

Navigating the new landscape of geopolitics and supply chain disruption: A critical look at key macro themes in healthcare

Carolina Pinto

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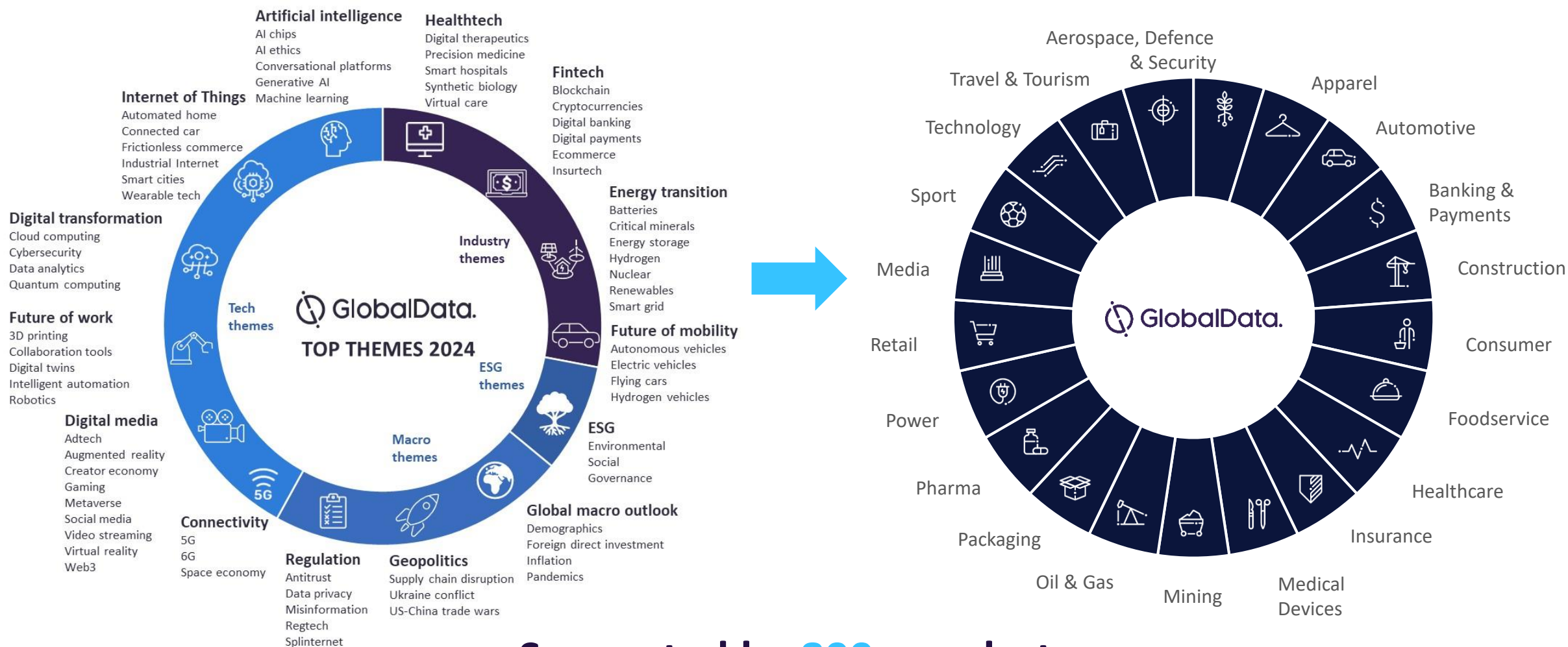
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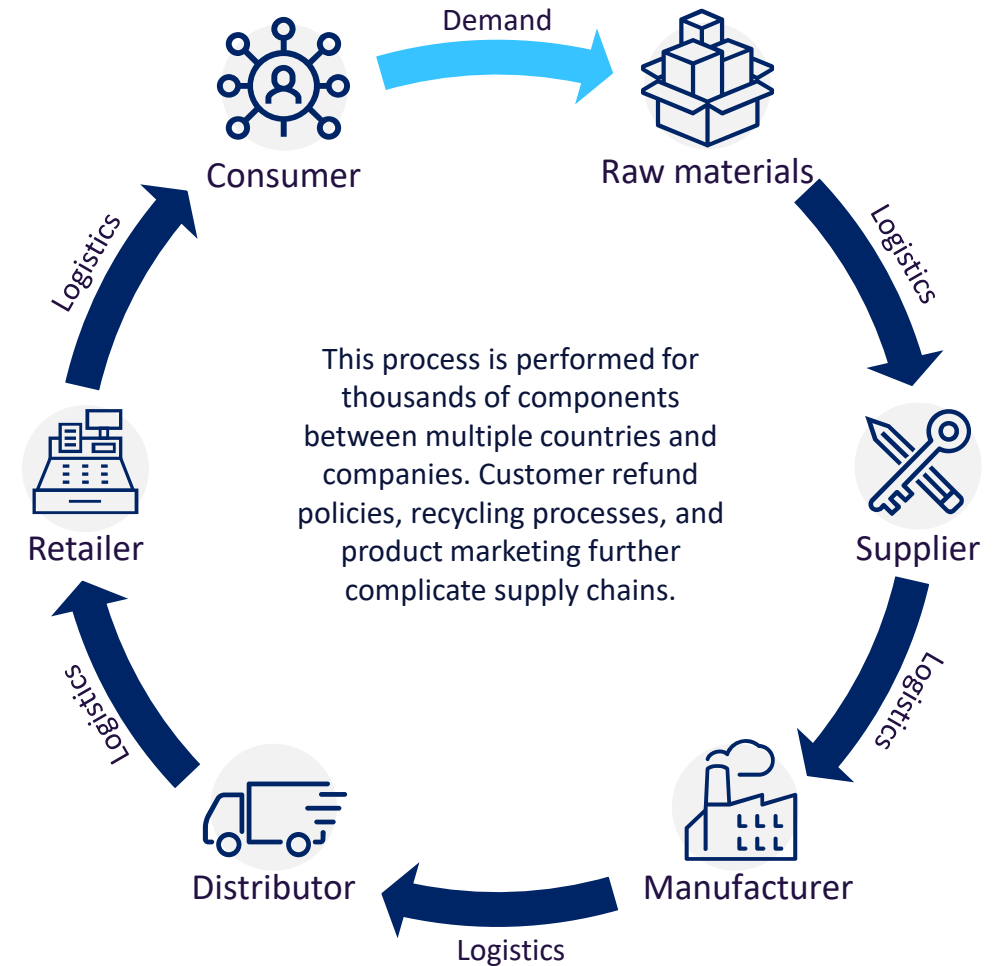
Supply chains in the 21st century

From just-in-time to just-in-case supply chain management



- During the golden era of mass globalization, supply chains functioned in a **just-in-time** system where raw material orders directly aligned with production schedules and current demand. Companies carried little to no inventory, limiting storage and financial costs, streamlining operations, and reducing losses associated with wasted products if demand decreased.
- The COVID-19 pandemic flipped supply chains upside down. Businesses shifted to a **just-in-case** model and began keeping a minimal inventory level to avoid losses from unforeseen supply chain disruptions.
- In 2024, despite growing supply chain risks, some companies reverted to just-in-time as pandemic-related disruption abated and high interest rates and high inflation made it more expensive to carry large inventories.

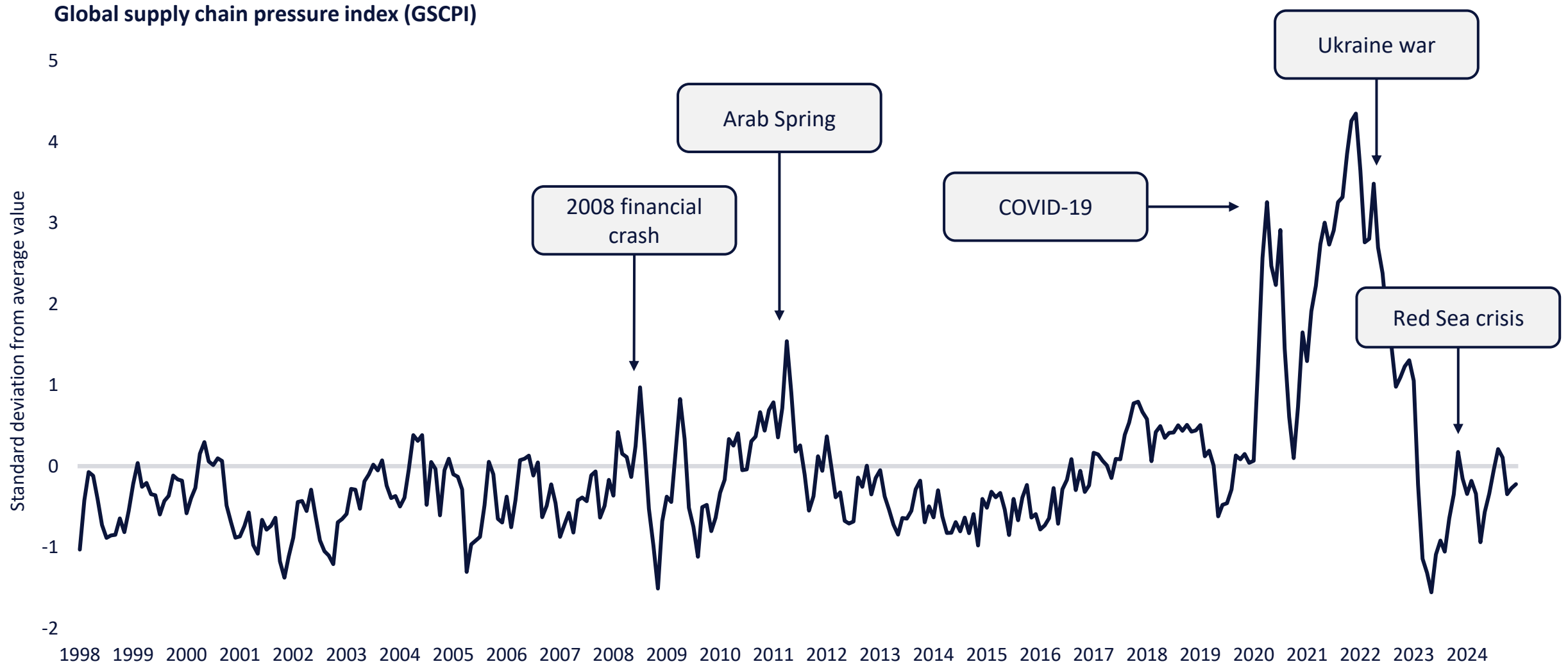
Most supply chains follow this basic structure



Supply chain disruptions are becoming worse and more frequent



Global supply chains are resilient but cannot always be relied upon. The timeline below outlines global supply chain disruptions since 1998 and the likely causes of these disruptions. The disruption since 2020 has been unprecedented.



There are six global challenges aggravating the severity of supply chain disruptions



These challenges are mutually reinforced, intertwined, and increase the risk of disruption



1. Geopolitical fractures



2. Armed conflict



3. Security



4. Climate change



5. Demographics

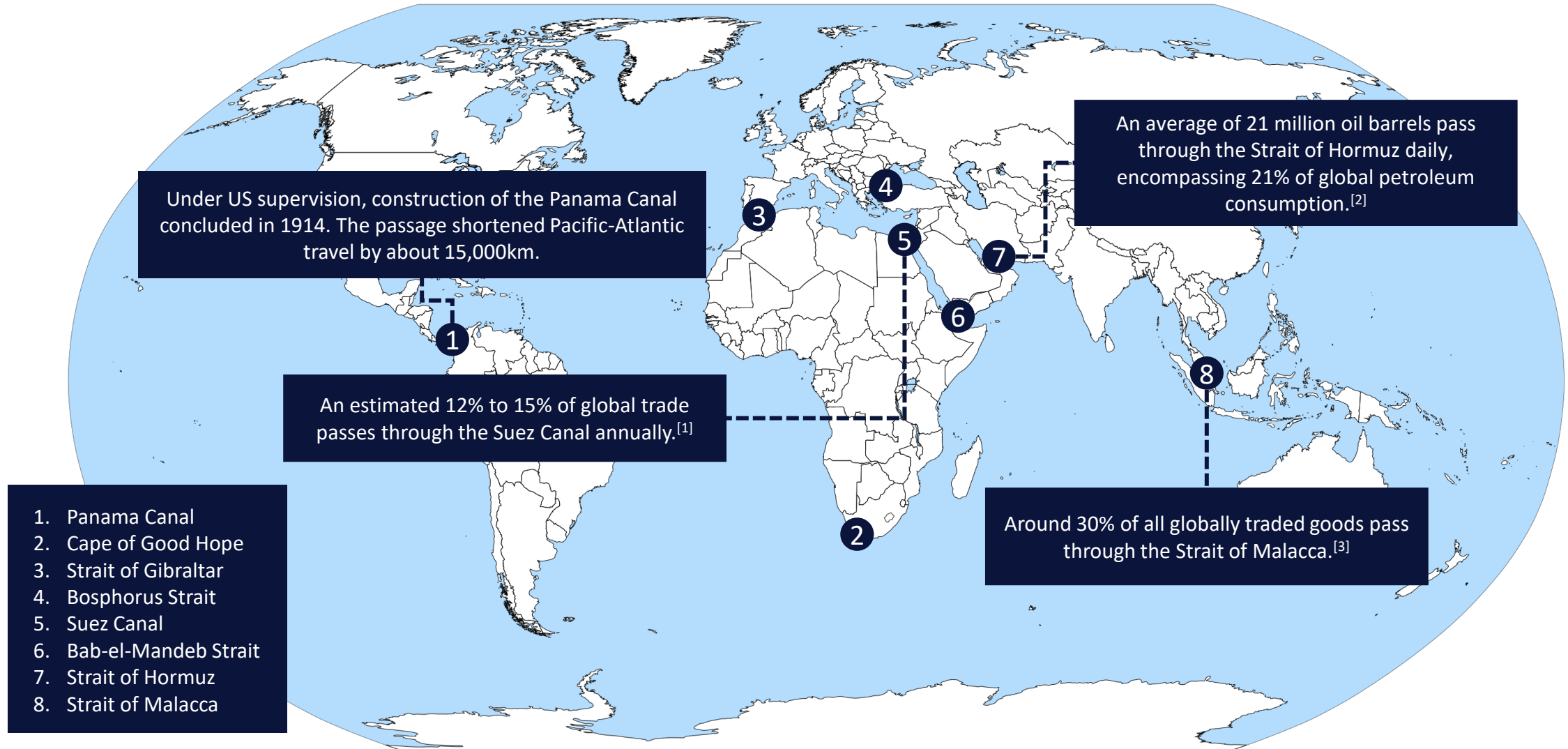


6. Migration

Supply chains are global, complex, and vulnerable



The graphic below shows the **primary supply chain choke points** that offer cost-effective maritime shipping and have few or no alternatives. Disruptions to these choke points would seriously impair global trade.



[1] According to the UN Conference on Trade and Development

[2] According to the US Energy Information Administration

[3] According to the World Economic Forum

Source: GlobalData

Six reasons to pay constant attention to geopolitics

Struggle for mastery; nowhere to hide

- Geopolitical risk stems from rivalry between Great Powers. The end of the Cold War left the US as the world's sole superpower: but China's rise challenges that status.
- The military, economic, and financial weight of such powers ensures that the rest of the world is affected by their rivalry; and the adversarial zero-sum dynamic of the US-China rivalry that increasingly dominates global affairs must be weighed in many political and business decisions to manage risk—and grasp opportunity, notably in relation to non-aligned countries like India.

No compromise; no end in sight

- The struggle is more tense for being early-stage: such efforts as are being made to manage rivalry lack the spirit of give-and-take required for reaching a stable and predictable equilibrium founded on, for example, mutually respected spheres of influence.
- In the Cold War, it took nearly two decades for tensions to become more stably managed—and this was only achieved after the world brushed with nuclear annihilation in the Cuban Missile Crisis.

Powerful economic spillovers

- Unlike the Cold War confrontation between two economically self-contained blocs, the US-China struggle has emerged against the backdrop of hyper-globalization and hyper-digitalization.
- This intensifies the dislocating economic impact of geopolitically-driven reconfiguration of trade, investment, finance, and supply chains.

The economic weapon

- Business and finance are not just passively exposed to geopolitical pressures: companies—especially in the tech sector—are also a key instrument of government-imposed sanctions against geopolitical rivals.
- Even in the absence of formal prohibitions (sanctions), companies must contend with the reputational risks of commercial activities across geopolitical fault lines.

Demonstration effect; Ukraine and Taiwan

- The war in Ukraine stems from the major powers involved taking the view that the issues at stake allow no room for compromise.
- The serious economic shocks and financial losses caused by the war in Ukraine and resulting sanctions would pale beside the impact if tensions over Taiwan were ever—similarly—to blow up into armed conflict.

Contagion and 'polycrisis'

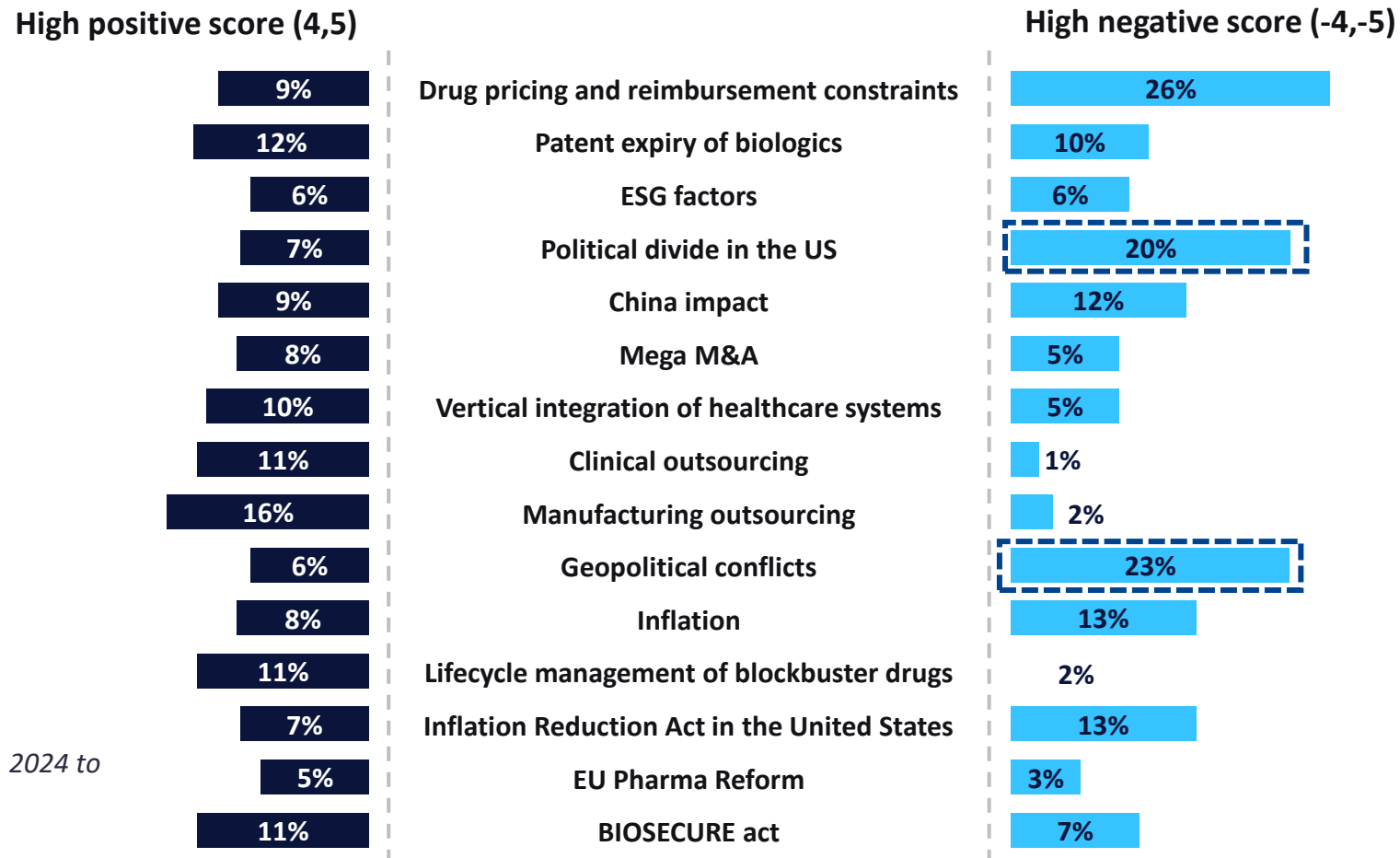
- Geopolitical tensions and other escalating global crises feed off each other in a self-reinforcing vicious cycle—the other two main (and themselves interlinked) components of this 'polycrisis' being climate change and increasing migration flows.
- Geopolitical rivalries hamper cooperative crisis management and can lead to the 'weaponization' of other crises, amplifying the associated economic dislocation (supply-chain shocks and pressures) and socio-political destabilization.

Geopolitical conflicts and the political divide in the US are seen as a hindrance to growth



Geopolitical conflicts and tensions often have a negative impact on the pharmaceutical industry by causing supply chain disruptions, trade barriers, and interruptions of clinical trials. They impact the industry's ability to develop, produce, and distribute medicines.

Q: On a scale of -5 to +5, please rate the anticipated impact of each of the following emerging regulatory and macroeconomic trends on the pharmaceutical industry in the next 12 months.



Survey fielded November 15, 2024 to
December 4, 2024

N=128

Source: GlobalData, The State of the Biopharmaceutical Industry, 2024

Note: Figures represent the number of respondents who selected a high negative or positive score.



Supply chain disruptions can slowdown, pause, or halt clinical trials studies

Impacts can be felt across the supply chain from sponsor to subject

Impact on **Sponsor**

- Delay in data verification
- Supply of study materials
- Difficulties in bio-sample shipments to the central labs
- Issues with study budgets linked to inflation
- Difficulties with money transfers
- Impact of political sanctions on study

Impact on **Site**

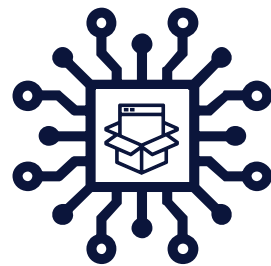
- Lack of staff
- Shortage of treatment materials and significant delays with re-supply
- Quality assurance difficulties
- Compliance issues
- Power outage and no stable internet connection
- Data collection loss or delay

Impact on **Subject**

- Limited or no access to the site for treatment
- No stable communication with the site
- Difficult transportation to/from the site
- Significant break from treatment



Relocation



Diversification



Digitalization



Circular economy

Trump 2.0 and bifurcated supply chains

Trump policies that matter most for the global economy and business in 2025

Will Trump's "America First" agenda raise or ease geopolitical tensions?

Main policies:

1. **Protectionism** - Structural shift in tariffs levied on US imports, not only from China (still the main target), but also from all other US trading partners.
2. **'Tech War'** - the struggle with China for leadership in the race to key technology frontiers (e.g., AI, biotech, chips, quantum, outer space).
 - This struggle—and the associated fracturing of the global economy—will further intensify; but it might also be carried on in a new way with some potentially positive economic effects.

Why are these the main policies?

- The impacts of the two highlighted policy areas—tariffs and tech war—will be felt by businesses in all sectors and all over the world.
- Other policies (e.g., immigration, tax cuts) will be more relevant for the domestic US economy: the importance of the US economy for the world means that these other policies will also have global impacts.

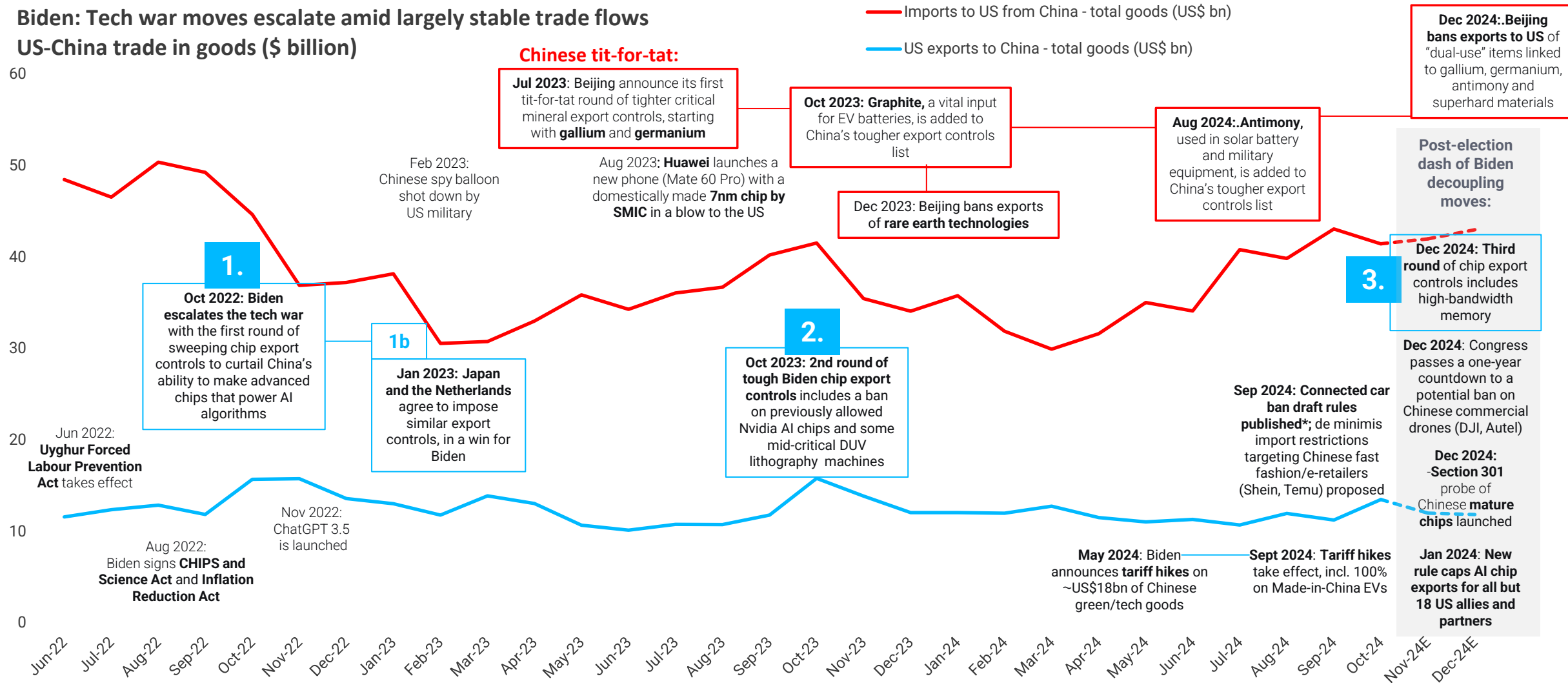


Protectionism vs China paired with tech war: Trump 1.0-Biden continuity . . .

Like Trump 1.0, the Biden administration has been racing to lock in the final decoupling moves before its exit, amid criticism about its still-gaping loopholes in measures to defend US leadership in chips

Biden: Tech war moves escalate amid largely stable trade flows

US-China trade in goods (\$ billion)

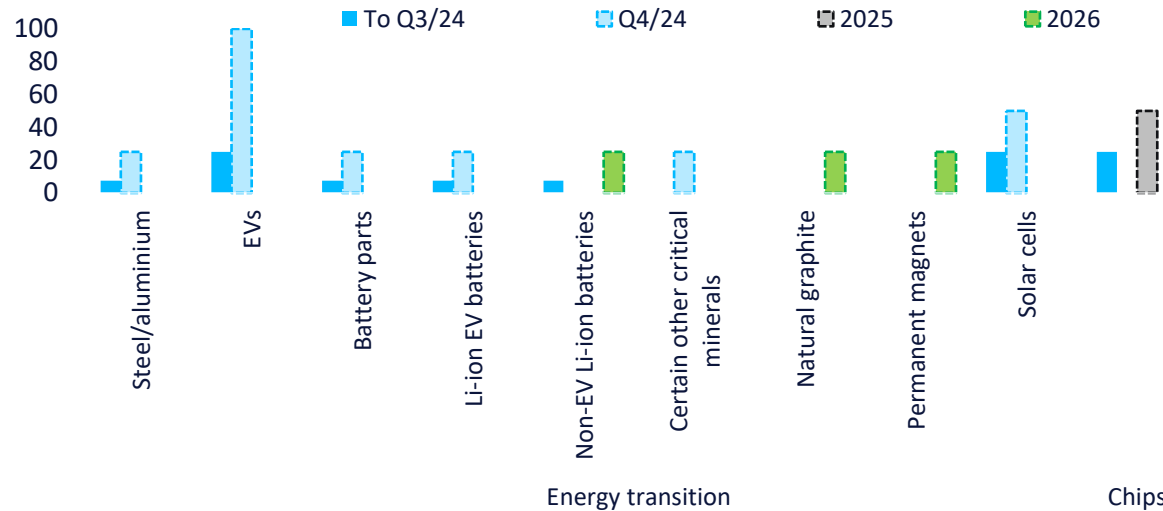


...augurs more decoupling to come under Trump 2.0

Global fragmentation is the likely result, with 'great power' rivalry heating up in multiple, hybrid domains

Biden's strategic tariffs on ~\$18B of Chinese imports

Section 301 tariffs (%)*



Core sectors/issues in crosshairs

- AI / chips / quantum
- Biotech (BIOSECURE Act)
- Connected cars / data
- Critical infrastructure (5G/6G, undersea cables, ports, satellites)
- Critical materials/minerals
- Drones / related devices
- Outbound investment screening mechanism
- Social media / Chinese apps
- New frontiers (Arctic, Antarctica, cyberspace, outer space)

Concerns across US government

“

The PRC has a bigger hacking program than every other major nation combined. [...] PRC hackers are targeting our critical infrastructure—our water treatment plants, our electrical grid, our oil and natural gas pipelines, our transportation systems—and the risk that poses to every American requires our attention now.

”

“

Given the foundational nature of certain technologies...we must maintain as large of a lead as possible.

”

— **FBI Director Christopher Wray, Jan 2024**

— **National Security Adviser Jake Sullivan, Sept 2022**

* Also includes select PPE/medical supplies and ship-to-shore cranes.

Sources: White House, Federal Register, GlobalData TS Lombard.



Trump's tariffs and tech policies carry inherent geopolitical impact

- Early action was expected and realized – 10% tariffs on Chinese imports came into effect on 4th February 2025, 25% Mexico and Canada delayed for 30 days.
- There is likely to be **pain before gain**:
 - US competitiveness hit by dollar strength and tariff retaliation from trading partners
 - A transactional approach leaves things “hanging” for months: resulting uncertainty inhibits investment

Why tariffs?

- 1 Reindustrializing the US** – Aim at reviving mid-wage, mid-skill jobs associated with ‘lost’ manufacturing to offshoring
- 2 Fiscal revenue** – Tariffs used to offset tax cuts planned from 2026.
- 3 Extracting concessions from trading partners** – Aim to 1) balance ‘unfair trade’ and/or 2) change foreign countries non-trade related policies (e.g., fentanyl supply chains in China, Mexico, and Canada, and migration in Mexico, Canada, and LATAM)



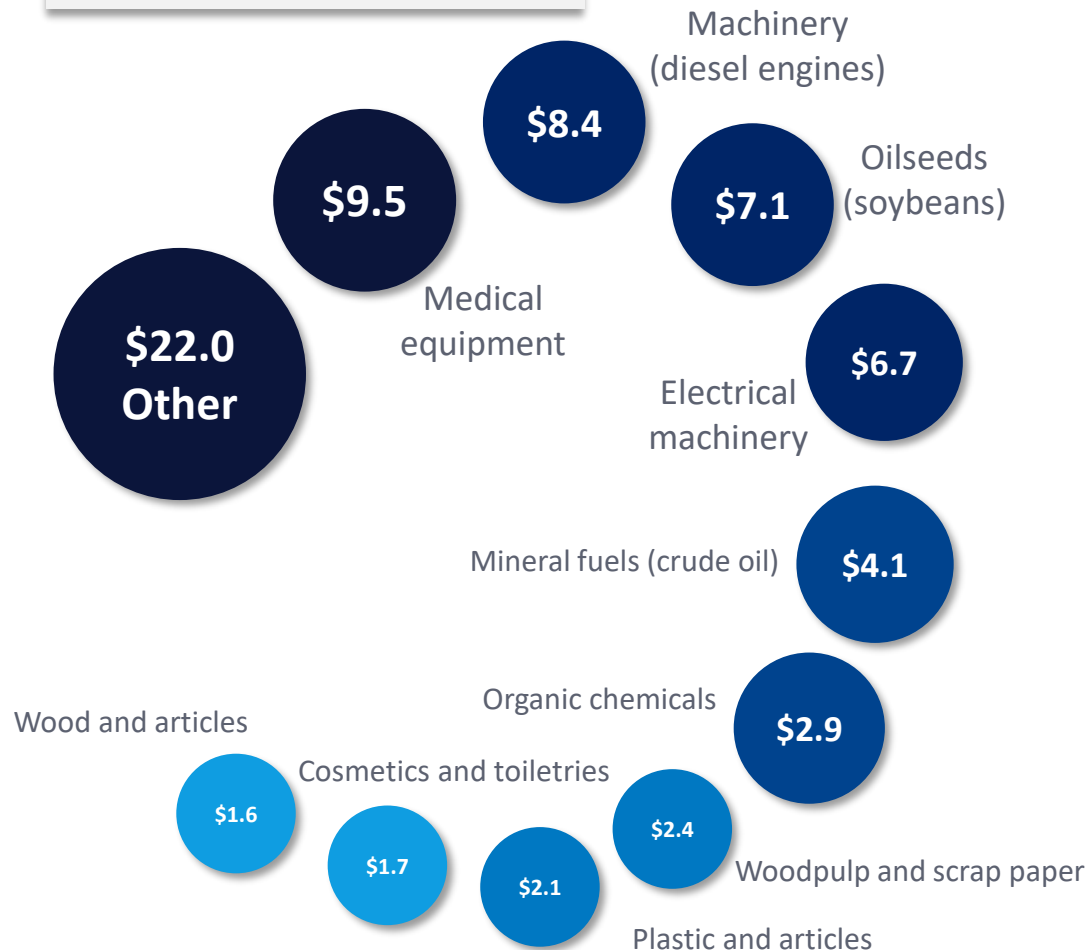
Retaliatory tariffs already on the way

Countries are more prepared to hit back in 2025 but are also *weaker*. This could help pave the way for new deals.

Retaliatory tariffs by China

301 Retaliation 2018

Total Exports: \$68.4 billion



Source: GlobalData, CRS.

301 Retaliation 2025 (as of 11/02/2025)

Total Exports: \$14 billion

15%

Additional tariffs on on US coal and liquefied natural gas products.

10%

Additional tariff on US crude oil, agricultural machinery, and large-displacement vehicles

Non-tariff retaliation

Export controls on products related to five critical minerals tungsten, tellurium, bismuth, molybdenum, and indium. This is not an outright ban.

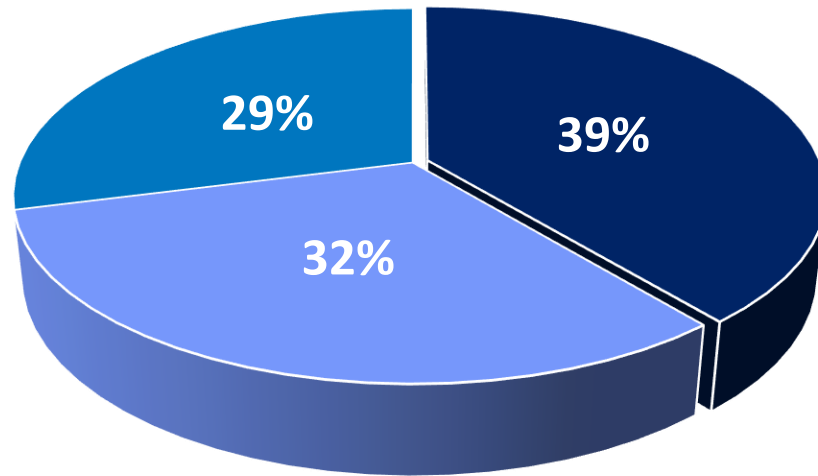
Implications Outside the US: EU Policymakers Assess Impact of Tariffs Under Trump

The tariffs could disrupt EU's pharmaceutical sector, raising costs, limiting market access and threatening industry growth.



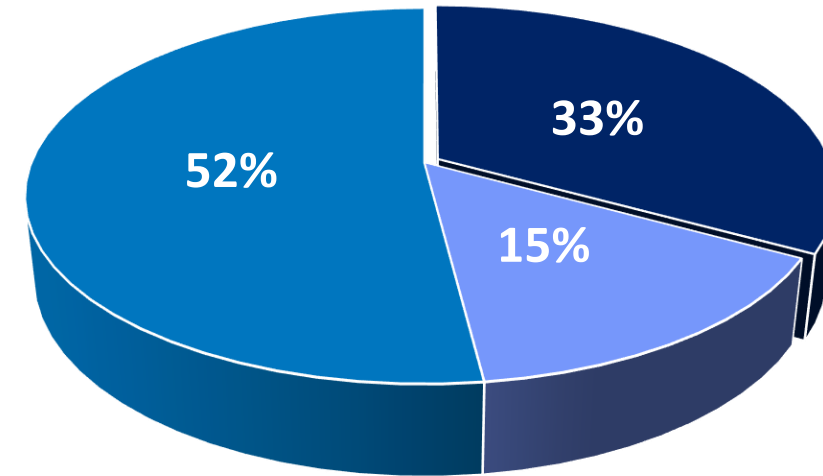
In 2023, the US remained the EU's largest trading partner for medicinal and pharmaceutical products. Nearly one-third of all EU exports in this sector were directed to the US (33%). Imports to the EU were dominated even more by the US (39%).

Imports



■ United States ■ Switzerland ■ Other

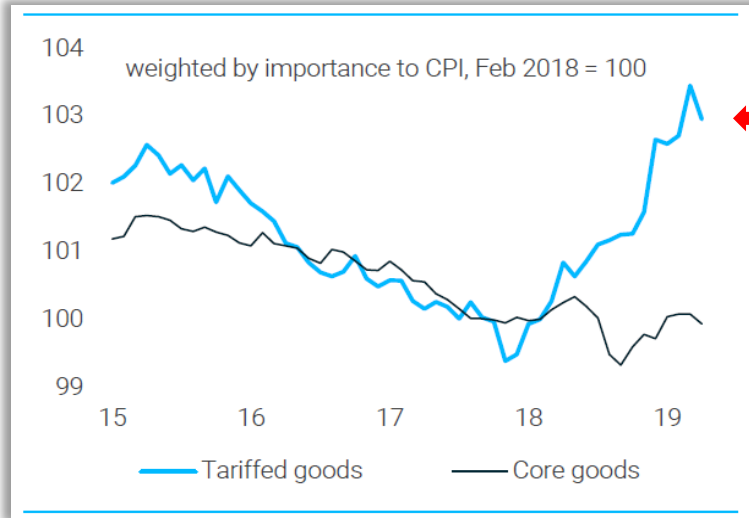
Exports



■ United States ■ Switzerland ■ Other

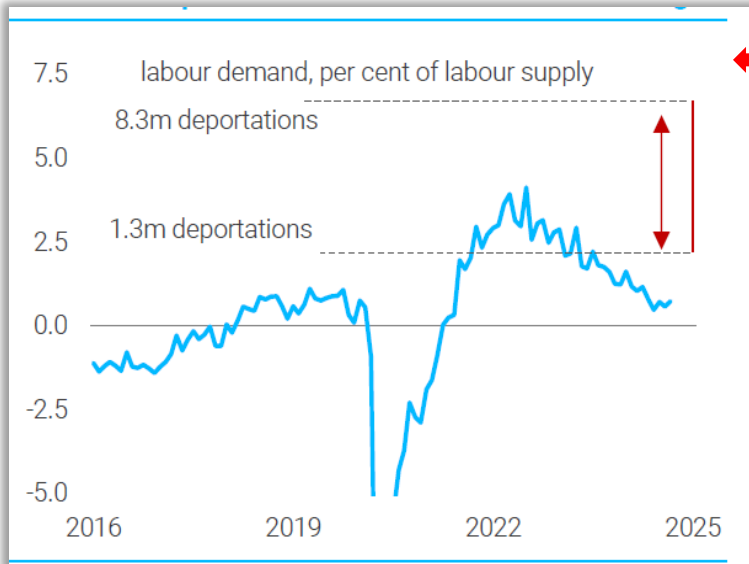
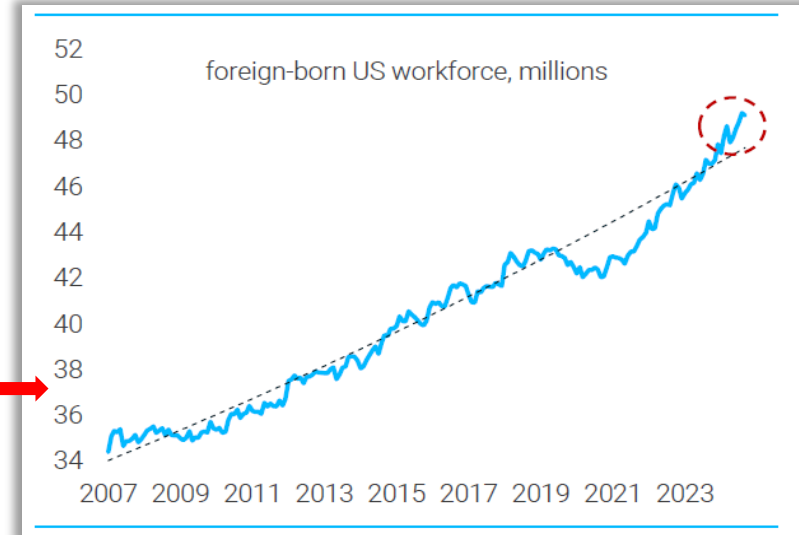
A further pain point: Inflation pressure

The inflationary effect of immigration policies might be even worse than tariff hikes



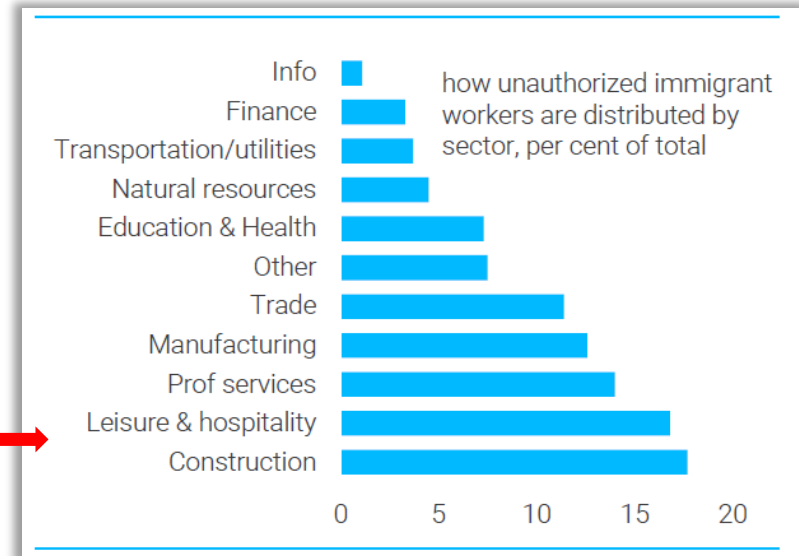
Trump's first trade war demonstrated that tariff hikes raise consumer prices

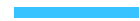
Increased immigration: key to curing the post-COVID inflation shock...



...(almost) equalizing labor supply with demand: but deportations would create new labor shortages...

...and would hit some sectors hard (esp. hospitality and construction)





BIOSECURE Act



BIOSECURE Act at center of US-China trade war

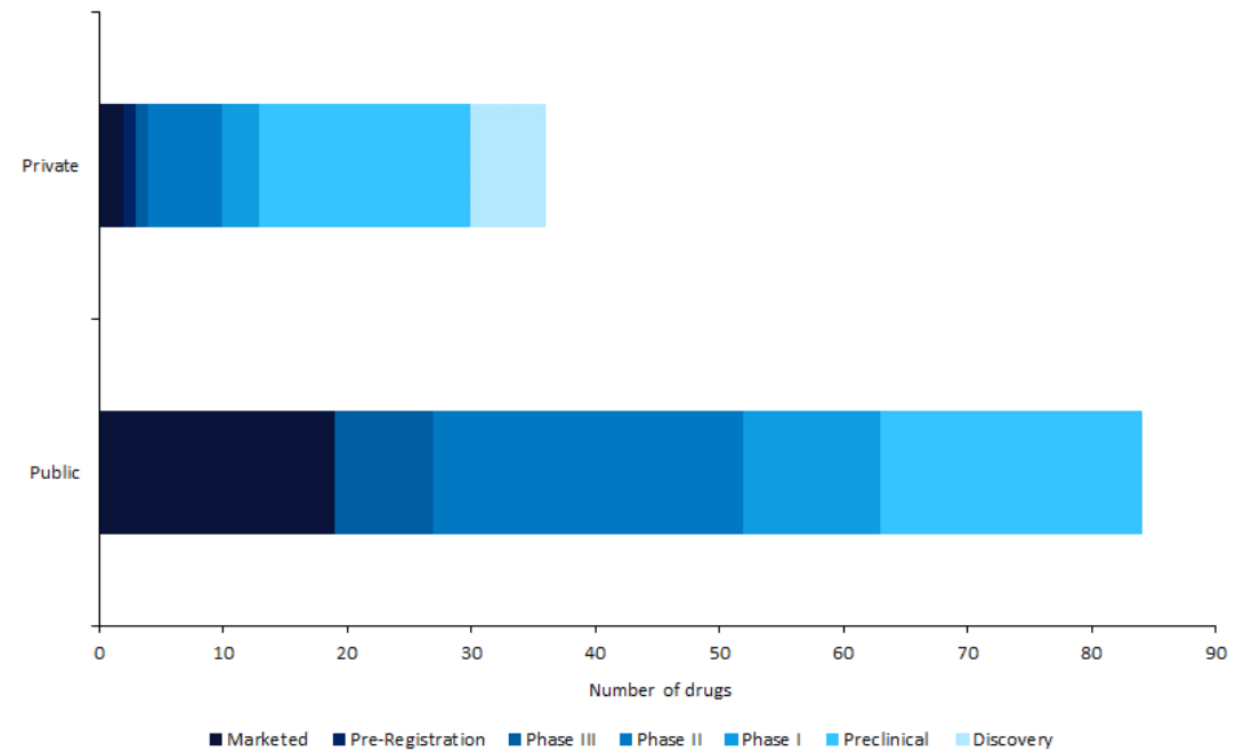
Will BIOSECURE pass under a Trump 2.0 administration?

The **BIOSECURE Act** could affect **over 120 US biopharmaceutical drugs in development** by companies partnered with Chinese contract development and manufacturing organizations (CDMOs) and biotechnology companies. Approximately half of these drugs are in clinical-stage development (Phases I to III) and a third are in early-stage preclinical trials and discovery, according to GlobalData's Pharma Intelligence Center Deals Database.

According to GlobalData's Pharma Intelligence Center Deals Database, more than 45 companies headquartered in the US have entered contract service agreements (CSAs), licensing agreements, or partnership deals with Complete Genomics, WuXi Biologics Cayman, WuXi AppTec, or BGI Genomics, and their subsidiaries.

Several biopharmaceutical companies, including Merck, Gilead Sciences, and Vertex Pharmaceuticals, have cited increased costs, delays in clinical trials, US Food and Drug Administration (FDA) regulatory submissions, and launch of drugs as potential impacts of the BIOSECURE Act in their company filings.

The total number of active innovator drugs, developed by private and public companies, involved in CSAs or strategic alliances between US-based companies and Chinese companies covered by the BIOSECURE Act

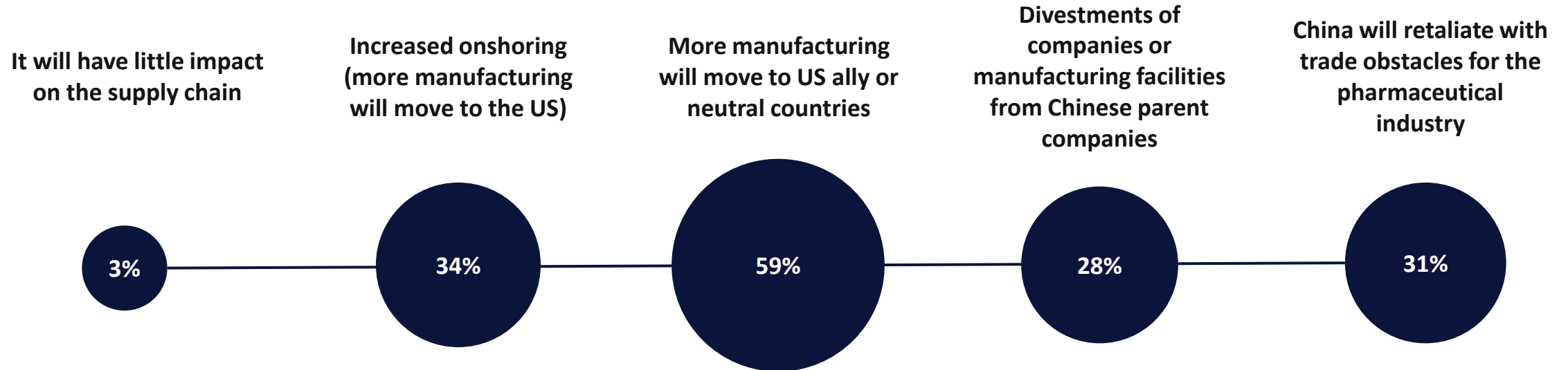




Concerns about BIOSECURE Act level out

Despite previous concerns, Chinese manufacturers double down on growth

Q: If the BIOSECURE bill passes, what would be the wider implications for the pharmaceutical supply chain?



Survey fielded November 15, 2024 to December 4, 2024

N=68

**Survey question was only presented to US-based pharma executives.*

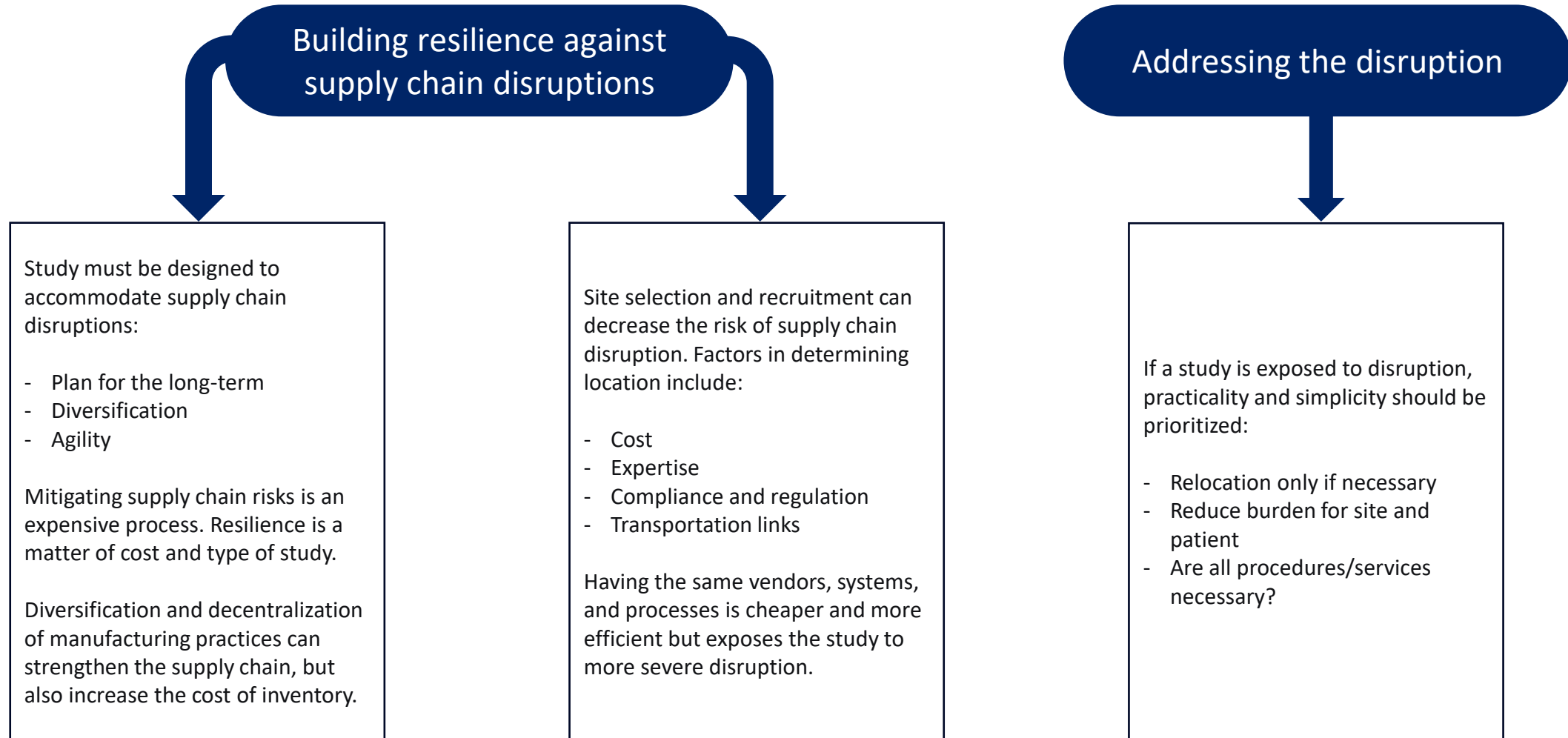
Source: GlobalData, The State of the Biopharmaceutical Industry, 2024 Edition



Building supply chain resilience

'Nice to have' vs. practicality

Study design, site selection, and recruitment are very important in mitigating supply chain risks





Diversification/decentralization can help reduce the cost of supply chain disruption

Essential to build resilience, but it cannot be achieved without increased supply chain visibility

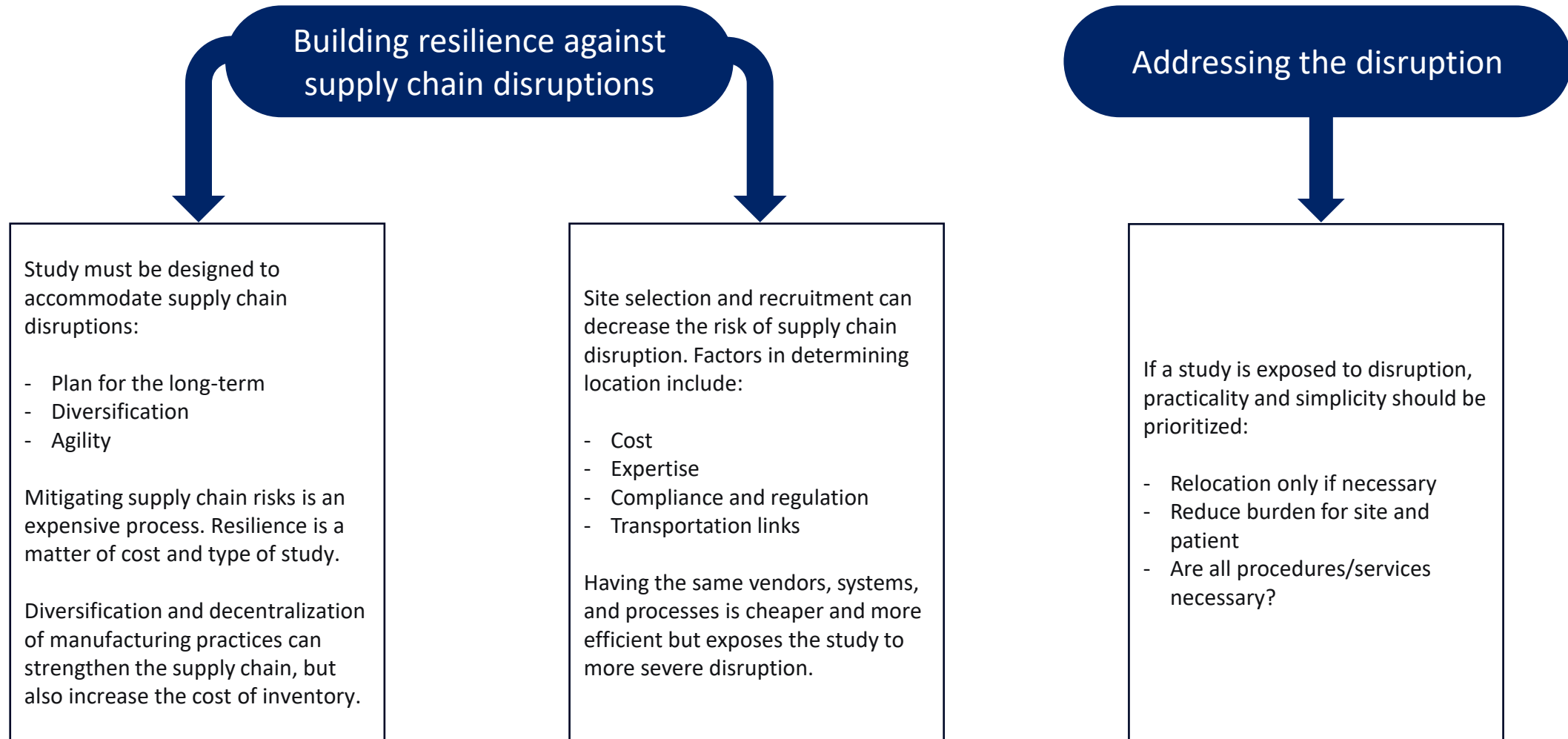
Challenges of supply chain diversification

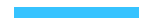
1. The risk of over-diversification
 - Each additional supplier is a new potential fault point. The more suppliers a company has, the higher the probability that something will go wrong.
2. The risk of reduced quality and consistency across suppliers
 - Finding a new supplier is only half the challenge. Companies should focus on the ability of a supplier to deliver a product or material reliably and consistently, rather than on the need to diversify a supply chain.
 - That requires gaining an understanding of the market a company is expanding to and building a long-term feedback loop with suppliers.
3. The administrative burden associated with managing more suppliers.
 - More suppliers require increased coordination, validation, and standardization across the supply chain. Not all companies have that capacity.

Diversification should **ONLY** be considered when a company has sufficient operational capacity to manage multiple suppliers and in conjunction with efforts to improve supply chain visibility.

'Nice to have' vs. practicality

Study design, site selection, and recruitment are very important in mitigating supply chain risks





Q&A

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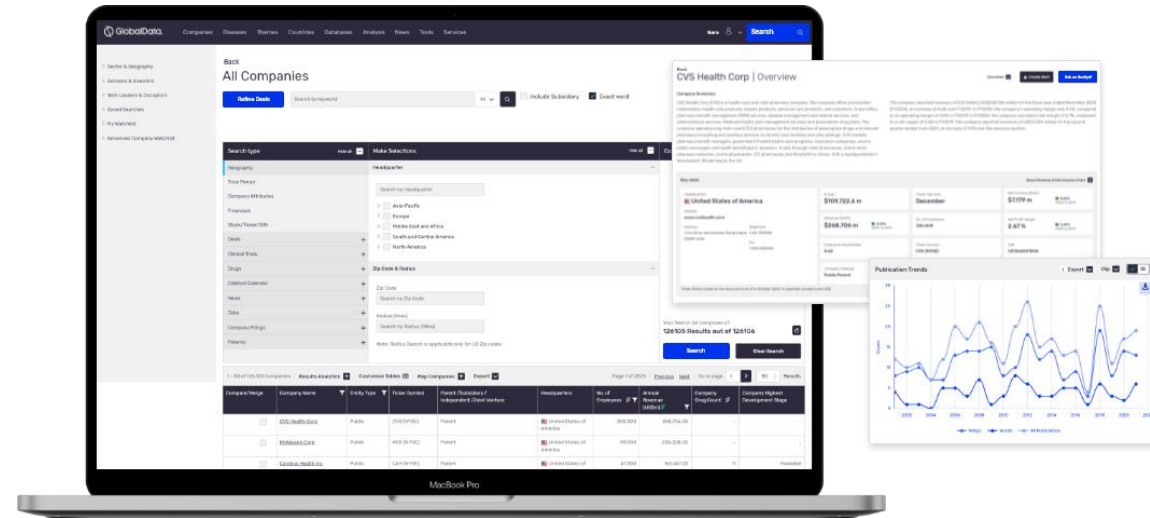
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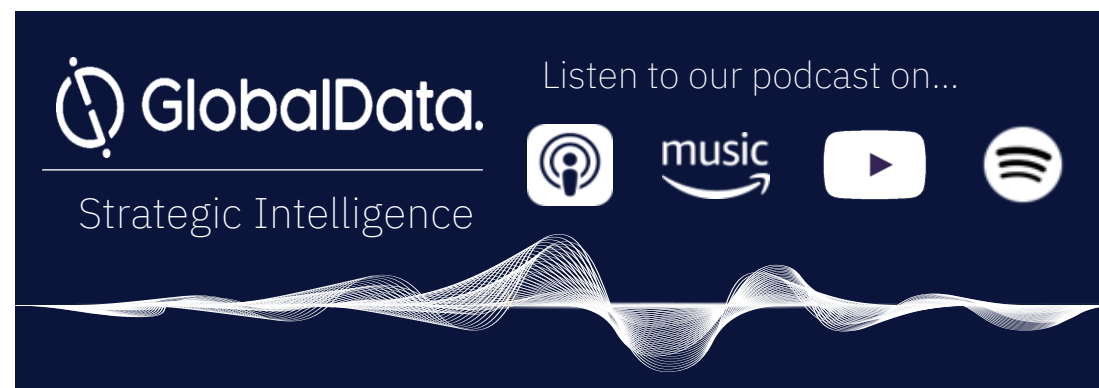


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