships between April and June of this year versus the year prior. As a result, freight rates have seen significant regression compared to earlier in the pandemic.

That said, the reliance on shipping containers is not what it once was, and may continue to degrade in the near term. Lower freight prices mean businesses might start reconsidering the benefits of reshoring or nearshoring manufacturing operations. High container inventory in tandem with dwindling demand points to supply chain bottlenecks, and manufacturers are likely to become more reliant on local suppliers or suppliers from nearby regions to reduce their dependence on distant suppliers and mitigate supply chain disruptions. This is a subtle win for localized manufacturing in that lower container prices enable "just-intime" production strategies so manufacturers can quickly respond to changing market demands. This is particularly important for localized manufacturing that needs to adapt to fluctuating consumer preferences.

#### Applying Pressure: giving localization a voice

Democratic Western markets for goods and services leave both governments and enterprises open to vocal forces from many of society's stakeholders. The voice of the customer is key and social media has enabled many pressure groups to organize and, find a forum for their opinions.

Central to the debate is an increasing number of methods used by manufacturers to make the repair of products and supplies more difficult by incorporating design features that prevent the dismantling of the device. And, even if the product could be disassembled the availability of spare parts is often limited or, specific diagnostic and repair tools are simply unavailable.

In Europe, there is a strong Right to Repair movement repair.eu They are interested in the reuse of many different product groups and printing hardware and supplies are in their focus. They are enthusiastic supporters of the European Commission's forthcoming regulation which in addition to improving the useful life and energy efficiency of printers and MFPs, is proposing to bring an end to many of the industrys' practices which discourage the use of remanufactured supplies.

In the USA, the Right to Repair laws are rolling out in many States enabling new local repair shops to compete with manufacturerbranded dealers and partners across a wide range of B2C industries.

#### Other industries are going local too

Companies across various industries have begun to embrace the production of goods and products closer to the point of consumption. Why? The benefits in reducing supply chain complexities, increased customization, sustainability, and enhanced resilience in the face of market disruptions cannot be denied.

#### Average of 30% of resellers MIF is already 2<sup>nd</sup> use

Q38: What share of your printer/MFP/copier hardware fleet has been refurbished or reconditioned and/or placed back in the market for a second or multiple use cycle?



In the automotive landscape, we have Tesla, whose five "gigafactories" are strategically located across the globe, enabling the organization to manufacture EVs and batteries closer to target markets.

For the medical devices/pharmaceutical space, 3D printing has found a home in the production of prosthetics through companies like LimbForge and Mecuris. Digital design files can be quickly transmitted to 3D printers, allowing for direct production on a local level, eliminating the need to coordinate complex international supply chains and shipping schedules from manufacturing facilities to distribution centers and finally to patients.

Big names in apparel are investing in localized production as well as responsible remanufacturing. Patagonia emphasizes repairing and reusing products to extend their lifespan through its Worn Wear program, which promotes the resale and repair of used Patagonia products. On a smaller scale, boutique fashion studios are emerging to create localized and custom-made clothing by working closely with customers to design and produce unique garments which cater to individual preferences and sizes in a given geographic location. Some parts of the US and Europe are witnessing the resurgence of localized textile production through knitting and weaving workshops. Such workshops produce small batches of textiles using traditional techniques while promoting craftsmanship and sustainability.

#### Rebuilding Remanufacturing: acting local in office printing

There can be few people in Western Markets who would not recall the Cartridge World franchised stores. In 2010 there were over 2,000 stores worldwide offering toner and ink cartridge remanufacturing and refilling. Today that number is below 600 stores. Remanufacturing has been displaced by the availability of mass-produced, low-cost compatibles. Those left in the remanufacturing industry have consolidated capabilities and, the remanufacturing process has become focused on legally profitable cartridge SKUs.

A major challenge for the industry is how to expand and encourage the remanufacturing of supplies, locally while recognizing the shape of the industry today, learning the lessons of localized remanufacturing from the past and empowering reuse of toner and ink cartridges for the benefit of the planet. Interestingly, in the copier hardware market remanufacturing is alive and well. When supply chains carrying new copiers broke during the COVID and Container Ship crisis, local dealers and resellers empowered their engineers to refurbish copiers in their workshops. When coupled with changing legislation in both the US and EU requiring refurbished hardware to be a growing part of tender and procurement processes, the result is a growing market for reconditioned hardware. Even OEMs are gearing up with ranges of Factory Certified Reconditioned hardware.

Change is the only constant, and the current shifts in globalized manufacturing underscore the adaptability and resilience of industries in the face of multifaceted challenges. As we navigate the complexities and changes afoot, one thing remains clear – a transformation is underway, and it's defined by a shift towards proximity, efficiency, and the pursuit of sustainable, resilient manufacturing ecosystems. With each sector embracing this journey in its own unique way, the global manufacturing landscape is entering an era that champions agility, innovation, and a closer connection between producers and consumers.

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