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Opinion

Australia's predicament in navigating a new era of techno-nationalism

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In recent years, US policy has increasingly focused on restricting China's access to advanced technologies. The Biden administration's latest export controls targeting hundreds of Chinese semiconductor-related entities represent the expansion of a 'small yard, high fence' approach. This effort echoes an era where supply chains, once celebrated for their efficiency, are now seen as strategic vulnerabilities. By weaponising export controls, subsidies, and investment screenings and slowing China's technological ascent, Washington aims to safeguard its dominance in areas such as AI, quantum computing, and advanced manufacturing.

Beijing has responded with assertive countermeasures. China's sweeping export restrictions on critical minerals such as gallium, germanium, antimony, and superhard materials underscore its strategic leverage as the world's leading producer of vital inputs for advanced semiconductors, renewable energy systems, and modern defence applications. Willing to deploy its resource endowments as geopolitical bargaining chips, Beijing has also encouraged its major industry associations to push firms away from US semiconductors, accelerating China's technology self-sufficiency. This demonstrates Beijing's readiness to use its domestic technology market as part of its counteroffensive.

This two-way squeeze is ushering in a new era of techno-nationalism. States are no longer just seeking technological self-reliance, but also asserting sovereignty over critical technologies. As a result, traditional notions of open innovation and global value chains are giving way to rival blocs and restricted flows of knowledge, talent, and hardware.

Yet this clampdown carries risks. China is the world's largest semiconductor customer, accounting for roughly 65.6 percent of global semiconductor market revenue. A sudden market decoupling could create cascading effects for US chipmakers, forcing them to scramble for alternative buyers. Meanwhile, China's domestic producers, once overshadowed by more advanced foreign suppliers, may seize this opportunity to scale up and improve their technologies – powered by an internal market now compelled to 'buy local'.

Simultaneously, resource nationalism is re-emerging as a powerful force shaping strategic competition. Control over critical minerals – lithium, cobalt, rare earth elements, and others – has become a crucial source of geopolitical leverage. These materials underpin the green energy transition and next-generation technologies, including advanced batteries, electric vehicles, and precision-guided weaponry. While historical precedents exist of resource-rich nations leveraging commodities for political and economic gain, today's stakes are higher and more complex: it's not just about owning raw materials but also controlling the entire supply chain, from processing technologies to manufacturing capabilities.

Though deposits are dispersed globally, China stands out in dominating both the production and processing of many critical minerals, exposing vulnerabilities in existing supply chains. In response, the United States, the European Union, and other partners are diversifying supply lines, seeking reliable sources in friendly nations, and building domestic processing infrastructure. Often described as 'friend-shoring', this approach puts countries with abundant mineral reserves at the centre of a strategic scramble – one that offers significant opportunities but also intensifies the pressure to pick sides.

Australia boasts vast reserves of many critical minerals. As a resource-rich democracy integrated into Western security architectures, it has been courted to join US-led frameworks such as the Minerals Security Partnership. Bargains of this type could unlock new markets for Australian exports and attract investment into local processing and manufacturing, bolstering supply chain security (for the West).

Yet Australia's position is more complex than might appear. While it is a major producer of raw materials, it remains heavily dependent on China for midstream processing and downstream manufacturing. Reducing reliance on China thus faces immediate capacity and cost constraints. Establishing a sophisticated domestic processing industry or partnering with alternative markets – such as Japan or South Korea – will require time, capital, and technological expertise. Furthermore, future price fluctuations could undermine the commercial viability of these investments; the recent dip in lithium prices, for example, has already cast doubt on plans for domestic lithium processing.

This predicament highlights the broader dilemma of strategic hedging. Deepening security ties with the United States, and possibly joining more explicit efforts to contain China's technological ambitions, could safeguard Australia's long-term interests. However, Canberra's choices will be closely scrutinised in both Washington and Beijing, potentially limiting its diplomatic manoeuvring space in an era of heightened great power tension.

The tit-for-tat interplay of technological containment is fostering a vicious cycle, pushing both the United States and China deeper into costly quests for self-reliance. This trajectory suggests a future with parallel technology ecosystems that rarely interconnect. Such fragmentation would inflate costs, slow innovation, and force states into awkward partnerships as they struggle to balance national security with supply chain resilience.

The 'great tech decoupling' compels states to rethink old assumptions: open trade may no longer ensure stability or growth, and heavy dependence on a single great power – for either markets or components – entails significant vulnerabilities.

Rather than remain passive bystanders, third-power states need to approach the future with careful diplomatic engagement and diversified economic partnerships. This should span bilateral resource deals and multilateral frameworks, which can bolster resilience. Ultimately, the cost of misalignment is high in a world where techno-nationalism and resource nationalism dominate.

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