

# Supply chain shake-up sparks innovation revolution

August 2022



**Virginie Maisonneuve**  
Global CIO Equity

## New technologies are helping companies reinvent disrupted supply chains and build more resilience into the system.

While the recent resumption of grain shipments from the port of Odesa offers some relief to the myriad countries reliant on Ukraine for food staples, the supply chain stresses that have beset the global economy since 2020 are lingering.

Shortages of goods from toilet paper to semiconductor chips have been a headache for consumers and businesses alike around the world over the past two years or so, due to factors ranging from Covid-19 to deglobalisation in certain sectors and, most recently, the war in Ukraine.

While there are some signs of supply chain pressures easing most recently, stresses remain at historically high levels and the risk of escalating geopolitical tensions, labour strikes and further Covid-19 lockdowns in China loom on the horizon.<sup>1</sup>

But this period of disruption has a silver lining. In many instances, it is accelerating innovation as businesses seek to future-proof their operations, often by investing in technology or overhauling decades-old supply chain strategies.

For investors, the shake-up represents both challenges and opportunities for their portfolios.

### Key takeaways

- Supply chains are still reeling from the impact of Covid-19, war in Ukraine and deglobalisation in some sectors
- Upheaval to trade may impact corporate earnings, but companies are mitigating risks by shaking up their supply chains and investing in technology
- Amid the disruption, investors can find opportunities in sectors such as robotics, data centres, and agricultural technology that underpin the supply chain revolution

In the shorter-term, the supply chain dislocation is likely to squeeze corporate profit margins, particularly for those companies most vulnerable to higher costs caused by supply delays. These companies include transport and logistics firms, manufacturers and retailers. In the longer-term, however, investors can position for opportunities in areas from robotics to supplier diversification as businesses seek to build more resilience into their operations.



**Embracing  
Disruption**

**Allianz**   
Global Investors



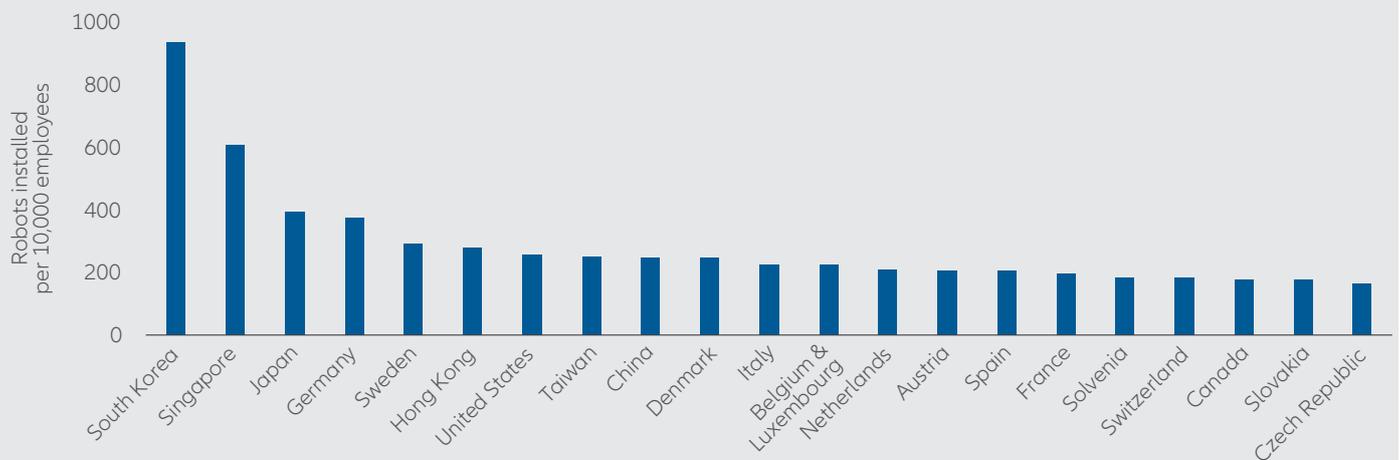
### Investing in innovation

So, how are companies innovating in the face of today's disruption? From managing greater inventory build-up to helping pack shipments more efficiently, companies are exploring how to optimise supply chains through automation and smart use of data. This includes greater use of robots. With many firms grappling with higher expenses from surging inflation, robots can also help companies streamline routine tasks such as inventory and fulfilment, while managing labour

costs, focusing on staffing in higher-value areas where automation isn't viable.

And there's potential for more investment. Currently, there are 126 industrial robots per 10,000 manufacturing jobs globally, implying a robot density of about 1%, according to the latest figures from International Federation of Robotics. High single-digit robot density in manufacturing hubs like South Korea and Singapore shows the potential for catch-up in markets such as China, the US and France, where density is much lower (see Exhibit 1).<sup>2</sup>

**Exhibit 1: Robot density in the manufacturing industry**



Note: Robot density nearly doubled globally – International Federation of Robotics (ifr.org).  
Source: World Robotics 2021.



### Focus on food

Another area of innovation is agricultural technology. Food security fears intensified by the Ukraine war and Covid-19 have ignited further interest in agricultural technology. Food prices reached record highs in the early part of 2022 and although they've since eased, high fertiliser prices, a bleak economic outlook and currency movements could threaten the outlook. We think this will open the way for more investment in agricultural technology and water irrigation equipment.

The sector's long-term growth outlook has strengthened in recent years as more countries seek to build resilience into food supply chains to reduce the impact of increasingly regular natural events such as drought and floods brought on by climate change. Investment in farm tech venture capital, spanning everything from the use of robots to GPS technology, surged to a record USD 11.3 billion in 2021, up 61% from the previous year.<sup>3</sup> Spending is likely to ramp up

further as modern farm technology brings down usage of water, fertiliser and pesticides.



### Gathering the data

Other technology in the form of advanced analytics can help companies plan and navigate risks. One of the challenges highlighted by the recent supply chain instability was that very few firms had an overview of their supply chains at every stage. According to a 2021 McKinsey survey, companies that successfully managed the Covid-19 pandemic were 2.5 times more likely to report they had pre-existing advanced-analytics capabilities.<sup>4</sup> Firms investing in advanced analytics might be better placed to ride out supply chain dislocations and economic headwinds. The thirst by companies for more sophisticated information is also sparking greater interest in data centres. For investors, data centres offer diversification and exposure to assets with long-term growth drivers.

## Supply chain shifts

But aside from appreciating the technological revolution, investors also need to be attuned to broader strategic changes businesses are making to their supply chain management – and seek out those companies taking a proactive approach to the recent challenges.

A significant hurdle thrown up by the recent disruption has been limitations in companies' ability to respond in an agile way to changes in consumer demand or geopolitical events, such as US-China trade tensions, Britain's exit from the European Union, or the war in Ukraine.

In response, some car manufacturers and other firms are ripping up just-in-time models that have formed the backbone of supply chain management for decades in favour of just-in-case, which requires holding greater inventory.

Other firms are diversifying suppliers in the form of nearshoring – the process of transferring manufacturing or supplier business closer to the location of customer demand.

Nearshoring trends may help support interest in local warehouses as more firms seek to build greater supply

chain resilience to help guard against bottlenecks caused by either geopolitical flare-ups or a repeat of the shortages that plagued supplies during the Covid-19 pandemic.

In some cases, governments are seeking to reduce their countries' reliance on key components sourced from overseas. In August 2022, the United States passed a law to provide billions of dollars of subsidies for domestic semiconductor production and research. The European Union and others have announced similar plans to develop their own chipmaking industries. Eventually, that may help ease a global chip shortage stoked by surging demand for cars and other products that include chips.

Those companies that manage supply chain challenges now could be better positioned to ride out – and even thrive – during periods of future disruption.

In summary, investors should think strategically about what supply chain issues mean for their portfolio – both the impact on assets from short-term disruption and the longer-term opportunities that may arise from broader structural shifts in manufacturing and logistic markets and the technologies that support them.

### Learn more:

For more insights into supply chain disruption, read **"Unpacking opportunities from supply chain innovation"**, available here: [www.allianzgi.com/supplychains](http://www.allianzgi.com/supplychains)

And for a quick-read overview of the issues affecting supply chains and the investment implications, see our snapshot: [www.allianzgi.com/supplychainsnapshot](http://www.allianzgi.com/supplychainsnapshot)

**Allianz Global Investors** is a leading active asset manager with over 600 investment professionals in over 20 offices worldwide and managing EUR 578 billion in assets. We invest for the long term and seek to generate value for clients every step of the way. We do this by being active – in how we partner with clients and anticipate their changing needs, and build solutions based on capabilities across public and private markets. Our focus on protecting and enhancing our clients' assets leads naturally to a commitment to sustainability to drive positive change. Our goal is to elevate the investment experience for clients, whatever their location or objectives.

#### Active is: Allianz Global Investors

Data as at 30 June 2022. On 25 July 2022, AllianzGI completed the transfer of investment teams (including 87 Investment Professionals) and USD 101bn of assets they manage to Voya Investment Management as part of a strategic partnership. Two thirds of the assets continue to be managed on behalf of AllianzGI clients outside of the US.

1. Source: [Global Supply Chain Pressure Index](#), Federal Reserve Bank of New York, July 2022
2. Source: [2021 World Robot Report](#), International Federation of Robotics, December 2021
3. Source: [Investment Monitor](#) (citing PitchBook data), 8 July 2022
4. Source: [McKinsey](#), 23 November 2021

#### Diversification does not guarantee a profit or protect against losses.

**Investing involves risk.** The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security.

The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted.

This material has not been reviewed by any regulatory authorities. In mainland China, it is for Qualified Domestic Institutional Investors scheme pursuant to applicable rules and regulations and is for information purpose only. This document does not constitute a public offer by virtue of Act Number 26.831 of the Argentine Republic and General Resolution No. 622/2013 of the NSC. This communication's sole purpose is to inform and does not under any circumstance constitute promotion or publicity of Allianz Global Investors products and/or services in Colombia or to Colombian residents pursuant to part 4 of Decree 2555 of 2010. This communication does not in any way aim to directly or indirectly initiate the purchase of a product or the provision of a service offered by Allianz Global Investors. Via reception of his document, each resident in Colombia acknowledges and accepts to have contacted Allianz Global Investors via their own initiative and that the communication under no circumstances does not arise from any promotional or marketing activities carried out by Allianz Global Investors. Colombian residents accept that accessing any type of social network page of Allianz Global Investors is done under their own responsibility and initiative and are aware that they may access specific information on the products and services of Allianz Global Investors. This communication is strictly private and confidential and may not be reproduced. This communication does not constitute a public offer of securities in Colombia pursuant to the public offer regulation set forth in Decree 2555 of 2010. This communication and the information provided herein should not be considered a solicitation or an offer by Allianz Global Investors or its affiliates to provide any financial products in Brazil, Panama, Peru, and Uruguay. In Australia, this material is presented by Allianz Global Investors Asia Pacific Limited ("AllianzGI AP") and is intended for the use of investment consultants and other institutional/professional investors only, and is not directed to the public or individual retail investors. AllianzGI AP is not licensed to provide financial services to retail clients in Australia. AllianzGI AP is exempt from the requirement to hold an Australian Foreign Financial Service License under the Corporations Act 2001 (Cth) pursuant to ASIC Class Order (CO 03/1103) with respect to the provision of financial services to wholesale clients only. AllianzGI AP is licensed and regulated by Hong Kong Securities and Futures Commission under Hong Kong laws, which differ from Australian laws.

This document is being distributed by the following Allianz Global Investors companies: Allianz Global Investors U.S. LLC, an investment adviser registered with the U.S. Securities and Exchange Commission; Allianz Global Investors Distributors LLC, distributor registered with FINRA, is affiliated with Allianz Global Investors U.S. LLC; Allianz Global Investors GmbH, an investment company in Germany, authorized by the German Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin); Allianz Global Investors (Schweiz) AG; in HK, by Allianz Global Investors Asia Pacific Ltd., licensed by the Hong Kong Securities and Futures Commission; in Singapore, by Allianz Global Investors Singapore Ltd., regulated by the Monetary Authority of Singapore [Company Registration No. 199907169Z]; in Japan, by Allianz Global Investors Japan Co., Ltd., registered in Japan as a Financial Instruments Business Operator [Registered No. The Director of Kanto Local Finance Bureau (Financial Instruments Business Operator), No. 424], Member of Japan Investment Advisers Association, the Investment Trust Association, Japan and Type II Financial Instruments Firms Association; in Taiwan, by Allianz Global Investors Taiwan Ltd., licensed by Financial Supervisory Commission in Taiwan; and in Indonesia, by PT. Allianz Global Investors Asset Management Indonesia licensed by Indonesia Financial Services Authority (OJK).