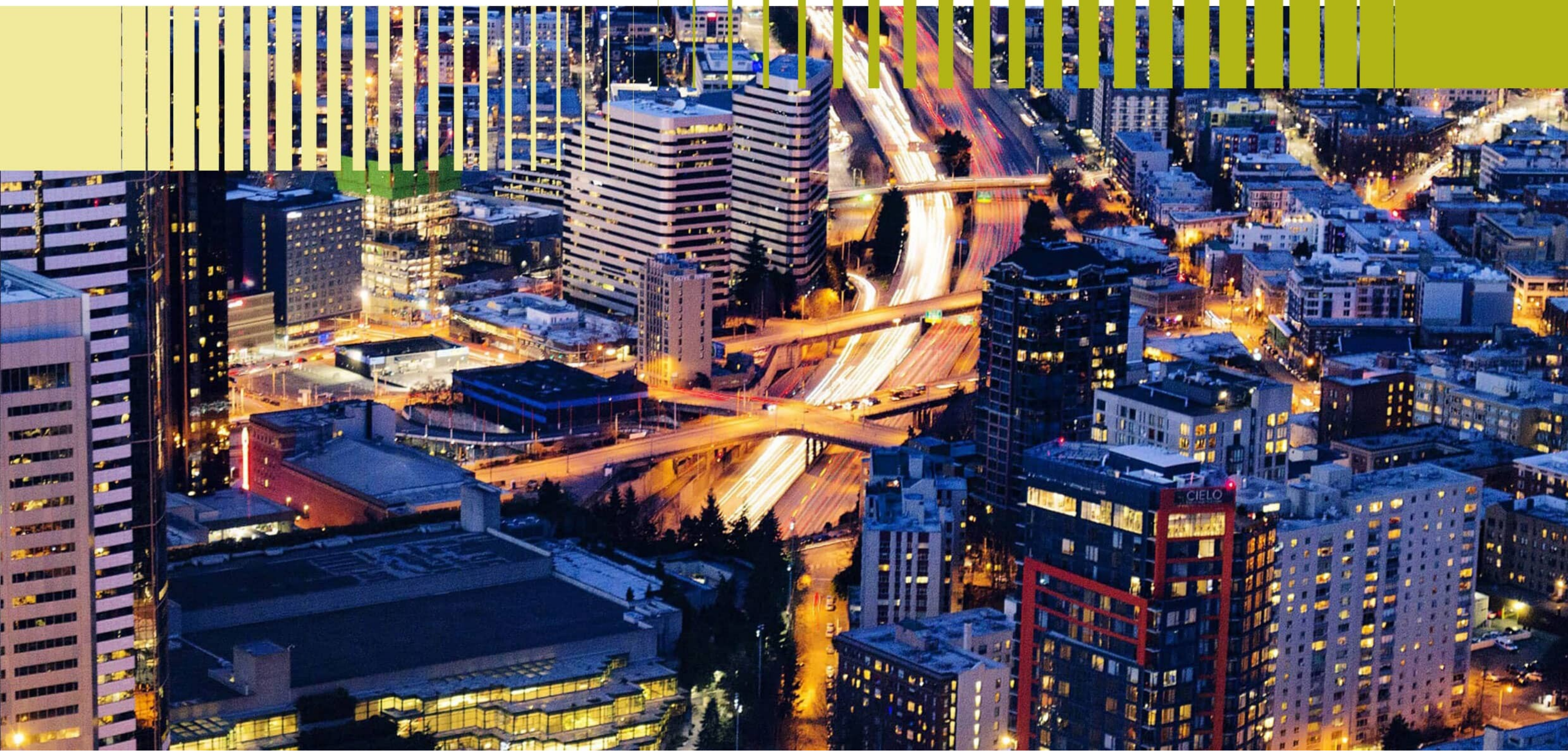

What PE Needs to Know About Geopolitics and Tech

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> **Supply chain disruptions. Cybersecurity. Trade wars. New taxes. The global geopolitical landscape is getting far trickier for technology investors. Here's how they can negotiate it.**

There's a new normal in geopolitics and global trade. As frictions between nations increase, governments are coming to view their technology sectors not only as growth engines but also as sources of strategic innovation, competition, and national security. In response, they are taking decisive steps to shape market outcomes, moves that are likely to have a considerable impact on investment opportunities and outcomes throughout the space.

Private equity (PE) investors' geopolitical concerns were historically limited to historically risk-prone areas, such as mining and energy. But given the rise in international concerns about tech, an appreciation of geopolitics is essential for accurately valuing current holdings, determining future acquisitions and divestments, and thinking strategically about the optimal portfolio mix across all industries.

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This is especially true now that digital technologies have become central to virtually every aspect of our business and personal lives. Most products and services are today provided via digital devices and on digital platforms, creating attractive investment opportunities in hardware, software, and infrastructure. Traditional products like automobiles have become heavily dependent on software, and vast opportunities are emerging in app development, e-commerce, financial and consumer data, and other areas.

PE firms are responding accordingly. Europe offers a case in point. Since 2016, the share of deals in sectors that PE has traditionally focused on—such as retail and industrial goods—has decreased amid a significant increase in tech deals. The pandemic has only accentuated this trend. According to Pitchbook, in FY2019 and FY2020, tech was the only industry that saw clear growth in PE activity globally.

In what follows, we tease out the geopolitical implications for PE in three key areas: electronics supply chains, cybersecurity and data regulations, and taxation and antitrust enforcement. How can PE investors build the understanding and resilience needed to create advantage in an increasingly uncertain environment?

Disruption in Electronics Supply Chains

Until recently, geopolitics has had comparatively little impact on electronics supply chains. According to researchers at Global Trade Alert at the University of St.Gallen, the manufacturing sectors with the largest number of harmful trade interventions are metals, chemicals, and motor vehicles. Back in the 1980s and early 1990s, a variety of trade frictions arose when Korean and Japanese firms emerged as competitors to the US in semiconductor manufacturing. Since the late 1990s, however, these frictions have ebbed. An agreement to eliminate tariffs on IT products, signed in 1996 by a large subset of World Trade Organization members, created a long-standing baseline of industry stability.

But these dynamics are shifting. The demand for technology products and their associated components and raw materials has increased vulnerabilities for companies and nations that rely on a narrow set of geographically concentrated suppliers. A handful of US firms dominate fabless chip design, for example, while high-performance semiconductors are made primarily at facilities located in Korea and Taiwan. Mainland China is the global hub for consumer electronics assembly.

This concentration of activities among just a few geographies and companies has made supply chains more efficient and more vulnerable to disruption. Meanwhile, global trade war tensions, as well as the pandemic, have forced governments to become more clear-eyed about the risks. Many are now taking actions to reshore their manufacturing capabilities and increase self-reliance.

Take, for example, the semiconductor industry, which lies at the core of the electronics supply chain. In the US, the Biden Administration has ordered an extensive supply chain resilience review, concluding that urgent action is needed to stem the decline in the country's share of global semiconductor manufacturing capacity. The administration has also deployed a multibillion-dollar federal program to incentivize participation in this market. Meanwhile, in the EU, recent disruptions in automotive manufacturing—resulting from a shortage of semiconductors—have increased the sense of urgency to ramp up domestic semiconductor manufacturing, with new funding earmarked to support the industry.

In 2014, China unveiled a strategic plan to build out its domestic semiconductor manufacturing capacity. Since then, various megaprojects have been underway to increase chip production, supported by state-guided investment entities such as the China National Integrated Circuit Industry Investment Fund. The 14th Five-Year Plan, covering 2021 through 2025, places even greater emphasis on domestic innovation and self-reliance.

Even as governments take action to increase their domestic supply chain resilience, they are also imposing a variety of trade barriers that are accentuating existing supply risks.

As the world's dominant producer of rare earth minerals—vital raw materials for batteries and electronics components—China has placed quantitative restrictions on extraction and processing and regulates exports through a licensing system. Likewise, in 2019, Japan imposed export controls on South Korea over the distribution of specialty chemicals used in semiconductor manufacturing. The move was made in retaliation against a South Korean court decision requiring the payment of World War II reparations. These export restrictions had knock-on effects for other geographies that rely on imports of Korean-made chips.

Also in 2019, the US began to impose a series of export controls on US firms supplying critical technology to China's Huawei corporation, which ranks among the top three globally in telecom equipment and smartphone sales. Both the US and the EU are increasing foreign investment screening, with a focus on high-tech sectors, effectively making it more difficult for outside investors to appropriate technological intellectual property (IP) through M&A.

PE firms will have to adopt smart strategies to adapt to these trends. They can increase investment in companies poised to take advantage of supply chain reshoring incentives and associated shifts in the mix of

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global trade. At the same time, further regulatory restrictions on trade in key technologies and components could place existing holdings in jeopardy. Investors should analyze their exposure to supply chain risks under a range of scenarios—from a world of worsening geopolitical frictions and risks, to the status quo, to one in which frictions decline—and plan accordingly.

Cybersecurity and Data Protectionism

The global surge in digital services has raised new issues and concerns over privacy, IP, cybersecurity, and national sovereignty. Data has become a highly valuable commodity; governments are responding with new regulations governing its storage, use, and movement.

In 2018, the EU enacted the General Data Protection Regulation (GDPR) to regulate the use and security of private data. The EU's Cybersecurity Act of 2020 establishes a harmonized cybersecurity framework for digital products, services, and processes. China, for its part, is building a virtually self-contained data ecosystem with increasingly complex cybersecurity laws that impose data-localization requirements on privately and commercially funded research. The country is also levying other restrictions on the business use of data.

The international trading system is playing catch-up with these changes and has yet to put in place rules governing digital trade. In the meantime, some governments are taking matters into their own hands, addressing the shifting cyber landscape through preferential and multilateral trade agreements.

For example, several Asian-Pacific countries—namely China, Japan, South Korea, Australia, and New Zealand, along with the ten member states of the ASEAN bloc—signed the Regional Comprehensive Economic Partnership (RCEP) in November 2020. It contains provisions for the digitization of cross-border trade, commitments on data flows and localization, implementation of duties on digital products, and measures to protect personal information. The agreement addresses emerging issues facing exporters and e-commerce operators by reducing trading costs and clearance delays. It ensures easier access to markets for digital services, increased certainty for trade in digital products, easier compliance with national regulations, and greater consumer trust.

Other recent free-trade agreements, such as the renegotiated NAFTA (known as USMCA) and the UK–EU Trade and Cooperation Agreement, contain similar rules. And, at the multilateral level, some WTO members are negotiating an agreement on e-commerce. Among the priorities put forward are allowing the free flow of data and prohibiting forced data localization.

Cybersecurity continues to be a fraught geopolitical issue, particularly in the context of US-China relations. In 2018, the US produced a report alleging that the Chinese government sponsors and enables the cybertheft of US technology and in 2020 began to take aggressive actions against China-based telecom, software, and internet services firms. In December of that year, the US government issued an executive order directing the New York Stock Exchange to delist China's three major telecom companies—China Mobile, China Unicom, and China Telecom—owing to their alleged ties to the Chinese military.

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PE must adapt to the increasingly complex environment of digital trade. The portfolio companies they invest in may have to balance the need to be present in attractive markets against the risks of local data storage. As data ecosystems become more self-contained, PE firms will have to direct their investments to different companies in each market while also accounting for local consumer preferences. And they will have to hedge their bets on future geopolitical outcomes—by preparing for a range of US-China cybersecurity scenarios, for example, and weighing new global trade rules against national regulations.

Taxation and Antitrust Regulation

Multinational technology companies face two key challenges from governments looking to reduce their power: taxation and antitrust action. Both have the potential to affect PE firms' portfolio strategies and investment decisions.

Taxation. Because many technology companies provide essential services in countries where they have no physical presence, there is often a mismatch between the considerable amount of value they create and the taxes they pay. As a result, a number of firms pay lower-than-average taxes, which is exacerbated by their use of complex offshore taxing mechanisms to minimize their tax burdens. Many companies make little or no taxable profits, despite huge global revenues.

To address the issue, the EU and several countries have been exploring the use of digital services taxes to be levied on revenue instead of profits. Technologies potentially subject to digital services taxes include social media platforms, search engines, online marketplaces, and advertisements on digital interfaces.

Debates about digital services taxes have created divisions among countries. The EU and some Asian countries have argued that these taxes will allow them to obtain a fair share of taxable income from the technology companies operating in their territories. Others, including the US, have opposed them, in part because of the issues that differing and uncoordinated national digital tax regimes would cause for multinational companies.

The outlook for the use of digital services taxes is complicated by a recent consensus among the G20 countries—which now includes members of the OECD—to impose a global minimum corporate income tax of 15%. As part of this arrangement, a proportion of tax receipts would be redistributed to the jurisdictions where a firm's income is generated in order to discourage the shifting of profits to lower-tax countries.

Following a landmark agreement in October 2021, the OECD is now drawing up plans to implement the global minimum corporate tax rate by 2023. This would require ratification and implementation by all 136 signatories, including the US, where a Senate supermajority is required. As part of the deal, members have agreed to a two-year standstill period to allow ratification to occur, during which they will not impose any new digital services taxes. The US has also withdrawn its proposed retaliatory measures against multiple countries that have already introduced these taxes.

This means that the EU's plans are on ice for now. But whatever happens, the way large digital companies are taxed is changing. If the OECD plans are ratified, a proportion of the taxes they pay will be linked to wherever their revenues are generated. If the plans aren't ratified, the EU and others will rapidly move to reopen the debate.

Antitrust. Tech companies are increasingly exposed to antirust actions by governments concerned about their oligopoly and even monopoly power.

The European Commission's current Digital Markets Act, for example, aims to level the distortions of the playing field caused by the dominance of US technology firms in areas such as online marketplaces and social media. Under the act, marketplaces would be required to treat third-party businesses offering products and services on the same terms as their own in search results and on app stores.

Meanwhile, antitrust authorities around the world are taking a closer look at big tech. In November 2020, China's antitrust regulators effectively prevented the public listing of Ant, one of the country's largest technology companies. A month later, the US Department of Commerce opened an antitrust investigation of Facebook. And in June 2021, the EU launched antitrust proceedings against Amazon.

PE investors should consider how forthcoming antitrust actions and new digital services taxes could affect their portfolio companies and potential investments. The impact will vary depending on a particular company's business model and the sector and geographies it operates in. The EU's proposed approach, for example, primarily targets companies that generate revenue in online marketplaces, social media, and advertising. While the main focus will be on larger multinationals, regional market share is also a key consideration, so fast-growing smaller players could soon find themselves falling within the scope of these measures.

The Way Forward

The global tech industry will become an even more attractive and dynamic opportunity for PE investors as its trade value increases. But with this growth will come even greater focus by regulators and governments on the sector generally, along with increased exposure to geopolitical risk. As such, PE firms should prepare for four key trends:

- More widely distributed electronics supply chains with increased regulatory requirements and incentives for local production in certain jurisdictions
- Changes in tax regimes for tech companies
- A greater focus on data privacy, with diverging national and regional regulatory ecosystems and additional digital trade barriers
- Increased antitrust actions aimed at reducing the dominant market power of certain players, such as online marketplaces

PE firms can get ready for these trends by initiating three actions.

They should first run a portfolio review of assets to evaluate their degree of exposure. Any provider of consumer electronics, for example, would have benefitted significantly from having stocked adequate supplies of semiconductors ahead of the current supply shortage. Second, given the fast pace of change, they should establish a process for identifying any new and emerging risks and assess their potential impact on portfolio companies and potential new investments. Third, PE firms should explicitly consider regulatory issues as part of the due diligence process when considering new investments and include a specific workstream for doing so.

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PE investors, particularly those focusing on the tech sector, need to account for emerging geopolitical and regulatory trends. Increasingly nationalist governments are raising the barriers to digital trade in a range of ways—and this trend will only grow over the coming years. The free early days of the digital age are over. Investors need to be smart in spotting emerging concerns and ensuring that they properly manage their investment portfolios in response.

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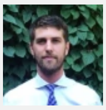

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