

Professional Perspective

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Effective Supply Chain Management in an Era of Decoupling

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The Covid-19 pandemic has significantly disrupted global supply chains, forcing companies around the world to navigate a wide variety of challenges that threaten the continuous operation—or even, in some cases, the fundamental viability—of their supply chains. A trend towards decoupling is being driven by public policy changes occurring as a reaction to Covid, China-U.S. trade tensions, and other developments. Businesses will need to develop innovative tactics to succeed. By employing an OpTIMAL decoupling strategy discussed below, companies can create an integrated, holistic approach to supply chains, gain a competitive edge in this emerging world—globalized, yet decoupled—and rapidly transform and manage their supply chains on their terms.

A well-managed and efficiently operated supply chain provides competitive advantages that reduce costs and maximize profits. Conversely, poorly-managed supply chains may result in inefficiency, compliance failures, and customer dissatisfaction. Companies with well-defined legal and regulatory strategies surrounding their supply chain management programs benefit from more frequent commercial opportunities, access to higher-caliber resources and talent, and see consistent gains in quality and efficiency.

Decoupling, not Deglobalization

Traditionally, times of deep crisis are followed by “deglobalization,” i.e., a reversal of globalization. Reduced cross-border trade flows and a rise in protectionism were seen in the aftermath of both the Great Depression and the 2008 financial crisis; indeed, global trade volume as a percentage of GDP peaked in 2008 and has not returned to pre-2008 levels, according to the World Bank.

Naturally, Covid-19 has engendered concerns and reports of an imminent wave of deglobalization, and has spurred a continuance or even an escalation of U.S.-China trade tensions.

While it is critical to think about structuring supply chain networks that are different from those of the past, we must continue to maintain a globalized approach to supply chains as globalization is strongly linked to economic prosperity. Today, economies are far more interconnected and interdependent than they were in the 1920s or even the 2010s, and that is helping lift millions out of poverty and improving living standards across the world.

Last year, a U.K.-based think tank, Legatum Institute, found that Economic Openness—an indicator of the participation of an economy in global trade for 130 countries representing 90% of the world's population—reached its highest ever global level in 2019. The institute's [Economic Openness Index](#) ranked North America and Western Europe as top-ranking regions on the key characteristics of openness to trade, ideas, investment, competition, and talent. Interestingly, in a finding that defies popular perception, the report noted that the U.S. “has had the world's largest, and one of the most open, economies since the Second World War.”

How do we minimize the risks of globalization without reducing its footprint? This can be done through “decoupling.” Generally, decoupling is widely used for inventory management where it plays a crucial role in centralizing and buffering a distribution network. A decoupling point, established close to the operational zone, acts as both a strategic distribution hub and a safety buffer that protects the supply chain network from demand shocks. For global supply chain management, decoupling points or nodes also connect supply chain pathways to customers.

For example, a customer base can be divided into different regions, with each region having its own supply chain network that is independent and, at the same time, interdependent with other network clusters. In the event of a global crisis like Covid-19, regional decoupling nodes can help organizations react and effectively redistribute production and sourcing to unaffected areas. This ensures that operations in other parts of the world are not affected, thus mitigating supply chain risks.

In other words, instead of a worldwide web of long and linearly joined supply chain networks that evolved over the last 30 years, we will have regionally concentrated supply chain clusters, each connected with other clusters using a decoupling point. There is likely to be a move towards the formation of such decoupled supply chain networks concentrated around

South East Asia, South Asia, Latin America, North America, and other economic hubs, where each hub is connected to the others, yet protected from demand shockwaves such as the ones being experienced today.

What we are likely to see are many more regional, customer-centric supply chain clusters taking shape around the provisioning of essential items such as food and lifesaving drugs and equipment, and, due to national policy changes, could subsequently include a larger set of goods and services that are not dictated by reasons of health and medical security but by a mix of economic competitiveness and national security reasons. These semi-independent clusters will be joined by decoupling points that will provide them a dynamic capability of moving procurement or supplies from one cluster to another.

Such customer-centric supply chain clusters will be less vulnerable to end-to-end disruption in future crises. Imagine if during the initial days of the Covid-19 crisis—when U.S. supply chains floundered in their ability to source PPEs, ventilators, and vital drugs, for which the U.S. was wholly dependent on one external economy or another—a decoupled, agile and resilient supply chain design could have swiftly tapped into diverse supply chain clusters and saved thousands of lives.

Globalization is a great way to ensure that supply chain networks continue to function in the face of single-location events, such as a natural disaster or political unrest. In order to build the same level of reliability into decoupled networks, it is critical to create network redundancies and diversity within a region. Companies operating in critical sectors like medicine and defense can better function within a decoupled network design. Integrated with advanced, emerging technologies like AI and prescriptive analytics, these decoupled networks will have inbuilt dynamic, responsive, real-time supply chain capabilities, with the ability to withstand shocks of any magnitude.

In the long run, decoupling will provide a way for companies to navigate growing tensions between China and the U.S. and the highly regulated environment of the post-Covid world, along with the natural proclivity of nations to seek prosperity through mutual economic cooperation. Given the need to prepare for the next global crisis, the likelihood of continued China-U.S. tensions, and the need for many countries and regions to take sides for economic and/or national security reasons, governments will also need to formulate, adopt, and implement national and/or regional decoupling strategies.

In the U.S., the Department of Homeland Security's Cybersecurity & Infrastructure Security Agency (CISA) and the Information and Communication Technology (ICT) Supply Chain Risk Management Task Force published an [analysis](#) on supply chain challenges that the ICT industry has faced in dealing with Covid-19 that reinforces many of these points. Industry issues identified in the report include a lack of diversification in supply chains, reliance on lean inventory models, and not having sufficient understanding of suppliers.

The report identified specific recommendations for companies to build a more resilient ICT supply chain, including the need to take a proactive and iterative approach to supply chain risk management, map specific supply chains, broaden specific supplier networks (by raw material, product, and region), expand inventories, keep an eye on important metrics, and make plans for alternative logistics and transportation options. The report also noted that some of these areas were ripe for industry-wide standardization. While these recommendations were specific to the ICT supply chain, they clearly have broader application.

In sum, as the U.S. enters its third and seemingly largest wave of Covid-19 infections yet, companies cannot afford to wait to build additional resilience into their supply chains. And recognizing that the public policy shift toward decoupling in the U.S. and other major economies is likely inevitable, companies should think proactively about potential opportunities to advocate for national and regional policies that would improve their competitive positioning in a market or region, and shape multilateral and/or plurilateral rules that may be developed.

Effective planning will result in a company's ability to think proactively, develop a comprehensive supply chain plan, and rapidly and coherently implement strategies to address risks, mitigate harm and leverage opportunities to strengthen and safeguard its supply chains.

Elements of an OpTIMAL decoupling strategy

Assuming the cross-jurisdictional nature of supply chains, there will be a wide range of potential issues that companies need to address on an iterative basis as part of a comprehensive decoupling strategy, in order to manage the full range of global supply chain issues. The elements of an OpTIMAL decoupling strategy can be grouped into six components: Operational, Technical, Infrastructure, Management, Advocacy, and Legal. While these elements are intended for

developing corporate strategies, they should also be carefully considered by national and regional policymakers, as they develop and implement their own supply chain strategies to attract investment to their jurisdictions during an era of disruption.

Operational

By definition, a decoupled supply chain network requires the presence of localized supply chain hubs physically close to consumer markets. Other conditions that improve the flexibility of localized supply-chain hubs include: availability of skilled workforce, supplier ecosystems, innovation centers, sufficient storage and transportation options, and business-friendly regulatory policies. Advanced economic regions such as North America, Europe, and Southeast Asia generally offer such conditions, although there can be variations within jurisdictions.

The acute shortage of life-saving drugs and equipment during the early days of the Covid-19 pandemic forced American companies to localize their supply base. An example of crisis-induced nearshoring was that of printed circuit board (PCB) manufacturers, which, when faced with the expediency of supplying PCBs for ventilators, preferred to have the chip installation done in Mexico, rather than China, which is the usual route.

Similarly, for European manufacturers, existing industrial hubs in Morocco, Tunisia, and Egypt have emerged as cost-effective alternatives to China. For their part, China and India both plan to focus more on their domestic markets and on self-sufficiency in manufacturing for their next phase of growth.

Regionalized supply chains would marginally increase production costs in the short run, but they offer several long-term benefits such as a reduced carbon footprint, improved agility and resiliency in the face of supply chain disruptions, and potentially higher product quality.

Developing effective supply chain operations that account for a decoupled world will take planning, and require a careful balance between lean manufacturing principles and supply chain adaptability and resilience. Companies need to develop, establish, and maintain a robust internal and external auditing strategy consistent with regulatory requirements and corporate culture.

They need to impart education and training in compliance with global standards and certifications; ensure independent evaluation of Good Manufacturing Practice (GMP) requirements and procedures, and proactively identify and address changes in national and international manufacturing practices. Companies should also develop a corporate standards strategy to ensure that their participation in standards development is consistent with a decoupling strategy, and that opportunities are identified and seized, and risks are mitigated.

In designing the decoupled supply-chain networks of the future, companies will need to go beyond the immediate imperative of goods sold, and look at the holistic imperatives of sustainability, risk management, cost, speed to market, and resiliency. They will need to be prepared to think beyond the China-dependent supply network models of the past.

Technical

The most efficient way for companies to align with decoupled supply chains in a post-Covid world and offset the delta of cost, speed, and cycle time, is to implement a digital transformation strategy, leveraging technologies such as 5G, IoT, machine learning, blockchain, AI, and advanced data analytics to efficiently align with decoupled supply chains.

The ability of companies to adopt digital transformation strategies will vary depending on their size and resources. Organizations with access to capital will have a greater ability than others to deploy the necessary resources to take advantage of available opportunities. Large companies, though they may be resource-rich, will also need to phase out legacy systems and complex traditional processes. Small to midsize companies, while not typically having the same access to capital, will have the advantage of being able to pivot much more quickly in adopting digital solutions to supply chain issues.

In addition, in the areas where national policies are most likely to lead to decoupling, such as with respect to products crucial to public health and national security, it will be more important than ever for companies to ensure and be able to certify that their entire supply chain is secure for both private and public sector audiences. In a global economy, supply chain ecosystems are complex, and mostly rely on third-party technology partnerships for management of data, hardware,

and software. Not only are those interconnections potential points of entry for cyber threat actors, but they are also subject to ever increasing regulatory and other policy frameworks across the globe.

Further, each supply chain brings its own challenges around personal and non-personal data ownership, flows, and governance. Managing and complying with those competing requirements require careful attention to sourcing, vendor management, internal and external auditing capabilities, board level awareness, and engagement. They also require a careful negotiation of security and privacy clauses in supply chain agreements, an understanding of international security standards and current and upcoming national or regional certification schemes, drafting of security requirements in RFPs or procurements, due diligence, as well as vendor assessments. And as national security rules are tightened around the globe, it increasingly means that prime contractors will need to ensure that their subcontractors—which tend to be smaller and less resourced—meet the same technical requirements that they do.

Admittedly, decoupling of global supply chains, most of which are single-strand legacy networks, is a tall order, but increasing geopolitical tensions and cross-border uncertainties should not be taken lightly. Companies must begin to conceptualize, analyze, and appropriately implement customer-centric network design. Engaging technical experts from the relevant domains to look at supply chains from an integrated, holistic perspective is necessary to facilitate the transition into this new frontier with successful outcomes.

Infrastructure

Where new physical and digital supply chain infrastructure is needed to support a revamped supply chain, companies need to develop and execute a strategy for obtaining financing, especially in challenging financial markets. On the transactional side, this means putting together a team to handle every stage of the business cycle—from entity formation and early stage financing, to day-to-day business and legal issues such as governance and organizational structure, from negotiating mergers, acquisitions, joint ventures and dispositions, and product distribution and supplier contracts, to complex financial and restructuring transactions.

Depending on the project, companies may need to develop and employ a legal and political strategy as well. Legal and regulatory issues may arise at every point of a project lifecycle, from the design phase through financing, permitting, completion, and operation. In some cases, some or all of the needed infrastructure improvements may involve public goods—such as roads and bridges, seaports and rail, locks and dams, communications infrastructure and airports, and power and water utilities—with a different set of financing options. In such cases, companies should be prepared to deploy an advocacy strategy to support financing, permitting, stakeholder engagement, and operations.

Management

The responsibility for navigating through these headwinds rests on the shoulders of an organization's leadership team. Corporate leaders will need to make a deliberate decision to focus on supply-chain resilience and agility as their core objective, rather than on a strict cost imperative.

A transition to customer-centric supply chains entails a paradigm shift. Trends show that large multinationals such as Amazon, Intel, and Apple are leading the way, just as economies around the world are raising policy barriers, imposing stricter regulations, and making the supply of essential items a subject of national security and supply chain resiliency.

Management must put in the investments necessary to safeguard their organizations from severe supply-chain disruptions, such as the one caused by the Covid-19 pandemic. For a majority of companies, utilizing decoupled supply chains would mean undertaking a journey of digital transformation. This is not an option, but a market-mandated inevitability. A McKinsey [survey](#) showed that digital adoption across industries and regions globally has taken a quantum leap during the crisis.

If a company does not have the time to improve its technological agility, it is soon going to find itself out-competed and eventually, replaced. Leadership must realize that decoupling and redesigning of supply chains will be underpinned by future technology, including AI, machine learning, IoT, and blockchain. These are highly uncertain times, as the business community braces to better understand what the world will look like post-Covid. What is certain is that big changes will be required. Companies that follow a phase-based approach to transforming their supply chains will find that the transition can be quite manageable.

Advocacy

To be truly effective, any supply chain strategy will also require carefully designed and proactive advocacy and marketing strategies. These could include: an emphasis on buying local, promoting specific brands as best-in-class with respect to health and safety, or pushing stronger climate change, sustainability, or circularity measures to take advantage of proactive investments or new technologies that provide a competitive advantage—whether to a company, a sector, a jurisdiction, or a region.

Taking a proactive approach will help companies to identify and seize opportunities to change laws, regulations, and policies to benefit their specific priorities and manage specific political risks. Traditionally, a successful advocacy strategy requires companies to invest in relationships with relevant stakeholders—whether private sector, NGO, or governmental—well in advance of when their assistance is needed, and develop substantive depth in the relevant policy issues, procedures, and institutions. Depending on the issue, this could include building a firm understanding of the key people, entities, and dynamics in a variety of policy worlds, from foreign policy to defense, international trade to public health, and transportation to energy.

In a world in which governments are willing to entertain a wide array of measures to safeguard or strengthen existing national supply chains, and create the conditions to establish new ones in their territories or those of trusted partners, companies need to think creatively about ways to prioritize their specific interests or, conversely, be prepared to persuasively divert counterproductive endeavors into more workable alternatives.

Legal

Lastly, companies need their legal departments to develop expertise on supply chain issues and oversee all aspects of the other five components of the strategy. The focus of these efforts would be to minimize legal risk, take advantage of existing laws and regulations, and help craft new policies that would benefit the bottom line. Accomplishing this task will require a flexible, practical approach, oriented towards problem-solving.

A successful legal strategy will also necessarily entail integrating multiple areas of law relevant to supply chains across the jurisdictions in which a company maintains operations. Such areas may include blockchain; trade and customs; commercial agreements; privacy and cybersecurity; government contracts; transportation; employment and labor; export controls, sanctions, and investment; anti-corruption; human rights; environment; competition; and intellectual property.

For example, in addition to needing to comply with relevant laws and regulations of new jurisdictions that pertain to the company's products and services, supply chain shifts and new government supply chain-related policies may require a company to:

- Develop and executive outsourcing strategies
- Solve new logistical challenges
- Implement labor reorganization strategies
- Obtain permits for new facilities
- Put in place new measures to protect its intellectual property
- Demonstrate supply chain risk management to a government agency as part of a procurement bid
- Develop and execute strategies to minimize tax and duty liability
- Ensure compliant incorporation of temporary workers and contractors into the workforce
- Address immigration and visa issues for foreign workers
- Manage difficulties arising out of acquisitions and divestitures

All of these could require identifying and addressing legal issues across multiple areas of law, while at the same time maintaining a holistic focus on developing and maintaining competitive advantage for the company with respect to cost, quality, efficiency, and resilience.

Conclusion

The fundamental nature of the disruptions to global supply chains caused by Covid-19 and growing China-U.S. trade tensions have effectuated a new normal—where instability is the rule, rather than the exception. With this in mind, many countries are beginning to focus on national policies that ensure their domestic companies are able to do business with major trading partners that are implementing decoupling or other adjustment measures. This will obviously lead to further significant impacts on global supply chains.

Companies should be proactive in assessing their supply chain operations using the OpTIMAL framework - which can identify and analyze potential challenges and opportunities for any supply chain, irrespective of product or global footprint—and develop an effective strategy to chart a path forward, into this new world.

Decoupled supply chains will be far more resilient to geopolitical tensions and natural disasters, and will not expose humanity to the level of despair and despondency that this current crisis created. Above all, they will be more environmentally and climate-friendly. That alone is a goal worth striving for.