



By: *Diane Coyle*

# The hidden chokepoints threatening the global economy



The closure of the **Strait of Hormuz** is just the latest in a series of major supply shocks the global economy has experienced since 2020.

Yet each time, the resulting shortages appear to catch policymakers off guard. From personal protective equipment at the start of the COVID-19 pandemic to fertilizer and sulfur today, the key chokepoints and complex supply-chain interdependencies that cause these shortages remain poorly understood, often becoming visible only once crises are already underway.

The downstream consequences of the current crisis have yet to materialize and may take months to be fully felt.

No sulfur means no sulfuric acid, which in turn threatens copper production in Chile.

Meanwhile, surging fertilizer prices are likely to hit food supplies and drive up consumer prices later this year, disproportionately affecting import-dependent economies.

This raises a critical question: What other bottlenecks and shortages will emerge in the years ahead?

One might have expected governments to improve their monitoring of supply-chain vulnerabilities, yet despite repeated disruptions, progress in mapping these networks and building resilience has been limited.

As a result, the global economy is bound to be caught unprepared once again.

## The hidden structure of global production networks

To be sure, there has been some progress since the pandemic. The OECD's value-added **trade database**, for example, provides useful insights into flows of components, goods, and services, shedding light on the hidden structure of global production networks.

But it remains a supplement to traditional trade statistics, offering aggregated data that extends only to 2022, and therefore, captures only a small part of a rapidly evolving landscape.

### Real-time visibility remains out of reach for most governments

Real-time visibility thus remains out of reach for most governments.

Other initiatives, such as the **Observatory of Economic Complexity**, offer more granular data, including on individual firms. Some vulnerabilities are now well known.

Most notably, Taiwan dominates advanced semiconductor production through TSMC, which accounts for more than **90% of the global supply**.

Even so, governments must do far more to identify their economies' weak points and confront those vulnerabilities head-on.

Many essential inputs are produced in highly concentrated markets, often in just a handful of countries.

And given that even simple or cheap components can be indispensable further up the supply chain, a seemingly minor disruption can quickly cascade into a major supply crisis that reverberates through the global economy.

## Many specialized components have no alternative producers

Consider, for example, the **bicycle industry**: most bikes rely on components made by Japanese manufacturer Shimano, which has struggled in recent years to keep up with demand.

Similarly, automotive supply chains are dominated by specialist suppliers, with one or two firms often accounting for most of the

sector's output.

While such dependencies are well known within these industries, policymakers rarely follow the trade press, where problems tend to surface first.

With roughly **two-thirds of global trade** in manufactured goods consisting of intermediate components rather than finished products, this is far from a niche concern.

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Globalization has created vast and intricate supply chains that turbocharged economic growth while deepening interdependence.

As Adam Smith observed in *The Wealth of Nations* 250 years ago, specialization drives prosperity.

But it also depends on the size of the market: there is little point in producing 1,000 pins a day instead of a hundred if demand for pins does not grow.

While globalization has expanded markets beyond national borders, many specialized components have no alternative producers.

Their market is ultimately capped by global demand for the final product, leaving little room for diversification on the supply side and making sudden shocks harder to absorb or offset.

## Economic resilience is inseparable from national security

The stakes are enormous. A delay in receiving a new bicycle is inconvenient, but disruptions to food and water systems or medical supplies would have far more serious consequences.



*In most countries supply-chain vulnerabilities remain largely overlooked in policy debates. That could be a costly mistake*

Encouragingly, some policymakers have begun to identify strategically important sectors. Heightened geopolitical uncertainty has spurred investment in domestic manufacturing capacity, most notably in semiconductor production in the United States.

But the persistence of supply-chain chokepoints underscores the need to rethink industrial policy. In particular, policymakers should think more broadly, including seeking to reinforce existing strengths, rather than focusing narrowly on emerging technologies such as clean energy and AI.

In most countries, however, supply-chain vulnerabilities remain largely overlooked in policy debates. That could be a costly mistake.

With further disruption all but certain, governments must be able to move fast to secure vital inputs and contain emerging risks. Economic resilience is now inseparable from national security.

Countries that fail to build a flexible, robust production base will learn that the hard way.

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