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Journal of World Business

journal homepage: www.elsevier.com/locate/jwb



Perspective Article

Decoupling in international business: Evidence, drivers, impact, and implications for IB research

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Keywords:
Decoupling
Deglobalization
Geopolitics
China
United States of America



We argue that decoupling, defined as the process of weakening interdependence between two nations or blocs of nations, has been ongoing between China and the United States and is likely to accelerate, with major implications for IB and MNE strategies and management. We present data that the world has experienced deglobalization and China-US decoupling and discuss the dynamics underlying decoupling and their implications for IB. We propose an initial framework of variations in decoupling by industry characteristics, and we outline novel and important questions for IB research growing out of our analysis. We conclude with a brief exposition of possible alternative scenarios.

Deglobalization and decoupling are salient topics for International Business (IB) scholars and social scientists as well as top management of multi-national enterprises (MNEs). Deglobalization has been defined as "the process of weakening interdependence among nations" (Witt, 2019b: 1054), with the world as the level of analysis (Witt, 2019b). By extension, we define decoupling as the process of weakening interdependence between two nations or blocs of nations. The level of analysis here is not the world, but the dyadic ties between specific nations or economic blocs, and nations/blocs may be simultaneously decoupling from some nations/blocs while undergoing closer coupling with others. While interdependence can exist along various dimensions, we focus primarily on economic interdependence, which has significant consequences for multinational firms that set up their structures and operations on the assumption that growing interdependence is an irreversible phenomenon.

The empirical evidence suggests that deglobalization and Sino-US decoupling have been in progress for more than a decade—a statement that is contested even by IB scholars, mostly because of definitional and construct validity issues. The pandemic has thrown these issues into relief by revealing cost-optimized global supply chains as the Achilles heel of IB (Delios, Perchthold & Capri, 2021; Li, 2020; Shih, 2020), with the Russian invasion of Ukraine further exacerbating the situation (Simchi-Levi & Haren, 2022). Deglobalization and decoupling are

ongoing processes driven by wide-ranging and far-reaching geopolitical and economic dynamics and the budding digital industrial revolution, with broad consequences for the shape of the world economy, global living standards and related policies such as China's common prosperity, and ultimately the question of war and peace.

In this perspective paper, we focus predominantly on decoupling. We advance the argument that decoupling between China and the United States is real and likely to accelerate, with major implications for IB and MNE strategies and management. We begin by presenting data that the world has been deglobalizing and that China and the United States have been decoupling in recent years. We then review and discuss the underlying dynamics at the heart of decoupling and their implications for IB. At the same time, we expect that decoupling will not affect all industries equally. Rather, the extent of decoupling in each industry is likely to be a function of two dimensions: strategic importance and reshorability. We outline novel and important questions for IB research growing out of our analysis in several areas: endogenizing the macro forces behind decoupling in IB theory, location choices, industry dynamics, organizational responses, generalizability of decoupling dynamics to other contexts, counter movements towards coupling among other states and their firms, and coupling with China for some states and their firms. We conclude with a brief exposition of possible alternative scenarios.

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Geographically, the focus of our attention is the dyadic economic interdependence between China and the United States, and the use of the term "decoupling" in the remainder of this paper should be read as shorthand for declining levels of economic interdependence between these two nations. However, we expect that our analytical framework is also applicable, with some adjustments, to economic interdependence between a bloc formed by China and its allies—notably Russia—on one side and a bloc of advanced industrialized countries aligned with the United States on the other.

1. The evidence: declining interdependence

The focus of this paper is on Sino-US decoupling—that is, the process of weakening interdependence between the two nations. This section draws on empirical data to show that this is not merely a hypothetical concern, but a phenomenon in progress. We build this section from the ground up, starting with the measurement and state of deglobalization, a known and closely related concept. We then extend an analogous analysis to the state of Sino-US decoupling.

As mentioned earlier, deglobalization is defined as a process of weakening interdependence among nations. This is the mirror image of the common definition in the IB literature of globalization as a process of increasing interdependence among nations (Chase-Dunn, Kawano & Brewer, 2000; Guillén, 2001; Meyer, 2017; Rugman & Verbeke, 2004; Verbeke, Coeurderoy & Matt, 2018; Witt, 2019b).

This definition has three major implications for operationalization and thus for the measurement of the state of deglobalization. Specifically:

- 1 Deglobalization is a *process*, not an outcome. A hypothetical endpoint of deglobalization as a process would be a completely *deglobalized* world economy—one without economic activities between countries. Deglobalization signifies a *decrease* in interdependence. This implies that the mere presence of international economic activity, such as trade or foreign direct investments (FDI), is <u>not</u> per se a sign of globalization, even if at high levels. Likewise, deglobalization does not mean the complete absence of such activity. What matters is the trend over time: Rising levels of interdependence indicate globalization, while declining levels signify deglobalization,
- 2 Deglobalization requires lessening *interdependence* of nations. Interdependence implies that nations rely on one another. It relates to how much these nations obtain from others *relative* to how much they themselves have. For instance, two nations with a GDP of \$200 billion each and mutual imports of \$100 billion are highly interdependent. Two nations with the same amounts of mutual imports but a GDP of \$20 trillion each are hardly interdependent at all. In other words, metrics of (de)globalization such as trade or FDI always need to be evaluated *relative to GDP*, ¹ not as absolute numbers. Valid measures thus include:

$$\frac{global\ trade}{global\ GDP} \tag{1}$$

$$\frac{global \ FDI}{global \ GDP} \tag{2}$$

Note that (1) can be simplified to global exports/global GDP or global imports/global GDP, as global exports by definition are precisely equal to global imports and global trade is defined as global exports + global imports. By the same logic, (2) can be simplified to global OFDI/global GDP or global IFDI/global GDP.

Mutatis mutandis, the same principle of using relative measures applies to other dimensions. For example, financial (de)globalization can be measured by the ratio of global financial flows over global GDP. It also extends to less aggregate levels of analysis. For instance, deglobalization might be visible in companies' sales and profits generated abroad relative to their total sales and profits or the ratio of the output of foreign affiliates as a share of global output (for evidence of deglobalization evident in these measures in the 2010s, see Antràs, 2020; Economist, 2019).

3 Analyses based on absolute numbers lack construct validity for both, measuring globalization and deglobalization. In addition, in analyses of other issues for which absolute numbers are meaningful measures, they need correcting for inflation—that is, they require the use of real rather than nominal values. Trade and FDI numbers as well as financial flows, unless clearly marked otherwise, are usually reported in nominal terms. Since nominal values = real values + inflation, nominal metrics overstate international economic activities if there is positive inflation. Indeed, nominal values may increase even if real values stagnate or shrink at a rate whose (absolute) value is smaller than inflation.

The prior literature has tended to discuss deglobalization mostly in the context of two metrics: trade and FDI (Antràs, 2020; Chase-Dunn et al., 2000; Jones, 2005, 2007, 2014; O'Rourke & Williamson, 2014; Witt, 2019b). While both are valid measures of interdependence in the real economy, they differ in their temporal points of reference (Witt, 2022): Trade interdependence today results from international business strategies created years or even decades ago, such as decisions to invest in China to produce there for export to the United States and other countries following China's accession to the WTO in 2001. Based on the accretion of capital and the creation of supply chains over decades, it is also likely to exhibit high structural inertia. By contrast, FDI interdependence as expressed in mutual FDI flows (not: stock²) indicates the extent to which firms today see opportunities abroad and thus are willing to invest. It is a forward-looking indicator, and as such, the more meaningful of the two for detecting emerging trends.

Both trade and especially FDI at global levels have fallen relative to world GDP since the second half of the 2000s (Figs. 1 and 2)—trade somewhat, FDI precipitously. In other words, the trends in trade and FDI suggest deglobalization. As expected, trade has been more resilient than FDI. Given that both dimensions have been on a downward trend for one-and-a-half decades now—deglobalization during the Great Depression and World War II lasted just about as long (Chase-Dunn et al., 2000; Jones, 2007)—it would seem to be difficult to dismiss these declines as temporary aberration.

Turning now to *decoupling*—a decrease of interdependence between China and the US—we extend the same principles just discussed to the bilateral trade and bilateral FDI flows between the two countries. For the reasons laid out before, we normalize these figures by GDP to capture the levels of interdependence that the total numbers imply. Fig. 3 shows mutual exports standardized by GDP of the exporting country, following

¹ Technically, other measures than GDP could also be adopted, such as gross national income (GNI). In practical terms, the difference between GDP and GNI is minimal for most countries (including China and the United States), so the results would usually be virtually identical. In addition, the use of less common metrics like GNI might lead to confusion in readers. Our recommendation is therefore to use GDP unless there are strong technical reasons for employing a different measure. Given the potential for confusion, these reasons and how the measure differs from GDP need to be laid out in detail.

² FDI stock is not a valid measure of interdependence. FDI is a source of interdependence with respect to investments only in the period in which it occurs. Afterwards, it no longer contributes to the investment needs of the host country. It may create a different form of interdependence by producing value and thus contributing to host country GDP, but there is no way to determine the magnitude of this effect from the FDI stock numbers.

³ Note that at the global level, imports = exports.

⁴ Note that at the global level, IFDI = OFDI.

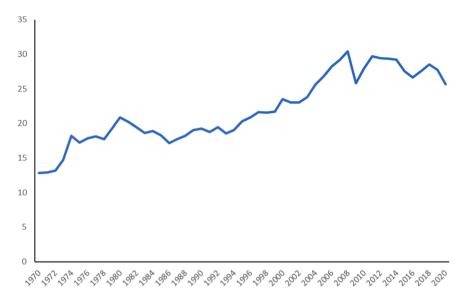


Fig. 1. Trade (de-)globalization. Measure: Global imports as a percentage of GDP. Source: World Development Indicators.

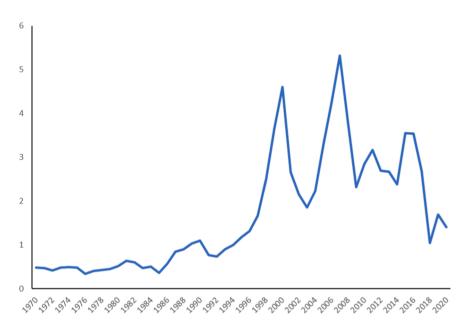


Fig. 2. FDI (de-)globalization. Measure: Global inward FDI as a percentage of GDP. 4 Source: World Development Indicators.

the logic that the two countries are relying on each other as export markets. Measured in this way, China's exports reliance on the US peaked in 2005; that of the US on China, in 2017. Levels in 2020 were at 28% and 82% of their respective top.

Fig. 4 shows mutual exports standardized by GDP of the importing country. The logic here is that the two countries need each other to provide goods and services. This operationalization shows China's reliance on US imports peaking in 2006, and US reliance on Chinese imports, in 2014. 2020 levels were at 48% and 78% of their respective maximum.

Fig. 5 shows mutual FDI flows standardized by GDP of the receiving country, following the logic that the recipient country relies on the investing country for part of its investment needs. China's reliance on US FDI peaked in 2005, while US reliance on Chinese FDI topped in 2016. Again, 2020 levels are down considerably from the respective maximum level, at 8% for US FDI in China and 13% for Chinese FDI in the United States.

The overall picture that emerges from these data is one not only of

ongoing deglobalization, but also of decoupling. Every single measure we have shown is down from earlier peaks—and was so before the onset of the COVID-19 pandemic, which is a confounding factor for data from 2020 at least through 2022, given the impact of current lockdowns in China and the potential for further waves and attendant disruptions. Most measures show a longstanding downward trend that started in the 2000s or first half of the 2010s.

Intriguingly, these data also suggest that China has already decoupled considerably from the United States: China's exports to the US, its imports from the US, and its FDI from the US are far less today than in the past. It is noteworthy that these trends were visible in trade from the mid-2000s onwards.

The United States has seen a substantial decline in its relative dependence on Chinese FDI as a result of adversarial policies of the Trump administration and attendant restrictions on Chinese investments (Casson, 2021; Luo & Witt, 2022; Witt, 2019a). By contrast, reliance on trade with China, in both directions, has shown smaller drops. Especially with respect to imports from China, the scope for US decoupling remains

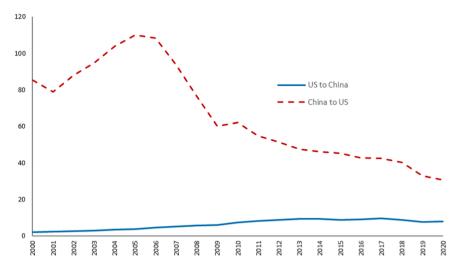


Fig. 3. Trade decoupling, China and United States. Measure: Exports divided by GDP of exporting country. Sources: BEA, World Development Indicators.

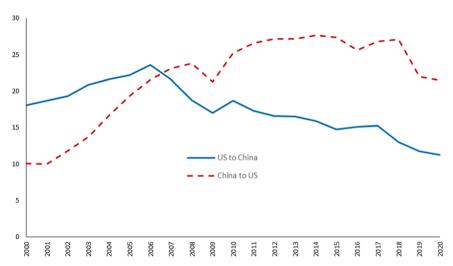


Fig. 4. Trade decoupling, China and United States. Measure: Exports divided by GDP of importing country. Sources: BEA, World Development Indicators.

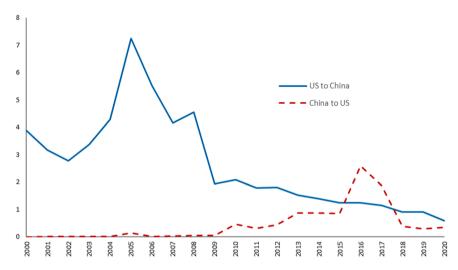


Fig. 5. FDI decoupling, China and United States. Measure: IFDI divided by GDP of host country. Sources: Rhodium Group, World Development Indicators.

large.

2. Economic, political and technological drivers

The causes and context of *deglobalization* have received considerable attention in the prior literature (Cuervo-Cazurra et al., 2020; Kobrin, 2017; Meyer, 2017; Meyer & Li, 2022; Witt, 2019b), and we will not reiterate the debate over them here.

Our focus for the rest of this paper lies on *decoupling*. We argue that continued decoupling between China and the United States is very likely because interdependence is becoming less attractive to both. For both countries and their firms, geopolitical frictions loom large. In addition, US firms face a marked reduction in economic attractiveness of China as a production site and investment destination. For firms on both sides, technological developments may facilitate decoupling by lowering exit barriers.

We discuss these three main drivers—politics, economics, and technology—in turn, with an emphasis on the likely trajectory of decoupling from here rather than a historical account of prior events. Table 1 summarizes the essence of our analysis.

2.1. Politics

Geopolitics represents perhaps the most unambiguous force behind decoupling. The mechanisms underlying this force have been explored in detail elsewhere (Witt, 2019a, b), especially with respect to US motivations for decoupling in response to China's economic and military rise as well as the presence of multiple points of major frictions and a likely Cold War with two major economic blocs.

These analyses still hold, and we will not reiterate them here, though we would like to add two points: First, the forces identified in the earlier analyses have since gathered additional momentum. China and the United States are locked in a global systemic competition (Beckley, 2022; Mackinnon, 2022; Rennie, 2022; Renshaw, Shalal, & Martina, 2021), and growing tensions over Taiwan following a visit by the US Speaker of the House in August 2022 have made the possibility of war between the two nations salient (Colby, 2022). Accordingly, the United States has redoubled its efforts to slow Chinese technological development by cutting off supplies of advanced semiconductors (Bateman, 2022; Patel, 2022). This is accomplished by new export restrictions that "effectively bring all of China under the special rule formerly reserved for Huawei" (Bateman, 2022), with further technologies likely to follow. At the same time, the retrospective recognition that economic relations with China have had harmful effects on the United States has become economic mainstream (Krugman, 2019).

Table 1
Factors driving decoupling.

Dimensions	Forces	Connection with decoupling
Politics	Cold War II	Great power rivalry between China and the United States for global supremacy inducing both states to pursue decoupling
	Ukraine War	China's alliance with Russia deepening antagonism with the United States
Economics	Falling Growth	Loss of market attractiveness
	Labor Costs	Loss of competitiveness as production site
	Governance	Loss of attractiveness as place of business
	Uncertainty	
	Pandemic	China's zero-Covid policy leading to repeated
	Response	lockdowns and severe supply chain and staffing restrictions
Technology	Digitalization	Ability to re-integrate operations previously outsourced to reduce complexity; enhancement of state control in China
	Additive	Ability to produce small, customized batches
	Manufacturing	locally
	Platforms	Ability to flexibly farm out manufacturing and service jobs for local production

Second, other analyses in the literature can generally be subsumed under the two frameworks, liberalism and realism, outlined in Witt (2019b). For example, the argument in Petricevic and Teece (2019) about decoupling resulting from a bifurcation in governance in China and the United States is essentially a liberalist argument about incompatible domestic political structures.

The conclusions in Witt (2019a) have since been reinforced by two significant developments. First, China has adopted national policies and initiatives with an underlying desire to decouple (Rudd, 2021; Yan, 2021). The evidence we showed in this paper suggests that China started to decouple from the United States in the mid-2000s, earlier than commonly realized. Certainly in recent years, China has been open about its desire to decouple. For example, China's "Made in China 2025" had set the goal of becoming at least 70% independent of foreign technological supplies in all strategic industries (Li, 2021). China's "domestic-international dual circulation" strategy, adopted in May 2020, aims specifically at reorienting the Chinese economy towards domestic production and consumption and places renewed emphasis on "indigenous innovation" (Mitchell & Yu, 2021), which in turn implies reduced dependence on foreign inputs so as to minimize the vulnerability it implies (Economist, 2021c; Hu, Tian, Wu & Yang, 2021; Takahashi, 2020; Yan, 2021).

At the same time, decoupling is not intended to be complete, as Beijing seems intent on making international supply chains more dependent on China in order to gain leverage on trade partners (Rudd, 2021). China's current 5-year plan, adopted in fall 2020, likewise emphasizes "scientific and technological self-reliance' and a 'strong domestic market'" (Mitchell & Yu, 2021) to reduce US leverage over China. Industrial policy aimed at catching up and leading in key technology domains, first proclaimed in the context of the failed "Made in China 2025" program, remain in place and aims at dominating all new technology domains (Rudd, 2021).

Didi Chuxing's decision to move its stock market listing from New York to Hong Kong, apparently at the behest of Chinese officials, suggests that China has also begun to push for financial decoupling (Economist, 2021d), with major Chinese state-owned firms leaving the New York stock exchange (Lockett, Leng & Kinder, 2022) and a "flurry" of delistings expected in the coming years (Economist Intelligence Unit, 2021). That US investment banks continue to be welcome in Hong Kong and China is consistent with the international component of the dual circulation strategy.

An important but under-appreciated component of China's efforts at decoupling is the Belt and Road Initiative (BRI). While the IB literature has tended to focus on the economic and business aspects of the BRI, it is at its core a political initiative supporting a range of Chinese domestic and international policy objectives (Lewin & Witt, 2022). Domestically, it seeks to address critical and existential economic issues to maintain the legitimacy of China's system of governance and authoritarian capitalism. Externally, it pursues a range of geopolitical objectives, such as securing of strategic positions and critical supply lines—especially energy imports from the Middle East —in anticipation of potential conflict with the United States.

Of special relevance to decoupling are two aspects of the BRI. First, the BRI may contribute to China's building of an alternative institutional world order based on Chinese interests and preferences (Cau, 2018; Clarke, 2018; Johnston, 2019; Layne, 2018; Mobley, 2019; Teece, 2022). In effect, China can use its financial dominance to set the rules of the game for countries benefitting from BRI investments. Since institutions usually favor their creators (North, 1990), Chinese MNEs will be at a relative advantage operating under these new rules. All else equal, this makes it more likely for Chinese MNEs to invest within this emergent economic sphere of influence rather than outside it.

 $^{^{5}}$ It is worth noting that China's strategic emphasis on green energy also relates to reducing its dependence on energy imports.

The BRI may also contribute to decoupling by creating favorable conditions for Chinese MNE investments in partner countries. For instance, Chinese companies dependent on low-cost labor might look to African BRI partner countries indebted—literally and figuratively—to the Chinese government. Chinese MNEs might then try to replicate in Africa a processing trade model akin to that used by Western MNEs in China (Dai, Maitra & Yu, 2016). This would involve shifting labor-intensive manufacturing to select partner countries in Africa, with higher value-added inputs sourced from China. Unless US MNEs manage to muster a strong competitive response without the benefit of a US equivalent of the BRI, Chinese MNEs may thus come to dominate a number of African economies. Taken together, the setting of new rules and economic dominance in BRI partner countries may permit China to carve out its own, distinct economic sphere of influence largely decoupled from that of the United States.

The second major development is that the Ukraine War has widened the rift between China and the United States. Viewed through a realist lens (see Witt, 2019b), the Ukraine War may be interpreted as an attempt by a Sino-Russian bloc to build out its sphere of influence through the subjugation of a neighboring country that may otherwise have joined the rival, US-led bloc. The United States has decisively taken the side of Ukraine, committing major resources to aiding the country to keep the status quo—i.e., an independent Ukraine. China, on the other hand, has been supporting Russia's war both politically (e.g., by refusing to condemn Russia in the United Nations and by perpetuating a narrative blaming Ukraine and NATO for Russia's invasion) and economically (e.g., by facilitating imports of Russian coal (Bloomberg, 2022) and buying large amounts of Russian oil (CNBC, 2022)).

2.2. Economics

Economic forces represent a second major driver, though one that is asymmetrical in its effect. If not for the geopolitical developments already noted, the United States would be about as attractive to Chinese firms as it was five or ten years ago. It is still a very large economy that can absorb much of China's exports; it is still a leading source of technology that Chinese firms need and would want to use for their spring boarding strategies (Luo & Tung, 2018; Luo & Witt, 2022); and it is still a source of large pools of capital that could contribute to investments in China

The view from the United States is markedly different. US firms see rapidly worsening economic prospects for China and an increasing likelihood that China may not escape the middle-income trap (Kenney & Lewin, 2022; Lewin, Kenney & Murmann, 2016; Witt, 2016). Especially noteworthy are several unfolding dynamics: the end of China's period of high economic growth; rising labor costs; governance uncertainty; and the consequences of the zero-COVID strategy. Other forces are likely to exist, and the salience of these forces may change over time. But taken together, they have the effect of a large-scale deterioration of the attractiveness of China to US businesses, prompting US firms to look elsewhere. The result is additional momentum towards decoupling.

Falling growth. China's large market size paired with high rates of economic growth have been major factors in MNEs decisions to invest in China. While the scale of China economic market remains large, rapid growth has increasingly become a matter of the past. GDP growth invariably slows down as emerging economies reach higher levels of per capita GDP (Eichengreen, Park & Shin, 2012, 2013; Prescott, 1988). In addition, China faces a confluence of developments likely to depress growth moving forward (Lewin & Witt, 2022): a steady decline in the population to approximately half its current size by the end of the century, with attendant shrinkage of the labor force; poor and shrinking

returns to capital investments and overcapacity especially in infrastructure industries, with attendant low annual growth in total factor productivity around 1% for the past decade (Kenney & Lewin, 2022); limited success in catching up technologically with Global Tier 1 manufacturing leaders (China is ranked in Tier 3), as evident in the failure of the "Made in China 2025" initiative (Lewin & Witt, 2022); and an imploding property sector with major developers defaulting, investors as well as creditors and home buyers incurring massive losses, and local governments running large deficits because of falling land sales (Hale, 2022; Kynge, Yu & Hale, 2022). Governance issues, discussed below, further compound these trends.

Growth rates above 5%, as expected by the Chinese government for 2022, are now out of reach. The World Bank predicts 2022 Chinese GDP growth at 2.8%, slower than the rest of Asia (Editorial Board, 2022) and about on par with the 2–3% the United States registers in an average year. It looks increasingly likely that these rates are becoming permanent (Eichengreen et al., 2012, 2013; Rajah & Leng, 2022). Flagging growth, however, reduces the incentive for US MNEs to do business with and in China.

Labor cost. Average monthly real wages in China, measured in constant 2007 US dollars, rose by a factor of about 6 between 1993 and 2015, far outpacing much more moderate increases in Southeast Asian emerging markets and India (Huang, Sheng & Wang, 2021). This has made China less attractive for low-skilled manufacturing relative to other Asian countries and countries like Mexico (Hille, 2020). Especially foreign producers in this segment have thus had an economic incentive to move production out of China (Huang et al., 2021). On the one hand, this is a desirable and desired consequence of China's economic development, moving the economy up the value chain into more technology and capital-intensive industries with higher levels of value-added. On the other hand, it is also likely to reinforce a trend toward decoupling. As we argue later, the United States is far less likely to offshore manufacturing of high value-added products to China than manufacturing requiring unskilled, low-cost labor, as the latter is less likely to be strategically important.

Governance uncertainty. China has recently exhibited a series of abrupt policy changes and political interventions in the economy that have increased uncertainty about doing business in China. Examples include the unforeseen cancelation of the IPO of Ant in fall 2020, ostensibly in response to critical comments about the government by Alibaba chairman Jack Ma (Ren, 2020); the swift ban of Didi Chuxing's ride hailing app after the company had ignored guidance to delay its overseas IPO (Economist, 2021b), followed later by delisting from US markets; the sudden outlawing of private tutoring in summer 2021 (Ye, 2021); and the similarly precipitous introduction of large-scale restrictions on the online gaming industry in summer 2021 (Economist, 2021a). Unofficial embargoes on Australian coal, paired with mismanagement of the domestic coal mining industry, led to electricity shortages for most of 2021 (Su, 2021). In each of these cases, companies and investors lost billions of dollars. They have illustrated the ability and a rediscovered willingness of Chinese central policymakers to intervene massively to the detriment of individual firms or industries, apparently without prior notice and without any credible checks and balances (Mitchell, Yu & Olcott, 2022). The heightened uncertainty resulting from these policies is likely to reduce the attractiveness of China for foreign businesses. To the extent it feeds back into lower economic growth, it may also undermine the legitimacy of CCP rule and the credibility of its professed goal of common prosperity.

Pandemic responses. China has devised and reinforced a stringent zero-COVID strategy. The implications for companies active in or trading with China have been profound. For MNEs active in China, it has become extremely difficult to deploy or retain any foreign staff at their subsidiaries in China. After strongly criticizing the West for curtailing flights from China at the beginning of the COVID-19 pandemic, China reversed course and has since largely isolated itself from international people flows. Chinese authorities routinely deny requests for business

 $^{^6}$ This assumes that workers in African nations would be willing to accept low-skilled manufacturing jobs in Chinese MNEs. This is not a foregone conclusion.

travel to China, and travelers who obtain permission are subjected to extensive and highly variable travel and quarantine requirements (e.g., Sander, 2021). Accordingly, international flights to China have dropped by 98% (Ankenbrand, 2021). At the same time, foreign residents have been leaving China: In Shanghai alone, their number is estimated to have dropped from 170,000 before the pandemic to 40,000 by end of 2021 (Ankenbrand, 2021). Given a need for at least some expatriate staff to ensure knowledge flows and effective headquarters communications and control, China's self-isolation thus raises another dimension of decoupling relating to the long-term viability of foreign subsidiaries in the country.

As a result, companies are exploring diversifying sourcing away from China. The COVID-19 pandemic has shifted the focus from supply chain efficiency to supply chain resilience (Rapoza, 2020). Firms are actively replacing single-sourcing of critical components with multiple, at least partially redundant and geographically diverse supply chains so as to prevent interruptions in a single source country from bringing the whole supply chain to a halt and to avoid single-source dependencies, as happened with personal protective equipment in the initial days of the pandemic. In addition, the costs of relocating supply chains, especially nearer to the home country, may be outweighed by greater supply chain responsiveness as well as reduced risks of shipping delays.

A trend away from China-based sourcing had already begun in the 2000s, when companies started to adopt "China-plus-one" sourcing strategies (Economist, 2007). The pandemic reinforced this trend, with other countries in Asia such as Vietnam and Taiwan as well as Latin American countries like Mexico as main beneficiaries (Hille, 2020; van der Veen, 2020). Recent Chinese lockdowns, such as that in Shanghai, are reinforcing this trend. The result is supply chain decoupling between China and the United States, with reshoring to the US and relocations to third countries substituting for China.

2.3. Technology

In the prior literature, technology usually plays the role of enabling interdependence by lowering communications and transportation costs (Chase-Dunn et al., 2000; Jones, 2007; O'Rourke & Williamson, 2014). This not only changed the economics of outsourcing and offshoring, but also enabled the development of new organizational forms, such as global matrix organizations or transnational organizations (Bartlett & Ghoshal, 1989).

In contrast with the past, we may now see the emergence of physical technologies that may enable both, higher and lower levels of interdependence (George & Schillebeeckx, 2022). For example, digitalization may allow firms to absorb higher levels of organizational complexity. This could be used to erect and manage more elaborate global structures, but it may also enable firms to reabsorb functions that they had previously outsourced and potentially offshored. Additive manufacturing (also known as 3D printing) may facilitate localized production both at home and abroad. With wider adoption and increased sophistication, these technologies may supplant some global supply chains by enabling local manufacturing of increasingly complex and precision products, and they may speak to firms' needs to reduce risks by reshoring and shortening supply chains.

Rather than invest in fixed assets for localized production, firms may also draw on asset-less platforms to farm out jobs as needed, possibly leveraging other technologies such as blockchains to secure and keep track of output and assure customers of quality. To the extent this enables firms to choose from a larger and internationally more dispersed group of suppliers, it should make it easier to shift production from one country to another, reducing supply chain risks and localizing production as needed. Advances in artificial intelligence (AI) may play a role in reducing the complexity of leveraging these emerging production ecosystems.

Finally, digital technologies may enhance the control of authoritarian states such as China over internal economic activities (Kendall-Taylor, Frantz & Wright, 2020). For example, China's state agencies at all levels are establishing so-called "industry brains" to monitor that supply-chain activities accord to state plans and to enhance supply-chain resilience by spotting bottlenecks early. Such monitoring may enhance the desire and ability of China to decouple its domestic economic activities. It may also raise concerns among MNEs in China about the extent of surveillance and the possibility of China's return to a centrally planned economic model.

The last point aside, the overall effect of these technological trends is not necessarily to militate for decoupling. However, by enabling firms to shift production more easily to where it is needed and desired, they lower the exit barriers for firms looking to shift operations elsewhere. Given that US firms have been much more active in China than Chinese firms in the United States, this mechanism is likely to be especially relevant to US firms seeking to reduce their dependence on China as the "workshop of the world" because of the political and economic forces we have laid out earlier.

3. Differential impact

The deterioration of economic conditions in China is likely to affect US companies across the board. Those chasing the Chinese market need to contend with slower growth; those relying on cheap labor, with rapidly rising costs. Either way, their incentive to engage economically in China is decreasing.

The impact of political forces, by contrast, is likely to vary by industry. In recognition that there is much more US activity in China than vice versa, we take the perspective of US companies producing in China. The arguments also apply, *mutatis mutandis*, to Chinese firms producing in the United States.

For US firms active in China, whether to serve the local market or to produce for export, we expect the extent of decoupling to be a function of two dimensions: strategic importance and reshorability. Strategic importance relates to the national-level importance of an industry and its products for national security, broadly conceived. For example, semiconductors have high strategic importance because of their use in defense, while standard apparel has low strategic importance. Reshorability denotes the industry-level, physical feasibility of bringing production back home. For instance, the production of smartphones, which requires large numbers of workers and sophisticated local supply chains, has low reshorability from China to the US, as the latter lacks both the requisite labor supply and local supplier infrastructure. Medical personal protective equipment, on the other hand, has high reshorability. Relocating its production from China to the United States has cost implications but is physically straightforward, as the COVID-19 pandemic

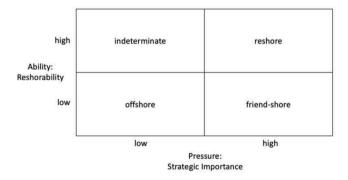


Fig. 6. Differential impact of political pressures on decoupling.

^{7 &}quot;Products" in this context are both goods and services.

illustrated.

The interaction of these dimensions will shape the decoupling responses of firms (Fig. 6). For industries with high strategic importance, relocating production away from China is increasingly likely. The underlying logic is that firms in these industries will come under political pressure at home to withhold their products and attendant know-how from China, a potential adversary. Where reshorability is high, these firms may respond by reshoring, that is, relocating their activities back to the home market. Where reshorability is low, companies are likely to pursue friend-shoring (Coy, 2021): relocating to countries that offer a suitable context for their activities and are allies of the United States, or at least unlikely future allies of China. For example, Apple contractors have partially moved iPhone assembly to India and iPad assembly to Vietnam. For labor-intensive tasks, India in particular could be a likely beneficiary.

Where strategic importance is low, decoupling is far less likely to occur. In industries that combine low strategic importance with low reshorability, companies will continue to produce in China or any other country offering competitive costs and reliable supplies. Political alignment of the host country with the United States will play no or a minor role. Where strategic importance is low and reshorability is high, both offshoring as just laid out as well as reshoring to the United States become possibilities. Cost and supply chain reliability are likely to be the central driver of location decisions in these cases.

For US firms serving the Chinese market through exports, the equation is simpler: the higher the strategic importance, the more likely that government will enact export restrictions, with attendant decoupling. The more important China is as an export market for a given industry, the more political resistance that industry is likely to put up—for instance, by lobbying against export controls. However, all else equal, we expect national security concerns to prevail over exporters' economic interests, as illustrated by the CHIPS and Science Act in the United States and recently enacted restrictions on semiconductor exports mentioned earlier.

4. Implications for IB research

In this perspective paper, we have elaborated and expanded on the argument that China and the United States are poised to decouple (Luo & Witt, 2022; Petricevic & Teece, 2019; Witt, 2019a, b). We have provided guidance on how to assess the state of deglobalization and decoupling with measures that possess construct validity. We have shown empirical evidence that the world has not only been deglobalizing, but that decoupling between China and the United States seems to have commenced as early as the mid-2000s, with China taking the lead. We have identified political, economic, and technological factors that make it seem likely that decoupling will continue apace, with US firms likely to drive the process. We have further proposed that for US firms producing in China, the extent and shape of decoupling may depend on two factors, national-level strategic importance of the industry and reshorability of the industry. Depending on the specific configuration of these factors, firms may retain production in China, re-locate their activities anywhere in the world, friend-shore, or reshore to the United States. For exporters to China, strategic importance is likely to be decisive for decoupling.

Our paper may have a range of implications for IB research. Beyond the fundamental recognition that politics, economics, and technology play crucial roles in shaping the future landscape of IB, a key question would be how to endogenize geopolitics and potentially new kinds of technological forces in IB theory. IB theory developed and matured mostly in an era in which growing interdependence could be taken for granted and thus be abstracted from Witt, (2019b). In this context, the central role of technological advances was to enable further interdependence through the reduction of transaction costs (Chase-Dunn et al., 2000; Jones, 2007; O'Rourke & Williamson, 2014). By contrast, IB activities are now taking place in a world of diminishing interdependence

in which the two major economies have been decoupling. Existing IB theory may well be flexible enough to accommodate these changes. For example, geopolitics could be interpreted as a transaction cost, and the position of a country in international politics can be seen as a country-specific advantage. There remains considerable space, however, for elaborating the theoretical mechanisms that link changing political and technological conditions to IB outcomes. Leveraging theories from the social sciences, such as realism and liberalism, will probably be crucial for this effort.

Likewise important would be for IB research to develop a better sense of where business activities decoupling from China and the United States may move in the future. While we have advanced an initial framework for the likelihood and potential shape of a decoupling response based on strategic importance and reshorability, many questions remain open. A key area needing attention would be the concept of friend-shoring, which suggests that location choices will become increasingly dependent on advance knowledge of which countries are and will remain allies as decoupled economic blocs emerge around China and the United States. While prior research has identified the quality of political relations as a factor in location choices (Li, Meyer, Zhang, & Ding, 2018), IB has no theoretical toolkit for predicting which countries will remain on friendly terms with whom and why. Developing this kit would not only enhance the predictive power of IB theories for the coming years but also have critical real-world implications for business practitioners making business location decisions.

Our matrix of strategic importance and reshorability also is open to testing and extension. What is the predictive power of the matrix as presented? And what are other factors that may influence the decoupling decisions of firms? For example, asset-light industries such as consulting may decide to delay decoupling safe in the knowledge that they can exit on short notice and with minimal write-offs (essentially, some office equipment). By contrast, asset-heavy industries such as chemicals may be early movers to reduce the risk of massive write-offs if economic and political conditions deteriorate markedly.

Moving to the organizational level, a wide range of salient questions awaits exploration. First, how and where does decoupling manifest itself within the MNE? The data we have shown earlier suggest the presence of decoupling in investment and product flows. Have firms also begun to decouple in other respects, such as the flow of people or the flow of information and knowledge inside the firm? For example, have they stopped appointing staff from "the other side" to positions that may be technologically or politically sensitive?

Second, what are the processes by which firms decouple? For instance, what are the decision-making processes leading to decoupling? Once the decision has been made, what functions are relocated first? How do firms manage the requisite transfers of capital and knowledge as well as the winding down of the existing operations? And what processes do firms employ to reconfigure their supply chains?

Third, how do firms within industries vary in terms of their decoupling responses and why? Who decouples first, and who moves last? What are the contingencies that govern these variations, and to what extent are they industry-specific or generalizable across industries? For example, larger firms, which are generally more visible and thus more likely to experience stakeholder and political pressure to decouple, may be in the vanguard, while smaller firms may decouple with a delay or possibly not at all.

Fourth, how do MNEs' decoupling responses relate to corporate governance and stakeholder configurations? For example, do firms with CEO duality, high levels of board independence, or large block holders respond differently from firms that differ in these respects? Are there configurations of these factors associated with specific decoupling responses such as earlier or delayed timing? And what roles do factors such as external stakeholder configurations and organizational visibility play in this context?

Fifth, to what extent and how are prior IB experience and success, not least in the country being decoupled, connected to variations in

decoupling responses? For example, it is conceivable that MNEs with greater experience and higher success rates in their international operations are more willing to decouple because it is likely to be less risky for them. On the other hand, MNEs that do very well in China specifically may well be more reluctant to decouple than firms that produce little profit or losses there.

Sixth, how much agency do firms have in responding to pressure to decouple? For example, a leading manufacturer of semiconductors would probably be wooed by both China and the United States to produce or export there. How much freedom to choose would this company have, and what would be the boundary conditions for this choice? Can such companies, or their home countries, play off China against the United States to obtain benefits otherwise not available? For example, would Indian companies be in a privileged position vis-à-vis the United States given the likely pivotal role of India as a US ally in Asia (Li, Lewin, Witt & Välikangas, 2021; Luo & Witt, 2022), with an attendant potential for a boost to Indian economic growth? What tools do the two states have to limit this kind of bargaining behavior? Conversely, to what extent do firms experience a liability of origin in decoupling (Tan & Yang, 2021)? How can they maneuver the attendant challenges, and how can their home countries support them?

And seventh, what is the impact of decoupling on the performance characteristics of affected firms? The literature has conjectured, for example, that innovation is likely to suffer under these circumstances (Luo & Witt, 2022; Wang & Xie, 2021; Williamson, 2021). It also seems plausible that a loss of scale and scope as well as inefficiencies in supply chains would lower other performance indicators, such as returns on investment and stock market valuations. To what extent does the evidence bear out these conjectures, and what are contingencies and mediating factors?

The empirical focus of our paper has been on decoupling between China and the United States, but we expect our argument to generalize more widely to decoupling especially between China and its allies on one side and the United States and its allies on the other. This expectation is subject to testing and elaboration, opening up a number of promising research opportunities. For example, to what extent have other major Western players begun to decouple from China? There is anecdotal evidence that some European firms, encouraged by their governments, have begun to decouple their Chinese operations (Theurer, 2022; Záboji, 2022). How widespread, in Europe and elsewhere, is this kind of strategic change? How dissimilar are trajectories of major players and their companies, and why? Does variance in the drivers we identified explain differences in trajectories, and if not, what factors are missing? Does decoupling always require the presence of certain drivers, or are there alternative, equifinal configurations of drivers that each on their own may be sufficient for decoupling to occur?8

Understanding a phenomenon fully usually also requires explaining its opposite—in this case, an increase in dyadic interdependence. Some countries are likely to see growing levels of dyadic interdependence. What brings these countries and their firms closer to China or the United States? Is it low salience of the drivers underlying decoupling? Or is this a case of causal asymmetry, where the absence of a given outcome is not explained by the absence of the factors that account for the presence of the outcome (see Fainshmidt, Witt, Aguilera & Verbeke, 2020)?

For example, for the case of China, it is possible that membership in the Belt and Road Initiative (BRI) may have no influence on the decision to decouple—it may be overridden by bigger concerns. But it may be an important factor in tying some countries closer to China, an outcome that may be desirable to China both for economic and security reasons (Lewin & Witt, 2022). Myanmar and Pakistan, for example, are highly relevant to China's national security by offering alternative routes for energy supplies to reach China without passing through the Malacca

Strait, which can be easily blocked by an adversary (China's "Malacca Dilemma") (Lewin & Witt, 2022). Africa is a key provider of resources, but also potential host of overseas military bases and offshoring destination for Chinese firms requiring low-cost labor (Lewin & Witt, 2022). And aligning at least some of the members of ASEAN with China serves the purpose of preventing ASEAN from taking a united stance against China's appropriation of the South China Sea. Will the BRI play a role in increasing dyadic interdependence of some countries with China? What is the evidence in terms of FDI and trade? And at the industry and organizational level, does BRI involvement lead to greater economic engagement in and with China, and if so, is the effect transitory or permanent?

Complicating these considerations is the presence of conflicting interests and constraints in potential partner countries. For example, India should in principle be a ready candidate for tighter coupling with the United States and EU countries. It shares with the United States an interest in containing China, and it is the only country with the potential to replace China as both production location and target market by dint of its large and young population (Li et al., 2021). Aware of this opportunity, the Indian government is committing US\$1.2 trillion to attract factories from China (Saxena & Chakraborty, 2002). At the same time, India has been constrained by its need to remain on friendly terms with Russia, its major arms supplier. It has not joined the United States and the West in condemning Russia's war on Ukraine at the United Nations (e.g., Economic Times, 2022). It has also defied US pressure by buying Russian oil at a discount, lowering energy prices in India but also helping Russia finance its war in Ukraine (Krauss, Stevenson, & Schmall, 2022). India thus seems to be aligned with the United States against China but also with Russia, a Chinese ally, against the United States. As a result of these inconsistencies, it remains unclear how far Indo-US coupling can grow. Indeed, many potential location choices for friend-shoring will present themselves in shades of gray. There are exceptions, such as Mexico (too close to the United States to ally with China) or Taiwan (too close to, and threatened by, China not to ally with the United States). But most alternative destinations, including much of Southeast Asia, are not necessarily clear-cut cases.

These complexities open up further opportunities for research. For example, framework agreements enabling closer coupling, such as the proposed Indo-Pacific Economic Framework (IPEF) pursued by the United States, usually involve years of negotiations about commitments from negotiating partners and attendant enforcement mechanisms. How does Sino-American decoupling interact with other interests and constraints to shape how governments approach these negotiations? What kinds of non-market strategic behavior do we observe in firms as they try to influence the negotiations to their respective advantage, and how do they vary with local contingencies such as the form of political governance? How do firms interact with government agencies at various levels? And how do the strategies and characteristics of local and foreign firms, local and state governments, and countries as a whole coevolve over time?

Decoupling as a phenomenon thus opens up a wide range of important research questions for IB. It also provides one angle to begin to evolve an understanding of what is bound to be a grand challenge for IB research in the coming years: the distinct possibility that for the foreseeable future, IB may take place in the context of a struggle for global supremacy between China and the United States. As argued, this is a key driver for decoupling and interacts with it. But its likely impact goes much further. A probable scenario is a protracted second Cold War that is defined by a fierce contest for economic dominance, the commanding heights of science and technology, and control of the institutional infrastructure of the world—as well as by a battle of democracy vs. autocracy. Blocs have been forming, with the United States and NATO as well as other close allies on one side; China, Russia, and their allies and sympathizers on the other; and a range of countries unable or unwilling to commit to either bloc. Both countries will likely compete over converting the latter camp to their cause. For example, the latest US

⁸ The last two questions would probably be best explored using configurational methods such as fsQCA (Fainshmidt, Witt, Aguilera, and Verbeke, 2020).

efforts to shore up its position in Asia through security and trade arrangements such as the Quad (defense) and the Indo-Pacific Economic Framework (trade) would not only of reinforce ties with existing allies, but also bring India more firmly into the US camp. Between the resultant two major blocs, relations may grow increasingly hostile. It seems possible that the Ukraine War may be the first in a series of wars over control of the edges of these blocs, and proxy wars over control of non-aligned states may once again become common. This would be a context for IB dramatically different from anything the field has ever experienced. It would be essential for the field to ready itself for this new world.

5. Conclusion

We have made the argument that decoupling of China and the United States is an ongoing empirical process and that the confluence of a wide range of factors is likely to propel it further in the future, though the precise trend will vary with key characteristics of specific industries. We have proposed a wide range of research questions growing out of our argument, and it is our hope that IB as a field will capture the opportunities for relevance thus afforded.

While we believe that continued decoupling between China and the United States is the most likely outcome from here, we would be remiss not to note that other trajectories remain possible (though unlikely) that involve a reduction, though not cessation, of decoupling. For example, while the days of low-cost labor in China are over for sure, it is possible that the country may correct its economic policies, including its stringent zero-COVID approach, and emerge with considerably higher levels of growth than we allowed for. This would obviously increase the cost of decoupling to firms and may induce at least some of them to stay put.

Likewise, it is possible (though unlikely) that the political challenges driving decoupling may be resolved. For example, China may surprise the world and democratize, thus enabling democratic peace (see Witt, 2019a) with the United States and an attendant reduction in geopolitical tensions. In this case, national security concerns would take on lower levels of priority, reducing the pressure on firms producing strategically important goods and services to decouple.

It is further possible that digitalization, additive printing, and in general the substitution of capital for labor all fail to enable meaningful reshoring to the United States or friend-shoring to allied advanced industrialized countries. This would be the case in particular if these technologies did not enable firms to produce at competitive prices, necessitating continued offshoring to less developed countries. If then Africa and India also failed to capture the current opportunity to become the new factories of the world, as they may well do, decoupling levels may drop for lack of relocation opportunities.

Of these alternative scenarios, we would rate the probability of technology as well as Africa and India disappointing highest and that of a political rapprochement lowest. However, for *all* incentives for decoupling to disappear, we would need to see a monumental change in Chinese politics that would probably involve the end of Communist Party rule. While fundamental changes such as these are notoriously difficult to predict, we believe that the chances here are infinitesimal. Decoupling is likely to remain with us for many years hence.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

We thank Professor Siah Hwee Ang for his constructive editorial guidance and the two anonymous reviewers for their helpful input. We are grateful to Thilo Hanemann and Mark Witzke of the Rhodium Group and Max Zenglein of MERICS for providing access to bilateral foreign direct investment data. We also thank audience members at AIB 2022 for their insightful questions and feedback. Peter Ping Li acknowledges financial support from NSFC Grant 71732007.

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