



**RAISINA**

DIALOGUE 2022

RAISINA FILES 2022

**TERRANOVA:**

**IS PAST PROLOGUE?**



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# RAISINA FILES

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ANAHITA KHANNA**

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Raisina Files is an annual ORF publication that brings together emerging and established voices in a collection of essays on key, contemporary questions that are implicating the world and India.

The views expressed in this publication are those of the individual authors.



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# Editors' Note

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In the sixth edition of our flagship annual journal of essays, the Raisina Files, we seek to take stock of where we are as people, communities, and countries. We intend to discuss and clarify responses to challenges that have arisen due to the pandemic, and discover and chart pathways to opportunities in the post-COVID19 world. Our contributors engage with the new war in Europe, and its consequences for the region and the world. Most importantly, the fine minds who have penned the essays that follow, seek to describe what lies ahead, how it will be arranged, who will shape it, and who will likely benefit from what unfolds.

The Raisina Files mirror the theme of the Raisina Dialogue 2022, “Terra Nova: Impassioned, Impatient, and Imperilled.” We have identified six pillars and areas of discussion within this overarching theme to engage with critically—Rethinking Democracy: Trade, Tech, and

Ideology; End of Multilateralism: A Networked Global Order?; Water Caucuses: Turbulent Tides in the Indo-Pacific; Communities Inc.: First Responders to Health, Development, and Planet; Achieving Green Transitions: Common Imperative, Diverging Realities; and Samson vs Goliath: The Persistent and Relentless Tech Wars. Together, these six pillars of the Raisina Dialogue capture the multitude of conversations, opportunities, and anxieties countries engage and grapple with.

As the pandemic continues to loom large over our lives, the future of the world order needs to be addressed and requires much scrutiny. In a global order teetering due to the unmistakable rivalry between the United States and China, the dramatic collapse of Kabul in 2021 and the ongoing Russia-Ukraine conflict will have consequential impact on its future. The fundamentals are in a flux. Be it the idea of ‘democracy’, the terms of trade, usefulness

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of technology, and centrality of ideology—all are today being reagitated and are finding new avatars largely coloured by expediency and bias.

For instance, Velina Tchakarova, in her essay 'The DragonBear: Putin's Choices', says, "The 'DragonBear' is not a classic alliance according to Western ideas and concepts. Rather, China and Russia have tactically entered into a rapprochement to manage the uncertain transitional phase of the bifurcation without the need to announce a strategic alliance, let alone a military one," proclaiming the increasing visibility of a new geopolitical formation responding to only the moment, and devoid of some of the ingredients that were essential in the past.

As political tensions mount and rivalries unfold, revisionist powers assess this period as being a propitious one. China, for instance, is alive to the opportunities that will benefit its power politics and expansive economic agenda. The Middle Kingdom's rise not only threatens to undermine the legitimacy of the rules-based international order, but also the global supply chains. "To forestall ceding more manufacturing output and control over critical supply chains to China, other nations must be prepared to rethink long-standing conventions about international trade," states Jeffrey Jeb

Nadaner, in his essay 'Forging China-Resistant Supplier Compacts.'

Andreas Kuehn adopts a similar line in his essay, 'Materials That Matter', as he suggests that the global surge in demand for rare earth elements and critical materials have given rise to new geopolitics and the need to "reduce dependence and strengthen supply chains." In a related vein, Sameer Patil and Vivek Mishra attempt to analyse how the changing global order and the rise of revisionist powers have also brought an acceleration in the role and influence of technology in curating the political spheres. Their paper, 'Democracy, Technology, Geopolitics' engages on how "technology is driving both international cooperation and competition." They argue, "Democracies of the world today confront two significant tech challenges: Authoritarian regimes' determined pursuit for tech supremacy and the perils of the 'Big Tech.'"

Lydia Kostopoulos takes this argument further. In 'Emerging Domains of Conflict in the 21st Century,' she talks about how the world is coming to "terms with new technology, social norms, evolving values, and competing new power structures." She presents five emerging domains of conflict that will characterise the remainder of the first half of the 21st century. Health of the multilateral trading system has

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also been deeply frayed. Stormy-Annika Mildner's paper, 'The World in Disarray: Is This the End of Multilateralism for Trade?' discusses the possible scenarios for the World Trade Organization to survive in the future. She argues that "A strong, healthy WTO is needed now more than ever to help navigate governments and businesses through these troubled times." Renato G. Flôres Jr. further builds on the theme by proposing deep changes in the current system of trade governance in his essay, 'Advancing Trade Governance—Only for Democracies?'

As multilateralism struggles to survive, certain players have taken advantage of the mounting crises. Over the last two decades, China has aggressively pursued a dominant position in the global political and economic system. Rory Medcalf, in his essay 'The Season of Caucuses: QUAD, AUKUS, and the Exclusive-Inclusive Duality of Indo-Pacific Asia,' points out that "the primary contest for the future of the Indo-Pacific region is about preventing Chinese hegemony while avoiding catastrophic conflict." Satoru Nagao further drives this point home in 'Oceanic Choices: India, Japan, and the Dragon's Fire: How does the QUAD Work?' By highlighting the features of China's territorial expansion, he elaborates on how the QUAD should respond. He notes, "China's aggressive territorial expansion gave rise to the QUAD in the Indo-Pacific and because China

has escalated its activities, the QUAD countries must show their strength."

In a related vein, S. Paul Kapur, in 'Diverging US and Indian Approaches to Europe: The Problem of Ukraine,' says that as the China challenge continues to grow, India and the US should not let the war in Ukraine impede their strategic cooperation. Instead, he calls for the reconciliation of their current policies in Europe and the Indo-Pacific, to tackle the Chinese threat. Similarly, faced with the advance of authoritarian powers, in her essay, 'Scripting a Third Way: The Importance of EU-India Partnership,' Amrita Narlikar argues that, "The European Union and India must script the future together. The values that we cherish—indeed our very way of life—may depend on it."

While we see a failing liberal order at hand, we continue to face formidable challenges in the form of the pandemic, climate change, and inequality. In 'The Pandemic at 24 Months,' Sridhar Venkatapuram points out two principles that can help us understand why we are not at an end of this pandemic—despite the boon of vaccines—and why we are not prepared for the next pandemic either. However, the pandemic has also given us the unique opportunity to 'reset'. We must 'build back better' for the future with policies that are gender-first and environmentally sound.

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In 'Anticipate, Reform, and Elevate: Looking Toward W20 India 2023,' Erin Watson-Lynn sets out how the gender agenda fits within the G20 system, and through a critical analysis of trends in the Women 20, makes three recommendations for India's presidency of the G20 where it can anticipate, reform, and elevate the W20 agenda.

Mannat Jaspal and Terri B. Chapman, in their essay 'Exploring the Inequities of Climate Finance', look specifically at international climate financial flows from the prism of climate justice, and scrutinise how particular features perpetuate and exacerbate inequalities between countries. In 'Enabling the Green Transition to be a Just Transition,' Nuvodita Singh and Akshima Ghate further build on the theme by adding that "As we journey on, it is evident that the low carbon pathways—while unquestionably desirable from a climate mitigation standpoint—will be more socially beneficial than the fossil fuel regime only with active interventions to ensure a just transition."

The pandemic era is also witnessing an altered role of technology in our lives. Nisha Holla, in her essay 'India's Unicorn Step-Function Growth Signals the Emergence of its Innovation Ecosystem' notes how during the pandemic, startups became invaluable to the common man and helped drive the rapid growth of Indian technology ecosystem. However, the

widening world of the Web also brings in new questions on cyberspace norms. Nicolò Andreola and Stefania Petruzzelli, in their essay 'Meta-Soft Power: Flipping the Scales Between Art & Culture', highlight the same. "In this transition from universe to Metaverse, in fact, a dangerous metamorphosis of culture is at stake: From a tool of soft power to a weapon of hard power" aver the authors, arguing that while there exists a pressing need to invest in the metaverse, it is equally urgent to regulate the space.

The expanse of thoughts and richness of ideas that proliferate this edition is impressive. For that, we would like to thank all the authors of this diverse selection of essays for their contributions. This compendium is being published at an important time. A pandemic ravaged world is now confronted with another European war. The challenges faced by those who reside in Afghanistan seem to have been forgotten and the continuing crises in parts of West Asia and the African continent do not attract the attention that they should. Climate action is an imperative and green investments the only tool to respond before the planet unleashes its full fury. Multiple fronts need coordinated responses and global savings, technology and ideas can allow us to prevail. We hope the insights that we bring together in this publication will illuminate our tomorrow.



The “DragonBear” is neither an alliance or an entente nor a “marriage of convenience”, but a temporary asymmetrical relationship.





# The DragonBear: Putin's Choices

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On 24 February, Russian President Vladimir Putin decided to launch an all-out war against Ukraine from various directions.<sup>1</sup> This military reinvasion followed Russia's annexation of Crimea<sup>2</sup> and its direct support for separatist activities in eastern Ukraine<sup>3</sup> and marked a new chapter in Moscow's geopolitical approach. Even more remarkable was China's response and its overt diplomatic, financial, and economic support for Russia. Are the contours of a new geopolitical formation—which I called the “DragonBear”<sup>4</sup> in 2015—characterised by deepening relations between the two countries in key strategic areas, now increasingly visible? If so, what are Putin's geopolitical choices?

Against the backdrop of the ongoing war in Ukraine and the Great Power rivalry between the United States (US) and China, Russia is striving to become an indispensable power, without which neither the US nor China would be able to win the system competition against each other in the future. To achieve this, Moscow seeks to build and consolidate its “sphere of influence” based on a union between Russia, Ukraine, and Belarus, which would help Moscow become a major player with significant power projection in Eastern Europe, the South Caucasus, and Eurasia.<sup>5</sup> If President Putin manages to subjugate Ukraine, this would fulfil Russia's geopolitical ambitions to revive a post-imperial state as a great power with a significantly improved position in global politics. In this regard, Russia's geostrategic approach pursues a vertical (north-south) extension of its geopolitical and geoeconomic interests, encompassing the Arctic Ocean and the Barents Sea; spanning its “near abroad” in Eastern Europe and the South Caucasus; and reaching into Eurasia, the Middle East, and North Africa.<sup>6</sup> The western flank of Russia, which is the eastern flank for NATO's European members, remains one of the most important geostrategic flashpoints because of the concentration of Russia's population

in this area. Russia is slowly but surely shifting its centre of gravity from an interdependence with Western Europe to Eurasia, South Asia (India, Pakistan, Afghanistan), and even the Indo-Pacific region. For this reason, the Russian president is eager to close the chapter on the “sphere of influence” in Eastern Europe by reshaping the European security architecture once and for all, to turn his attention to the above-mentioned geopolitical and geoeconomic areas in the long run.

It is plausible that Russia needs a powerful ally after the precarious isolation by the West, while China seeks a loyal partner with regional power projection to bolster its global influence. In this context, Russia has seized the opportunity to successively build a new *modus vivendi* of systemic coordination with China in relevant key areas of shared geopolitical and geoeconomic interests. Since 2014, Sino-Russian relations have continued to deepen under sustained US pressure and ongoing Western sanctions.

## What is the “DragonBear”?

The “DragonBear” is neither an alliance or an entente nor a “marriage of convenience”, but a temporary asymmetrical relationship, in which China predominantly sets the tone but remains dependent on Russia in many ways. While China enjoys trade, economic, and financial dominance, Russia continues to rely on defence and—in many respects—diplomatic superiority through its regional power projection and successful military operations around the globe. The unequal collaboration is cemented by the shared geopolitical interest in creating a credible counterweight to US influence in international affairs based on a systemic coordination of a wide range of policies and actions.



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Moreover, the “DragonBear” is intensifying due to the common goal of responding collectively to major turbulences in the global economy, finance, and trade; but both countries keep in mind the rapidly changing strategic alliances and partnerships amidst the Fourth Industrial Revolution (4IR). They assume that the global order is undergoing a systemic transformation, the outcome of which is unpredictable, but likely with a variety of unforeseen implications for Russian and Chinese interests. Thus, the “DragonBear” is not a classic alliance according to Western ideas and concepts. Rather, China and Russia have tactically entered into a rapprochement to manage the uncertain transitional phase of the bifurcation without the need to announce a strategic alliance, let alone a military one.

China is evidently the stronger partner economically and financially, but it treats Russia as an equal rather than a subordinate counterpart. Mutual respect plays an exceedingly important role in this bilateral relationship, in which the two presidents have met 38 times. The relationship reached its culmination during the opening ceremony of the Olympic Games on 4 February 2022 in Beijing when the two leaders signed a “Joint Statement of the Russian Federation and the People’s Republic of China on the International Relations Entering a New Era and the Global Sustainable Development.”<sup>7</sup>

Russia has been China’s top arms supplier for decades. Key building blocks of Russian-Chinese cooperation include the delivery of S-400 air defence systems and Su-35 fighter jets to improve Beijing’s ability to attack US warships.<sup>8</sup> Since 2019, Russia and China have been jointly developing China’s missile defence early warning system.<sup>9</sup> In addition, Moscow is supporting Beijing’s military with technologies about which Russian President Putin has declined to provide further details. Russian scientists are working in Chinese technology and telecommunications companies such as Huawei. China’s

advanced computer chips are another way for Russia to acquire military technologies, circumventing Western sanctions. Other opportunities for cooperation, such as the joint development of satellites and the construction of a future lunar station, have also been explored. Cooperation in the area of space or the new technologies of the 4IR are particularly problematic from the perspective of Western countries due to the growing great power competition in space.<sup>10</sup>

China and Russia have also settled their long-standing territorial disputes and amicably demilitarised their common border. Therefore, neither territorial claims nor border disputes should affect bilateral relations in the long term. Although both are involved in territorial disputes with third countries, they avoid direct confrontation with each other.

In the energy sector, their interests are complementary, as Russia is the world’s largest combined supplier of oil and gas, while China remains the largest energy consumer. In the future, an energy dependency similar to that between Russia and Europe could emerge, as Moscow increasingly supplies China with oil and gas through various pipelines. On the other hand, energy cooperation improves Russia profile in the Asian markets and allows it to diversify its own energy portfolio away from Europe.

### Beijing Needs Russia for Power Projection in Eurasia

The main common denominator is not only the goal of demonstrating a credible counterweight to US global power. It is also about creating a significant Eurasian connectivity in response to US maritime dominance in the Indo-Pacific region, ensuring security of supply in the event of future sea lane blockages.<sup>11</sup>

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Russia and China openly share the objective of reducing US and European influence in Eurasia. Moscow's military operation with the Collective Security Treaty Organisation (CSTO) to efficiently stabilise the situation in Kazakhstan,<sup>12</sup> following violent protests in January this year, has improved its regional position vis-à-vis the US and China. Russia helped Kazakh President Tokayev stay in power and gained additional political influence in the country, which has a significant amount of raw materials and plays an important role in China's Silk Road projects.<sup>13</sup> Kazakhstan is also a member of the two main regional organisations of Russia and China (Shanghai Cooperation Organisation). Thus, Russia can be rented as a security provider and Russian president Putin has raised the price of Russia's future engagement at the invitation of authoritarian regimes that want to remain in power. After his military support for Syrian President Assad and Belarusian President Lukashenko, Kazakh President Tokayev is now the next leader to safeguard Russian interests on the ground and beyond.

Indeed, Moscow benefits from China's terrestrial expansion that connects Asia and Europe across the Eurasian landmass. The Chinese Silk Road embodies a horizontal geopolitical extension that stretches from the least developed parts of China to Europe, diverting China's attention from Russia's Far East. The Belt and Road Initiative is accentuating the need for Russia's role in filling geopolitical gaps in those geographic points of intersection. China benefits from Russia's projection of power in the "near abroad" and Eurasia by securing valuable access to raw materials and offering economic and financial incentives to these countries once the situation there is stabilised. Moscow is emerging as a global security provider that could act on behalf of China's geoeconomic interests in Eurasia and other parts of the world. The "DragonBear" may have discovered a successful formula of task sharing (Russia is the security provider, China is the financial and economic provider) that can be applied in other parts of the world.

The modus vivendi of coordination extends beyond Eurasia to South Asia. Moscow is helping Beijing stabilise Afghanistan and prevent spillover effects of terrorist activities in Kazakhstan, Tajikistan, Uzbekistan, and Turkmenistan.<sup>14</sup> Many great powers have repeatedly tried, unsuccessfully, to make Afghanistan a stage for their geopolitical ambitions. The US is the latest superpower to suffer a catastrophic defeat in the country after two decades of unsuccessful occupation and state-building. China's focus is on terrestrial connectivity (transport, trade, and energy) in conjunction with Central Asian countries as well as Pakistan and Iran. Building bridges between them is beneficial to Russian interests.

Potential points of conflict between Russia and China arise from their geographic prioritisation and overlapping geopolitical interests. Russian fears of growing Chinese influence in Central Asia, the Far East, and other traditional spheres of influence in the post-Soviet space have become entrenched. However, the general hypothesis that China and Russia currently face competing interests in Central Asia, Africa, India, and the Arctic—that inhibit the modus vivendi of mutual coordination in the long term—cannot be confirmed at this time.

### The "DragonBear" in the Aftermath of Russia's War on Ukraine

China and Russia may have coordinated the timing of Moscow's launch of the reinvasion of Ukraine to take place after the Olympics.<sup>15</sup> Xi Jinping and Vladimir Putin met on 4 February in a long-awaited effort to diplomatically boost their countries' international standing, leading to the announcement of the 5,000-word joint statement.<sup>16</sup> At the bilateral summit, the two presidents declared that their "friendship has no limits".<sup>17</sup> The document covers broad sections of the bilateral, regional and international relationship between Beijing and Moscow. The Joint Declaration marks a turning point in the bilateral relations.

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Vladimir Putin would never have launched such a large-scale war against Ukraine if he had not relied on China's financial, economic, and diplomatic support. Moreover, China was apparently surprised by the Russian military's difficulties in the combat zones: The Chinese president was "unsettled" by the "reputational damage" that could result from the strong support for Russia, as well as the global economic consequences in light of Russian countersanctions at a time when Beijing is seeking to boost its own economic growth.<sup>18</sup>

China's support for Russia's economy following the Western sanctions has many dimensions, stemming from mutual interests in commodity trade<sup>19</sup> as well as the above-mentioned strategic domains. Beijing's role is critical for Russia's economy in the midst of a threatening default scenario. China is considering buying stakes in Russian energy and natural resources companies (e.g., Gazprom and Rusal).<sup>20</sup> In addition, China decided to double the trading margin with the Ruble after the Russian currency crashed.<sup>21</sup> Some of the actions by the "DragonBear" following Western sanctions against Russia indicate carefully planned steps in anticipation of them. For example, Russia's state-owned Sberbank revealed plans to replace VISA and MasterCard with a new "MIR" card system in cooperation with China's UnionPay immediately after VISA and MasterCard<sup>22</sup> announced that they would suspend operations in the country.<sup>23</sup>

China supported Russia diplomatically as well. China's foreign minister Wang Yi spoke of "ever-lasting friendship" with Russia and stressed that the two countries would help bring "peace and stability" to the world.<sup>24</sup> At the same time, China's Foreign Ministry opposed any moves by the US "that add fuel to flames"<sup>25</sup> and pledged that Beijing would retaliate with a "serious response" if the US would impose sanctions on China over Ukraine. China also stressed that the moves by US-led NATO had pushed the tensions between Russia and Ukraine to a breaking point.

China further stated that the US criticised China's position on Ukraine to seek space for the plot of simultaneously suppressing China and Russia with a view to maintaining its hegemony.<sup>26</sup> Furthermore, Beijing's official statements showed unequivocal support to Russia, claiming that China will continue to cooperate with Moscow on trade and will not impose sanctions as the West did. Finally, reports of a possible request by Russia for military assistance from China caught the international community by surprise. The U.S. also warned China of serious consequences if it helped Russia evade U.S. sanctions.<sup>27</sup>

Given its significant export shares of various commodities, Russia's plans may also include an intention to wage a commodity war against the West. The country has already announced that grain exports to members of the Eurasian Economic Union will be banned until August 31.<sup>28</sup> With skyrocketing food and energy prices and the FAO Food Price Index reaching Arab Spring levels in December last year<sup>29</sup>, limited exports of grain, fertilizers or other important commodities from Russia would contribute to the further surge of these prices. This could lead to a similar risk scenario of political protests due to socio-economic pressures and escalation of violence in the streets with the ultimate outcome of coups or regime changes in some countries in Africa and Asia similar to the Arab Spring in 2011.<sup>30</sup> Such a scenario could trigger a significant migration movement from these countries toward Europe, where the asylum system is already under pressure due to the Belarus migration crisis in 2021<sup>31</sup> and the Ukraine war.<sup>32</sup> At the same time, China has allowed imports of wheat from all regions of Russia, since it signed an agreement on February 4 that went into effect the day Russia reinvaded Ukraine. This helps Beijing secure its food supply at a time when global food prices are already near 10-year highs.<sup>33</sup>

### What Next?

Russia is emerging as a major free rider in the global power

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competition between two systemic rivals – America and China. Moscow does not shy away from using hard power to gain more bargaining leverage or expand its projection in geographic areas of primary interest. Russia's unrealistic demands on the US and NATO regarding the security architecture in Europe and its subsequent war in Ukraine show that Moscow is preparing for the "long game," i.e., the new systemic competition. The Russian president is counting on the United States to avoid direct military involvement in the Russia-Ukraine war because of the upcoming midterm elections in November as well as dwindling US geopolitical interests in the Old Continent.

With the show of force in Ukraine, Russia wants to demonstrate its unique geopolitical weight as an indispensable player, without which neither of the two rivals—America and China—could win the competition against each other in the future. The Russian president also sees this as a significant opportunity to test US willingness to engage in bilateral talks with Moscow and to review America's red lines for future concessions to Russia. If Washington wants Russia to break away from China's sphere of influence in the long term, the US now knows that Moscow's terms for this are the freedom to create its own, much larger sphere of influence in Europe, and to dictate the future of the European security architecture.

For the US, a modus vivendi between China and Russia and, thus, a two-front scenario against Washington, would be extraordinarily threatening in the future. Indeed, the most important common denominator of the "DragonBear" will remain the goal of counterbalancing the US in all relevant areas of international politics. In the long run, the US can be expected to gradually withdraw from Europe to devote itself to the Indo-Pacific region, especially because of the rise of China in East Asia. Russia could also gain significant access to the Indo-Pacific region through several geopolitical corridors.<sup>34</sup> Currently, Moscow is expanding its military presence in Africa

and plans to establish military bases in several African countries, including Madagascar, Mozambique, and Sudan.<sup>35</sup> In this way, Russia could gain maritime access to the Indian Ocean and, in the long term, expand its power projection in the Indo-Pacific region together with China and India. Moreover, despite the deepening of relations between Moscow and Beijing, India remains a strategic and traditionally reliable partner of Russia. At the diplomatic level, Russia supports China's stance in the Indo-Pacific region and openly opposes geopolitical blocs such as the US-British-Australian Security and Defense Pact (AUKUS)<sup>36</sup> and QUAD<sup>37</sup> (US, India, Australia, and Japan), which was also reflected in the joint statement with China. Moscow is also open to India's proposal for a more active role for Russia in the Indo-Pacific region. New Delhi and Moscow share a geoeconomic interest in creating an alternative to China's terrestrial Silk Road connectivity in South and Central Asia, which is why they are promoting the International North-South Transport Corridor (INSTC)<sup>38</sup> as a multimodal transit route linking India with Europe, Central Asia, and Russia. Although Russia does not currently play a key role in the competition among major powers in the Indo-Pacific region, the country could become a major player in the future in the most contested geographic space.

### Conclusion

In the great power competition between Beijing and Washington, Russia is playing the wild card. Following the motto, "not always with each other, but never against each other", Beijing and Moscow have found a winning formula in their bilateral relations. The two-front diplomatic scenario, in which Russia overtly supports China's position on Taiwan and China overtly supports Russia's position on Ukraine, creates a new level of confrontation between the "DragonBear" and the United States. Accordingly, what China defines as "Russia's strategic space" with respect to Ukraine, Russia defines as "China's strategic space" with respect to Taiwan and the South China Sea.

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The majority of geopolitical experts still see Russia and China as separate threats, but systemic coordination between Beijing and Moscow increasingly represents a complex “threat multiplier.” Clearly, Russian President Putin is trying to capitalise on the current geopolitical competition with the United States. He currently pursues a three-dimensional approach: 1) a war against Ukraine, which threatens the country’s very existence as a sovereign state, and Russia’s new geopolitical project of a Union state with Belarus and Ukraine; 2) against the European Union (EU), which, despite the most severe sanctions against Moscow, is not a real military counterweight to Russia’s actions in Ukraine and is thus rendered geopolitically irrelevant; and finally, 3) against China and the United States, in that Moscow is significantly raising the price of Russia’s future participation in the systemic rivalry between China and the United States.

The extent to which this relationship will increasingly shape the global system will depend on whether China continues its economic rise and successfully helps Russia avoid a default like the one in 2014. It is in the interest of both countries to give the impression to the outside world of a stable and resilient relationship against the West. However, there are currently no clear signals of a defence alliance between the two powers. The geopolitical rapprochement appears to be more tactical than strategic. Even maintaining the status quo would probably be acceptable to both states as long as the rise of China does not pose a direct threat to Russia’s strategic interests in its own geographic “sphere of influence.”

Neither the United States nor China wants a scenario in which Russia becomes part of the adversarial geopolitical bloc. From the Chinese perspective, an ad hoc partnership between Russia and the United States would be the worst-case scenario. Conversely, Russia will never endorse Chinese domination in

the sense of a “Pax Sinica” in Eurasia and adjacent areas in the “near abroad” (Black Sea region, Eastern Mediterranean, South Caucasus, and Eastern Europe).

Given the critical uncertainties and unpredictable course of Russia’s war against Ukraine, Russian President Putin may turn the country into a global mercenary for China’s geoeconomic interests due to increasing dependencies on the “DragonBear.” Russia’s political, economic, and financial survival will depend on China amid the country’s worst isolation by the West. Indeed, Vladimir Putin factored in the severe sanctions before launching the full-scale reinvasion. Currently, he has more options to diversify trade and economic ties because of the bifurcation of the global system and deepening relations with China, than he did in 2014. Even as a junior partner to the “DragonBear,” Russia could completely reshape the European security architecture while diverting the West’s attention from China’s rise in the Indo-Pacific region if it succeeds in Ukraine. However, the West’s biggest miscalculation in the aftermath of Russia’s war was not China’s comprehensive actions to support Russia, but India’s stance towards Moscow. Evidently, India is pursuing its own geopolitical and geoeconomic interests amidst the biggest recalibration of the world order since 1945. Undeniably, the US needs India when confronted with the “DragonBear” more than India needs the US when confronted with China in the Indo-Pacific.<sup>39</sup> Against this background, Moscow will increasingly rely on international partners by expanding its relations with Asian, African, and Latin-American countries, while India will be Russia’s next most significant partner besides the “DragonBear.” Russia will, however, not focus on managing its complex relations with China and India in the Indo-Pacific, until Moscow has addressed its own security challenges in Europe.

## Endnotes

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The global community is waking up to the national security risks associated with China's dominance of global supply chains.



# Forging China-Resistant Supplier Compacts

Over the last two decades, the People's Republic of China has aggressively pursued a dominant position in the global political and economic system. This will enable it to make the lion's share of the world's key goods, including microelectronics, advanced materials for batteries and energy storage, new energy technologies, and permanent magnets. The United States and its partner countries recognise the economic and national security risks of over-relying on China for the crucial inputs and technologies that will define the 21<sup>st</sup> century.

No country can afford to lose any more manufacturing capacity—people, equipment, research, and development (R&D), and management and organisational skills—of its most advanced sectors to China. If such capacity is lost or severely degraded, it will threaten many countries' economies and millions of jobs and may also raise new national security risks.

China's whole-of-nation approach to outmanoeuvring foreign competitors, abetted by abusive and sometimes illegal practices, appears impervious to change within the incumbent trading system. There is little reasonable sign that attempting, yet again, to enforce existing global agreements—much less negotiating their replacements—will yield better results. To forestall ceding more manufacturing output and control over critical supply chains to China, other nations must be prepared to rethink long-standing conventions about international trade.

In place of a centralised, exhaustively negotiated, and all-encompassing global regime, it is time to consider a more realistic alternative—groups of nations fashioning arrangements to govern the supply chains that matter most. The groupings can be regional, values-based, and driven by national and economic security concerns with respect to critical technologies and materials. The common thread of these multinational arrangements will be enhancing domestic production and curbing Chinese market power in pivotal industrial areas.

A starting point will be an economic-diplomatic initiative focused on electric vehicle (EV) supply chains that evolves into a trading compact consisting of most of the high-technology industrial democracies in Asia, North America, and eventually, Continental Europe. The resulting "G7 plus" would consist of the US and other major economies like India, Australia, the UK, Mexico, Canada, France, Japan, South Korea, and Taiwan. These nations would sign on to a limited number of basic common standards for supply chains that would provide a level playing field amongst them, while leveraging each other's comparative advantage.

A supply chain coalition among nations with compatible interests and values will provide considerable benefits that are currently difficult to achieve under the existing international trading system. A trading group that includes the countries with the highest per capita purchasing power will help address the multidimensional character of China's leverage. In addition to being the leading supplier of many vital products, China also is a major consumer market. It has become the largest trading partner of the European Union (EU), one of the US's closest allies.<sup>1</sup> The threat of losing access to the Chinese market leaves many US allies hesitant to take substantive unilateral action to discipline Beijing in the face of its poor behaviour.

A new trading alignment, however, could erode China's economic leverage as the world's second-largest economy. The G7 and India together command nearly half of global gross domestic product (GDP).<sup>a</sup> If these same countries collaborate with other like-minded nations, they could pressure China the same way it has been pressuring them—by threatening to deny or restrict Beijing's access to their common market, unless China changes its tactics and levels the playing field.

A new trading alignment will erode China's dominance in essential industries and divert production to the members of such an initiative, generate employment opportunities for their citizens and mitigate national security risks.

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### China's Dominance of Essential Industries

In 2001, many believed that China's accession to the World Trade Organization (WTO) would accelerate its transition to a market-based economy, forcing Beijing to adhere to global trade norms and liberalise its political system. Instead, Beijing spent the last two decades doubling down on its state-led, mercantilist policies and practices.<sup>2</sup>

China's integration into the global market, coupled with the control the Chinese Communist Party (CCP) wields on the economy, has enhanced its competitiveness in many industries, often to the detriment of US companies and workers.<sup>3</sup>

In 2015, the CCP released Made in China 2025, an update to its state-led industrial policy, designed to expedite China's evolution into a high-technology manufacturing superpower and global innovation hub. The plan identifies 10 industries Beijing deems critical for the future global economy, including new energy vehicles powered by advanced fuels, supercomputing, and artificial intelligence. To position China as a global leader in these technologies, it aims to localise R&D and manufacturing, substitute foreign technology with domestic solutions, and capture global market share to control most significant supply chains.<sup>4</sup>

Beijing's actions are evidently problematic for the US and many of its allies. The Office of the US Trade Representative has reported that Beijing's interventions in its domestic economy cause global market distortions to the detriment of China's trading partners.<sup>5</sup> The Chinese government offers significant funding and subsidies to domestic companies, penalises, and exploits their international competitors, and coerces intellectual property from foreign businesses around the world.<sup>6</sup>

Beijing also systematically encourages and supports the international expansion of its companies, leaving non-Chinese firms to essentially compete against the entire Chinese nation-state.<sup>b,7</sup> Furthermore, Beijing's failure to comply with transparency obligations has continually thwarted existing WTO mechanisms, enabling it to pursue industrial policy objectives by any means possible.<sup>c,8</sup> Chinese enterprises, on the other hand, continue to benefit from non-discriminatory access to other countries' markets.

The global community is waking up to the national security risks associated with China's dominance of global supply chains. Cutting-edge technologies being developed today use inputs that often have significant military applications. For example, permanent magnets contain rare earths that are critical components of EV motors and missile defence systems. If China were to weaponise its leverage during periods of heightened tensions, it would hinder the ability of the US and its allies to restrain Beijing in the future.

Perhaps no industry will be more important to China's future industrial ambitions than the automotive sector. Many of the world's other advanced economies owe much of their success to automobile manufacturing. Developing a globally successful automotive sector provides significant economy-wide benefits because it requires large-scale component manufacturing facilities, the utilisation of a wide array of raw materials and other services, investment in R&D, and direct and indirect jobs. China hopes to emulate this model, with expectations that a vibrant automotive sector will catalyse prosperity in many other strategic, high-technology industries.<sup>9</sup>

Rather than attempting to compete on current internal combustion engine technologies, Beijing has charted a different course.<sup>10</sup> Central to its effort is a focus on EVs, which provides Beijing with an opportunity for leadership in a nascent technology that will gain a significant market share over the coming decades. So far,



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automakers have announced over US\$500 billion of investment in EV development and production, and China is well-positioned to attract a significant portion of this.<sup>11</sup>

China is aggressively pursuing control of EV supply chains, from critical minerals to battery manufacturing. Since 2016, Beijing has deployed state-owned enterprises and other private firms to secure access to foreign mineral reserves—Chinese firms account for over 60 percent of lithium and nickel processing, and 70 percent of cobalt refining, creating potential choke points for those critical minerals.<sup>d</sup> Additionally, 41 percent of the cathodes and 71 percent of the anodes used in EV batteries are produced by Chinese companies,<sup>e</sup> and 156 of the 211 battery giga factories under construction or already built globally are in China.<sup>12</sup>

Beijing's efforts in other industries have led to mixed results. For example, despite investing billions in the domestic semiconductor industry and nearly doubling its market share in back-end semiconductor manufacturing between 2015 and 2020, China lags in the production of the most cutting-edge chips. In logic chips, one of the highest value segments of the industry, Chinese companies have less than 1 percent market share.<sup>13</sup> Nevertheless, Beijing's efforts to realise its high-tech manufacturing ambition should not be underestimated. The government plans to invest over US\$150 billion, through 2030, in its domestic semiconductor industry as it looks to increase its market share and establish itself as a technology leader.<sup>14</sup>

Beijing is also working to grow a China-based international financial payment system based on the Renminbi. China established the Cross-Border Interbank Payment System to process international transactions denominated in Yuan. Its current use represents a tiny share of international transactions, but Beijing would like to increase its global use and that of the Renminbi in international transactions.<sup>15</sup> Any success on this front might give China greater leverage over its trading partners and present further risks to supply chains worldwide.

## Towards a New Allies and Partners Trade Arrangement

So far, US efforts to enter discussions with China or appeal to existing international organisations have proven futile. The US and several like-minded nations have filed 27 cases against China at the WTO. While it won every case that was decided, the US was unable to alter the interventionist industrial policies underlying the harmful trade practices it challenged.<sup>16</sup> In essence, any “success” has been nothing but a short-lived mirage.

China's competitors recognise the need to boost their own capacity and capabilities—particularly in EVs, batteries, critical minerals, and semiconductors. But even significant gains in domestic production, however positive, will not overcome the distorting impact of Chinese industrial policies and predatory trade tactics.

It is time for some of those like-minded nations to adopt new trading arrangements with respect to critical supply chains. The arrangements will have rules and regulations that leverage some combination of basic standards, such as representative government and basic labour and environmental protections, criteria that will tip the scale in favour of the US and its partners.

Given that each country will have strengths and weaknesses relative to China (and each other), the national leadership should pursue policies that accelerate innovation to leverage each country's specialised position in strategic sectors. Leaders could band together through a series of diplomatic-economic initiatives, from which a new trading arrangement for essential supply chains will emerge. China will fall outside this network, as will many of its Belt and Road partners. Excluded nations could still buy and sell products with this group, but will do so at a distinct competitive disadvantage. A system will be needed to monitor trade and investment flows to countries that are not yet members.<sup>17</sup>



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Developing new response mechanisms to combat Beijing's harmful practices will provide mutual benefits to nations that manufacture automobiles and other cutting-edge technologies. At present, no single nation possesses the natural resources and manufacturing infrastructure to develop a complete and secure supply chain for automobiles and other advanced transportation systems.

Consequently, the initial goal will be to identify a group of nations that have the natural resources and are prepared to make capital investments across entire supply chains to manufacture vehicles and other critical goods independent of Chinese control. Rather than focusing solely to reach a new comprehensive trade agreement—the most promising of which is the Indo-Pacific Economic Framework, and which will take years—they could simultaneously pursue a more modest approach aimed at quicker results. The interested nations could form their own practical arrangements that evolve over time and by habit into more formal agreements.

India and the US can lead a dialogue with like-minded nations in Asia-Pacific, Europe, and North America to explore opportunities to create secure supply chains for the EV sector and other manufactured goods. By facilitating government-to-government and business-to-business discussions with nations that have resources and infrastructure, new opportunities for commercial agreements and trade relationships may begin to proliferate.

To launch this initiative, the US and India could call for a meeting of the Quad members (Australia, Japan, India, and the US) and of the National Technology and Industrial Base (US, Australia, Canada, and the UK).<sup>18</sup> Nations in these groups collectively possess several important attributes for this new arrangement, including ample resources and established auto manufacturing sectors.

Countries like France, Germany, Japan, Mexico, Singapore, South Korea, and Taiwan that possess resources, expertise, or infrastructure and some combination of shared values and interests can also be engaged. Further iterations could expand to include nations like Vietnam and the UAE. Not all countries will initially align on all criteria, but they share a determination to resist Chinese predations on their economy and sovereignty. For some, their participation will exist alongside formal multilateral commitments—the EU, United States-Mexico-Canada Agreement, or Regional Comprehensive Economic Partnership—that may need to be reconciled.

While the working groups will not intervene with the internal policies of governments, they can encourage each country to adopt policies tailored to its specific circumstances. Together, these different approaches could add up to a powerful response to China's attempt to monopolise certain supply chains.

In the short term, the group could make substantial progress toward reaching commercial arrangements to strengthen their automobile supply chains and related major technologies and materials. Over time, the participants might be able to use such arrangements as the basis for broader multilateral trade agreements or common frameworks to address China's anti-competitive behaviour.

Such measures could include a common set of border adjustments, export controls, and licencing systems. These policies could also be instrumental in enabling prudent environmental and human rights standards while leveraging those standards to boost competitive advantage.

The US and India have a meaningful opportunity to work together to develop a critical mineral and parts supply chains

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independent of China. Where domestic resources are available, India and other nations can advance domestic mineral mining and the development of mineral refining and processing facilities. These actions can be taken with environmental safeguards and human rights. Some US-Indian initiatives dealing with mineral processing—an indispensable part of the supply chain currently dominated by China—are already underway.<sup>19</sup>

The array of countries within this new trading initiative are home to sophisticated chemical companies which, with new industry participants, can be incentivised to undertake the mineral processing needed to manufacture batteries, semiconductors, permanent magnets, and other parts and components. Because many technology-related supply chains are broad, the EV supply chain will have significant overlap with supply chains for other clean energy and computing technologies, strengthening their manufacturers as well. Where governments determine it is necessary for economic or national security reasons, they can expand assistance to incorporate other critical supply chains.

Members of the new economic-diplomatic initiative can expand support for the development and deployment of EVs, a sector that China aims to control. Once the industrial base for vehicle manufacturing weakens, the entire ecosystem that evolves around the automotive industry will erode too. It will be nearly impossible for any nation to maintain its market position in auto manufacturing, with the loss of all of the attendant economic benefits, including jobs and contribution to national income.

Countries' support for R&D and manufacturing is crucial, as is maintaining incentives to help stimulate demand for EVs. Many countries have made a down payment on this approach, and India is no different. The Indian government's National Programme on

Advanced Chemistry Cell Battery Storage and Faster Adoption and Manufacturing of Electric Vehicles initiatives offered funding to support new battery manufacturing capacity, boost domestic manufacturing capacity, including the production of electric and hydrogen fuel cell vehicles, and incentives to establish charging infrastructure that encourage interlinking renewable energy sources.

Each nation that has adopted policies to support the transition to electrification should review their progress regularly to ensure that assistance is appropriately calibrated to maintain its progress and to ensure that China cannot exert control over the EV supply chain or of other critical supply networks that feed into the advanced fuel vehicle market, including semiconductors and critical minerals.

### Conclusion

Countries around the world need not condemn themselves to single-source dependency, nor need they submit to national security risks arising from China's growing geopolitical leverage. Importantly, countries should not leave their populations bereft of the opportunity to participate in the leading edge of the 21st-century economy.

A market-driven practical trading arrangement—stretching from Asia-Pacific to Europe and North America, and beyond—will promote the development of secure and diversified supply chains that mitigate the risks from China. Coupled with public policies that promote innovation and manufacturing in key sectors, members of the multilateral trading initiative can realise the economic benefits of partaking in the global supply chains for 21st-century technologies.

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Technology is at the heart of contemporary geopolitics, shaping global alignments and defining the contours of global engagements. Frontier technologies, in particular, are inducing a rapid Fourth Industrial Revolution led by emerging technologies such as Artificial Intelligence (AI), blockchain, and 5G. The economic potential of frontier technologies has been assessed as transformational in its impact on states globally. States are looking to an integrated scheme of frontier technologies where advancements in one sector could lead to breakthroughs in another. Among such leading technologies, 5G is expected to touch US\$13 trillion in global economic value and create 22 million jobs by 2035, and AI is expected to add over US\$15 trillion to the global economy by the year 2030.<sup>1</sup> Countries from Europe and Asia—led by China and the United States—have all scrambled to invest heavily in frontier technologies, expecting the decisively strategic impact these technologies will have on geopolitics in the future as well as on the characteristics of nation states.

Technology is driving both international cooperation and competition. Tech-based partnerships seem to be gaining a precedent in international politics, as seen from the United Kingdom's Prime Minister Boris Johnson's proposed "D-10" (a coalition of ten democracies to create an alternative supply chain of 5G and other emerging technologies).<sup>2</sup> This is in consonance with the Quadrilateral Security Dialogue (Quad) countries' agreement in March 2021 along with a follow up meeting in September the same year to explore cooperation on 5G deployment and diversification of equipment suppliers, in close cooperation with the private sector and industry.<sup>3</sup> A similar proposal is of the "T-12" group of techno-democracies (democracies with top technology sectors and advanced

economies).<sup>4</sup> Technology is also dominating influential multilateral and regional settings like the Group of 20 and the Quad, which are taking steps to foster cooperation on emerging technologies. These developments make it clear the dominant role played by technology.

## Fragmentation of the World Order

Digital technology has indeed benefitted humanity. However, with technological advancement come also the harms. The technological spaces we live in are now spaces of contestations and conflicts. Technology is also driving intense international competition and fragmenting the world order as seen in the conceptualisation of our digital spaces—reflected by the competing visions for global digital order, differing norms, and divergent standards and protocols.<sup>5</sup> The COVID-19 pandemic may have accelerated the trends of global order fragmentation. The disruptions induced by the pandemic in the global order has caused a new digital normal which is often in dissonance with the old digital regimes. With this transformation has come the need for revisiting global norms and protocols in the areas of emerging technologies to provide momentum to the benefits and reduce risks that come with it. States—including the leading democracy of the world, the US—have shown the tendency to look inwards. Increasingly, nations have imposed state controls on trade through regulations, export controls, entities lists, and localisation to get access to critical technologies themselves. These steps often give rise to export monopolies and destabilise trade and international order, atop existing global trade balance. The geopolitical competition shaping in the world with regards to production, control of resources, and supply of semiconductors and rare earth material are the leading examples of tech-induced geopolitical rivalry that may well be transforming the global order.



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Today, countries are eager to exploit each other's dependence on technology and use it to settle their geopolitical rivalries. Cyberspace, for instance—which knew no boundaries and promised to bring the world together—is now increasingly an arena of competition and conflict. Moreover, mounting cyberattacks on critical infrastructure and services pose challenges to national resilience while also redefining offence-defence balance and escalation.

## Democracies and Technology

Democracies of the world today confront two significant tech challenges: Authoritarian regimes' determined pursuit for tech supremacy and the perils of the 'Big Tech.' For sure, technology has benefitted democracies by giving them tools to reach out to their citizens and improve governance, but on the other hand, it has also complicated their security environment. In this, the 'Big Tech'—social media platforms and tech titans—has played a critical role.

Today's world relies on the Big Tech to provide us the spaces for communication. However, Big Tech often demonstrates no accountability to the national jurisdictions under which they operate. Instead, the Big Tech companies have revealed its American, Western, or Chinese roots, prompting some to construe their behaviour as foreign interference in democratic polities. Dr. Samir Saran and Shashank Mattoo have observed that "operating outside rules and regulations prescribed by sovereign constitutions, social media platforms now exercise a worrying level of influence without accountability."<sup>6</sup> Consequently, these double standards of the Big Tech challenge national sovereignty and destabilise the foundations of democracy.

The evolution of digital technologies has redefined the concept of digital sovereignty—largely understood as the ability of states

to sustain a digital ecosystem by using homegrown technologies and cutting technological dependencies on other countries.<sup>7</sup> The concept of sovereignty—as opposed to democracy—harps on the more restrictive characteristics of the nation-state. Resultantly, the extension of some of the conceptual elements of sovereignty to the digital domain and its interest-based interpretations by autocratic states like China, has led to the evolution of new models of digital sovereignty. Today, the US and China are representative of two alternative models of digital sovereignty. In 2017, China passed its National Intelligence Law which made it mandatory for its companies to share information with its intelligence agencies. Importantly, this law had both domestic and international implications. The latter violated digital sovereignties of the countries in which Chinese tech companies operated.<sup>8</sup> China has not only emerged as an alternative model of digital sovereignty but has also inverted the principles of democracy through the manner in which technology has been used in that country. The competitive technological mix between the two countries that emerged around the US' attempt to bar Huawei from next generation telecommunications network has had a clear geopolitical ramification.

Big Tech has also been complicit in disseminating misinformation and propaganda—as seen in India's case—where social media platforms have repeatedly clashed with the government to take down certain offensive content.<sup>9</sup> As such, one of the most consequential impacts that Big Tech could have on future democracies may be the rupturing of the interconnectedness that democratic states have established between them. States have reoriented their position to impose additional restrictions on Big Tech companies to suit their national interests.

Worldwide, there have been efforts to rein in the 'Big Tech.' Nigeria banned Twitter in June 2021;<sup>10</sup> India has implemented

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the 'Intermediary Guidelines and Digital Media Ethics Code Rules';<sup>11</sup> while Australia has enforced its News Media Bargaining Code.<sup>12</sup> It is clear that if democracies perceive dangers from the Big Tech, they will step in to regulate it, even if it leads to confrontation.<sup>13</sup> The era of states giving kid gloves treatment to the Big Tech's monopoly is over.<sup>14</sup> While an unruptured spectrum of communication and its transnational nature signifies a stable order, Big Tech companies have often been embroiled in politicisation of its power and influence, and its resultant impact on domestic politics of states. In a future tech-driven order, ownership and control of Big Tech companies are seen as factors that will shape the geopolitics of influence.<sup>15</sup>

## Tech Race Between Democracies and Dictatorships

The COVID-19 pandemic has caused economic strains and distracted many democracies from their strategic objectives. Moreover, despite their vibrant technological bases and thriving innovation eco-systems, democracies now confront a stark reality: They no longer enjoy a lead in many digital technologies.<sup>16</sup> Digital technologies are no longer advancing democratic values, the manner in which they were perceived to be at the beginning of the digital revolution two decades ago.<sup>17</sup>

On the contrary, authoritarian regimes have bolstered their collaboration and marched ahead. The US-China tech competition has shown that other democracies are not immune from this race. Increasingly, the pursuit of technologies has become a zero-sum game. As a result, authoritarian regimes are attaining competitive advantage in digital technologies and thereby, reconfiguring the power balance between them and the democracies.<sup>18</sup>

Authoritarian regimes are using their technological proficiency to extend their repression. Scholars Alina Polyakova and Chris Meserole describe this as 'digital authoritarianism'—the use of digital information technology by authoritarian regimes to surveil, repress, and manipulate domestic and foreign populations.<sup>19</sup> For instance, the Chinese Communist Party has leveraged the services of its domestic technology giants like Alibaba, SenseTime, and Megvii for targeted facial recognition, AI, big data, and genetic testing against the Uyghur ethnic minority in Xinjiang.<sup>20</sup>

China's systematic harnessing of emerging tech and its deployment for repression has defined its approach—one that is deeply soaked in 'techno-nationalism'.<sup>21</sup> As Hilary McGeachy notes, "For Beijing, efforts to increase activity and effectiveness in international standards organisations are beginning to bear fruit, notably, in the development of 5G network standards, a trend that is likely to continue in...AI...and Internet of Things (IoT)."<sup>22</sup>

Authoritarian regimes have also used tech to spread disinformation and promote their propaganda. They have also used technologies to breach democratic systems. For instance, China's surging geopolitical and tech influence along with penetrating cyber capabilities have enabled it to interfere in other states' political systems. This weaponisation of tech has direct implications for democracies and their functioning.

## Forging Collaboration Between Democracies

While there are a lot of unknowns when it comes to the impact of emerging technologies on future global order—

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among certainties—only a collaborative approach among the democracies will be tenable to get us past these challenges.

Democracies will need to lead the way to mitigate the pernicious effect of technology. They must identify technologies that will bind them together in their struggle against the authoritarian regimes. If democracies are serious about preserving their values, they need to shed their reluctance and status quoist approach. Instead, they need to be bold and ambitious in their collaborative vision—they need to share more data, develop common standards, and focus on innovation while equipping fellow democracies to tackle the tech challenges better. While multilaterals do what they can do best to operate in this polarised global order, democracies need to forge a ‘coalition of the like-minded and willing’ to take forward their technological collaboration—democracies that fundamentally share concerns on privacy, surveillance, and disinformation.

More importantly, western democracies—howsoever preeminent their technological lead is—will have to cede space to other democracies to ensure that the evolving coalition is inclusive and benefits every stakeholder. Proposals such as the D-10, Digital Stability Board, and Techno-democracies do indicate the path ahead.

With technology set to have a transformational impact on polities, it makes sense for the governments to step in and mitigate its impact and even regulate them. The COVID-19 pandemic—even with its debilitating impact—provided countries with opportunity to address existing challenges and prepare for future ones by leveraging technology. The use of technology by China to fight the pandemic provides both positive and negative lessons

for democracies. Specifically, China made use of positioning technologies to track patients, and impose lockdowns and other restrictions. For many authoritarian regimes, the pandemic proved to be an opportunity to hone the use and applicability of restrictive technologies. The continued use of such technologies remains a looming concern for the international democratic community. Some democracies have scrambled to pre-empt these threats. For instance, the ‘Build Back Better’ approach to better health security—by the Quad democracies—commits to prepare better for the next pandemic and towards building a resilient Indo-Pacific. Cooperative programmes within the Quad such as the Accelerating COVID-19 Therapeutic Interventions and Vaccines and Global Influenza Surveillance and Response System require serious technological commitments by all democratic members countries to address common challenges.

## Conclusion

The geopolitics of the next few decades is likely to be shaped by the technological competition between two axes of power—China on one hand and a US-led coalition on the other. In this, both US’ trans-Atlantic partners in Europe and its Indo-Pacific partners like Australia, India, South Korea, and Japan could play decisive roles. The emergent geopolitics would also likely shape economics and politics in equal measure and lead to strategic re-assessments. In particular, China’s high-tech innovation and advancements in areas like AI, Big Data, 5G, nanotechnology, biotechnology, robotics, IoT, and quantum computing have the potential to realign the balance of power and balance of influence in a future global order. These technological advancements by China form part of its revolution in high-tech sectors that it seeks through its “Made in China 2025” programme, geared towards achieving an advanced industrial base, a smooth supply chain,

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and integrated by better coordination between the two. For other industrial nations reliant on the existing mechanisms of industrial manufacturing and supply chain—led by the US—China’s call for a tech-overhaul is not just a wake-up call but also a destabilising factor that has a threat potential.

In the Indo-Pacific, this realisation among nations is already strengthening cooperation. The Indo-Pacific strategy of the Biden administration lays down a plan for an Indo-Pacific Economic Framework (IPEF) that seeks to promote elevated trade standards, governance of the digital economy, bolster security and resilience of supply-chains, usher investments in transparent, high-standards infrastructure, and build digital connectivity.<sup>23</sup> The IPEF seeks to bind regional democracies with a common arc of purpose and leverages technology to do that. From a geopolitical perspective, it intends to present a counter strategic framework to China’s Belt and Road Initiative.

The Quad is leading a cooperative agenda among the Indo-Pacific democracies on emerging technologies. In March 2021, the Quad leaders agreed to establish a Critical and Emerging Technology Working Group to facilitate cooperation to ensure that technology standards are governed by shared interests and values.<sup>24</sup> The Quad’s focus on emerging technologies underscores the inevitability of reliance on technologies to shape future democratic order, maintain common rules of engagement and operation, and create a stable global order. Frontier technologies have underscored the importance of integration of various sectors of an economy under an overarching framework of technology—extending from availing resources to exports through supply chains. For democracies of the future, internally this has signalled a call for increasing alignment between various

sectors in future economies like health, climate change, and trade; and externally, it has meant aligning their production bases with external supply chains as well as preventing disruptions in supply chains. Both these efforts are themselves integrated and could thrive under cooperative democratic efforts between states. Leveraging of technology could be the single most important factor in effecting this order but also re-shaping the geopolitical landscape of the Indo-Pacific by countries on two sides of the power axes in the region.

The pandemic has rewritten the rules of competition in many sectors. As nations emerge strongly—picking up on the post-pandemic momentum—there will be a reordering of global politics and economics. While variations among nations on their economic and military capabilities may have been reordered due to the pandemic, their future course will be defined by their adaptability to technologies—both extant and emerging. More importantly, the level of technological integration of various sectors of economies will be the key to driving the overall growth. Amidst this scramble, one of the biggest bets of international order will depend on how rapidly and extensively the reliance of the global defence sector on technology will grow. As the Ukraine-Russia war has shown, wars have neither become obsolete nor have their dependence on technology. If anything, the scope of technology in wars has only grown. Technological upper hand can quickly change the course of wars, give accurate information, or bolster defence against a much larger enemy. In the post-Ukraine crisis, the Eurasian continent, as perhaps elsewhere, smaller countries will look to enhance their bets on bigger enemies through a technological build up. The current Eurasian crisis may very well drive a weaponisation of technology like never before.

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The global surge in demand for critical materials has given rise to new geopolitics.



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Advanced technology will have profound effects on the global economy and chart a way for inclusive and sustainable growth. While digital technologies—ranging from artificial intelligence, semiconductors, and cloud computing to the Internet of Things (IoT)—are at the heart of the Fourth Industrial Revolution (4IR), it is electric vehicles, solar panels, wind turbines, and energy storage that drive the green energy transition and power the low carbon economy of the future. Against the backdrop of a global climate crisis and an estimated 47 percent increase in global energy demand over the next 30 years, clear and feasible pathways to sustainable, renewable energy sources are integral to the technologies of the future.<sup>1</sup>

As we are approaching this new era—challenges and uncertainties abound—it becomes evident that a set of metals and minerals, especially the family of 17 elements in the periodic table known as rare earth elements and other critical materials, are key input factors for many industries manufacturing digital and sustainable energy technologies. These critical materials are equivalent to what coal and iron were to the Industrial Revolution in the eighteenth century, which kicked off a ground-breaking transformation in human history. As a source of energy, coal-powered steam engines and turned iron ore into iron and later, steel. This was only the start. Industrialisation led to mass-production, turned towns into cities, changed social structures, and gave rise to new geopolitical powers, particularly Europe and the United States (US). Changes of equal magnitude are afoot that will shape the global order. Amidst foreign supply dependencies and high concentration of deposits and production, the ability to secure supplies, manage the value

chain—from extraction, processing, use to recycling—and harvest the unique chemical and physical properties of critical materials for high tech will determine the economic, diplomatic, and military leaders of the future.

Reflecting differing state priorities and industrial needs, the European Union (EU) designates 30 elements as “critical and raw materials”; its Japanese counterpart identifies 34 “rare materials”; and the US lists 35 “critical materials” as strategic for its national interest, but only half of the entries are identical on all three lists.<sup>2</sup> Cobalt, copper, nickel, lithium, and rare earth elements—notably neodymium and dysprosium—are commonly cited as critical to a low-carbon future due to their use in electric vehicles, wind turbines, and solar panels.<sup>3</sup> Integral to the production of information and communication technology (ICT), robotics, drones, and 3D printing, rare earths—magnesium, niobium, germanium, borates, and scandium—exhibit the highest supply risk of critical materials in the EU’s digital transformation.<sup>4</sup>

What drives the increase in demand for critical materials are a mix of international agreements between states to fight climate change—such as the Paris Climate Accords, the UN Sustainable Development Goals—and national economy, sustainability, and industrial development plans. Germany’s Industry 4.0 strategy future-proofs its mighty industrial and engineering sectors; and India’s ambitions to electrify significant numbers of private and commercial vehicles by 2030 exemplify key drivers behind the steep upward trend in demand due to the anticipated rapid deployment of advanced clean energy and digital technologies.<sup>5</sup>

Whether supply can meet demand has become a major

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economic and geopolitical concern. It is projected that by 2040, the future supply of clean energy technology materials has to increase by four times the current demand at the minimum and at even six times by 2050 to limit global warming to 1.5°C under a net-zero scenario.<sup>6</sup> It is uncertain whether near and mid-term supply growth will suffice to meet those demands. The shortage is especially pronounced in the case of minerals used in electric vehicles. Lithium—widely used in batteries for electric cars and mobile devices—is the 33<sup>rd</sup> most abundant element but exists only in very low concentrations and thus, is expensive to extract.<sup>7</sup> Copper is another example for the increase, not the reduction of materials, used in green technologies. Electric vehicles require four times the amount or 80 kg of copper per car; it is expected, though, that 90 percent of known deposits will be extracted by 2050.<sup>8</sup>

### Concentration and Dependence as the Drivers Behind the New Geopolitics of Critical Materials

The global surge in demand for critical materials has given rise to new geopolitics. The natural limitation of mineral deposits, high concentration of production, and dependence on foreign suppliers—particularly those subject to states with weak institutions, high political uncertainty, or authoritarian rule—are the main determinants of these still emerging dynamics. Benefitting from the earth's geological compositions, some countries endowed with rich and accessible mineral deposits have turned into powerful suppliers of single or groups of critical materials.<sup>9</sup> But concentration does not stop with the geological

occurrence and the mining of critical materials, it extends into downstream processing and refining as well. Thus, concentration along the global value chain warrants attention.

The reliance on critical materials for economic and strategic purposes puts states—some more than others—in a vulnerable position. Calls to reduce dependence and strengthen supply chains coincide with growing geopolitical tensions over recent years and the recognition that critical materials are essential for the economic health and security of states and their industries. The concentration in China—which alone produces 60 percent and refines 90 percent of the world's rare earths—has led to an awakening and realisation that China could leverage its position to deny or delay benefits to others, but also that processing, not mining is the real bottleneck.<sup>10</sup> In fact, today, the US is sending its rare earths ores to China for processing before it gets reimported for downstream manufacturing. Building up domestic smelting and processing capacities is costly, and the environmental and health hazards remain alarmingly high.<sup>11</sup>

The Democratic Republic of the Congo, which produces close to 70 percent of mined cobalt globally—an important component for electric car, computer, and cell phone batteries—is another often-cited example of concentration and unreliable supplier due to political instability.<sup>12</sup> A Chinese conglomerate bought one of the world's largest and purest cobalt reserves in Congo in 2016, ironically from a US mining group, adding further to the perception of China as a threat.<sup>13</sup> As for China, it seeks to secure cobalt for its fast-growing electric vehicle industry.<sup>14</sup>

China is the top producer of a long list of critical materials,

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including bismuth (85 percent of global market share), gallium (80 percent), germanium (80 percent), indium (48 percent), scandium (66 percent), silicon metal (66 percent), titanium (45 percent), tungsten (69 percent), vanadium (55 percent), and rare earth elements (86 percent).<sup>15</sup> Other resource-rich nations dominate the production of other critical materials, such as Brazil (niobium, 92 percent of global market share); Chile (lithium, 44 percent); Congo (cobalt, 59 percent; tantalum, 33 percent); France (hafnium, 49 percent); Spain (strontium, 31 percent); South Africa (platinum metals, 84 percent); Turkey (borate, 42 percent); and the US (beryllium, 88 percent). Argentina, Australia, Austria, Canada, Finland, France, Germany, India, Indonesia, Iran, Japan, Kazakhstan, Korea, Laos, Madagascar, Mexico, Mongolia, Morocco, Norway, Russia, Rwanda, Tajikistan, Thailand, Ukraine, and Vietnam are among the largest producers of critical materials at times, though at a much lower quantity. Congo's output dwarfs Australia's 4 percent stake as the third-largest cobalt producer by far.<sup>16</sup>

A look at history shows that dominance is not a given. There was a time when the US, not China, was the leading producer of rare earths. Through a combination of industrial policy, state-backed financing, and loose environmental protection, China rose to become the top producer in the 1980s and early 1990s.<sup>17</sup> Unable to compete with Chinese low-price exports, leading mines closed their operations. The world's reliance on China for rare earths became painfully clear when it introduced quotas to manage resources and reduce pollution, resulting in soaring prices. China's dominance peaked in 2010 when it accounted for an astounding 97 percent market share.<sup>18</sup> Since then, the number has dropped to around 70-80 percent.<sup>19</sup> Today, China is

the biggest consumer of rare earths due to its burgeoning high-tech manufacturing. As a net importer, it now relies on Myanmar and others to satisfy its demand and has grown sensitive to potential price hikes and supply disruptions to its own industry. The exploitation of foreign dependencies is a staple in the geopolitical powerplay handbook. The geopolitics of energy—as in squeezing a nation's energy supply—is the primary example. The bigger the gap and the more difficult to find substitutes, the bigger the pressure point. Heightened geopolitical tensions and war amplify those dynamics. Even before the Russia-Ukraine crisis turned into a full-blown conflict, Europe's heavy reliance on Russian gas (45 percent) and oil (27 percent) has left many wondering how the West could effectively respond to the Russian threat.<sup>20</sup> The uncertainty let the oil prices soar. In response, over 30 countries planned to release 60 million barrels of their strategic oil reserves, to temporarily ease the dependence.<sup>21</sup>

Many critical materials are geographically more concentrated than oil or natural gas.<sup>22</sup> As such, it was perhaps not a surprise that a market research group highlighted the chip industry's dependence on Russian and Ukrainian-sourced neon and palladium.<sup>23</sup> It is plausible that critical material supply chains will become more frequently the target of geopolitical tensions. In anticipation, governments conducted extensive supply chain reviews of critical and emerging technologies.<sup>24</sup> Amidst the crisis, the White House, thus, asked the US semiconductor industry to diversify its suppliers.<sup>25</sup> Beyond that, the case of the Ukrainian-Russian war illustrates that dependencies can not only be weaponised to target other economies in retaliation but also erode political tools of statecraft by undermining the effects sanctions could have.<sup>26</sup>



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Seeing this through the lenses of an international relations realist's perspective, it needs to be expected that states will exploit vulnerabilities in critical material supply chains. They are the two sides of the same coin—the buyer nation's dependency and economic risk is the supplier state's geopolitical gain. Examples of those are few thus far. Yet, China was not shy in leveraging its rare earths muscles against Japan during a diplomatic standoff following the 2010 Senkaku boat collision in which a Chinese fishing trawler collided with two Japanese coast guard vessels in disputed waters in the East China Sea.<sup>27</sup> China moved to block rare earths exports to Japan over the incident, which is seen as an early example of economic coercion under China's foreign policy.<sup>28</sup> A 2014 World Trade Organisation ruling later rejected China's export ban.<sup>29</sup> China also reminded the US about its rare earths reliance. A well-publicised visit by Chinese President Xi Jinping to a rare earths magnet maker, in which he called the minerals "an important strategic resource," followed just a few days after Washington blacklisted Chinese telecom equipment manufacturer, Huawei.<sup>30</sup>

### Hedging Geopolitics Through Innovation, Diversification and Structural Changes

Scarcity is a tenet of economic theory and explains the dynamics around competition for critical materials. "There is never enough of anything to fully satisfy all those who want it" is the economist's Thomas Sowell blunt but succinct explanation of scarcity. Through a market mechanism, scarce resources are allocated dynamically based on price. An increase in price leads to higher production but lower consumption. Through the

interaction of supply and demand, producers will invest in mining operations when they can expect a return on their investments. Higher prices, though, also motivate buyers to innovate and find cheaper material substitutes or more efficient designs.

Scarcity is also a political concept with different motivating logics underpinned by national security and economic interests. States will seek to secure access to critical materials—or deny others the access—to maintain or expand their economic and military powers. To that end, states have been monitoring and tracking domestic critical material needs and global supply through dedicated agencies and developed plans to ensure industrial competitiveness and national security.

The soaring demand for critical materials has put the economic and political dynamics in full swing. With demand up, prices are rising and are triggering investments in new and existing mining operations. These investments come with high uncertainties. It can take years and hundreds of millions of US dollars to develop new mines or processing plants, while the risk of unexpected delays, regulatory changes, low extraction yields, and price fluctuations can eat away returns.

One of the most powerful forces to reduce scarcity and lower concentration is innovation through technological and structural changes along the global value chain. The discovery of new reserves—aided by new technology and more efficient extraction and processing methods—adds to the global supply. Japan's researchers have discovered rich supplies of rare earths, 6,000 metres below the surface, in sea mud within their exclusive economic zone of the Pacific Ocean. Meanwhile, the US is developing biotech to extract rare earths in an environmentally

## Materials That Matter

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responsible way.<sup>31</sup> Both efforts were started to cut down on foreign supply dependence. While not yet in commercial operation, private companies are developing technologies for deep-sea mining of cobalt, nickel, and manganese.<sup>32</sup> And even the mining of the moon and celestial objects has been given some thought, which some hope could become a breakthrough solution one day.<sup>33</sup> In the short term, competing design choices and substitution lower scarcity and may come with acceptable trade-offs. A switch away from nickel-cobalt-aluminium to lithium-iron-phosphate chemistry in electric car batteries—while reducing the demand for nickel and cobalt—decreases performance and increases weight but has a longer lifespan and is safer.<sup>34</sup> A Japanese conglomerate has developed a motor that does not use rare earths at all.<sup>35</sup> Last but not least, recycling is expected to become a viable source for critical materials supplies. First, though, a sufficient stockpile of materials for recycling needs to develop.

Supply shortages of critical materials are likely to persist in the short term, and possibly become worse before they get better. This presents real geopolitical and geoeconomic risks for the short and intermediate future. It seems though that the economic and political dynamics of scarcity will ease those challenges in the long run as innovation and economic incentives will produce design alternatives and efficient, low-cost material substitutes as well as promote recycling of critical

materials. Together, with other forces already underway—such as efforts to reshore manufacturing and critical parts of supply chains in response to the COVID-19 pandemic—it is likely that geopolitical vulnerabilities from critical materials will decrease. Japan's response to China's quota led to a significant reduction of rare earths imports from over 90 percent to less than 60 percent within a decade and a projected further decrease below 50 percent by 2025.<sup>36</sup>

Changes and innovation can gradually mount to a restructuring of the value chain, by slashing dependencies on unreliable suppliers, enhancing supply resilience and diversification, and investing strategically to lower concentration along the supply chain. Multilateral actions among like-minded states can aid this development. To that end, states should develop policies for securing sufficient supplies, developing stockpiles, reducing or substituting materials, ensuring sustainable production, and supporting a level playing field in the global trade of critical materials. There remains, however, as the painful conflict in Ukraine shows, the potential for significant, unexpected disruptions from human-made conflicts and natural disasters. Careful long- and short-term planning and monitoring help to lessen unforeseen calamities and ensure that the momentous transformation empowered by critical materials-based digital and sustainable energy technologies keeps going steady.

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The EU and India must script the future together. The values that we cherish — indeed our very way of life — may depend on it.



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# Scripting a Third Way: The Importance of EU-India Partnership

The European Union (EU) and India must script the future together. The values that we cherish—indeed our very way of life—may depend on it.

The EU and India are “natural allies”.<sup>1</sup> They have been strategic partners since 2004 and both are committed democracies. The EU-India Leaders’ Summit, held in Porto in May 2021, affirmed not only shared interests but also shared “principles and values of democracy, freedom, rule of law and respect for human rights”<sup>2</sup> as underpinning the partnership. Besides these long-standing commonalities, diplomatic niceties, and the sweet talk of global summity though, urgent and new imperatives are also on the rise that demand the joint attention of these two major actors. One key threat is the growing assertiveness of powerful, authoritarian states.

## Authoritarian Advance: Knocking on the Borders of EU and India

China’s global expansion via the Belt and Road Initiative (BRI), its military adventurism in Asia, misuse of the multilateral trading system (e.g., via subsidies and forced technology transfers), and gross human rights’ violations in Xinjiang were well-known in Europe for some time. But all these disturbing trends were perhaps still seen as distant enough; developing a narrative in 2019 that China was Europe’s “partner, competitor and rival”,<sup>3</sup> Europe tried to eat its cake and have it too. Today, the EU has much greater cause for concern. Russia’s invasion of Ukraine has brought the threat directly to European borders. And despite much speculation on how China will play its cards (thereby potentially undermining the efficacy of EU sanctions against Russia – or not<sup>4</sup>), European politicians and technocrats will be well-served to remember that China and Russia announced a “no-limits” partnership in February, earlier this year. China is no longer a distant threat to Europe, be this via its large investment

projects in the transport and technology sectors in Germany,<sup>5</sup> or via its partnership with Russia.

India too finds itself in a tough spot. For years now, it has experienced China’s increasing overreach across several issue-areas, including military confrontations on its border (with casualties). Its concerns about China are serious enough to make India the sole holdout on the Regional Comprehensive Economic Partnership, and also refrain from joining BRI.

Faced with the advance of authoritarian powers—both globally and on their borders—the “world’s largest democracies”<sup>6</sup> should be collaborating more closely than ever. But across several crucial areas, it is not the closeness of the EU-India partnership that stands out, but its limitations.

## The Limitations of the EU-India Partnership

Witness negotiations over trade, climate change, or indeed geopolitics, and we see that the EU and India often end up on opposing sides.

Negotiations for an EU-India Free Trade Agreement were begun in 2007, but were put on hold in 2013. It took another 7 years for them to resume in 2021.<sup>7</sup> For all the goodwill on both sides and attempts to drum up public excitement over this step, these negotiations will still not be a cakewalk. In the meantime, trade figures remain underwhelming. India may be the EU’s tenth largest partner and accounts for 1.8 percent of the EU’s trade in goods, falling well behind China that constitutes 16.1 percent.<sup>8</sup>

The limits of this partnership, moreover, are not restricted purely to the realm of commercial interests. Labour and environmental standards, for instance, have been quite the bugbear in the EU’s

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trade dealings, not only with India but also with some other major players in the Global South (for instance, the difficulties that the EU-MERCOSUR agreement has run into).<sup>9</sup> At the COP26 in Glasgow in November 2021, India and China together attracted much criticism for their insistence that the language on coal be changed from “phase out” to “phase down”.<sup>10</sup>

Fundamental disagreements between the EU and India also appear on questions of geostrategy and high politics, as exemplified over the positions that the two have adopted over Russia and Ukraine. The EU urged India to take a firm line condemning the Russian invasion;<sup>11</sup> India, however, abstained in both the United Nations Security Council and the UN General Assembly (UNGA).<sup>12</sup> In doing so at the UNGA, India again ended up in an odd corner of abstaining parties, together with China and Pakistan. Some commentators have interpreted this vote as indicative of the West “mistaking its own unity for consensus”, but this is too simplistic an analysis: The 141 member countries,<sup>13</sup> which voted in favour, included large and small countries from the Global South.<sup>14</sup> Different motivations guided the individual members of this minority group; for the purposes of this article, democratic India’s abstentions over the Russia-Ukraine war provide yet another worrying illustration of the divergence between India and the EU.

### Explaining the Clumsy Tango

For the unfulfilled potential of their partnership, both the EU and India share equal responsibility.

In terms of miscalculations by the EU, three points are important.<sup>15</sup> First, the EU tends to place considerable emphasis on business relations with India. This is an issue that India too is interested in promoting, especially under the business-oriented Modi government that has prioritised growth and development. But the EU then swiftly goes down a cul-de-sac of the narrowly

defined values of social and environmental standards, whenever trade agreements are discussed. The tone of such discussions, moreover, can come across as if the Europeans are preaching to their Indian counterparts on the importance of liberal values.<sup>16</sup> Neither the content nor the tone of these discussions are useful for winning trust, especially when negotiating with an ancient civilisation like India.<sup>17</sup> Second, if one compares this with the EU’s negotiation strategy with China, it is difficult to avoid accusations of hypocrisy. China’s flagrant human rights violations in Xinjiang have produced little more than some tut-tutting in Europe thus far, while business continues as usual. These double standards are also evident in media reporting and punditry in much of Europe: Indian democracy is frequently scrutinised and lambasted, while a blind eye is turned to China’s domestic, regional, and global excesses. Third, even as Europe is slowly waking up to the dangers posed by China to the existing global order, the call for more China-specific research expertise is growing. Unfortunately, however, this is not matched by a demand for more in-depth knowledge on India or other actors in Asia.<sup>18</sup> To some extent, this is understandable: We tend to focus on the problems and take the rest for granted. But this skewed focus means that there is far too little expertise on India in Europe, and public interest too does not go much beyond the usual clichés. Opportunities to develop EU-India relations into a meaningful and impactful partnership remain untapped, amidst this rather “special” mix of judgementalism and lack of real interest.

The Indian side has also been miscalculating. Three considerations are especially important. First, rather than push back against being put into a corner of “Asian values” and assert its own variants of universal liberalism,<sup>19</sup> India’s tendency has been to use the language of “pragmatism” in foreign policy. In an agenda-setting speech of 2019, Foreign Minister Jaishankar speaks of “multi-alignment”, “India First”, and “hedging” as part of a “strong and pragmatic policy outlook”. There are

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some elegant turns of phrase in this speech, e.g.: “Hedging is a delicate exercise, whether it is the non-alignment and strategic autonomy of earlier periods, or multiple engagements of the future.... The answer is in a willingness to look beyond dogma and enter the real world of convergences. Think of it, not just as arithmetic but calculus.”<sup>20</sup> The problem with this prioritisation of pragmatism—over values—is that it diminishes the potential use of the immense soft power that India could harness to shape its relations with the EU. Second—as is also evident from the emphasis on pragmatic multi-alignment—India shows a continued reluctance to join alliances. The Foreign Minister described this as “I think we should choose a side, and that’s our side.”<sup>21</sup> At face-value, this Ent-like<sup>22</sup> philosophy sounds appealing. In fact, however, India might not be well-served by it in the medium term, especially if China’s authoritarian advance continues in the region. To choose one’s own side sometimes requires working closely in alliances and coalitions.<sup>23</sup> Third, as a result of the first two issues, India often ends up in China’s corner. These moves may be tactical and issue-specific—for instance, during the debates on Special and Differential Treatment at the World Trade Organization—but they lead to a further “hyphenation”<sup>24</sup> of India with its frequent adversary, China. India’s credibility—as a democratic power and reliable partner for the EU—is not helped by this.<sup>25</sup>

### What Should be Done

What might be done to really get the EU and India on the same page, and then start scripting a future together? Three steps will be vital to any such endeavour.

First, both the EU and India would do well to engage more openly and readily on the question of values. For the EU, this would require several changes in narrative and policy, including a widening of its focus to go beyond narrow questions of labour and environmental standards and include broader questions of

democracy and liberalism. The EU would also need to recognise that the “West” is not the sole guardian of liberal values; it is possible, indeed likely, that there are some powerful, homegrown, and even ancient traditions of liberalism in the Global South. India, in turn, would need to become more explicit in “owning” its liberal traditions, and building these systematically into its foreign policy narratives as well as alliance politics.

Second, while recognising the significance of values is important, a mutual use of soft power alone will not suffice in bolstering the EU-India relationship. India’s dependence on Russia for military supplies contributed to its refusal to side with Ukraine; European dependence on Russia for energy led to foot-dragging on sanctions (and continues to produce some perverse and counter-productive policies).<sup>26</sup> Both the EU and India need to urgently realign their supply chains in strategically important sectors, if they do not want to be held hostage by rival powers in the future. This also creates a vista of new opportunities for them—and other like-minded states—to work together.

Third, more effort and investment need to go into promoting a better understanding of India in Europe, and vice versa. To facilitate this, increased funding in research and education will be indispensable. Collaborations in the Natural and Applied Sciences will be very important for producing compatible, cutting-edge developments in areas such as dual-use technology. But at the same time, the importance of research initiatives in the Social Sciences and Humanities should not be underestimated, especially to further a better appreciation of each other’s societies, politics, and cultures. China’s Confucius institutes have played an important role in Chinese diplomacy; Russian funding still occupies a prominent place in some of the most revered institutions of learning in the West (for instance via the Blavatnik School of Government at the University of Oxford). It is high time that the world’s largest democracies—the EU and India—also started investing more systematically and visibly in each other’s think-tanks, research institutes, and universities.



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## Endnotes

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To anticipate and interpret the emerging domains of conflict, we will need to unlearn many of the ways we have understood the international area to operate.



# Emerging Domains of Conflict in the 21st Century

The first quarter of the 21<sup>st</sup> century has seen tremendous change thanks to the internet reaching critical mass, and accelerated technological advancements across several key fields of science, namely computer science, artificial intelligence (AI), nanotechnology, batteries, biology, and physics. The convergence of these technologies has exponentially furthered our knowledge, capability, and understanding of our DNA, microbiome, solar system, renewable energy capture, social sentiment, industrial design, and much more.

With technological change comes social change and a shift in the organising systems that oversee how our communities are governed. Today, we can feel the tectonic plates shift under the grounds of our socio-political and economic norms. As in the past, technological change came with an unsettling period of confusion and conflict until the new organising systems emerged.<sup>1</sup> Today, we are in the middle of the eye of the storm of this shift and there is much confusion and conflict as the world comes to terms with new technology, social norms, evolving values, and competing new power structures.

This paper highlights five emerging domains of conflict that will characterise the remainder of the first half of the 21<sup>st</sup> century. They are:

1. **Nation-State Governance Tensions:** Conflict derived from democracy's need to modernise its value proposition and autocracy's modern struggles with control;
2. **Environmental Constraints:** Climactic changes are forcing migration, exacerbating conflict and resource scarcity, and fanning the flames of 'environmental nationalism';
3. **Continued friction with pervasive Supra-National Tech Governance structures:** The friction between supra-national corporate governance and sovereign state governance will increase with Web 3.0 and the spatial web. Distributed Autonomous Organisations (DAOs) and cryptocurrencies will also challenge governance structures with parallel economies and organising systems;

4. **Non-State Interest-Based Arms:** The marketplace for organised corporate mercenaries or crowdsourced voluntary conscripts offering financial means, technological offensive capabilities, or traditional kinetic violence which can be leveraged in the cause of an interest-based conflict is growing; and

5. **Contentious Space:** As more entrepreneurs pursue and develop commercial interests in space, there will be tension between countries and companies to regulate and create standards. Separately, space weapons continue to threaten peace in space and debris pose threats to a congested environment of vital space assets.

A common thread that weaves through these emerging domains of conflict is that they all challenge the Westphalian model of state sovereignty that has been the core foundation of the modern international system. As technology, space, and climate challenge the limits of state sovereignty, there is more at play than just emerging domains of conflict but the prospect of a new power shift in the way states have organised themselves. How this prospect unfolds and what it will morph into remains unknown, however, the broader emerging domains of conflict discussed in this paper help us paint this new picture that is emerging.

## Nation-State Governance Tensions

The 2008 economic crisis continues to have ripple effects in today's tensions on inequality, challenges within middle and lower economic classes, loss of confidence in the future, and distrust in the government. Since 2008, the economic power of the middle class in western liberal democracies has shrunk or remained stagnant, while faith in democratic institutions has been challenged. This can be seen in divisive politics in the United States, particularly during the Trump Presidency; in the United Kingdom, with both the Scottish and Brexit referendums; and in Germany, with the far-right populist party Alternative für Deutschland. In authoritarian countries, technology has simultaneously proven to be a tool of oppression—with the rising use of surveillance technologies and AI—and one of

# Emerging Domains of Conflict in the 21st Century

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hope and liberation—for those living under oppression—as gaming, digital currencies, the metaverse, digital anonymity tools, and access to education online has given them new ways to earn an income, participate in new digital economies, and gain knowledge and skill sets that they would otherwise not have access to.

Whether it is an authoritarian or a democratic form of governance, both systems—as they are practiced today—are being challenged. Many regulatory norms and laws still represent a bygone era, technology has created new power structures that policymakers are still grappling with and societies are rapidly upending and rewriting new norms.

Researchers of the impacts of disruptive technology, Tony Seba and James Arbib, deconstruct this in their book, *Rethinking Humanity*.<sup>2</sup> They argue that as a civilisation advances and its population grows, its organising system must adapt to meet the new demands of the civilisation. If it does not—and the organising system is no longer fit for purpose—a dark age ensues where there is conflict and reduced or stalled productivity, until a new and more compatible organising system emerges. Seba and Arbib have observed that “Throughout history every civilization has been built on the same five foundational sectors: information, energy, transport, food and materials. When technologies disrupt any of these change ripples and cascades challenging our rules, systems and mindsets.”<sup>3</sup>

Today, in 2021, we are precisely in this moment of change. All five of these foundational sectors have seen rapid change in just the past decade alone. Liberal democracies, monarchies, or authoritarian governance structures are facing a reality of changing foundations across technological imperatives and the minds of their constituencies.

## Environmental Constraints

To deny climate change a spot on the list of emerging domains of conflict is to be truly misinformed on the multiplying climate

conflicts and challenges that we are already collectively experiencing. Today, the earth is 1.2 degree Celsius warmer than the pre-industrial levels and while we have not reached the 1.5 degree Celsius Paris Agreement limit, there are already several noticeable changes.<sup>4</sup> The 2022 Intergovernmental Panel on Climate Change report has warned that the changes to the environment are taking place faster than governments, institutions, and people are able to adapt.<sup>5</sup>

Just in the first two years of the 2020s, Australia saw the worst bushfire season with over 46 million acres being burned, equating to the entire landmass of Syria.<sup>6</sup> The following year, Germany, Austria,<sup>7</sup> the Netherlands, and China<sup>8</sup> experienced torrential rain and mass flooding that caused landslides, damage to infrastructure, and loss of life. At the beginning of 2022, at the time of writing this paper, both the Arctic and Antarctica are experiencing heatwaves with 30 degrees Celsius and 40 degrees Celsius, respectively, above normal.<sup>9</sup> This is not withstanding the European heatwaves, since the deadly 2003 heatwave, which continue to claim hundreds of lives each year.<sup>10</sup>

Changing planetary ecosystems are causing extreme environmental events that have implications for the environment, food supply chains, human life, and in return, implications for the economy and politics. Droughts and floods have destroyed arable land and caused farmers and communities in Bangladesh<sup>11</sup> and Senegal<sup>12</sup> to move to safer and more resource-abundant lands; while in the Middle East, conflict over scarce water resources between Iran and Iraq is becoming increasingly more contentious as “Iran is building dams to divert... water, causing alarm and creating major water shortages for Iraq.”<sup>13</sup>

The number of climate refugees leaving their country for more environmentally prosperous and resource-abundant countries is a trend that is growing.<sup>14</sup> This migration has compounded existing immigration tensions in the countries they seek to find new homes. According to the United Nations High Commissioner for Refugees, “Hazards resulting from



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the increasing intensity and frequency of extreme weather events, such as abnormally heavy rainfall, prolonged droughts, desertification, environmental degradation, or sea-level rise and cyclones are already causing an average of more than 20 million people to leave their homes and move to other areas in their countries each year.”<sup>15</sup>

These 20 million climate refugees require homes, jobs, and resources in the new countries they have immigrated to, which at times places constraints on the existing resources. Within subsets of some communities, this is breeding a new form of nationalism—environmental nationalism—where protectionist nationalism encompasses protecting access to valuable environmental resources within the territorial sovereignty, and excluding foreigners who may threaten their access to these resources.<sup>1</sup>

Last, but certainly not the least—regardless of where one stands in the globe, whether it is a water-rich area or one with annual wildfires—“climate change is already damaging the physical and mental health of everyone on Earth, with half of humanity already vulnerable to water insecurity and billions more at risk of extreme heat events, vector-borne diseases and hunger linked to global heating.”<sup>16</sup>

The changes in climate and the planet’s environment brings an emerging domain of conflict that traverses fundamental resource scarcity, exacerbates existing conflicts while creating new political tensions, contributes to more refugees, and impacts the health of all. It is a domain of conflict that individuals, politicians, and businesses must urgently work together on.

### Continued Friction with Pervasive Supra-National Tech Governance Structures

The friction between supra-national corporate governance and sovereign state governance will increase with the rise of Web 3.0,

the spatial web, smart infrastructure, and AI. The Westphalian model is once again challenged with the evolution of technology. But in this emerging domain of conflict, it is not about an outdated organisation system of governance; instead, it is about the emergence of a non-state governance structure that crosses over international sovereign boundaries and mediates the lives of billions of people—supra-national big tech.

The big tech platforms—such as Facebook, Google, Amazon, Uber, Airbnb, Apple, and others emerging in the metaverse space—are technological critical infrastructure that much of the world and global economy relies on. This challenges the sovereign state to contend with a pervasive supra-national tech governance structure that, in some circumstances, wields power that was once only privy to sovereign nations. The Ukraine-Russia war has countless multi-national companies as well as supra-national tech companies impose their own economic restriction measures and take sides in this political conflict with economic consequences for many people living in Russia.<sup>17</sup> In doing so, supra-national companies have joined the international political arena in ways that were never before so swift and politically consequential.

In parallel to this, smart infrastructure, digital twins, and millions of new Internet of Things devices are getting connected to the internet. This digital infrastructure has a virtual overlay of the physical world. This is most illustrative with digital twins where factories, critical infrastructures, and entire cities have digital twin copies where services can be rendered, commerce can take place, and advertising can be placed on the digital layer of the physical geography. This is also a place for corporations to dictate terms, bringing wide-spread implications for governance, commerce incentivisation, protections of marginalised people, and socio-economic access.

Questions arise such as who owns and runs the digital twin of a city; is it collectively owned; are parts of it privately owned like parts of the physical space are; and who polices the digital twin of a city when there are many ‘worlds’ and service layers on top



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of it? Smart cities, algorithms, and digital twin economies will be contentious spaces for the state sovereign and the supra-national tech entities that govern these virtual spaces. If supra-national tech is able to pull out from a country or service at their own discretion, sovereign states will need guaranteed securities for their citizens in these virtual spaces for the stability of their economies.

Separately from corporate supra-national tech governance structures, there are non-corporate governance structures that are emerging, thanks to distributed ledger technologies. The blockchain is an example of a distributed ledger which has allowed for cryptocurrencies and DAOs.<sup>18</sup> Both cryptocurrencies and DAOs do not need a third-party trust entity or a bureaucracy to deliver services; instead, it is the collective community that manages the ledger. These technologies are being leveraged to operate outside the international FIAT currency system and to create transparent supra-national governance structures through DAOs where people can opt in to the coded rules. Some are using them to create companies, unions, or social clubs, and others see it as the next form of government. This is an emerging area of technology governance conflict as DAOs do not need state registration to be created or approved. If sovereign states cannot manage to regulate and weave this technological infrastructure into the evolving contemporary society, it will continue to be a growing area of tension.

## Non-State Interest-Based Arms

An underappreciated area of contemporary conflict is the thriving and growing marketplace for a full spectrum of political interest-based support. Whether it is corporate mercenaries; or crowdsourced voluntary conscripts providing technological offensive capabilities or traditional kinetic capabilities; or those providing financial support through crowdfunding; the space of cause related interest-based conflict support is growing.

Author of *The New Rules of War*, Sean McFate, argues that

we live in a state-centric world that is slowly eroding and while “states won’t go away, they will become less important because war is now divorcing from the state and technology is a huge enabler of this and that will change international relations in the next thirty years profoundly.”<sup>19</sup> He points out that the private sector of armed mercenaries is growing and working collaboratively with private sector intelligence companies, which is also a market that is growing. When non-state special operations teams are hired, new dynamics are created in the international arena—separate from nationalism and state interests—that open a new political market where non-state interests can be defended through private intelligence and private warriors. However, the plot of mercenaries thickens as nation-states also utilise arms for hire, to supplement missions or to mask actions in ways that will not be directly linked to the government. The rise of private intelligence and mercenaries will further complicate international politics and decision-making.<sup>20</sup>

However, there is another non-state warfare market and its currency is not money, but emotions. The Ukraine-Russia war has showcased what it looks like when citizens all around the world choose on their volition to participate in a conflict and take sides. Over US\$100 million have been raised from around the world in support of Ukraine in cryptocurrency alone,<sup>21</sup> and many have creatively used Airbnb to make their donations, raising over US\$2 million.<sup>22</sup> Foreign urban warfare experts have provided detail guidance on Twitter for Ukrainian fighters,<sup>23</sup> and over 20,000 people have flown in to Ukraine to volunteer in the International Legion of Territorial Defense of Ukraine to defend a country that is not their own.<sup>24</sup> Cyber hacking groups have rallied in defence of Ukraine, providing cyber defence and offensive support.<sup>25</sup> These examples demonstrate how technology has created an asymmetry for participation in a conflict and how regardless of nationality, race, or religion, any individual around the world can rally resources and support in defence of interests they align with and support their side of

# Emerging Domains of Conflict in the 21st Century

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the political conflict with money, resources, time, and expertise. This will not be the last political conflict that sees non-state interest-based support and we will see an empowered individual who will use their means to support causes, regardless of their national borders.

## Contentious Space

Outer space has seen a resurgence in interest from political, military, and economic fronts. Politically, there has been more interest in creating human settlements on Mars to make humans a multi-planetary species<sup>26</sup> with Russia, the US, China, and the United Arab Emirates<sup>27</sup> conducting human settlement research for Mars. Militarily, the development, testing, deployment, and proliferation of space weapons<sup>28</sup> continues, which is in conflict with the Outer Space Treaty that “bans the stationing of weapons of mass destruction (WMD) in outer space, prohibits military activities on celestial bodies, and details legally binding rules governing the peaceful exploration and use of space.”<sup>29</sup> Economically, there has been a boom for commercial interest in space with countless entrepreneurs pursuing space ventures.<sup>30</sup>

All this space activity is creating several areas of conflict as entrepreneurship and commercial interests in space will cause tensions between countries and companies to regulate and create standards that allow for space prosperity while respecting it as a ‘global common’. Notwithstanding the long running problem of space debris, which continues to pose threats in a congested environment of valuable and critical space assets.<sup>31</sup> Countries and companies will need to work together to protect space assets that are critical to economies on earth. If not, Low Earth Orbit will soon become a dangerous object-polluted place to operate in and space related activity will need to move to higher orbits.

Separately, space weapons continue to threaten peace,<sup>32</sup>

prompting the United Nations to approve an “open-ended working group aimed at preventing an arms race in space”<sup>33</sup> and avoiding ‘celestial conflict’.<sup>34</sup> This domain of conflict is not exclusive to space as it has real implications on planet earth and foresight, collaboration, and diplomacy will be needed to prevent conflict.

## Conclusion

These five emerging domains of conflict will grow in the coming decades and if they are not managed by the middle of the 21<sup>st</sup> century, they will become entrenched and compounded conflicts. Whether it is climate change affecting health, migration, food supply chains, or access to vital resources such as water, the impact of our environment on our politics, society, and economy will be felt pervasively by 2050. Outer space is not only an area where critical infrastructure resides for our many space-reliant technologies, but it is also a frontier for human exploration. It will be up to the collaboration of nation-states and space companies to make space an area full of opportunity, prosperity, and hope and not one of danger, conflict, and profiteering. As the Westphalian model sunsets, a new model will emerge—while it may be too soon to label it—we can already start to see some of its characteristics. Some notable ones are that the sovereignty of nation-states is morphing into a shared sovereignty with supra-national technology platforms and companies, that more and more decision-spaces of our lives will be algorithmically mediated, and the actors in any given conflict will be varied borderless interest-based actors rather than strictly nation-based actors.

To anticipate and interpret the emerging domains of conflict as they unfold in the coming decades, we will need to unlearn many of the ways we have understood the international area to operate, and open our mind to observe the new ways in which value is created and the emerging power structures that arbitrate them.

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Multilateralism must remain,  
even if less widespread and  
more conditioned.





# Advancing Trade Governance—Only for Democracies?

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Following Ikenberry (2020), it is easy to accept that, in the present state of growing anarchy in the world (dis)order<sup>1</sup>, big and main middle powers remain fully occupied by the “problems of anarchy”, such as hegemonic struggles, competition for security and spheres of influence, or reactionary nationalism. However, he continues, they are much more threatened by ‘emergent, interconnected, cascading transnational dangers’: Pandemic diseases, financial crises, dangerously encompassing pollution threats and widespread nuclear proliferation, to mention a few.

Loss of the ability to keep and secure stable and intensive international trade flows is a major transnational threat. Such activity is crucial for harmonious progress among democracies and an encompassing welfare-enhancing goal that should include a plurality of regimes.

While abuse of the panacea of free trade has been progressively giving way to more realistic views towards fair or fairer trade, other objectives to trade gained voice. Job creation led the growing set of discontents with globalisation; it is now evident that securing employment for the less qualified and those displaced by the international efficiency mantra should not be left to half-baked adaptation policies. The environment needs care, the digital must be tackled, and politics and special interests—ever present—must be kept, more often than not, at bay.

Though not yet in profound hibernation, the related international institution, the World Trade Organisation (WTO), has been vilified

and bypassed, sometimes becoming a puppet institution. The present state of fairly generalised ungovernance is a preliminary step to chaos. Exclusion and creation of different, autonomous trade circles would be a move backwards, with evolving serious consequences.

How do we reconcile the aggressive, disruptive and footloose aspects of present-day trade with a better, minimally fairer and more welfare-improving international version of the same practice, under the aegis of a modern and flexible international institution—appealing to all—that would assure an adequate level of governance?

This paper addresses this ambitious challenge by proposing deep changes in the present system of trade governance. The next section briefly describes the modern issues that have transformed the standard pattern and uses of trade, and then the problems with the WTO. It works as a building block for the proposal presented in section 3. Section 4 concludes in a somewhat enlarged view.

## Trade Problems and Institutional Troubles

### The Trade Dimension

Economies may display a variety of state and market arrangements, operating with more or less imperfect markets and more

## Advancing Trade Governance—Only for Democracies?

or less state intervention, usually being plagued by monopolies and oligopolies, whether visible or not. In more than a few countries—and often independently of the regime—states are significant partners in key enterprises. Interactions among these structures may produce harsh competition and Schumpeterian destruction; trade can be either a tool for imposing uniformity or for spurring rapid, sometimes undesired, globalisation rather than a means to foster diversity.<sup>2</sup>

In the present world (dis)order, the experiences that have accrued post the WWII years has led to problems or realities that have been poorly considered in the debates on trade regulation:

### ***The value chains phenomenon***

Value chains have ultimately changed the logic of several classical tariff and trade barriers systems while also creating serious dependencies and highlighting the importance of specific materials and components. It enhances labour problems—by displacing significant contingents of less efficient producers in the chain—and creates ticklish property rights issues.

Thanks to the fragmentation of production and the forging of international value chains, around 80% of trade in goods takes place among fewer than 1000 big world manufacturers. A much broader and more modern economic logic than the familiar (localised) comparative advantages setting imagined by David Ricardo.<sup>3</sup>

Globalised world competition no longer centres on supplying

competitive versions of a specific good. Although the latter still exists, the main focus today is on rules, norms, and standards embodied in technological decisions and innovations, which ease the creation of multi-country value chains.

### ***The digital galaxy***

This has introduced new forms of exchange, from internet sales platforms to 3D printers, that have transformed elusive concepts like tariffs and even classical competitive settings, disrupting existing practices and posing questions not yet addressed by the current regulations. Five constellations—Alphabet/Google, Amazon, Apple, Facebook and Microsoft—are prominent in the galaxy and are powerful enough to dictate (unwritten) rules and practices that either circumvent or apply outside the traditional trade flows realm. Trade-related intellectual property rights acquire new challenging and unsolved shapes.

### ***New (and powerful) actors***

Adding to the previous five giants, with the likes of Walmart, Benetton or Zara, Bayer, the top five pharmaceutical industries,<sup>4</sup> Samsung, Huawei, Siemens, Tencent and Ali Baba, among others, it becomes apparent that large companies, rather than nations, are fighting for greater international sales and market share, even if the parent country usually offers some support. This undercuts many of the traditional findings and theories about how markets should work, and forces any given nation—democratic or not—to confront not only economic but also complex juridical and geostrategic policy choices.

## Advancing Trade Governance—Only for Democracies?

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### ***The surge of political motivations***

The (dis)order resulting from a weakening hegemon and the growth of serious alternatives along with the assertiveness of quite a few middle powers have, of late, brought forward additional problems, such as:

- i) The urge for self-sufficiency: Concerns over a nation's autonomy to produce specific, supposedly strategic, goods have always existed, but the COVID-19 pandemic has enhanced these concerns as well as zeroed in focus on protectionist policies when it comes to key raw materials and components, together with the redesign of related value chains;
- ii) Sanctions: The use of economic sanctions, of which trade restrictions are, perhaps, first and foremost, has consistently increased since the early years of this century, and is becoming widespread. Sanctions, besides being rather debatable—both in humanitarian terms and in terms of causing effective damage—disrupt patterns of trade and often disregard basic trade regulations; their widespread use, irrespective of sensible restraint, eventually hurt the whole system and many other partners beyond those at the core of the conflict;
- iii) Technological protectionism: What is often, and wrongly, called the US-China trade war is actually a struggle over technological supremacy, with its most prominent axes of contention being the 5G technology, in which—to the great surprise of the US—China so far has developed a better product;<sup>5</sup> and the advancements in super and quantum computing, have brought

forth game-changing civil and military applications. This war then extends to trade restrictions—many illegal—as goods and services embody crucial technology, and induces distorting industrial policies.

### ***The social-environmental priorities***

Social and environmental priorities reflect a greater awareness of the global commons on how the control of trade activities cannot be restricted merely to the economic realm. The carbon footprint of the traded goods and services, the diversified labour concerns, and even the inclusion of issues related to the animal kingdom are gaining ever more space. Certain countries and blocs already impose (or envisage to impose) extra tariffs on the grounds of how “green” the purchased good or service is purported to be.

### **The Trouble With WTO**

Tracing when the ongoing crisis at the WTO started is not easy. A clear sign that things were seriously awry may be found in early December 2019, when the institution's Appellate Body was closed for lack of a quorum, and many of its functions and attributes came in for questioning and criticism. At the core of the crisis lies the US-China rivalry, with the former complaining about China's actions since the country joined the WTO on 11 December 2001. The American side broadly charges that China betrayed the hopes of those who facilitated its accession, while China firmly denies and explicitly preaches in favour of the WTO and the multilateral approach to trade. The paralysis in the Ap-

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Appellate Body is solely due to the US systematically using its veto power to block the nominations of new judges.

Within this context, it is almost inevitable that the actions taken by many members start to cross the limits of what is allowed by WTO rules, if not to violate them outright.

The new realities in the world trade arena discussed above have contributed to its deterioration. The digital complex and its multiple trade-related aspects is a blatant void in the Organisation. A serious updating and rethinking of intellectual property rights—to be made more flexible in ticklish sectors like pharma, or more modern in brand-new sectors such as the digital galaxy—are dearly needed. This must be done in tandem with a new vision as regards trade and investment, where the balance between the micro-economic objectives and the broad social benefits will be even harder to achieve than in the past. The vexed question of state trading firms needs to begin with a clear, widely accepted definition of this animal.

Moreover, the criticism originally raised by the US applies: That the Appellate Body had slowly become a dual persona of the institution, setting decisions and procedures that, gradually and informally—though effectively—become codified as interpretations of, and additions or extensions to the established, hard negotiated treaties; hence, introducing an unacceptable amount of juridicisation to the Organisation.

The WTO had, thus, been under intensive care since before the

pandemic. It went out of tune with the new trade realities, and lost focus and became aimed at partial corrections, missing the larger picture. To think that topical remedies, like changes in the Dispute Settlement Understanding, may provide enough oxygen to its breathless body is illusory. After too many years in the hands of international bureaucrats—competent as they might have been—novel ideas and ways to cope with the new “trade shapes & forms” must be put to a full discussion, without prejudice and a hidden desire to ensure that things remain as they are.

Notwithstanding, the WTO has a precious cumulated value—knowledge of systems and procedures, embodied in its high-level staff—that should be preserved, and global trade in principle needs global rules.

Demands and disputes will surge as trade patterns resume and evolve in the coming (recession) post-pandemic years. Resorting to domestic subsidies will frequently appear in multiple guises, which will add to the protectionist measures still remaining from the 2008-2009 financial crisis.

A temptation to separately address individual issues like the ones above—under a pragmatic spirit of mending misdeeds, repairing damages and taking the WTO out of intensive care—will be strong. But is this not the right course of action. And who will lead it—a US wanting to be again conspicuously present everywhere? Will China be happy with this choice? What about the likely coalitions? Given the multiplicity of themes and damages to tackle, it

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is hard to expect middle powers to stick to the same leader in all of them. Will a divide take place, with groups of faithful followers closing ranks behind either China or the US?

International institutions are foundational for guaranteeing the rule of law in a global society that wants to minimise its inherently anarchic trends. But for this to happen, a sizable number of countries must be willing, fighting for and supporting them: The WTO needs a rebirth out of a credible common effort. And, unfortunately, at the heart of the previous statements lies a fundamental, preliminary question, inherent to the debate on any international organism: Do the nations in this new world (dis)order still believe in and want multilateralism?

Multilateralism translates to communities of states the ideal format of democracy. Despite engaging with all manner of countries, and having the desirable quality of equalising the weak to the powerful, multilateralism suffers from innate deficiencies.

While in the case of democratic nations, the monopoly of law enforcement and, if needed, violence, is clearly in the hands of the state; in an international multilateral organisation, no police force is available, and the ways to ensure the due settlement of disputes assume different forms, none of which are ideal or fully efficient. Moreover, the imposed a priori equality among parties may generate distortions particularly as regards obligations. In the WTO treaties, to assume all members equally wealthy, developed and competitive is, sometimes, a cynical way to push them towards the model and interests of the powerful—in the original

case, the advanced Western economies.

More powerful countries can always put pressure on smaller and weaker ones to accept their views, many times through bargaining the support against concessions in other areas, like a foreign debt or a military alliance. This kind of “corridor politics” is common in many multilateral organisations, and in the WTO, they are sometimes called Green Room meetings. Corridor politics do not invalidate the merits of multilateralism, but introducing mechanisms to curb them is a welcome though not easy advancement, as they should not impair one of the golden tools of the approach: Coalitions of the weak at a level that is sizeable to block the strong.

At the same time, muscular members can break the rules and refuse to join arrangements nevertheless supported by them. The refusal of the US to be a signatory to the International Convention of the Seas and, more crucially, of the International Criminal Court, then followed by China, Russia and—under the US shield—Israel, shows the limits of acceptance of this supposedly ideal design.

However, if the strategy of multilateralism, with its simplicity and elusive absolute fairness, is neither sufficient nor appealing any more to completely tame the rule of instincts akin to anarchy, other solutions need more elaboration and a clearer definition of responsibilities.

Multilateralism must remain, even if less widespread and more

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conditioned. It creates viable inter-state communities, provided there does not exist much disruption of the established power balance. It does not abolish the underlying jungle spirits; it is merely super-imposed on them. In the governance body proposed here, it is supposed to continue.

### The Design

A multilateral organisation is proposed, as an evolution of the WTO; call it ITO – International Trade Organisation, the name envisaged in the 1947 Havana Charter.

Two main principles guide the proposal. The first is that the WTO moved to not only a heavy structure but (also and worse) a rigid framework where the parties' degrees of freedom have progressively been reduced, with all members—regardless of their own will and specificities—being obliged to fit into the same strait-jacket. Flexibility, and an as lean as possible structure, must be brought back. The second is to accept that enforcement in an international institution is problematic and may easily lead to impasses like the one lived nowadays by the Organisation. This has bold implications as will be seen below.

A preliminary question is: What do we do with the present WTO? How do we tackle the *acquis* and, most crucially, the existing treaties and commitments?

To answer, we must first describe membership. Two kinds of members are possible: Members and Encompassing Members.

The former adhere to a single basic treaty, which would be a modernised and somewhat larger version of GATT 1994<sup>6</sup> and all its Understandings, plus most Agreements in Annex 1A, together with Annex 1B on trade in services; the latter keep on subscribing to all texts of the Marrakesh Agreement, with the remark that Annex 2, on dispute settlement, would be reformulated as described below.

All parties would, thus, respect the foundational principles like the most-favoured nation or the national treatment ones, but further commitments, like TRIPS and the enforcement package (Annex 2) would be optional.

Any Member could, at any time, (re)adhere to a text outside its basic core, or even decide to acquire Encompassing Members status. Take, for instance, a developing country that does not want to commit itself to property rights constraints. It can live on, trusting on the attractiveness of its market, which could even be supported by domestic legislation giving a minimum of protection to foreign investors. If, at a certain moment, it judges the existing situation unacceptable, investments and opportunities being lost because it has not adhered to TRIPS (Annex 1C), it can easily request its inclusion in the Agreement.

Instead of imposing market regulations to parties as in the classical format—despite the fact that they were the outcome of negotiated treaties—they become free to join them, if deemed necessary. It is well known that, though helping, WTO rules, especially at the present times, are not a pre-requisite for foreign



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investments; these usually result out of a compromise between risks and opportunities. High though known risks—as, for instance, property rights ones—are usually tolerated, because they have been part of the overall calculus of expected returns. This flexibility also eases the burden of developing countries in general, as they are not forced to sign more sophisticated regulations that may stifle their growth and innovation potential. The multiplicity of level playing fields allows advanced economies to trade among themselves at one level, while underdeveloped ones are subject to basic trade fairness requirements among them, and relations between representatives of both groups are regulated by constraints applying to the weakest one.

All parties discuss and negotiate any of the urgently needed revisions, updates and novel additions to the existing set of legal texts. All may engage in their formulation, though many may eventually opt out. This implies a different policy to approve a treaty, which can be set at a slight majority level, like 55 or 60% of all parties.

More daring initiatives by select parties should not be restricted. A given group—even composed of less than half the parties—could at any time form a special-interests niche, advancing both liberalisation and regulation of a specific sector or activity. This implies a revamping of Article XXIV of GATT 1994, in which emphasis and encouragement should be given to the creation and formatting of such niches, rather than to the (nowadays) heavy and irrationally ambitious time and resources consuming regional integrations.

The Dispute Settlement Understanding is where the greatest change would take place. The bold decision here is to abolish the whole framework in Annex 2, replacing it by a much-streamlined version. The first phase of the panels would be maintained, and panel decisions could be appealed to the same panel, that could then be enlarged by one or two more panellists. The decision would judge which party(ies) was right, could call for the suspension or abolishment of the illegal practice, but would not estimate damage for purposes of compensation or retaliation;. A party judged of wrongdoing a certain number of times, during a specified time interval, would have its rights suspended in the Organisation. Repetition could result in leaving the ITO.

This would save time and the somewhat hypocritical procedure of enforcing penalties and compensations often eluded or actually not complied with.

The hopefully leaner and more dynamic structure would be complemented and gain additional clout by the following two supplementary principles.

First, stop with the über-enthusiastic and encompassing view that trade deals and trade itself are a way to solve or tackle more effectively global-commons issues like environmental degradation or inhumane labour conditions. Such an approach crams the trade agenda with questions that, more often than not, may be handled better in another forum.

New mechanisms should be created to deal with transnational companies' trade flows, given their inherently asymmetric char-

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acter and their weight in global trade in goods.<sup>7</sup> Joint, co-ordinated work with other multilateral agencies should be encouraged and given a dramatic boost. This is not exactly new, as successful earlier experiments like the association between Sanitary and Phytosanitary rules with the Food and Agriculture Organisation's Codex Alimentarius testifies. Telecommunications and internet issues overlap considerably with the International Telecommunications Union. A joint task force on coupling and identifying basic general ITO-ITU rules seems a must.

Trade must cease to be taken as a proxy for the solution to all failures in the governance and regulation of common goods. Climate change and carbon footprints, unfair labour practices, potential violations of basic human rights, broad competitiveness gaps, and geo-strategic rivalries—all must be addressed in their proper fora.

Second, a collective effort should be pursued to curb the use of trade for other purposes than trade itself; a clear separation between trade and strategic conflict (war) goals must be put forward, which will require modifications in Articles XX and, specially, XXI of GATT 1994. Use of trade as a tool of war should be banned, or at least greatly restricted.

The imposition of trade sanctions on specific states, though known to be usually inhuman, continues to proliferate despite its

nefarious consequences. A Convention on Abolishing the Use of Trade Sanctions in International Relations would be a step in the right direction. In principle, the United Nations would be the right venue to host the Convention.

A similar effort and attention should be given to the issue of arms trade—the heart and fuel of the “war & conflict business”—but the complexity of the solutions obliges us to just mention the point here.

### Conclusion

Trade is too basic and important to be restricted to democratic regimes only. It is neither a tool for regime change nor a sure vehicle to pass better and more equitable government values. Notwithstanding, it carries information that goes beyond the traded good or service. This is encouraging and justifies that its flows—provided key local features like labour, culture and minimal needs are preserved should go round the planet, creating convergences and improving life for every world citizen.

Regulations are needed but should be kept to a minimum and not become a source for byzantine bureaucracy and artificial super-structures. An outline in this direction has been outlined in the previous lines. Improvements and details are needed, but the spirit of the design should be kept.

## Endnotes

1. Throughout the text use is made of the expression ‘world (dis)order’, following Tharoor and Saran (2020). See also Flôres (2021). J. Ikenberry, “The Next Liberal Order,” *Foreign Affairs* 99, no.4 (2020), pp. 133-42, <https://www.foreignaffairs.com/articles/united-states/2020-06-09/next-liberal-order>; Shashi Tharoor and Samir Saran, *The New World Disorder and the Indian Imperative*. (New Delhi: Aleph Book Company, 2020); R. G. Flôres, Jr, *The World Corona Changed: US, China and Middle Powers in the New International Order* (Abington: Routledge, 2021).
2. On the multiple features of the trade activity, and the false causality trade →peace, see Flôres (2013). R. G. Flôres Jr., “Conclusion: Dismissing the Kantian view of trade and peace,” in *A Global History of Trade and Conflict since 1500* eds. L. Coppolaro and F. McKenzie, (London: Palgrave MacMillan, 2013).
3. This is true despite the fact that the very concept of “comparative advantage” is quite elusive and not correctly understood by many, who easily confuse it with “absolute advantage”. Paul Samuelson, to his credit, liked to say that Ricardian comparative advantage remained one of the most subtle and difficult-to-grasp economic concepts.
4. Respectively, in terms of revenue, as of 2020: Johnson & Johnson, Pfizer, Roche, Novartis and Merck & Co, though the next three - GlaxoSmithKline and Sanofi - also posted revenues above US\$40 billion.
5. One of the reasons for this is that US companies focused on individual components, as handsets or routers, and disregarded the network dimension needed to build any end-to-end 5G system like that offered by Huawei. See, for instance, Darby and Seawall (2021). Christopher Darby and Sarah Seawall, “The Innovation Wars: America’s eroding technological advantage” *Foreign Affairs* 100, no. 2 (2021), pp. 142-53, <https://www.foreignaffairs.com/articles/united-states/2021-02-10/technology-innovation-wars>.
6. All GATT 1994 articles cited are according to the incorporation of GATT 1947 in the GATT 1994 as described in WTO (1995); a reference that applies to all treaties mentioned in the text. World Trade Organization (WTO), *The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts*, Geneva: WTO (1995).
7. Unfortunately, there is no space to further elaborate this point here.



Trade is increasingly seen from a security lens: As a source of national vulnerabilities, and as a coercive, strategic instrument.



# The World in Disarray: Is This the End of Multilateralism for Trade?

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For decades, trade has been an important driver for economic growth, job creation, and wellbeing. It helped lift billions of people out of poverty, and promoted economic—and in some cases political—freedom. It allowed for a diffusion of knowledge and ideas and created interdependencies that—while not always preventing conflicts and wars, as Russia’s war on Ukraine shows—contributed to international stability. The multilateral trading system, with the World Trade Organization (WTO) at its centre, held power politics at bay and allowed for settling trade disputes in a rules-based and mostly fair way.

These times seem to be over. Great power politics, a competition of ideas and systems, cold and hot conflicts, as well as wars threaten to divide the world into new blocks—large autocracies on one side, and liberal democracies on the other. Trade is increasingly seen from a security lens: As a source of national vulnerabilities, and as a coercive, strategic instrument. This will massively impact trade flows. It will accelerate the re-regionalisation and re-nationalisation of value chains that began a few years ago, gaining momentum during the COVID-19 pandemic, and is fuelled by the power competition between the United States and China. At the same time, the WTO, which is already fragile, could weaken even further, at a time when a strong institution is more important than ever.

What are the current trends in trade and how healthy is the multilateral trading system? What are possible scenarios for the WTO and what needs to be done to reform it so it can continue doing its job?

## Trade Outlook

After a steep drop in 2020 due to the pandemic, trade in goods and services grew strongly in 2021, experiencing an increase of about 13 percent relative to the pre-pandemic level of 2019,<sup>1</sup>

which was a faster and stronger recovery than in the aftermath of the 2008 financial crisis. However, global trade is facing serious headwinds in 2022. The IMF had already downgraded its growth expectations before Russia invaded Ukraine due to persistent inflation in the US and concerns related to China’s real estate sector.<sup>2</sup>

Russia’s war on Ukraine puts additional pressure on the global economy by interrupting the supply of basic commodities, due to which the prices for food and energy will rise, pushing up inflation, and thus depressing demand. Russia will be particularly affected, but the disruptions will also be felt globally.<sup>3</sup> UN Secretary-General Antonio Guterres warned that the conflict could cause a “hurricane of hunger and a meltdown of the global food system”.<sup>4</sup> According to the Food and Agriculture Organization (FAO), the number of undernourished people could increase by eight to 13 million people during 2022-2023.<sup>5</sup>

Many countries, particularly in Europe, could slide into recession, while several may suffer from stagflation, i.e. high inflation and low economic growth with increasing unemployment. Poorer developing countries will suffer even more from high energy and food prices, and inequality is prone to increase between as well as within countries. The COVID-19 pandemic continues to take its toll, with new variants challenging the capacity of health systems worldwide.

Global value chains are likely to witness an acceleration of re-regionalisation and re-nationalisation in the coming years. This is not an entirely new phenomenon. The 1990s and early 2000s were characterised by a rapid globalisation of value chains, but it lost momentum in the second decade of the 2000s, even before the pandemic hit, due to several reasons. First, digitalisation is changing industrial production in a way that makes international merchandise trade more and more obsolete. New technologies



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such as 3D printing or selective laser melting facilitate production on-site. Second is the technological catch-up of large emerging economies. China, in particular, has become more technologically independent and increasingly manufactures high-tech products domestically rather than importing them.<sup>6</sup>

Third, since the 2008 financial crisis, there has been a steady flow of new protectionist measures, with the WTO registering new barriers with an annual average of 147 measures from 2012 to 2020. The share of trade being affected by these measures rose from 1.17 percent in the period from mid-October 2013 to mid-October 2014 to 3.84 percent in the period from mid-October 2018 to mid-October 2019 with a decrease to 2.4 percent in the period from mid-October 2019 to mid-October 2020.<sup>7</sup> While WTO members showed restraint in employing new protectionist policies and implemented numerous trade facilitating measures amid the COVID-19 pandemic, there is little appetite for further trade liberalisation. In addition, the 2017-2020 period was characterised by numerous trade conflicts, many originating in the US under former President Donald Trump. New and stricter laws regarding export controls for dual-use products and investment screening in the US and China led companies in a variety of industries (including semiconductors, autos, and medical equipment) to re-localise parts of their supply chains and production. Additionally, at the beginning of the pandemic, many countries resorted to export restrictions, particularly on medical and pharmaceutical products.

Fourth, companies have increasingly tried to reduce vulnerabilities and the exposure to global risks in the aftermath of the last financial and economic crisis. Another driving factor is the increasing frequency and severeness of natural disasters. The pandemic further exposed the vulnerability of global value chains, first disrupting many (particularly those for medical goods and equipment) and then slowing down recovery due to a shortage of workers, ships, containers, air cargo space, and congested ports. Consequently, companies around the world

intensified diversification strategies and the restructuring of their value chains.

The localisation and re-regionalisation of value chains are not driven only by companies. Reducing dependencies has been high on the agenda of many Western governments for some years. Many governments are increasing investment in ports, airports, and other infrastructure, while supporting research and development (R&D) and the production of critical materials. The US, the European Union (EU), and Japan are striving for greater technological sovereignty. For instance, the US CHIPS Act and the European Chips Act<sup>8</sup> seek to reduce the dependence on Taiwan and South Korea for semiconductors. The US government has, for some years, pushed for reducing dependencies on China (another example being the Entity List), but the EU is quickly catching up. The motto of the EU's new trade strategy is "open strategic autonomy"; it wants to be more assertive against unfair trade practices abroad, strengthen existing trade defence instruments, and create new ones.<sup>9</sup>

Lastly, the Ukraine crisis is likely to speed up the re-regionalisation of value chains. Ukraine's production capabilities are severely impaired,<sup>10</sup> and Western countries have agreed on a set of powerful sanctions targeting Russia.<sup>11</sup> Western companies are pulling out of Russia because of these sanctions, and many more are boycotting the country, even if not forced to do so by the law.<sup>12</sup> Companies around the world are re-evaluating their sourcing strategies in an attempt to reduce dependencies on Russia for transportation and raw materials, and China for components and finished goods.<sup>13</sup> The war has had a massive impact on transportation and logistics, as train lines between the EU and China (through Ukraine and Belarus) are disrupted and air transport is also blocked.<sup>14</sup> Producing closer to home promises lower costs and lesser risks of supply interruptions.

Russia's war on Ukraine is likely to further escalate, and the Western alliance will then react with additional economic



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sanctions. Moscow would in this case probably restrict exports of energy resources, metals, minerals, and agricultural products to Western countries. It is also likely to shift its economic focus towards Asia, deepening ties with China. Beijing will continue its decoupling from the West, heavily subsidising R&D and the production of critical technologies. It is also likely to continue to increase its global influence by investing more in the Belt and Road Initiative. It will probably also build up a new payments system, offering an alternative to SWIFT. Conflicts in the Indo-Pacific region are prone to escalate with China becoming increasingly aggressive towards Taiwan. Western companies will speed up the restructuring of their value chains, while governments heavily support their economies to advance the digital revolution and the green transition and to stabilise economic growth and employment. The war will thus fundamentally alter the global economic and geopolitical order.

## Health Check WTO: Multilateralism on Life Support?

A strong, healthy WTO is needed now more than ever to help navigate governments and businesses through these troubled times. However, the organisation is in its deepest crisis since its creation. All of its pillars—trade liberalisation and rules-setting, trade policy monitoring, and dispute settlement—face huge challenges.

As more countries have joined the WTO and tariffs have decreased considerably, multilateral liberalisation has become increasingly difficult. Since the Uruguay Round, no comprehensive trade agreement has been achieved, with the exception of the Trade Facilitation Agreement. At the last Ministerial Conference in Buenos Aires in December 2017, members failed to secure any multilateral outcome. For years, WTO members have shown little

appetite for further trade liberalisation. In addition, the WTO's rulebook neither fully reflects the characteristics of modern trade nor does it answer sufficiently to the world's biggest challenges. It has little to offer regarding digital trade and is weak on industrial subsidies. There is also little in the WTO framework on labour and environmental issues.

Additionally, existing WTO provisions are being abused, circumvented, or ignored by major trading countries. Deep divisions among the 164 members prevent the updating of existing trading rules, most of which were crafted in the 20th century. The world has fundamentally changed since China and Russia joined the WTO in 2001 and 2012, respectively. It is increasingly struggling with competing models of economic governance, values, and world views, and this is likely to worsen in the coming years.<sup>15</sup>

In December 2019, the WTO's dispute settlement process broke down as the US blocked the appointment of new appellate body (AB) members. Without a functioning AB, appealed panel rulings are placed in limbo, delaying the enforcement of WTO obligations indefinitely, and consequently weakening the organisation's effectiveness. While some countries have presented proposals for a reform of the dispute settlement process and the AB, the US does not seem keen on reviving the mechanism, pointing at considerable deficits regarding the AB.

Following the postponement of the 12th Ministerial Conference (MC12) in late 2021, the WTO Secretariat is trying to keep up the negotiation momentum, with mixed results. One success relates to trade in services. In early December 2021, more than 60 member countries successfully concluded negotiations of the WTO Joint Statement Initiative (JSI) on Services Domestic Regulation. The initiative aims at simplifying unnecessarily complicated regulations, ease procedural hurdles, and increase

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transparency and fairness. The participating members are to make specific commitments by the end of 2022.<sup>16</sup>

Another positive sign is the provisional compromise to waive intellectual property rights for COVID-19 vaccines between the EU, the US, India, and South Africa. However, there is still some controversy around the agreement.<sup>17</sup> While some criticise that it goes too far, others are disappointed that it only covers vaccines and not treatment for COVID-19. Furthermore, while the compromise has been negotiated by the European Commission, the EU member states still have to consent to it. Only when the four countries have found a final compromise will it be presented to all 164 WTO members, who then need to reach consensus for the agreement to enter into force.<sup>18</sup>

The MC12 is scheduled to take place in mid-June 2022. However, the road to a successful ministerial remains rocky as many countries have objected sitting at the same negotiation table with Russia as long as the war continues.

## What the Future Holds

What is in store for the multilateral trading system? While uncertainties concerning Russia's war on Ukraine remain, there are two possible scenarios for the WTO in the coming months amid the likely fragmentation of the global economy (as described above).

- **Scenario 1: WTO Becomes Irrelevant**

The number of trade conflicts increases dramatically; the WTO dispute settlement system is hardly able to keep up. Several countries appeal cases after the first panel report and consequently, these end in limbo as the appellate body remains dysfunctional. While countries are still using the WTO to solve disputes, many take immediate unilateral action or

resort to bilateral dispute settlement mechanisms. The MC12 is cancelled as countries are not willing to sit at the negotiation table with Russia. Negotiations on fishery subsidies and on the TRIPs waiver fail, and reform efforts are bogged down. As plurilateral initiatives within the WTO face increasing headwinds and critical mass (a prerequisite of plurilateral agreements on trade liberalisation) cannot be reached, countries take these initiatives outside the WTO. While bilateral and plurilateral trade agreements have always been a feature of the global trading system, their numbers are increasing, with many being partial agreements that do not meet the criteria of the WTO and are incompatible with the rulebook. More and more countries are turning their back on the organisation, investing in new initiatives, which are considerably more discriminatory. The WTO loses relevance and is less and less able to ensure open and rules-based trade.

- **Scenario 2: A New Impetus for WTO**

WTO members acknowledge the seriousness of the situation and show greater willingness to compromise. MC12 takes place, and members conclude negotiations for a comprehensive agreement on fishery subsidies. A compromise for a TRIPs waiver for COVID-19 vaccines is presented and agreed upon. Members mandate the WTO, UN Conference on Trade and Development, and FAO to set up a working group to analyse the effects of Russia's war on Ukraine on global agriculture markets. Furthermore, members agree on a work plan to help Least Developed Countries recover from COVID-19 and deal with increasing prices for agricultural products and food shortages. The plurilateral JSIs gain speed, particularly on micro, small and medium enterprises and electronic commerce. Negotiations on environmental goods and the WTO's pharma agreement are revived. While no far-reaching reforms are agreed upon at MC12, members set up a roadmap to address the WTO's structural deficits, particularly the dispute settlement mechanism.

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Following MC12, more countries join the JSIs on sustainability issues, advancing discussions on trade and the environment. The US tables proposals for a reform of the WTO's transparency mechanism and for trade dispute settlement, particularly the AB. This way, it initiates a real discussion on reform that can eventually lead to a revival of WTO's third pillar. The WTO, thus, receives the long-awaited impetus to allow it to be an effective guardian of open and rules-based trade.

Unfortunately, Scenario 1 currently seems to be much more likely than the positive reform Scenario 2.

## What Needs to be Done<sup>19</sup>

Global economic growth, prosperity, and well-being will be severely impacted, if Scenario 1 becomes reality. The following steps need to be taken to ensure Scenario 2.

- **Short and Medium Term**

It is pivotal that MC12 takes place in June 2022, despite the difficulties arising to the negotiations due to the war on Ukraine.

- **Export Restrictions:** The pandemic showed that export restriction or bans are bad policy instruments; they fail to secure supply of critical products for the implementing country and also hurt the global economy by severely disrupting supply chains. Amid the Ukraine crisis and the many bottlenecks in global supply chains, the risk of new export barriers is on the rise again. While sanctions on Russia and export restrictions blocking access to goods and technologies are instrumental in countering Moscow's aggression, other export barriers could easily exacerbate global commodity shortages and pose major risks to food security and health in many countries. Thus, WTO members should commit to refraining from new export barriers, particularly on energy

resources, metals, minerals, and agriculture products.

- **Trade and Health:** WTO members should agree on strengthening the positive link between trade and health. The US, EU, India, and South Africa should present their compromise on the TRIPs waiver to the other WTO members. If consensus cannot be found, members should agree on a roadmap for further negotiations.

WTO members should also revisit the plurilateral pharma agreement; an update of the products covered and a wider WTO membership will enhance its effectiveness. Furthermore, interested WTO members should explore the possibility of a plurilateral COVID-19 Vaccine Investment and Trade Agreement that focuses on accelerating the production and distribution of vaccines. In this regard, it is important to design this initiative to support COVAX. Another component of this agreement, apart from production commitments, should be that signatory countries pledge to refrain from export restrictions on supplies of vaccines and related materials.<sup>20</sup>

- **Agreement on Fisheries Subsidies:** WTO members need to agree on a compromise on fishery subsidies. A failure to conclude an agreement will be detrimental from an environmental perspective and will undermine the WTO's credibility. On the contrary, if WTO members are able to craft and adopt an environmentally ambitious trade agreement on fisheries subsidies, it will show that the organisation can live up to the sustainable development objective in its charter.

- **Long-Term**

The WTO needs serious reform. The goal should not be re-establishing the status quo but adapting the multilateral trading system to the realities and necessities of the 21st century. If

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multilateral progress is not possible, willing countries should advance negotiations for plurilateral agreements within the WTO, while ensuring that these do not hurt the unity of the organisation.

- **Updating the WTO Rulebook**  
The WTO currently offers few rules on digital trade. A comprehensive agreement on e-commerce is needed to prevent a fragmentation of world markets. The plurilateral JSI on e-commerce, which aims at setting new global rules for digital trade and removing tariff barriers, is a step in the right direction.<sup>21</sup> In addition, WTO members should make permanent the moratorium on customs duties on electronic transmissions. The moratorium prevented the imposition of burdensome tariffs, and a termination will lead to serious new trade barriers that would also hamper trade and development.<sup>22</sup>

Additionally, WTO rules do not adequately address the role of state-owned enterprises and industrial subsidies. Given the geopolitical environment, subsidies can be expected to rise further in the coming years. As a first step, WTO members need to increase transparency for subsidies, revisiting the enforceability of notification requirements. Furthermore, if a multilateral agreement is out of reach, willing countries should push for a plurilateral agreement that could build on the trilateral initiative by the US, the EU, and Japan to tackle non-market policies and practices.

Trade can play an important role in fostering the green transition. However, for the WTO to perform better, new rules on sustainability are needed. The JSIs on

environmental issues are a step in the right direction, but these efforts need to go further. Negotiations on an Environmental Goods Agreement should be revived to promote the diffusion of green technologies by lowering trade barriers. In addition, WTO members should agree on a concrete roadmap to phase out fossil fuel subsidies and ban support for new coal-fired electricity generation plants while allowing carbon abatement upgrades to existing facilities. WTO members should also agree on a roadmap on circularity, including developing a better knowledge base on how trade interacts with the circular economy. In the long-term, WTO members should take concrete steps to facilitate trade in key areas of the circular economy.

- **Reforming the WTO Dispute Settlement Mechanism**  
The two-tier dispute settlement mechanism has been a crown jewel of the WTO. Restoring and reforming the mechanisms must be a top priority for members. Elements of such a reform could include having a mandatory, binding, independent, and swift dispute settlement; maintaining a two-tier system of dispute resolution; and preserving the negative consensus rule to avoid blockage. At a minimum, WTO members should engage in an open and frank discussion, where a landing zone for reform could be.

A strong WTO is more needed than ever. WTO members need to acknowledge that the organisation stands at a crossroad. The multiple global crises could serve as a catalyst for reform, ensuring a rules-based trading system for the future. The risk is high that, in the future, the rule of power and not the rule of law will reign in international trade. Unless WTO members stop standing by and blocking reforms, the organisation will continue to lose relevance.

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Women's economic security has grown in increasing importance across the G20 against a backdrop of declining lifetime outcomes for women.



# Anticipate, Reform, and Elevate: Looking Toward W20 India 2023

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In the eight years since the G20 established an official engagement group representing the interests of women across the world's 20 largest economies, the Women 20 (W20) has made a significant contribution to international policy impacting women globally. What started as a civil engagement group, women's economic security is now central to the agenda of the G20. Leaders' statements successively endorse policy recommendations that focus on women. In the pre-Covid pandemic world, women faced significant disadvantage when it came to accessing secure livelihoods. The Brisbane '25x25' goals, announced in 2014, sought to increase labour force participation of women by 20 percent in 2025,<sup>1</sup> and is one of the important commitments of G20 leaders focused on women's economic security. However, in a world trying to recover and, in some cases, still very much living through the pandemic, women have been disproportionately impacted across the globe.<sup>2</sup> Additional caring responsibilities, increased domestic violence, decreased employment opportunities, and less access to government support means that the impact of the pandemic will compound women's existing disadvantage over their lifetimes.<sup>3</sup> This means that the role of multilateralism and the G20 in advancing women's economic security is more important than ever.

While the urgency of securing the economic future of women across the world is glaringly clear, the multilateral system is under strain. The increasingly complex and crowded geopolitical environment in the Indo-Pacific, the United States-China trade war, and more recently, Russia's invasion of Ukraine means the capability of the multilateral system to address cross-border challenges is difficult. This means that the G20, and others, must focus on what it can achieve with tangible impact—women's economic security is one of these areas.

This paper sets out how the gender agenda fits within the G20 system, and through a critical analysis of trends in the W20, makes three recommendations for India's presidency of the G20 where it can anticipate, reform, and elevate the W20 agenda.

## What is the W20?

Following the G20's commitment to the Brisbane 25x25 goal, the W20 was established during Turkey's presidency in 2015.<sup>4</sup> With official engagement group status, the purpose of the W20 was to provide a platform for entrepreneurs, business people, civil society, academia, and others to provide recommendations to the G20 on women's economic security. The official engagement groups sit outside the government-to-government tracks, and to some effect, democratise the G20 system. The 'arms-length' approach to the W20 has its advantages and disadvantages. On one hand, the strictly non-government representatives can be more candid and creative with their insights and recommendations. On the other hand, the fluctuating levels of funding and informal processes means influence is inconsistent.

Given that G20 countries know that increasing women's participation in the economy will grow domestic and global gross domestic product, it is unsurprising that in subsequent years after Turkey, the W20 often enjoyed high levels of access. In 2018, President Mauricio Macri accepted the policy recommendation of the W20 on stage,<sup>5</sup> as did Prime Minister Abe Shinzo in 2019 in Japan.<sup>6</sup> In Saudi Arabia, the government committed significant resources that enabled an administratively effective W20 office, and this was especially important during the first year of the pandemic.<sup>7</sup>

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W20 processes, at one point in time, generally (it changed somewhat from year to year) involved some roundtables scheduled throughout the year and culminated in one final Summit in the host country. The early roundtables were often held in Europe or the US and coincided with other major gender-focused events. These roundtables were often accessible to the delegates who did not travel via video conference. Most of the work toward the W20 final communique largely took place online and via email, and during a negotiation that often drifted late into the night once at the final summit. Often, efforts are supported by knowledge partners including other multilaterals such as the Organisation for Economic Co-operation and Development or the private sector such as McKinsey and Co.

In recent years, however, this relatively lean process has been replaced by an annual calendar of programming involving kick-off and closing events, thematic-related conferences, various taskforces, and working groups. Given the varied experiences of COVID-19, these events were conducted online, sometimes in person, and sometimes through hybrid delivery. This is not necessarily a bad thing, but alongside other movements within the G20 mechanisms focused on gender means that the W20 is often lost and drifting on the side-lines.

The W20, in some ways, has become a victim of its own success. In 2018, the Business Women's Leaders (BWL) Taskforce was established to focus on driving "actionable, measurable, and results-driven solutions to impact women's economic empowerment".<sup>8</sup> Heads of government appointed their country's representative, and effectively became an official, yet non-government voice for gender in the G20. The BWL Taskforce did not have an official pathway for advocacy with

the W20, but often its members were W20 delegates. For some, this opened up a pathway for communication but for others, it seemed to confuse the business efforts within the W20 with the BWL Taskforce, whose delegates had the approval stamp of their relevant head of government.

In 2020, the BWL Taskforce was dismantled and replaced with a new initiative, the G20 Alliance for the Empowerment and Progression of Women's Economic Representation (G20 EMPOWER), an initiative led by Canada.<sup>9</sup> EMPOWER's purpose is also to advance women's economic security but again, with a government-appointed representative from the primary sector. In some respect, the establishment of EMPOWER further embedded a power structure where it received support (and thus, resources) from the government tracks of the W20. Today, EMPOWER's Twitter account states that it is the most "inclusive and action-driven alliance among businesses and governments to accelerate women's leadership and empowerment".<sup>10</sup> It cannot be denied that there is a power struggle between the two mechanisms within the G20, and the W20 worries it is increasingly irrelevant. In fact, the opposite is true, especially given the newly created Ministerial Conference on Women's Empowerment in Italy in 2021 and carried forward by Indonesia in 2022.<sup>11</sup> The objective reality is that gender is now more embedded in G20 mechanisms than ever before, and for this reason, it is worth close examination for what India can do to ensure the W20 (and other groups) continue to have an impact where it matters most—to women.

### Recommendations for India 2023

It is something of a harsh reality that the W20 needs some reform.

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India is well positioned to do this in 2023 when it takes on the Indian presidency. First and foremost, as the newest member of the G20 troika, India should, of course, work closely with the current President, Indonesia, to learn and understand how G20 diplomacy functions. In doing so, India can also look at the past to see how it can best allocate its resources and tighten the impact of W20. Based on this, there are three things India can do to ensure the W20 succeeds—anticipate, reform, and elevate.

### Anticipate

India should anticipate the W20 and start from a position of expertise, rather than learning. The broadening of the W20 agenda to include a year-long calendar of events often focus on the thematic areas such as health or entrepreneurship. Increasingly it seems that rather than assuming expertise of the W20, these events have become a theatre for diplomacy and a process of educating delegates on the topics at hand. This is problematic, that W20 is largely an international grouping of volunteers with limited resources. At the same time, they are often world-leading experts including doctors, engineers, entrepreneurs, and economists. This means that going into the W20, the bench of expertise is already there and ready to work. They usually do not require days of learning about the latest developments in gender-issues, but are the ones with that knowledge. While there is the existing bench of expertise for India to draw upon, working with knowledge partners for new and important updates and developments is critical. This might be worked on in the early months of the W20 and delivered to delegates in the form of a short briefing. It means less events and really critically, less funding required of already

resource constrained delegates. After seven years of the W20, the issues are known, and the focus should turn to solutions early in the G20 year.

### Reform

Process reform of the W20 should come from a place of its strengths, rather than a place of its increasingly side-lined activity to the G20. There are two components to the process reform that India could steer in 2023. First, the W20 should be seen as a resource to the G20 with expertise on gender. With every official statement that is released by the G20, it should be considered by a representative of the W20 to identify how the policy recommendations will impact women. This might be by providing the W20 secretariat with observer status at Sherpa and Finance track meetings, or through a consultative process with a short period of response time. The W20 should be seen as a trusted partner that can assist the G20 with its policy recommendations. For a grouping where not one head of government is a woman,<sup>12</sup> this is particularly important.

Second, the focus of the W20 should return to its communique and policy recommendations that can be developed from the benchmark of knowledge established when the W20 is anticipated. The W20 should return to a model of a final communique negotiation in India, with a handful of roundtables hosted in a hybrid model to ensure maximum participation by delegates. This will also ensure the W20 continues to have the high-level delegates it has enjoyed in the past, because it is a focused and sharp commitment alongside their other commitments.

## Anticipate, Reform, and Elevate: Looking Toward W20 India 2023

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### Elevate

India should elevate the W20 within the G20 system. The W20 needs to return to an era of access to high-level ministers and heads of government. This means that the W20 (and other official engagement groups) are provided a formal pathway to G20 leaders to deliver policy recommendations. The leadership from India, to re-orient the W20 to a consultative mechanism in the G20, can be part of this elevate process. It highlights to the G20 community the capability and importance of W20 contributions to policy making. India can also do this by committing ministerial and senior official representative and lines of communication to the W20. Outlining these pathways and making it clear from when India takes on the presidency is one way that can signal to the W20 its elevated status. One thing that delegates look for is signals of leadership from the W20 presidency to understand that direction, but also whether their efforts and resources are worthwhile. Casual observations suggest that the sunk cost fallacy does not apply, and delegates disengage when they cannot easily read what the functional purpose of their work is.

### Looking Back to Look Ahead

Women's economic security has grown in increasing importance across the G20 against a backdrop of declining lifetime outcomes for women. The W20 and other groupings such as the BWL Taskforce and EMPOWER have played an important

role in advocating for policy recommendations that will positively impact women. Despite this, it is important to spend time focusing on where the W20 is going and what it has to offer the G20. This is not from the perspective of the 'gender agenda', but how that agenda is advocated for and feeds into an increasingly complex multilateral system that is under strain.

With India's G20 on the horizon, now is an opportunity to not only reflect with the privilege of time before the presidency commences, but also to consider how it will take leadership of such a critical policy agenda. The W20, as with much of the G20, is difficult to fully understand where public records are effectively wiped with every new presidency. There is much to learn from previous delegates and presidencies about what can be done to fully benefit from the expertise within the W20. For India, the first thing should be starting the W20 from a place of expertise. This means anticipating what the knowledge partners, delegates, and stakeholders have to offer. Assume their starting point as experts, and place this at the front of the W20. The second thing India should do is reform processes that are increasingly sidelined and ineffective. Re-orient the W20 to an expert group that can inform and advise official tracks of the G20. Take a lean approach to the W20 and re-focus its work on the communique with limited side-events. The third thing India can do is elevate the W20 with formal pathways to official tracks and senior representation.



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The dominant and narrow perspective that the pandemic was a biological problem requiring biomedical solutions at the individual level has been catastrophic.



# The Pandemic at 24 Months

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11 March 2022 marked two years since the World Health Organisation (WHO) declared the novel coronavirus (COVID-19) outbreak—originating in Wuhan, China—had turned into a global pandemic. Over the subsequent two years, no country has been able to hold off the virus at its national borders. And no country—or its people—have been able to avoid impact from responses to contain the pandemic, from local to the global. It has been truly a modern, global event. Every single person on the planet has been harmed by the pandemic, not least by the addition of a new threat to their health and wellbeing. The Economist estimates close to 24 million people have died so far due to the virus and pandemic responses, which is four times more than the official COVID-19 death statistics. And the number of deaths continue to grow daily, now largely in low and middle-income countries.<sup>1</sup> Beyond deaths, the long-term health harms from infections ('long-covid') and mental health impacts are still unclear, but certain. The knock-on effects in terms of social, political, economic, and other harms will be felt for years to come—particularly by the worst-off and vulnerable—within and across countries.

And on this anniversary day, China, once again, implemented an enormous lockdown in Changchun—a city of over nine million people—aiming to stave off rising infections.<sup>2</sup> This drastic approach is being repeated—despite the advent of vaccines, mass testing, and lower case-fatalities—because people are still spreading infections and partially to prevent further damage

to its global standing from another global wave or variant originating within its borders. And a new wave of infections and hospitalisations in Europe and the United States (US) seem to have already begun, following on from their removal of all disease control restrictions in order to return to normalcy.<sup>3</sup>

Furthermore, a few days before the two-year anniversary, Russia invaded Ukraine, further exacerbating a refugee crisis and raising the possibility of a protracted war in Europe, or worse. The invasion destabilises the world order as Russia's status—as of one of the big geopolitical powers—is now in play as the entire country and its oligarchs are being isolated, domestic dissent is now visible and increasing, and its threat to countries beyond Ukraine will not go unchecked. It would require wilful blindness to not see the timing of Russia's invasion of Ukraine as being linked to how our handling of the pandemic has produced disarray in geopolitics, marginalised the United Nations (UN) and other international organisations, and worsened the divisive domestic politics inside the G7 and broader G20 countries.

To a great extent, much of this current state of the world is due to human health being profoundly misunderstood and neglected in international relations as well as national politics. For decades, the focus has largely been on economics (growth, trade, finance), security, and culture wars/populism. For example, Dani Rodrik, a leading economist and analyst of the problems of 'hyper-

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globalisation' only began to appreciate and engage with the concept of public health (as something distinct from healthcare) in 2020.<sup>4</sup> Beyond academia, even senior statespersons such as Mikhail Gorbachev<sup>5</sup>, Madeleine Albright<sup>6</sup>, and Henry Kissinger<sup>7</sup> were taken aback by an infectious disease being a threat to domestic stability, multilateralism, and the liberal world-order.

How most countries, international organisations including UN agencies, corporations, international NGOs, and some billionaire 'super-citizens' have responded to this pandemic over the past two years can best be described in terms of failure. Despite political leaders and major actors—in the global COVID-19 response—putting forward a positive spin on their efforts, the reality shows otherwise. The rapid development of COVID-19 vaccines is put forward as an epic success of government-supported global science and cooperation. But it has also exacerbated global tensions between the G7 and poorest countries, bringing back the concept of racism in international relations. There is little assurance that the pharmaceutical success will adequately translate to ending the pandemic harms anytime soon—except, perhaps, for the wealthiest people and countries—barring new variants. It would require some magical thinking to conclude that, despite the profound failures and current disarray, we and our leaders are on a path to being better prepared for the next pandemic or even epidemic.

Two principles can help understand why we are not at an end of this pandemic—despite the boon of vaccines—and why we are

not prepared for the next pandemic:

1. Infectious disease emergence and spread, and health issues generally—whether at individual, national, regional, or global levels—are never simply biological events requiring just a biomedical solution;
2. Pandemic (and outbreak or epidemic) preparedness cannot be adequately achieved in isolation from improving the health of populations, particularly the most deprived.

### Biomedical Fetishism and Incompleteness

In early 2020, the world's attention was focused on the biological and epidemiological aspects of the novel virus. What kind of a virus is it? How does it get transmitted? How fatal is it? How transmissible is it? Answers to such questions are crucial to responding effectively to any outbreak. But what is astounding—especially in light of enormous learning from recent global experience with outbreaks of AIDS, Ebola, Tuberculosis, Zika, and so forth—is that there was utter lack of attempts to understand and integrate how human diversity and social forces at various levels drive the spread of infections across and within countries. To put it simply, the dominant and narrow perspective that the pandemic was a biological problem requiring biomedical solutions at the individual level has been catastrophic. Vaccine

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inequity is only a symptom of this fundamental fixation with the narrow biomedical perspective.

Infectious diseases are social phenomena; infections are transmitted from person to person through social interactions, profoundly determined by people's biological diversity (age, sex, morbidities, pregnancy, reasoning capacity, etc) as well as their behaviours that are, in turn, shaped by social and natural environments. We learned this from decades of dealing with other infectious disease outbreaks and pandemics. Focusing exclusively on the biology of the virus and viewing people as individual, passive biological units, produces incomplete explanations about causes beyond individual bodies, blinds us to social distribution patterns of disease (inequalities), and results in misdirected or inadequate responses. Three key moments—where this narrow perspective dominated and human diversity and social analysis were excluded—include the initial lockdowns in China, the early disease modelling in the UK, and WHO's advice to countries with the mantra of “test-trace-isolate”.

The Chinese government implementing lockdowns on cities with millions of people was not only unprecedented in terms of scale, but also scientifically unknown and unproven. Historically, infectious disease outbreaks have been dealt with through a ‘contain and control’ approach. Those who are infected or thought to be infected are separated from the not-infected to contain spread. In a small, localised outbreak, it can

be effective to quickly apply this approach as it involves few people. Immediately after an outbreak, quickly identifying and isolating human bodies with the virus can effectively contain it from spreading. But the greater the spread of infections across people, time, and geography, the cause of infections is no longer just the harmful organism. Human behaviours—affected by social factors (cultural, legal, economic, political, etc.)—start to profoundly impact the spread of infections. It becomes more necessary to identify how human diversity and social forces (from local to global) are impacting the scale of the spread and population distribution of the infections, and then integrate that evolving knowledge into the containment response. The response entails addressing both the biological and social factors driving spread of infections; and it requires social cooperation, as infections spread from one person to another.

China's approach of locking down cities—well after infections were spreading widely—reflects the absolute denial of the importance of human diversity and social factors affecting behaviours driving the spread. Officials thought that what could be done to a few individuals in a small outbreak, could be done to millions of people, expecting the same results. However, this is where the biomedical perspective fails profoundly. While the quarantines may have curtailed infections to some extent, they also spread infections outward to other countries as hundreds, perhaps thousands, of infected people fled the country.

The second key moment was also in early 2020 when

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mathematical modellers of infectious diseases at London's Imperial College predicted large scale deaths in the UK and the US.<sup>8</sup> Drawing on initial biological information about the virus and patients in Wuhan, the modellers aimed to identify the epidemiological dynamics of COVID-19 in the UK and the US, without and with interventions. The modellers, however, used assumptions that all people would have equal risk of exposures, of infections taking root, of proceeding to serious disease, and of death. The modelling did not include any human diversity or differences in how different social contexts will affect individuals' and groups' vulnerability to infection and death. The frightening numbers of predicted deaths (500,000 in the UK, 2 million in the US)—following on from China's large-scale city quarantines—motivated national lockdowns in the UK, the US, and then quickly around the world.

The models also presented the picture—which was repeated by politicians and news headlines—that anyone could die from the disease. Any experienced infectious disease expert would have known in early 2020 that the coronavirus is not one of the most dangerous viruses that will kill anyone who is exposed. We know from history and from recent experiences with other epidemics and pandemics that infectious diseases will affect those who are biologically and behaviourally least able to protect themselves.

The third key moment occurred at the global level when WHO began to daily broadcast around the world the mantra of “test-trace-isolate” (and later “support”). The basis of this mantra was the familiar ‘contain and control’ approach to small outbreaks. It may

have made sense to think that an initial small number of infected people entering countries is similar to a localised outbreak—officials could quickly identify and isolate the individuals at the borders. There is also the powerful idea that biological science and natural science is generalisable and applicable to all humans and all places. For example, results from medical research on people in one part of the world are often applied to people in other parts; and the laws of physics in one part of the world are the same in other parts. As the ‘contain and control’ approach is based on scientific reasoning, it seems plausible to think it can be applied anywhere in the world.

But what WHO's mantra obfuscated or elided was that the pandemic was not spontaneous and random little outbreaks in separate national-units. In our hyper-globalised world, all countries are inter-connected, and the infections were spreading because of the trans-national social connections and contexts we have created. By just focusing on the actions governments can take at the level of individuals within the country, the mantra took attention off the dynamics occurring and actions needed at the transnational and global level. For example, thousands of people carrying the virus were travelling on major airplane routes from China to global metropolitan cities, and these infections would then cascade to smaller cities and less connected countries. The role of these transportation routes are examples of significant international legal, economic, political, and other factors that were driving the spread of infections across countries. And the mantra repeats the error of thinking that what may be done to a few individuals can be done at ever increasing scale with the same results.

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This inadequacy of the test-trace-isolate mantra—in the face of non-biological drivers of infections—raises the important issue of whether WHO is capable or allowed to identify health threats and analyses that are beyond individual level biomedical factors. The mantra also did not help highlight the fact that some individuals in every country would be more vulnerable to becoming infected because of their diversity in biology and abilities to protect themselves. That is, the mantra neither addressed the global social factors driving the spread of infections across countries, nor did it go beyond the biomedical focus on individuals.

The initial China lockdowns, early disease modelling, and WHO's contain and control mantra, all focused narrowly on the biology of the viruses and individual human bodies, which contributed to the rapid lockdowns of entire countries across the world. The hard lockdowns in the beginning of the pandemic, like in China, were all the scaling up of the “contain and control” approach to entire populations without precedent and were scientifically unproven. The three events also contributed to the focus on individual-level biomedical interventions (vaccines) and other commodities such as tests, PPE, masks, and medical treatments. To be absolutely clear, all these biomedical interventions are hugely important in addressing the pandemic, but they are only part of the solution. Richer analysis of human diversity and social drivers of the global and local spread of infections, and good modelling of social distribution patterns could have informed much better lockdown policies and highlighted the importance of social cooperation. In particular, governments could have been compelled more to protect the most vulnerable (older people, biologically and psychologically impaired, social excluded groups, etc), rather

than largely focusing on policies protecting the average healthy citizen.

To put it another way, had some of the earlier affected countries known that infections would largely lead to the deaths of older people—and those biologically and socially vulnerable—would they have implemented the lockdowns, or implemented them in the way they did? The individual level biomedical reasoning behind the contain and control approach cannot be applied to entire populations, and it does not inform us about social distribution patterns or the causes for such patterns.

### Treating Disease Versus Addressing Causes

The vaccine inequity and persistence of pandemic deaths that we are now witnessing is not just about pharmaceutical greed, dysfunction of UN organisations such as the World Trade Organisation, or even of capitalism gone amok. The fixation on a biomedical intervention namely, a vaccine, as the best or ideal solution motivated some national leaders to see development and procuring of vaccines as a competition. Clearly Trump and his administration had established that US national interests would always prevail even prior to the pandemic. And in early 2020, Trump's behaviour towards even America's closest allies—such as by commandeering global supplies of masks, ventilators, and PPEs—cast doubt that the US was going to share any knowledge or actual vaccines. The UK found itself in the difficult position of neither being able to rely on the US



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nor on the European Union because of the acrimonious exit from the union. So, the combination of the narrow biomedical perspective, that points to individual-level biomedical interventions and fierce distrust and competition even among the G7 countries, produced a race in the development and domestic manufacturing of vaccines. Billions of public dollars, pounds, and German euros, were put into vaccine development and purchases of various types of vaccines. While the discovery of effective vaccines in a short time is a stupendous achievement, the biomedical perspective does not provide much insight into how to ensure access to the biomedical solutions to those who need it.

Despite the current situation, there is little indication to believe that those who seek to prepare the world for the next pandemic are not still trapped in the biomedical perspective. For example, the Coalition for Epidemic Preparedness Innovations recently raised US \$1.5 billion from various governments and funders in order to ensure that they will have safe and effective vaccines within 100 days of the next pandemic or epidemic.<sup>9</sup> As vital as these vaccines may be, the effort does not even try to address the root causes of the next pandemic. It just aims to provide the biomedical solution to (only) the next pandemic or epidemic. Preparedness in this form is clearly only a partial answer.

The emergence of a novel virus and subsequent outbreak in Wuhan was not a natural, random, or purely biological event. The virus emerged as a result of various policy choices and neglect regarding sites of human-animal interactions (“wet markets”); and the infections spread in a social context where free flow of information, particularly regarding harms under the domains of government agencies, is suppressed. In turn, the

central government’s approach to containing infections after it was widespread was by isolating millions of bodies through brute force, which pushed the infections outward toward other countries. The viruses were then carried across major international flight routes to major metropolitan cities, where they spread to smaller cities, as well as to major cities in smaller countries.

Within countries—especially in the earliest affected large countries such as the US, the UK, and Italy—the quality of government, public finances, functioning of public institutions, and federalist structures profoundly affected the spread of infections and the policies implemented in response. The subsequent deaths of older people, the physically vulnerable, and socially marginalised can be described as disproportionate only if it was not known how infectious diseases impact societies. Infectious diseases spread in concert with individual biological diversity and socially-created differences in abilities to control one’s own body and behaviours. The more biologically vulnerable and the more social factors constrain one’s ability to protect one self, the more likely one is at risk to become infected and suffer. Preventing the next epidemic or pandemic entails improving those biological vulnerabilities, the social environments that constrain people from being able to protect themselves, and addressing the bio-social drivers of behaviours that spread infections across countries. This will involve both biomedical interventions, such as ensuring wider access to healthcare, as well as addressing the important social factors that impact health, such as good governance from the local to the global levels. Perhaps, most of all, it will require elevating health to be a central concern of national governments and the international order.

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The Indo-Pacific is more than a place: It is an idea and a wave sweeping global diplomacy.



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The primary contest for the future of the Indo-Pacific region is simple: It is about preventing Chinese hegemony while avoiding catastrophic conflict. After all, the Indo-Pacific concept has become a useful organising principle for a wide range of nations seeking to manage and balance Chinese power. However, there is now a secondary contest for the Indo-Pacific—or more accurately a contest over the idea of the Indo-Pacific—in terms of what constitutes the most effective set of regional policy responses to the China challenge. The contours of this new diplomatic terrain were starkly laid out in 2021 in contrasting visions by a range of generally like-minded nations and their groupings.

The Quadrilateral Security Dialogue (Quad) and the trilateral security partnership between Australia, the United Kingdom, and the United States (AUKUS) are strong manifestations of balancing strategies in the Indo-Pacific. They are also complementary: If AUKUS can deliver a stronger Australia, then Australia will become a more capable partner in the Quad. However, the challenge now for their member states is to reconcile these exclusive balancing arrangements with the more inclusive approach advocated by Association of Southeast Asian Nations (ASEAN) and the European Union (EU). This will require Australia, in particular, to be more effective at articulating why AUKUS serves the interests of many partners, or at least why it does not undermine them. Canberra can make a sound case that AUKUS is, at heart, about improving national deterrent capability, not building a new alliance. At the same time, EU nations will need to openly acknowledge why balancing and deterrence postures may be increasingly necessary in a world

where China–Russia collaboration threatens stability at both ends of Eurasia.

## AUKUS and After: Submarine Turbulence and Deep Ocean Currents

The diplomatic storm of the Australian-British-American technology deal called AUKUS has become a familiar story. It involved Australia's sudden abandonment of the programme with France's Naval Group to build a fleet of advanced diesel-electric submarines.<sup>1</sup> Instead, in September 2021, Australia announced an extraordinary agreement with the US and the UK to acquire nuclear-powered vessels, either the US Virginia-class or the UK Astute-class SSN.<sup>2</sup>

The French government cried betrayal and deception over the termination of a contract that reflected a wider strategic partnership.<sup>3</sup> Australia insisted that it was simply pursuing the best military capability to protect its national interests in response to the growing threats from China. The mistrust will be slow to subside. But deeper ocean currents were revealed. For another character in this drama was something called the “Indo-Pacific”. A few years earlier, this word was barely heard in international affairs; now it has become a powerful diplomatic mantra—a term with many useful meanings, including a code for what to do about a powerful and assertive China.

“The future of the Indo-Pacific will impact all our futures,” said Australian Prime Minister Scott Morrison at the AUKUS launch. His British counterpart explained the new three-nation

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partnership as, “working hand in glove to preserve security and stability in the Indo-Pacific.” True to the American tradition of grand foreign policy rhetoric, President Biden declared that, “the future of each of our nations—and indeed the world—depends on a free and open Indo-Pacific enduring and flourishing in the decades ahead.”<sup>4</sup>

Also in September 2021, the leaders of the so-called Quad countries—the US, Australia, India and Japan—convened in Washington for their first in-person meeting of this important new strategic grouping, widely seen as a diplomatic balance to China. With a less confronting agenda than AUKUS, the Quad is more focused on a “public goods agenda” spanning vaccines, technology, environment and infrastructure. The member countries committed to “a region that is a bedrock of our shared security and prosperity—a free and open Indo-Pacific, which is also inclusive and resilient.”<sup>5</sup> This programme has continued into 2022, with Quad leaders convening again on short notice in March to maintain momentum on the public goods agenda, while also managing differences over responses to Russia’s invasion of Ukraine. The leaders reiterated that the primary focus of the Quad should remain the Indo-Pacific.

### A Family Feud Over the Indo-Pacific Idea

Canberra’s diplomatic activism has once effectively propagated the Indo-Pacific as a unifying idea. Now, Australia has become the centre of a family feud in which different democracies are preaching their own versions of the creed. France defined

its outcry over the sunken submarines deal, not in the crude business terms of the global arms trade, but as a regretful “lack of consistency”<sup>6</sup> in efforts to uphold shared interests and values in la région indo-pacifique. After all, on the very same day as the AUKUS bombshell, the EU—long accused of ignoring the tense geopolitical realities of Asia—had released its own ‘Strategy for Cooperation in the Indo-Pacific’.

The European approach was high sounding, but its plea for multilateral diplomacy, inclusiveness and non-confrontation sidestepped the hard question of what should be done if China had other ideas, especially with its escalating coercion of Taiwan. By October 2021, armed tensions were escalating across the Taiwan Strait, with Chinese bombers making sinister daily air shows in skies it contested with the self-ruling island. Taiwanese President, Tsai Ing-wen, declared that “the course of the Indo-Pacific, the world’s fastest-growing region, will in many ways shape the course of the 21<sup>st</sup> century.”<sup>7</sup> That included the increasingly real possibility of catastrophic war.

The Indo-Pacific, then, is more than a place: It is an idea and a wave sweeping global diplomacy. In the past few years, many powers and international groupings have invoked this term to define how they are rising up to the China challenge: The US, Japan, India, Australia, Indonesia, ASEAN, France, Germany, the Netherlands, the EU, Britain, Taiwan and more.

An Indo-Pacific future is rapidly arriving. In early 2021, the new US administration of President Joe Biden hit the ground running with its own evolution of the Indo-Pacific idea: An expansive map

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of what it described as ‘competitive coexistence’ with China. Such a policy was meant to be underpinned by the strengthened engagement of diverse allies and partners. Soon this was manifested in President Biden’s first international summit—the inaugural (if virtual) meeting of leaders of the Quad—followed by an in-person gathering within months. Such Indo-Pacific solidarity was then underscored in a firm American line against China in a diplomatic face-off in Anchorage; and extended a few months later in the Cornwall summit of the G7 and its new democratic partners, Australia, India, South Korea and South Africa.<sup>8</sup> The North Atlantic Treaty Organisation subsequently cast its eye far east, warning that China posed “systemic challenges”.<sup>9</sup> No longer an academic obscurity, the term “Indo-Pacific” is now standard language far and wide. This signifies one thing: The question of what needs to be done to blunt China’s bid to dominate the globally-vital Indo-Pacific region—in security, economics, technology and values—has now become a first-order question in global diplomacy.

## Reconciling Inclusive with Exclusive: Towards an Adaptable Strategy

The Indo-Pacific answer amounts to a practical reimagining of the world map to suit the problem and the times. It reframes an Asia-centric region to reflect growing connectivity and contest across the Pacific and the Indian Oceans, driven in substantial part by China’s expanding interests and influence. This vision is useful to many nations because it explains and encourages the balancing and dilution of Chinese power through an array of new partnerships across collapsed geographic boundaries. We, thus,

have a metaphor for collective action; a code for a pivotal region where China can be prominent but not dominant.

In a global discourse often dominated by Beijing’s transgressions and triumphalism, or simplistic narratives of US-China bipolarity, the Indo-Pacific idea offers a useful alternative. It is about steadiness and solidarity among many nations. It is about incorporating a more powerful China into a regional order where the rights of others are respected, and counter-balancing that power when those rights are not. And that is the point: It should be possible to reconcile the competing exclusive (US, Japan, AUKUS, Quad) and inclusive (EU, ASEAN, India) visions of the Indo-Pacific.

The key here is China’s behaviour: The strategy of others should be adaptable enough to pivot between inclusive and exclusive policy agendas, and to maintain elements of both simultaneously, depending on whether China is choosing to focus more on coexistence or coercion. I would contend that this dynamism has informed Australian policy for some years, even if that is not always apparent, or if its fruits are yet to be compelling. For instance, while placing the Quad and AUKUS together at the centre of foreign policy—as evidenced in the platforms of both major parties in the Australian 2022 federal election campaign<sup>10</sup>—Canberra has quietly strengthened relations with its non-aligned neighbours in Southeast Asia. In 2021, Australia became the first country to finalise a Comprehensive Strategic Partnership with ASEAN.<sup>11</sup> The AUKUS agreement had prompted brief expressions of concern in Indonesia and Malaysia, but received a better reception in Singapore and the Philippines,



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and does not seem to have alienated Australia-ASEAN relations overall. It is also worth noting that any concerns that AUKUS will somehow undermine the Quad were short-lived, more the stuff of excited media speculation than any serious policy thinking in either New Delhi or Tokyo.

A core part of the Indo-Pacific idea is the agency of middle players—not China or the US—in shaping the regional order. In fact, the spread of the Indo-Pacific concept was a quiet achievement from years of activist diplomacy by these powers, notably Australia and Japan. The turmoil of 2020 and 2021, with deepening concern about China as a threat, has had two divergent effects on the choices being made by nations. This captures a tension at the heart of the Indo-Pacific idea. On the one hand, it is about inclusion, multipolarity, risk-management and the choices of many nations across a shared space. But on the other hand, as China-centric rivalries worsen, the pressures will grow to emphasise strategic balancing and deterrent power. This tension—between one Indo-Pacific of diplomacy and inclusion and another of military balancing and US-China struggle—is what has been revealed and accentuated in the AUKUS crisis.

Other nations and groupings will need to develop their own sophisticated ways of navigating both these Indo-Pacifics—the inclusive and the exclusive. For instance, the Indo-Pacific democracies that have felt China's pressure—such as Australia, Japan, India, the Philippines and Taiwan—may welcome the EU's renewed interest in the region. However, there is a risk that the European focus on multilateral diplomacy, inclusiveness and

non-confrontation sidesteps the hard question of what to do if China has more coercive and uncompromising ideas. Moreover, China's support for Russia, ahead of and during the Ukraine invasion, suggests that the EU countries will not permanently be able to overlook the question of whether China poses a systemic challenge globally rather than just a regional threat to resident powers in the Indo-Pacific.

### What Next for the Quad?

Likewise, India and other Quad members will need to keep refining their expectations of this institution. After all, not only has the Quad been characterised as an exclusive balancing alignment, but also has the potential to be the core of more inclusive arrangements in terms of its 'public goods' agenda. The shift towards a broad 'public goods' agenda is smart. It has helped ensure the Quad's acceptance by many other nations and institutions, including ASEAN and the EU, as an enduring and stabilising part of global diplomatic architecture. This has blunted much of China's criticism that the Quad is supposedly some quasi-alliance bent on containment and a confrontational, exclusive approach to security.

The Quad has made great progress in recent years: The two summit meetings in 2021 (and a shorter leaders' virtual discussion in March 2022) affirm its priority place in the strategic policy settings of all four member states. At the same time, the establishment of AUKUS has become the new lightning rod for China's diplomatic frustration. As of March 2022, China is seeking to define the Quad, AUKUS, Five Eyes and various bilateral US

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alliances as part of an allegedly coordinated '5432' strategy.<sup>12</sup> This is an example of China's desperate recognition that it can no longer mount a credible diplomatic attack on the Quad *per se*.

A challenge now for the Quad is to focus on living up to the promise of delivering tangible outcomes and benefits to the regional community, such as through vaccine delivery in Southeast Asia and improvements to technology standards and governance. Other issues and opportunities ahead for the Quad include:

Preventing or managing fissures over Ukraine: It makes sense for the Quad countries to air and address differences robustly through their trusted dialogue with one another. India's dependence on Russia poses long-term risks for India's interests in balancing China. How seriously can Delhi rely on a self-weakened Moscow that, in turn, becomes increasingly reliant on Beijing? Quad partners need to help India diversify its sources of military technology and energy. At the same time, the focus of the Quad on the Indo-Pacific needs to be restated and reinforced.

Adapting to the opportunities of coordinating with other nations and groupings: Without necessarily expanding on an already busy agenda, Quad capitals would be well advised to identify early opportunities for 'Quad Plus' cooperation on specific functional issues such as critical technologies, vaccines, climate, disaster relief or infrastructure investment, perhaps with Britain, France, other European partners, South Korea (where a new government provides a real opening), individual Southeast Asian partners, Canada and New Zealand.

Anticipating future contingencies: The Quad is not a treaty alliance, and its early success will be jeopardised if alliance-like expectations are placed on it. Although the Quad capitals are building a significant degree of trust and like-mindedness with one another, this will not immediately translate into concerted policy action. The Quad governments would do well to invest in helping each other build shared understandings of the security risks their nations—and the region—could face in this decade of disruption. Shared anticipation of potential strategic shocks is the first step in building towards policy coordination, or in tempering expectations. For instance, Quad nations would benefit from frank and confidential dialogue, perhaps in a 1.5 track format, about plausible strategic shocks in the region—such as a Chinese assault on Taiwan—and their implications for national interests and policy options.

### Conclusion

The Quad has defied the doubters and is here to stay. Indeed, some internal strains actually reinforce the value of a flexible arrangement like the Quad to play a quiet bridge-building role between these key Indo-Pacific democracies. Those issues include not only divergence about how to respond to the Russian aggression but also, for instance, varying levels of risk appetite for overtly opposing China and differentiated patterns of applying democratic values to internet governance. To the extent that the Quad can be an island of trusted dialogue within a turbulent regional and global system, it can also set an example for other coalitions to counter coercion and build stability.

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The more China escalates the situation, the more the defence capabilities of the QUAD will be institutionalised in the Indo-Pacific.



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# Oceanic Choices: India, Japan, and the Dragon's Fire: How Does the QUAD Work?

An important feature of Japan's current strategic policy is its concept of the Quadrilateral Security Dialogue (QUAD) in the Indo-Pacific. Japan was a pioneer in creating the concept of both the QUAD and the Indo-Pacific area. Prime Minister Shinzo Abe's speech to the Indian parliament in 2007—entitled “Confluence of Two Seas”—introduced the idea (although he did not use the word “QUAD” specifically).<sup>1</sup>

Why does Japan need the QUAD? Since the 2000s, the security situation around Japan has changed, especially since China has escalated its activities in the entire Indo-Pacific area. As a result, the QUAD has an important role to play in the resolution of this issue. This article will focus on three things: What are the features of China's territorial expansion? How should the QUAD respond? And finally, what problems should the QUAD be anticipating?

## What are the Features of China's Territorial Expansion?

### Japan and India Share the Same Problem

The QUAD countries, including Japan and India, are experiencing the same problem: A steady increase in Chinese presence and activity near their borders. For example, in the sea around the Senkaku Islands of Japan, China has employed its coast guards and increased its activities. In 2011, the number of Chinese vessels identified within the contiguous zone in the waters surrounding the Senkaku Islands in Japan was only 12. But the number increased to 428 in 2012; 819 in 2013; 729 in 2014; 707 in 2015; 752 in 2016; 696 in 2017; and 615 in 2018. By 2019, the number had reached 1097.<sup>2</sup>

In the case of the Indo-China border, Beijing has also stepped up

its activities. In 2011, India recorded 213 incursions in the Indo-China border area, but in the following years, the numbers were larger: 426 in 2012; 411 in 2013; 460 in 2014; 428 in 2015; 296 in 2016; 473 in 2017; 404 in 2018; and 663 in 2019. Based on the number of Chinese incursions in the Indo-China border area and Chinese activities in the sea around the Senkaku Islands, it becomes apparent that China has increased its assertiveness in 2012 and 2019 in both regions (see Figure 1).

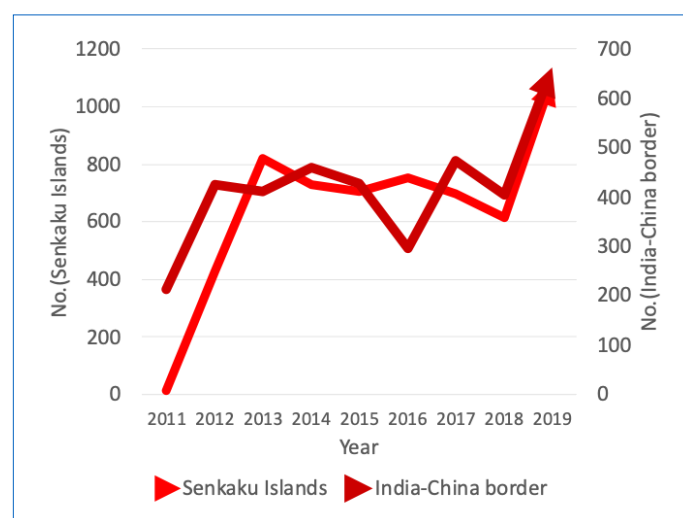


Figure 1: Comparison of China's activities in two regions

### Three Important Similarities of China's Territorial Expansion

China's territorial expansion has three features. The first feature of note is China's repeated disregard for current international law

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when laying claim to new territory. In the East China Sea, China did not claim the Senkaku Islands before 1971, but its attitude has since changed. The Senkaku Islands are in a strategic location to pressure Taiwan and have potential oil reserves. In the case of the Indo-China border, the Tibetan exile government has stated that these areas belong to India.<sup>3</sup> China has ignored current international law and expanded its territorial claim.

The second feature of China's territorial expansion is timing. Beijing has exploited the situation whenever it finds a power vacuum. For example, China occupied half of the Paracel Islands just after France withdrew in the 1950s, and occupied the other half in 1974. This was one year after the United States withdrew from South Vietnam. In the 1980s, China expanded its activities in the Spratly Islands and occupied six features there in 1988, just after the Soviet Union decreased its military presence in Vietnam. And in 1995, China occupied Mischief Reef, three years after the US troops withdrew from the Philippines.<sup>4</sup> These activities indicate that China tends to expand its territorial reach when military balances change and power vacuums are detected. Over the past decade, the military balance has been changing. According to the Stockholm International Peace Research Institute Military Expenditure Database, from 2011-20, China increased its military expenditure by 76 percent. During the same period, India increased its military expenditure by 34 percent, Australia by 33 percent, and Japan by only 2.4 percent. The United States decreased its expenditure by 10 percent.<sup>5</sup> China has tried to expand its territorial claims not only in the South China Sea, but also in the East China Sea, Taiwan, the

Indo-China border, and the Indian Ocean because it sees a power vacuum in these areas.

A third feature of China's territorial expansion is non-military control. China has used foreign infrastructure projects—known as the Belt and Road Initiative—to expand its sphere of influence. Countries with significant Chinese investment and debt are hesitant to criticise China, even when it flouts international rules. China has also been using “vaccine diplomacy” for COVID-19 to foster goodwill among recipient countries. Thus, for China, non-military methods like infrastructure projects, supply chain dependence, and vaccines serve to expand its influence and power. Even on developed countries like Japan and Australia, China uses this method of economic control. For example, when Australia insisted on an international investigation to identify the origin of COVID-19, China delayed processing imports like wine and lobster from Australia.<sup>6</sup> Dependence on the Chinese market is a powerful weapon for Beijing to expand its influence, and ultimately expand its territories.

### How Should the QUAD Respond?

#### Respecting Rules-Based Order

First, the QUAD must continue to respect and insist upon a rules-based order grounded in current international law. The joint statements of both QUAD summits in March and September 2021 mention that a free, open, rules-based order will “meet the challenges to the rules-based maritime order, including



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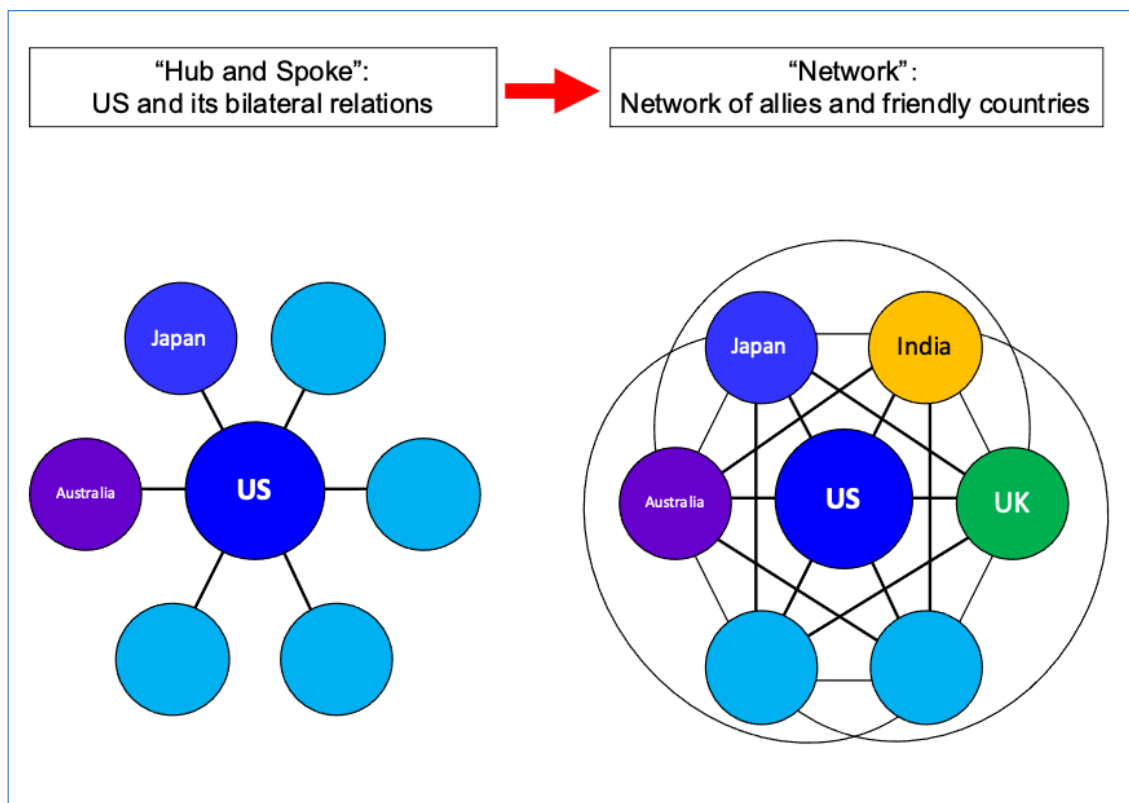


Figure 2: "Hub and spoke" and network-based security systems

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in the East and South China Seas.”<sup>7</sup> These words carry great significance because China has tried to change the status quo by force and continually challenges international norms.

### Maintaining Military Balance

Second, the QUAD countries need to fill perceived power vacuums by maintaining a military balance. To do this, they need to increase their defence budgets, which is not an easy task. Therefore, reorganising the security system itself is important. For a long time, a “hub and spoke” system has maintained order in the Indo-Pacific. In this system, the hub is the US and the many spokes are US allies such as Japan, Australia, Taiwan, the Philippines, Thailand, and South Korea in the Indo-Pacific. A feature of the current system is that it heavily depends on the US. For example, even though Japan and Australia are both US allies, there is no Japan-Australia alliance. However, China’s recent provocations indicate that the current system has not worked to dissuade its expansion. As mentioned above, between 2011-20, China increased its military expenditure 76 percent, and the US decreased its expenditure by 10 percent. Even if the US military expenditure were three times bigger than China’s, the current “hub and spoke” system would still not be enough.

As a result, a new network-based security system is emerging. American allies and partners cooperate with each other and share security burdens with the US and among themselves. Many bilateral, trilateral, quadrilateral, or other multilateral

cooperation arrangements—such as US-Japan-India, Japan-India-Australia, Australia-UK-US, India-Australia-Indonesia, India-Australia-France, US-India-Israel-UAE—are creating a network of security cooperation. In this case, the QUAD is one example of countries cooperating with each other and sharing the regional security burden.

If the QUAD countries coordinate well, they can force China to defend multiple fronts at once and, thereby, dissuade China’s territorial expansion. In such a scenario, China would need to simultaneously make defence expenditures against the US and Japan on the Pacific side, as well as against India on the India-China border side. This sort of cooperation would provide a way to maintain a military balance even if China’s military expenditure were rising at a rapid pace.

In this case, offensive capability is the key. For a long time, no countries except the US, Japan, Australia, and India possessed enough capability to attack China. However, if the US, Japan, and India all possess long-range strike capabilities, their combined capability forces China to defend multiple fronts. Even if China decides to expand its territories in the Indo-China border, it will still need to expend a certain amount of its budget and military force to defend itself against a potential attack from the US and Japan. Currently, Japan, India, and Australia are all planning to possess 1000-2000 km long-range strike capabilities, such as cruise missiles, and F-35 jets with glide bombs and cruise missiles.<sup>8</sup> Indeed, Taiwan, Vietnam, the Philippines, and South

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Korea are also increasing their strike arsenal with surface-to-surface missiles. In the case of the Philippines, Manila decided to import BrahMos cruise missiles from India.<sup>9</sup> These moves could be key in dissuading China from its current path of expansion.

In September 2021, Australia, the UK, and the US announced that they had formed AUKUS, a trilateral security arrangement in the Indo-Pacific. In this alliance, the US and the UK will support Australia to acquire and maintain eight nuclear submarines. If Australia possess nuclear submarines with long-range strike capabilities, Australian naval forces can operate in a far wider area in the Indo-Pacific, and potentially counter China's threat in that area.

### Integrate Military and Non-Military Policy as One Overall Strategy

Third, the QUAD needs to integrate non-military efforts into its overall strategy. These will be a very important part of any counter-China strategy, because China's threat is bound up with the strength of its budget. It can change the status quo by force when its military power is stronger than others, and so maintaining a military balance is important. However, because of its strong economy and ample budget, China's military modernisation has outpaced that of other countries. That is why non-military efforts are needed to reduce China's economic advantage.

In the case of foreign infrastructure projects, the situation is the same. Because of its favourable economic situation, China can invest heavily in these projects and create huge debts and obligations for recipient countries. These countries then tend

to follow China's lead in international organisations such as the World Trade Organization. Therefore, reducing China's ample budget and its influence is an important priority.

Other issues are similar: Because China is rich, it can deliver COVID-19 vaccines to expand its influence; it can dominate rare earth mines in the world and affect supply chains for critical technology; and it has been able to dominate solar panel production and expand its presence in that sector as strict new rules regarding climate change are imposed.

Therefore, the QUAD countries need to integrate their economic efforts and reduce their reliance on China. Decoupling and risk-diversifying of supply chains and markets are necessary. Japan, for its part, has already begun to do so—it has relocated its factories from China to Southeast Asia and South Asia and the number of Japanese citizens living in China has decreased from 150,399 in 2012 to 111,769 in 2020. At the same time, the number of Japanese living in the US has increased from 410,973 in 2012 to 426,354 in 2020.<sup>10</sup> In addition, Japan earmarked US\$2.2 billion of its 2020 economic stimulus package to help local manufacturers shift production out of China.<sup>11</sup>

### What Problems Should the QUAD be Anticipating?

#### Russia is Foremost

Currently, the most important obstacle the QUAD must overcome is relations with Russia. When Russia invaded

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Ukraine, Japan's very clear stance was that it would support Ukraine for three reasons. First, Russia could not credibly justify its military operation to the United Nations (UN). This means that it is using unilateral action to change the status quo by force. If the international community, including Japan, allows Russia to win the war, China will follow Russia's example by using the same type of invasion against Taiwan, India, and possibly others. This is not acceptable for Japan. Second, if Russia wins the war against Ukraine, the US will need to prioritise Russian deterrence in Europe. The US could not withdraw its military forces from Europe and redeploy them to the Indo-Pacific to deter China. Japan is aware that it would face a serious situation if it had to deter Russia and China at the same time. Third, Japan shares a border with Russia and has fought a war with Russia in the past. In recent years, Russia has repeatedly provoked Japan. For example, in 2020, Russian military planes tried to enter Japan's territorial airspace 258 times, setting off repeated "scrambles" of Japan's Air Self Defense Force fighter jets. In 2021, five Chinese warships and five Russian warships jointly circled Japan.<sup>12</sup> These incursions are evidence that Russia is a threat to Japan. The US and Australia share the same interests with Japan vis-a-vis Russia.

However, for India, Russia is important. India's military equipment depends on supplies of repair parts and ammunition from Russia. Despite India's weapons being high-end, sensitive machines, its soldiers need to use them in tough conditions, and having access to repair parts is vital. Additionally, Russia backs India in its fight against Pakistan's support of terrorist camps within its borders. There is a possibility that the international community will ask India to stop its military operation in Pakistan, but Russia will vote in the UN Security Council in favour of India. In addition, because India depended on the Soviet Union during the Cold War, their human-to-human connection is still deep and influential. Therefore, the stance of Japan-US-Australia and

the stance of India are completely different when it comes to Russia—posing a threat to the QUAD cohesion.

### Will India Need Russia?

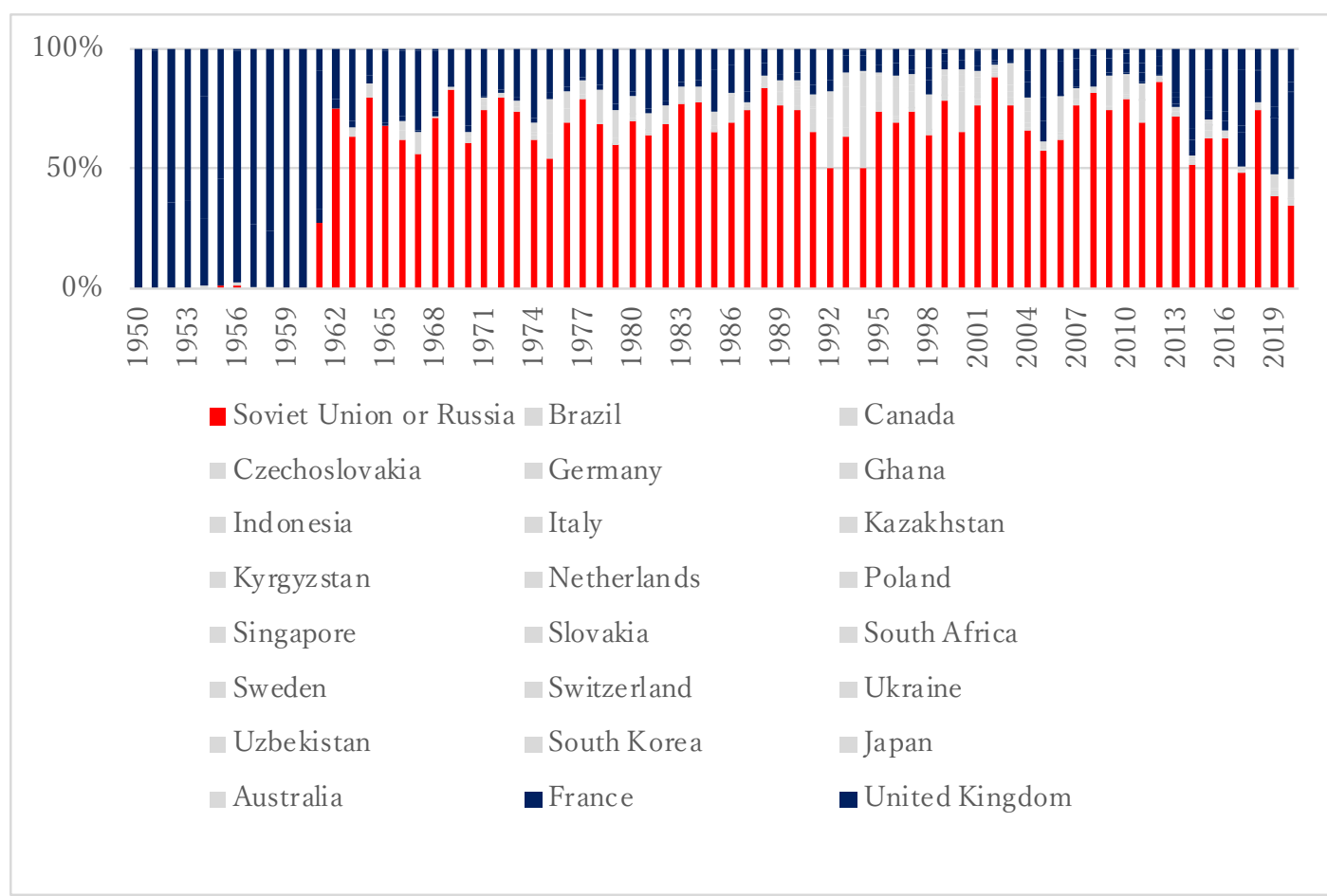
Will this situation continue in the future? Indeed, the situation is already changing. Figure 3 shows the share of arms suppliers for India. Arms imported from the US, the UK, France, and Israel are blue and arms imported from the USSR or Russia are shown in red. Before 1962, most arms suppliers were blue countries. But since 1962, the USSR or Russia have been the main arms suppliers for India. However, India has recently imported more weapons from the US, the UK, France, and Israel than Russia. Until now, Russia has been the main arms supplier for India to maintain its current equipment, but that is changing.

In addition, the US has started to side with India in its crackdown against state-sponsored terrorism in Pakistan. When India attacked terrorist camps in Pakistan in 2016 and 2019, joint statements of India-US, India-Japan, and the QUAD offered support for India's effort to deal with terrorism.

India's alliance with Russia has changed. Russia is supporting China, which is a serious security threat for India. Russia is exporting weapons to India's rival, Pakistan as well. For example, the engine of the China-Pakistan joint development fighter jet JF-17 (and J-10 also) is a Russian product.<sup>13</sup> Russia also sold Mi-35 attack helicopters to Pakistan.<sup>14</sup> It is likely that in the near future, Russia will cease to be an impediment to the QUAD cooperation.

China's aggressive territorial expansion gave rise to the QUAD in the Indo-Pacific and because China has escalated its activities, the QUAD countries must show their strength. The more China escalates the situation, the more the defence capabilities of the QUAD will be institutionalised in the Indo-Pacific.

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The US and India's shared strategic interests in the Indo-Pacific are too strong for their relationship to be derailed by developments in Europe.



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The United States-India strategic partnership—driven by the need to offset rising Chinese power and ensure that the Indo-Pacific remains free and open—is rooted firmly in Asia.<sup>1</sup> To be sure, the US, as a global power, has interests elsewhere around the world. This is particularly true of Europe, which was the US' focus during the Cold War, and remains an area of central strategic concern. But India, as a South Asian regional power, is necessarily more concerned with its own neighbourhood, and the Indo-Pacific is the locus of the Chinese threat, which both countries recognise as their most pressing strategic challenge.<sup>2</sup> This is especially the case for India, as a revisionist China actively seeks to redraw the Sino-Indian border.<sup>3</sup> Therefore, the US-India partnership is, in the first instance, regional.

This seems to suggest that—despite Europe's importance—US-India relations should be relatively insulated from events there, including even a major development like the Russian invasion of Ukraine. The Ukraine war is of neither India nor the US' making, and neither country is directly involved in the fighting. The conflict is occurring far from the two countries' shared locus of concern in the Indo-Pacific.

The reality, however, is more complicated as the Ukraine conflict has potentially significant implications for the Indo-Pacific and US-India cooperation. Russia's invasion of Ukraine, at root, denies the principle of sovereignty that underlies the nation-state system, ensuring territorial integrity and protecting weak states from aggression. This has implications well beyond Europe. If Russia succeeds in defeating Ukraine, China may be emboldened similarly to vindicate its revisionist claims against states in the Indo-Pacific region. This would create significant

challenges for the US and India, which seek to maintain the regional status quo.<sup>4</sup>

In addition, the war in Ukraine could impede US-India strategic cooperation. In an effort to address the crisis, the US might direct attention and resources away from the Indo-Pacific towards Europe. Commentators have pointed out that such a turn could undermine its position in Asia, and have especially harmful consequences for the defence of Taiwan.<sup>5</sup> It would also damage US-India strategic efforts. The two countries' partnership requires the US to remain actively engaged in the Indo-Pacific, as India cannot meet the challenge of rising Chinese power alone. If the US is distracted by conflict in Europe, the two countries will be less able to work together to build Indian strategic capacity, offset rising Chinese power, and keep the Indo-Pacific free and open.

## Differing Responses to the Ukraine Conflict

The US and India have responded to the problems stemming from the Ukraine conflict differently, and this has created tensions in their relationship. The US has vociferously condemned Russia's aggression.<sup>6</sup> It has, together with other likeminded states, levied an extensive array of sanctions against Russia, helping to cut it off from the global economic system. Although it has not become a combatant, the US has supplied Ukraine with weaponry that it is using to resist the Russian invasion. This has contributed to significant losses on the part of Russian forces.<sup>8</sup>

India's reaction to the Russian invasion, by contrast, has been extremely circumspect. Not only has India avoided any substantive

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action against Russia, in response—at the rhetorical level—it has remained largely silent. Indian leaders have encouraged peaceful resolution of the crisis and sent Ukraine humanitarian aid. But India has not directly criticised the Russian attack, abstaining from resolutions condemning Russia in both the United Nations Security Council and the UN General Assembly.<sup>9</sup>

India's silence is grounded in longstanding strategic logic. During the Cold War, India enjoyed close security relations with the erstwhile Soviet Union, on which it relied for most of its military equipment. That reliance continues to the present day, and Russian equipment currently accounts for approximately 70 percent of India's inventory. This includes the S-400 air defence system, of which India will be taking delivery through early 2023. If Indian criticism led Russia to cut off its military supplies, India could be significantly harmed. This would be particularly perilous given India's ongoing confrontation with China along the disputed Sino-Indian border.<sup>10</sup>

Also, as noted above, India is a regional power most concerned with strategic developments in its immediate vicinity. It is hesitant to insert itself into distant disputes to which it is not a party. This is particularly true when it is faced with urgent security challenges, such as the border dispute with China, at home.

These differences between the two countries' approach to conflict in Europe have created tensions in the US-India relationship. India's refusal to condemn Russia's aggressive behavior, even after concerted US efforts to persuade it to do so, has frustrated America, and led to criticism from President Biden and lawmakers.<sup>11</sup> In the US view, India's unwillingness to speak against the invasion

affords Russia de facto support, reducing its diplomatic isolation, and facilitating its bad behavior. It also undercuts India's appeal as a partner, with a shared liberal vision for the Indo-Pacific and for the larger international system.<sup>12</sup> None of this will undo the logic of US-India cooperation, particularly in the executive branch, which is generally more sympathetic to India's position than is the Congress. Nonetheless, it can create unhelpful headwinds in the American system, potentially slowing US-India cooperation at a time when further progress is essential.<sup>13</sup>

India has not complained about the strong American pressure to condemn Russia. Rather, it appears to be betting that, given the importance of their relationship, tensions with the US will eventually blow over.<sup>14</sup> But prominent Indian commentators have noted the US pressure, while emphasising India's strong interest in maintaining close relations with Russia, as well as Russian concerns about an expanding North Atlantic Treaty Organization (NATO), which they believe underlay the Ukraine invasion.<sup>15</sup> In addition, the US and its partners' deployment of the global economic system to punish Russia will have ripple effects that can negatively impact India's economy, and Indians fear that this tactic could be used against them in the event of a future disagreement with the US and Europe.<sup>16</sup> If the US response to Russian aggression becomes too coercive and costly, it can alienate India—which prizes its strategic autonomy—and undermine the trust that is crucial to their relationship.<sup>17</sup>

### Reconciling US and Indian Approaches

India and the US, therefore, must reconcile their approaches

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to the ongoing strategic developments in Europe. If they fail to do so, their partnership could face unwelcome obstacles at a crucial time. What steps can the two countries take to achieve this goal?

India should publicly indicate disapproval of Russia's behaviour in Ukraine. This need not be a full-throated condemnation; even forthrightly referring to the Russian attack on Ukraine as an invasion would be a step in the right direction.<sup>18</sup> This will displease Russia, but it is unlikely to break the Indo-Russian relationship. India is one of the few major states that still maintain good relations with Russia. The Russians will not want to lose Indian diplomatic support and lucrative defence sales by cutting its ties with India.<sup>19</sup>

In addition, India must diversify its defence acquisitions. Overreliance on Russia gives Moscow excessive leverage over Indian foreign policy. India has recognised this need for some time, and defence imports from Russia fell 53 percent from 2011-15 to 2016-20.<sup>20</sup> Nonetheless, India remains highly dependent on Russian arms sales, and will continue to do so for the foreseeable future; Russia enjoys a number of advantages, including low-cost equipment, willingness to share technology, and the longstanding familiarity of the Indian armed services with Russian systems.<sup>21</sup> Further diversification, which will require India to manage its relationship with Russia, wean its military away from Russian systems, and find new suppliers, will take time.

Europe, Israel, and the US can help to fill the gap. India's defence relationships with all three partners are on the upswing. India acquired its new Rafale fighter plane from France, and is currently

retrofitting it with India-specific enhancements.<sup>22</sup> Israel was India's third largest arms supplier between 2016 and 2020, and the two countries recently agreed to form a task force to identify new areas of defence cooperation over the coming decade, ensuring that the relationship will grow in the years ahead.<sup>23</sup> The US-India defence trade has blossomed in recent years, expanding from zero in 2005 to over US\$20 billion today. This includes Indian acquisition of a number of sophisticated aircraft such as the P-8, and co-development of systems such as air-launched drones, which take the relationship beyond that of just the buyer and seller. Also, signature of the so-called foundational agreements has facilitated geo-spatial information sharing and logistical cooperation.<sup>24</sup> Further expansion of the US-India defence trade will require India to trust America, which it sees as a fickle partner, sometimes balking at Indian requests for sophisticated weapons systems. As I explain below, however, this problem can be ameliorated through continued liberalisation of the rules governing US technology transfer.

The US, for its part, must ensure that its expectations of India are realistic. India can gently express disapproval of Russian aggression in Ukraine. But it is unlikely to openly condemn Russia nor will it end the Indo-Russian relationship, or even significantly reduce it in a short period of time. Change will have to be gradual.

Also, the US can encourage its European allies to do more to provide for their own defence. If the Europeans build their military capabilities and generate deterrence, future Russian or other aggression in the region will become less likely. This will reduce the likelihood of major crises in Europe, and better enable the US

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and India to focus their attention on the Indo-Pacific. Europe is already beginning to prioritise defence in response to the Ukraine conflict. Germany, for example, has announced that, for the first time since the end of the Cold War, it will exceed the NATO goal of devoting 2 percent of its gross domestic product to defence.<sup>25</sup>

Finally, the US should continue to build trust with India regarding defence acquisitions. Technology sharing can help. A number of past US administrations took important steps in this direction, including the Obama administration's Defense Technology and Trade Initiative and designation of India as a Major Defense Partner. During the Trump administration, the US eased high-technology export controls by granting India Strategic Trade Authorization-1 status.<sup>26</sup>

Competing priorities within the US foreign policy bureaucracy, such as technology control and the promotion of strategic balance in South Asia, have at times impeded cooperation with India on important systems, including aircraft and air defence. This has contributed to Indian distrust of America, and hesitance to become reliant on it. Senior US leadership should ensure that national strategic goals supersede bureaucratic interests, and that the US continues to liberalise rules regarding the export of dual-use technology to India. Such technology sharing will build Indian strategic capacity, help wean India off of Russian armaments, and provide evidence of US reliability.<sup>27</sup>

## Addressing the Problem of Third-Party Relationships

The above measures can help the US and India to reconcile their

policies in Europe and the Indo-Pacific during the Ukraine crisis and into the future. But even if they do so, the Ukraine conflict will have highlighted the need to resolve a longstanding question in their partnership: What can the two countries expect of one another regarding their third-party relationships?

India and America will inevitably have close relations with countries that the other does not like, such as Russia and Iran for India, and Pakistan for the US. The other partner must accept this reality, and recognise that it does not undermine the strategic logic of US-India cooperation. The relationship, despite its closeness, will thus be open and autonomous, and not exclusive.<sup>28</sup>

But how open and autonomous should the relationship be? Are there red lines—particularly naked acts of coercion or aggression, egregious violations of human rights—that call for unity in rejecting a state that crosses them? This has been an ongoing problem in the US-India partnership, and Ukraine brings it to the fore. The two countries should take advantage of this inflection point in their relationship and discuss candidly their expectations on this front. Doing so can help them to avoid misunderstandings in the future.

Ultimately, the US and India's shared strategic interests in the Indo-Pacific are too strong for their relationship to be derailed by developments in Europe. Nonetheless, disagreements can create headwinds, slowing the progress of their cooperation even as the China challenge grows. India and the US, therefore, must not waste time. They should reconcile their current policies in Europe and the Indo-Pacific and should discuss frankly their expectations regarding third-party relationships in the future.

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The inflection point in 2021 is driven by the fact that startups became invaluable during the pandemic.



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# India's Unicorn Step-Function Growth Signals the Emergence of its Innovation Ecosystem

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A unicorn is a startup valued at or north of US\$1 billion and aptly anointed because, just like the mythical creature, the rarity of such a wildly successful enterprise is improbable, but not impossible. Most companies that successfully transcend this much-coveted valuation do so by building a moat, either with a unique product or service, or a refined go-to-market strategy. They are either first to win a market or are best-in-class and can displace incumbent competition consistently. A company becoming a unicorn deserves the applause of the ecosystem as it is a robust signal of success. This is why the repeatable generation of this elusive outcome is an important indicator of the strength of a country's startup ecosystem.

India's first unicorn was MakeMyTrip which took ten years to become one in 2010.<sup>1</sup> Since then, India has generated unicorns at an accelerated pace, and startups are taking less time to join the club. Today, India has an estimated 98-103 unicorns;<sup>1</sup> various industry analyses had identified 85<sup>2</sup>-90<sup>3</sup> unicorns at the end of 2021, while 13 companies have turned unicorn between January-March (JFM) 2022.<sup>4</sup> With 73 identified soonicorns<sup>5</sup> (companies approaching unicorn valuation with consistent growth metrics) in the pipeline already, ecosystem observers have estimated that India will have 200 unicorns by the 2024-25 timeframe.<sup>6</sup>

India currently ranks third globally in the number of unicorns, behind the United States at 487 and China at 301.<sup>7</sup> The nation has long left the United Kingdom, Israel, Singapore, Germany, and other ecosystems behind; the UK, with 39 unicorns presently, was ranked third previously. Israel ranks fourth after India now, with 53 unicorns.<sup>8</sup>

2021 has been an inflection point in India's startup story, reflected by the doubling of its unicorn base. An overwhelming 46 of its 90 unicorns (at the end of 2021) arrived in 2021 itself.<sup>9</sup> India is

not the only country to have witnessed this acceleration. 254 of the US' 489 unicorns were added in 2021, as were 74 of China's 301, 33 of Israel's 53, and 15 of the UK's 39.<sup>10</sup> Unforeseen utilitarian and lifestyle changes induced by the pandemic has accelerated what was already a fast-growing economic growth engine worldwide.

In business parlance, India's internet total addressable market (TAM) rapidly increased over 2021 as technology solutions became mainstream, consumers across the country embraced digital platforms in daily life, and India's business backbone used technology to strengthen their operations and support the shift towards a self-reliant economy. With 440 million millennials in the country,<sup>11</sup> the consumer internet opportunity is more extensive than previous „guesstimates“. Over 830 million Indians are internet subscribers;<sup>12</sup> the affordability of data rates has unlocked access, democratized utility across the population, and is driving the rise of new economic growth engines.

2021 has, indeed, been a milestone year for the Indian technology ecosystem with Indian startups raising US\$42 billion over 1,583 deals over the year.<sup>13</sup> It was also a record year for exits, mergers and acquisitions (M&As), and Initial Public Offerings (IPOs). The year set a new peak for tech exits, with US\$17.4 billion being returned, which was twenty times the amount (US\$847 million) returned in 2020.<sup>14</sup> Eleven startups raised over US\$7.3 billion in their IPOs in 2021,<sup>15</sup> with most being sizably oversubscribed by retail investors. The Indian software product company, Freshworks, listed on the Nasdaq with a tremendous reception;<sup>16</sup> the first Indian IT services company to get listed on the US exchange was Infosys over 20 years ago.

Perhaps most interestingly, 2021 was when technology and digital platforms became mainstream in India's cultural fabric. An interesting anecdote from the industry is how Indian citizens

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can now order breakfast on their favourite food delivery app, and buy the company's shares before lunch on another listed tech company's brokerage app—something people in the US have always had the opportunity to do.<sup>17</sup> Feeding the retail investors' growing appetite, more than 20 companies have filed for their IPOs over 2022 and 2023. This process acts as a force multiplier of the value created in the technology startup ecosystem over the last decade, allows millions of Indians to participate in the growth, and frees up large pools of invested capital in returns that are highly likely to be reinvested in the next cycle.

This rapid growth of the ecosystem—indicated by its growing number of unicorns getting embedded in daily lives—is monumental. It signals that the startup ecosystem has established scale.

## India's Startup Ecosystem has Established Scale in the Knowledge Economy

The knowledge economy is driving growth in the 21st century. Material assets have characterised agricultural and industrial economies. However, knowledge economies use drivers like information, innovation, human capital, intellectual property, research and development, and focused creation of new specialisations to augment goods and services rapidly. Winning growth strategies in the knowledge economy-led era leverage technology, the internet, data, network effects, and other forces like artificial intelligence (AI) to capture market share, replace incumbent institutions and methodologies, and reap disproportionate gains. Today, in India, just like everywhere else, startups are leading the knowledge-economy surge.

From 2014 to 2021, Indian startups have collectively raised US\$112 billion.<sup>18</sup> In JFM 2022, estimates suggest that US\$11.8 billion has already been raised by 506 startups, which is 186 percent higher than the capital raised in JFM 2021.<sup>19</sup> The supporting ecosystem has also kept pace; there are over 250 quality accelerator-incubator systems, and about 500 institutional and 2,000 active investors.<sup>20</sup> Bengaluru, Mumbai, and Delhi-NCR have emerged as global centres of innovation.

With more than 66,000 startups<sup>21</sup> and over 100 unicorns, India is home to the third-largest startup ecosystem, behind only the US and China. Projections indicate that by 2025, India may well have over 100,000 startups that employ more than 3.5 million people and produce over 200 unicorns; with a total market value closer to US\$1 trillion.<sup>22</sup> The pipeline of companies that will potentially become unicorns and go on to list in the public markets is also expanding rapidly.

The inflection point in 2021 is driven by the fact that startups became invaluable during the pandemic. They suddenly delivered every service, from bills and other payments, food and grocery deliveries, teleconsultations and medicine delivery, coordination of oxygen and other essentials, to education, entertainment, communication, the deployment of information and live updates digitally, and more. Indian startups proved that they were inevitably a deeper part of everyday life. Despite being cash-strapped, many startups stood behind their employees during the lockdowns with insurance coverage and benefits.

Today, citizens are grateful to the startups and companies that helped them access necessities during a panic-induced period in their lives. Consequently, they are now loyal customers of these companies. Indians have realised that increasing number of elements in their daily lives now depend on technology. The status quo of their wallet share and consumption behaviour has



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fundamentally shifted. The TAM of the paying Indian internet consumer has nearly doubled due to this shift towards digital products and services. The pandemic has proved that people in tier-II and tier-III towns would also pay for digital services.<sup>23</sup>

Post the pandemic, more Indian consumers are willing to remain paying subscribers for digital products like health services, video and audio entertainment, edtech, video games, and more. This is happening across the spectrum of consumer classes, from urban India to non-metro and small towns. The old assumption that only the 10-20 million Indians living in tier-I cities will pay for services has now been disproven by this post-pandemic behavioural shift. With the TAM expansion, the value of the market-leading unicorns in each of these spaces is also multiplying.

These companies have amassed millions of lifetime customers. Industry participants share that there will soon be close to 100 million Indians that are willing to pay for digital products and services.<sup>24</sup> This implies that, in a rapid upward shift, more startups can become US\$100 million revenue businesses and make stronger claims for unicorn valuations. From Nykaa and Zomato to Licious and Mamaearth, in the consumer space, several startups have a larger number of present and potential customers now, and this is propelling them from being unicorns to becoming decacorns (startups with valuations north of US\$10 billion).

India's fintech sector is producing some of the world's most revolutionary models for financial inclusion by fundamentally re-engineering how Indians earn, spend, save, and transact online. Startups such as PolicyBazaar, Oxyzo, Open, PhonePe, Jupiter, BharatPe, and others are leveraging technology and digital access to design distinctive platforms and products to capture market share and value. The surge in investment volumes into the stock market via new-age digital brokerage platforms like Zerodha and Dhan—that distribute mutual funds and Structured

Investment Products—has also led to a record number of new retail investors allocating to this asset class.

Enterprise technology is another standout vertical that is re-engineering how India does business. As Indian corporations scale, many startups are building SaaS (Software-as-a-service) platforms to support their organisational operations at the enterprise level. In this space, India does not only rely on foreign enterprise tech companies, but also has robust homegrown solutions that design for India's needs. Companies such as Freshworks, Zoho, Darwinbox, BillDesk, Udaan, InMobi, and Betterplace have not only proven their value propositions in the country, but many of them are also global companies with diverse client bases across the world. The procurement of Indian tech is now much more extensive than initially assumed.

It stands to reason then that these sectors—e-commerce and consumer-brand, enterprise-tech, and fintech—lead in the number of unicorns, soonicorns, and combined sector valuations. Other fast-growing sectors include education-tech, agri-tech, logistics, and deep-tech. India's rapidly expanding club of unicorns and soonicorns has proved beyond doubt that the country's startup ecosystem has established scale in today's knowledge economy-led growth vectors.

### A Snapshot of India's Unicorn Club

Industry reports state that 85 unicorns were created till the end of 2021, with their combined valuation growing over US\$283 billion.<sup>25</sup> These companies have cumulatively raised over US\$75 billion in funding.

India has also produced five decacorns—Flipkart, Paytm, BYJU's, Oyo Rooms,<sup>26</sup> and Swiggy (that recently joined this club in January 2022).<sup>27</sup> All five are prodigious acquirers of other





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startups as part of their strategy to continue expanding their platforms and offerings. While Paytm listed on the public market via its IPO in November 2021, the other four are in various stages of their IPO offerings in 2022.

## Unicorns by Sector

Startups in the fintech and e-commerce sectors dominate both the unicorn and soonicorn lists, while newer areas such as SaaS, consumer marketplace brands, health tech, and logistics are also seeing immense growth.

The 13 unicorns that achieved that status in JFM 2022 represent one of the most diverse sectoral cohorts so far, ranging from AI, data analytics, fintech, SaaS, and logistics to edtech, social commerce and marketplace, and gaming.<sup>29</sup>

## Time-to-Unicorn

The average time for a company to become a unicorn is 7.8 years in 2021.<sup>30</sup> The inflection point in 2021 is evident here as well; the time-to-unicorn at the end of 2020 was 9.9 years. With 46 companies becoming unicorns at record pace in 2021, the average reduced by two years in a single year. With the addition of the 13 new unicorns in 2022, it is estimated time-to-unicorn has further dropped to 6.6 years.<sup>31</sup>

33 of India's unicorns reached there in less than five years. Mensa Brands holds the record for the fastest unicorn, at six months.<sup>32</sup> With a lift in the quality of the founding teams, a larger pool of highly trained technical talent, and larger TAMs that are more easily accessible, this acceleration is also indicative of a fundamental orbital shift up in the Indian ecosystem.

## Where are They?

Innovation occurs in clusters, and Indian unicorns are no

exception. The top unicorn city is Bengaluru with an estimated 39 unicorns, a product of its booming startup culture. Bengaluru received 51 percent of the total inbound capital in 2021,<sup>33</sup> and has emerged as the seventh largest unicorn hub of the world, competing with more established ecosystems in the US and China.

Delhi-NCR is second with 30 unicorns and Mumbai is third at 18.<sup>34</sup> These three cities accounted for 80 of India's 90 unicorns at the end of 2021, and have added more in 2022. This is unsurprising as an estimated 67 percent of all active startups are housed in these three locations.<sup>35</sup> Indian soonicorns, too, are largely in these three cities with an estimated 30 in Bengaluru, 17 in Mumbai and 12 in Delhi-NCR.<sup>36</sup>

It is encouraging to note that the rest of India is also seeing an acceleration of startup activity. Chennai and Pune both host 6 unicorns each, while Hyderabad has 2. Jaipur joined the list of unicorn cities in 2021 with CarDekho.<sup>37</sup>

## IPO-Bound

A natural growth vector for unicorns is to list on the public markets, and 2021 marked a record year for Indian tech IPOs. Eleven startups—EaseMyTrip, Freshworks, Nazara, Nykaa, Zomato, MapMyIndia, PolicyBazaar, RateGain, Fino, Paytm and CarTrade—raised over US\$7.3 billion in their IPOs this year.<sup>38</sup> Freshworks made history by becoming the first Indian SaaS company to list on Nasdaq. While many of these companies turned unicorns before they went public, it is interesting to note that Nazara and MapMyIndia turned unicorns after their IPO by focusing on their growth.<sup>39</sup> Most of these IPOs were vastly oversubscribed, signalling that the retail Indian investor welcomes this opportunity to invest and participate in the Indian growth story.

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More than 20 companies have filed for their IPOs targeting 2022 and 2023, and a fair number of them are already unicorns. Delhivery, Oyo, Pharmeasy, Mobikwik, Ola, BYJU's, Pine Labs, Flipkart, Swiggy, PhonePe, and BigBasket are some of the now-household names that are IPO-bound in the next two years.

Indian markets proved in 2021 that they work competently. Despite having the third-largest ecosystem globally, the country lagged in tech IPOs compared to the US and China. The US has developed an efficient system that supports hundreds of IPOs every year. Over the last decade, China established its market framework well and is supporting larger volumes of IPOs every year. India was lagging, but the events of 2021 have served as a pull-up stimulus to increase the momentum.

## Building Ecosystems Via M&As

One of the several feedforward effects of unicorns in the ecosystem is that they build their own sub-ecosystems. If business is booming and the company is consistently growing, it is natural to expand into market adjacencies and explore M&A options. The number of M&A deals in the Indian startup ecosystem multiplied 2.5 times—206 in 2021 as compared to 82 in 2020<sup>40</sup>—and Indian unicorns featured prominently in the acquisition activity.

Mensa Brands was valued at US\$1.2 billion in November 2021 and pioneers an umbrella approach to brand offerings. It also

holds the record for most startups acquired in 2021, at 12. BYJU's comes next, having acquired 10 startups; followed by Upscalio, which acquired 8.<sup>41</sup> Unicorn companies are expanding their sphere of influence with increased customer offerings.

The M&A trend will accelerate, given both the demand and supply sides of the pipeline are expanding in India, and 2022 is already seeing that.<sup>42</sup> The number of companies with consistent growth and cash in hand to acquire smaller companies is steadily growing, as seen by the velocity of unicorn generation. There's an avalanche effect in India's total startup pool on the other side. Many work on niche value propositions that larger companies might find practical to acquire rather than create them in-house. The recent acquisitions of startups by Reliance and Tata are early indications of such consolidation at work.<sup>43</sup>

In India's vision of self-reliance—combined with the goals of growing into a US\$5 trillion economy on the way to US\$10 trillion in this decade—the technology-led startup ecosystem will be an invaluable economic growth driver. The record pace of unicorn generation is an encouraging sign of establishing this growth driver as a force-multiplier of economic activity; the ecosystem is providing valuable goods and services, creating numerous job opportunities, and expanding the Indian market in ways unforeseen even a decade ago. The new decade should see technology establish a deeper connection with the mainstream.

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Who does the climate finance architecture serve most, who is left behind, and how is it shaping inequality between countries?



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The likelihood that you will lose your home to a storm, die in a flood, or face an income shock due to drought has very little to do with your life choices and everything to do with your life chances. The impacts of climate change are already being felt in all regions, but disproportionately so in lower-income countries. This is while a small handful of high-income countries are largely responsible for causing climate change.

Meeting emission cutting targets and adapting to the already vast impacts of climate change have high costs. Investments in energy transitions alone are expected to cost an additional US\$830 billion a year if we are to meet the 1.5 degree Celsius target.<sup>1</sup> But, how are those costs to be borne out? Over the last three decades, an international climate finance architecture has emerged to channel domestic and international funds towards mitigation and adaptation efforts. A successful climate finance system will have to not only mobilise vast quantities of capital at scale, but also lay emphasis on the direction of capital flows, the conditions under which they are moved, and the conditionalities attached which are all of critical importance in creating a just financial system for addressing climate change. Who does this architecture serve most, who is left behind, and how is it shaping inequality between countries? This paper looks specifically at international climate financial flows from the prism of climate justice and scrutinises how particular features perpetuate and exacerbate inequalities between countries.

## Climate Justice

A small number of countries are responsible for the vast majority of greenhouse gas (GHG) emissions today, with advanced economies emitting appreciably more CO<sub>2</sub> per person than lower and middle-income countries. Moreover, there are

considerable differences in historical contributions to emissions, again with advanced economies exploiting the majority of the atmospheric commons. Moreover, while climate impacts are felt across continents, they disproportionately affect lower-income countries and the least advantaged populations within them. Developing countries have recognised these inequities and called for great climate justice for decades.<sup>2</sup> While the Paris Agreement recognises differentiated responsibility and respective capabilities between countries, major gaps in how this applies to finance remain.<sup>3</sup>

## Current Emissions Per-Capita

Human activities, namely GHG emissions, cause climate change. There are vast differences between countries regarding how much they are emitting. The seven highest emitters account for around 60 percent of total emissions.<sup>4</sup> China emits nearly a third of total GHG emissions (26.1 percent), followed by the United States (13.4 percent), the European Union (7.6 percent), India (6.5 percent), Russia (5.6 percent), Japan (2.6), and Brazil (2.1 percent).<sup>5</sup>

But, looking at total emission by country conceals the importance of country size. For example, India is one of the largest absolute emitters, but when considered on a per-capita basis, India ranks 104<sup>th</sup>.<sup>6</sup> Hundreds of millions of people in India still lack electricity, making it difficult to compare growth in emissions to high-income countries. Qatar, New Caledonia, Mongolia, Trinidad and Tobago, and Brunei Darussalam are the top emitters on a per-capita basis.<sup>7</sup> The average person in Qatar emits 37.02 metric tons of emissions each year, 30 times more than someone in Sri Lanka, Guatemala, or Paraguay. The 50 least emitting countries per person emit less than one metric ton of CO<sub>2</sub> per capita, and all are low and lower-middle-income countries.<sup>8</sup>

# Exploring the Inequities of Climate Finance

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## Cumulative Emissions

The impact of GHG emissions is cumulative, meaning all historic emissions determine the extent of climate impacts today, not just the current level of emissions.<sup>9</sup> For this reason, the historical contributions of emissions by country are essential for attributing responsibility for climate change to countries. 86 percent of the climate ‘budget’ or the atmospheric commons has already been used up.<sup>10</sup> The US is the highest historical emitter, accounting for around 20 percent of cumulative emissions,<sup>11</sup> followed closely by the EU (17.3), China (12.1), and Russia (6.2).<sup>12</sup> Another study offers estimates which far exceed earlier assessments, attributing responsibility for climate change impact as follows: the US (40 percent), the EU (29 percent), the rest of Europe (13 percent), other Global North countries (10 percent), while the entire Global South (8 percent).<sup>13</sup>

Together, historical and current emissions per capita provide a proxy for the extent to which countries are responsible for climate change and its impacts. The vast disparities between the advanced economies and developing economies are stark. Over the last three decades, there has been an increasing call for the Global North to be responsible for covering the costs of adaptation in the Global South, which is disproportionately bearing the consequences of climate change today.<sup>14</sup>

## Social Impacts of Climate Change

The need to adapt is already facing much of the developing world where communities are being hit with storms of increasing intensity, where rainfall shocks, flooding and heat are destroying critical infrastructure, devastating crops, drying up water

sources, impacting incomes, demolishing homes, and impacting health. For example, Cyclone Idai, in March 2019, led to the loss of more than US\$39 million in income and the destruction and damage to 240,000 homes in Mozambique.<sup>15</sup> Hurricane Maria in September 2017 damaged an estimated 90 percent of the housing stock in Dominica.<sup>16</sup> As a result of such catastrophic events, and slower-onset climate-related changes, costs are expected to be between US\$70-100 billion annually,<sup>17</sup> increasing to US\$280-500 billion over the next three decades.<sup>18</sup>

The 2015 Paris Agreement recognised the need to address losses and damages caused by climate change. However, high-income countries have consistently pushed back against the inclusion of language that would make them liable to compensate. Emissions must also be considered in the broader context of industrial development. Countries of the Global North have grown their economies and raised incomes without regard for the climate impacts of that process. Today, developing countries are faced with the same need and desire to grow their economies and improve living standards without the luxury of burning carbon to do so.

The causes of climate-related impacts are driven by historical and present emissions—mainly from a small group of high-income countries. As developing countries aim to adapt to these impacts, financing becomes a critical question and determinant. This section has outlined why a justice lens is needed for considering international climate finance, including the fact that emissions today are significantly higher in high-income countries; per-capita emissions are vastly unequal, with advanced economies

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emitting much more CO<sub>2</sub> per person than lower and middle-income countries; a small handful of industrialised countries are responsible for most historical emissions, leaving little room for other countries to develop; and because the impacts of climate change are being felt disproportionately in poorer countries than in the countries that are causing climate change. Within this context, the following section looks at the international climate financial flows and articulates specific features of the system that create or deepen inequality between countries.

## Climate Finance

Climate finance flows from all sources reached US\$632 billion in 2019/2020.<sup>19</sup> While annual climate finance has grown almost 74 percent since 2011, we are still perilously far from the mark needed to limit global warming to below 1.5 degree Celsius, with an estimated increase of 588 percent to US\$4.35 trillion annually by 2030 considered critical to meet the set global climate targets.<sup>20</sup> While the volume of climate finance needs to significantly scale up, the conditionalities that drive and determine the quality of credit also needs evaluation and reconfiguration to ensure greater justice.

Climate finance can be channelled from multiple sources, public—such as the government, state owned financial institutions, climate funds, and multilateral, bilateral, and national development financial institutions—as well as private—such as commercial financial institutions, corporations, wealth funds, institutional investors, households, and individuals.<sup>21</sup> The nature of each source of capital in terms of scale and quality of credit is variable and holds significant bearing on optimal capital

allocation and marginal environmental impact of investment dollars.

Therefore, it is important to analyse and assess climate financial flows across a disaggregated set of parameters to lay bare the contextual realities of financial inequities that expose a climate financial architecture that is intrinsically skewed against a fair and inclusive energy transition in developing nations.

## Disaggregating Climate Financial Flows

**Skewed at Source:** While the public sector provided 51 percent (US\$321 billion) of annual climate finance in 2019, the private sector matched in efforts at 49 percent. But what is interesting to note is that private finance funded most of the climate projects in economically advanced regions of Western Europe, the US and Canada, and Other Oceania, while the rest sourced their climate investments primarily from public sources.<sup>22</sup> Since the scale up in climate finance is expected to come from the private sector, altering investment patterns and incentivising private sector to invest in emerging economies becomes all the more crucial. However, private capital—without negotiating the right terms in the contractual agreements—may risk leaving the poorest sections of the low-income countries shielded from access to opportunities for development.<sup>23</sup> In addition, relying heavily on public investments can lead to diversion of development aid to climate finance, which may lead to vulnerable sections and communities competing for limited resources and funding.

**Geographical Disparity:** The majority of climate finance

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mobilised remains in its country of origin. Approximately 60 percent of the US\$291 billion of outflow in climate commitments from Organisation for Economic Co-operation and Development (OECD) in 2018, was re-invested in the OECD countries.<sup>24</sup> In 2019 as well, three-quarters of the tracked climate investments raised was spent within domestic territories. The lions share was directed towards East Asia and Pacific, Western Europe, and North America, while only a quarter went to Sub-Saharan Africa, South Asia, Other Oceania, Middle East and North Africa, Latin America and Caribbean, and Central Asia and Eastern Europe.<sup>25</sup> On average, only 20.5 percent of climate related development finance—reported to the OECD—went to least developed countries in 2017–18, and merely 3 percent to small island developing states.<sup>26</sup> Clearly, both the scale of financial flows and their direction, in its current form, are illustrative of international inequities inherent in the climate finance system.

**Debt Bias:** Debt, as a financial instrument, continues to remain the preferred and conventional means for the provision of climate finance. Almost 61 percent (US\$384 billion) of climate finance raised in 2019–20 was in the form of debt, of which 75 percent was at the project-level market-rate and merely 12 percent was at the low-cost project level from public institutions. Close to 31 percent was raised by balance sheet financing majorly by commercial financial institutions. The other end of the spectrum has equity investments at 33 percent of the overall mix, and grants comprising of only 6 percent of the total flows.<sup>27</sup> Given that many developing countries are already under debt distress—exacerbated since the pandemic—debt laden investments are unsustainable alternatives which often come

with unfavourable conditionalities, (for example, the need for performance-focused results or sectoral limitations) and do not always align with the needs of the developing countries or their most vulnerable populations.

**Adaptation is Relatively Ignored:** Mitigation finance comprised of approximately 90 percent of the total climate finance provided and mobilised by developed countries, while adaptation finance stood at an abysmal 7.4 percent. A further 2.5 percent of commitments went to projects which served both purposes.<sup>28</sup> Global warming mitigation efforts that bring universal benefits make the core of climate negotiations and financing, as opposed to adaptation whose benefits are more local. This has implications for the mode of climate financing, such that mitigation efforts are driven by debt funding and almost all adaptation finance gets sourced by public sources (14 percent of total public finance flows in 2019–20).<sup>29</sup> Given that low and middle income countries are most in need of adaptation financing, lack of capital access at scale—particularly from private sources—leaves them severely vulnerable to impending climate shocks.

**Sectoral Preferences:** In 2019, the energy and transport sectors, taken together, accounted for almost half of total climate finance provided and mobilised.<sup>30</sup> Private investors provided nearly 54 percent of all mitigation finance flows to the renewable energy sector in 2019–20. Low carbon transport represented 31 percent of the total mitigation finance in the same period.<sup>31</sup> Given that energy and transport projects have become commercially viable today, it is easier to draw a business case for them to attract private-sector players, in comparison to say projects



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on agriculture, forestry, or land-use. Since many developing economies rely more heavily on the agricultural sector, investments and innovation in these industries will strongly weigh on the outcome of cumulative emission reduction at both the global and local level.

### Unclear Status on the US\$100 Billion Commitment

The COP 16 Accord emphasised the imperative for developed country parties to commit meaningful climate action and finance to support the transition in developing economies. The Green Climate Fund was set up with the goal of jointly mobilising US\$100 billion in new and additional funds per year by 2020, in line with the idea of climate justice and has since, formed the bedrock of international public finance and cooperation on climate action.<sup>32</sup> However, as estimated by an Intergovernmental Panel on Climate Change report (2018), developing countries together will need approximately US\$600 billion per year in the period 2020 to 2050—by way of additional investment—in just the energy sector alone to achieve the transition necessary.<sup>33</sup> Therefore, the amount of US\$100 billion is firstly, paltry and highly insufficient to bridge the transition financing deficit in developing countries and second, the commitment deliverable has got pushed<sup>34</sup> by a few years leaving poorer nations with more promises than guarantees as usual.

### Policy Recommendations and Conclusion

Clearly, the current financial system is inept at including climate change metrics in its capital allocation and disbursement processes and least of all applies a climate justice prism in making investment decisions. The continued reliance on financial mechanisms to pursue development objectives lays bare the

limitations of financial tools to accomplish climate parity and calls for a new paradigm which will allow an efficient allocation of capital combined with an optimal pathway for carbon reduction, particularly in the Global South. The private sector has little incentive to invest from a lens of climate justice and hence, financial mechanisms need to be reconfigured by active policymaking at an international level. Public finance should be leveraged to catalyse and direct private flows to low- and middle-income countries, where the marginal cost of reducing emissions is much lower and the environmental impact can be maximised at least cost.

Currently, the different organisations in the climate finance ecosystem all work in siloes with competing mandates, that makes delivery and tracking of finance difficult. A Green Bank—instituted by a global body such as the United Nations Framework Convention on Climate Change—offering services such as co-lending, risk mitigation, and credit enhancements (like guarantees, first loss capital, and green bonds)<sup>35</sup> can prove to be a comprehensive solution for consolidating and routing both public and private capital towards mitigation and adaptation projects, particularly in developing countries. It can also aid in promoting standardisation of frameworks, transparency in disclosures, and innovation of financial instruments and local institutions. Platforms such as the G20—particularly with the troika formed by Indonesia, India, and Brazil—must push forward the agenda of climate finance and jointly influence member nations at the G20 in defining and implementing inclusive policies to help level the playing field by serving the interests of the Global South in its pursuit for an equitable and just climate transition. The centrality of climate justice in climate finance negotiations and transactions needs to be revisited and reinstated so we can accelerate the pathway to carbon reduction and deliver on the promises of creating an equitable and sustainable world economic order.



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The concept of 'just transition' offers a holistic approach to green transitions that is rooted in justice and equity.



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# Enabling the Green Transition to be a Just Transition

We are at the cusp and in the middle of multiple transitions: Some are beginning, some are tipping, but they're all redefining, reimagining, and restructuring life, lifestyles, and livelihoods. The net effect of these transitions and disruptions can only be hypothesised and remains unknown. The COVID-19 pandemic has provided a peek into what disruptions can do. It has been an accelerated transition to a "new normal" that has made the precarity of global supply chains evident. The global economy is said to have shrunk by 3.5 percent in 2020.<sup>1</sup> It also laid out a picture in contrasts; and revealed the trade-off between health and livelihoods resulting from the lockdowns. The adequacy and ability of the health and economic systems to face such a challenge and slowdown was put to test. At the same time, the labour market was shaken to its core, and, unfortunately, it brought to the fore its embedded inequities, where vulnerable informal labour and certain sectors, in particular, suffered greatly.

The pandemic, perhaps, provided an accelerated view of another imminent challenge in front of us—that of climate change, being driven by rising emissions; the only difference being that climate change is not a recent challenge, and efforts to thwart its pace have been ongoing, albeit not at the scale or speed required. It is also one of those challenges that affects all parts of the world and, to that extent, unites us and pushes us towards a common imperative—to address its impacts (both direct and cascading) on all (especially vulnerable communities) through mitigation and adaptation.

The reality, however, is that communities, and where they may be in their socio-economic journey, look different across the world and also within nations and sub-national regions. This means that the capacity to undertake mitigation as well as adaptation measures is different across geographies, both globally and nationally. This dichotomy is evident in how in certain parts of

the world, we are mulling over electricity grid modernisation, digitalisation, advanced vehicle technologies, etc. to effect carbon mitigation, while in others, communities are faced with lack of access to energy, existence of transport deserts, and poor working conditions, which severely impact their ability to adapt.

And yet, both these contrasting contexts find common ground in the pursuit of clean/green transitions and, in fact, provide unique leapfrogging opportunities. A developing economy like India, for example, recognises that an ambitious move towards renewable energy (RE) is as important for a cleaner environmental future, as it is for a robust economic future as well. This is seen in the ambitious targets set by the country at CoP 26, where Prime Minister Modi declared the achievement of 500GW of RE and 50 percent generation from non-fossil sources as intermediate goals for 2030, before reaching net zero in 2070. Reaching this goal can create 3.4 million new jobs in the clean energy space, particularly in distributed RE that helps to power not just local economies, but also improves energy access and electricity resilience.<sup>2</sup>

However, climate mitigation goals through pursuit of low carbon pathways is about more than pursuing emissions reduction goals. It also implies new economic opportunities, and more importantly, opportunities to reinvent livelihoods in a way that they ascribe to the tenets of a 'just transition'. This confluence of the green transition opportunities with the socio-economic realities and needs is a new and emerging dynamic for governments and businesses alike and points towards the need for a just transition.

## Shared Need for Just Transition

A clean energy transition is inevitable and necessary to address

## Enabling the Green Transition to be a Just Transition

emissions contributing to burgeoning climate impacts and to improve local health and environmental outcomes. At the same time, it will lead to industrial and technological transformations, where new jobs will be created, but some jobs will be lost or transformed as well. According to the International Labour Organisation (ILO), while there are a net of 24 million jobs likely to be gained by following a transition pathway consistent with limiting global temperature rise to 2 degree Celsius, there is also a likelihood of losing 6 million jobs, which will be experienced unevenly across the globe.<sup>3</sup> This scale of job loss, stemming from phasing out of fossil fuels-based industries, is because they offer not just direct employment to individuals, but also support indirect jobs in multiples, and induce local economic activity as well. If energy transition was a massive challenge, then the associated social transition that must take place—such that it conforms to the principles of justice and equity—is an equally considerable challenge, but rarely recognised as such. This should not mean paring down ambition, however, but should involve raising the intensity and pace of action.

These transitions provide an opportunity to rethink lives and livelihoods in a way that conventional energy systems have not. Take, for instance, the growing trend of decentralisation and democratisation of renewable energy systems in developing country contexts. Decentralised renewable energy is an application that combines decarbonisation with reliable electricity provision (even in remote/disaster prone areas) and enables local economies to emerge and sustain themselves. This can have positive impacts for electricity access, greater RE integration, and potential for economic diversification and autonomy in driving livelihoods. At the same time, global coordination and support through sharing of technological know-how between advanced and developing economies can be key to unlock leapfrogging opportunities that can help accelerate climate action.

As countries plan for transition, it will be important to engage

with stakeholders across the board and enable participation in the planning and decision-making process. Communication of transition plans will be critical, as seen in the South African context. The country offers an example of including the voices of the parties affected by the clean energy transition in the process of planning itself. After including “Just Transition” in its National Development Plan back in 2012, at the behest of trade unions, the country set up a statutory body that brings together different stakeholders for nation-wide dialogues on just transition plans.<sup>4</sup> This integration of just transition in planning should extend to wider climate action planning as well.

The nature of impacts associated with the clean energy transition, across communities, will determine whether the outcomes of the transition are rooted in justice or not. Beyond jobs, socio-economic growth and development through job security, access to transport and energy, growth of local industries, etc. is also important to build the adaptive capacity of communities to deal with uncertainties.

The following section delves deeper into these themes.

### Developing ‘Just’ Transition Pathways

The concept of ‘just transition’ offers a holistic approach to green transitions that is rooted in justice and equity. It harbours elements of environmental justice (distribution of environmental benefits and burdens across communities), energy justice (equitable access and participation in energy systems), as well as climate justice (distribution of benefits and burdens of climate change across communities and generations).<sup>5</sup> Similar to climate action, while just transition is an important consideration for all country contexts, the capacity to deal with and address simultaneous developments on both the energy transition front and the social or labour transition front differs across countries,



## Enabling the Green Transition to be a Just Transition

and even across communities within countries. This section paints the common imperatives and diverging realities of the clean energy transition in three broad strokes, while anchoring on ideas of justice and equity.

### • **Adjusting to Geopolitical Realignments**

- **Regionalisation of Supply Chains:** During the onset of the COVID-19 pandemic, the world experienced economic shifts, and social and political unrest. As international trade got affected, the pandemic spurred an increasingly inward-looking focus among economies. In India, the 'Make in India' campaign to promote localisation of supply chains was prioritised. As we move towards new low carbon supply chains, changes in the economic and geopolitical landscapes, in line with emerging resources and technology hubs must be anticipated. Power and politics will realign themselves as countries' demand for green hydrogen, battery storage, solar panels increase vis-à-vis that of coal, oil, and gas. Currently, the ongoing war between Russia and Ukraine has brought Europe's natural gas dependence on Russia, and the connectedness of global supply chains, in focus. It has led to inflationary pressure across the world, much like the impacts experienced through the 2000s as a result of disruptions such as the financial crisis, SARS epidemics, and the tsunami. All of these disruptions pushed nations to hedge their risks and look towards increasing localisation of supply chains.<sup>6</sup> For the energy transition, while such actions may be motivated by the need for ensuring energy security, there is also the risk of isolation for countries that are not well equipped to sustainably transition to low carbon pathways independently, similar to the way in which vaccine nationalism would have been counter-productive to achieving the global goal of overcoming the COVID-19

pandemic. Countries that have achieved inflection points for clean energy technologies should strongly tread on the path of technology transfer to prevent other countries from having to reinvent the wheel.

- **Narrowing the Global Decarbonisation Divide:** Countries across the world are differently equipped to partake in the clean energy transition and are on different timelines to achieve decarbonisation goals. Part of this is due to the different stages of socio-economic and technological development that countries are at, and that justifies international assistance to developing and vulnerable nations, as mentioned above. A second aspect stems from the historical practices in the global political economy, wherein despite resource abundance, local communities could get exploited in the absence of strong institutional and labour laws. A just and equitable transition is important to ensure that this phenomenon, otherwise known as the 'resource curse', does not repeat itself in a clean energy future.<sup>7</sup> For instance, African nations such as the Democratic Republic of the Congo and Ghana fall in the upstream (mining) and downstream (disposal of electronic-waste (e-waste)) parts respectively of the low carbon technology supply chain, and face sizeable associated environment and public health risks.<sup>8</sup> Globally, there is uneven distribution in terms of where the mining for minerals and metals takes place, where these resources get utilised in the form of low carbon technologies, and where resultant e-waste gets disposed of—all of which have differential implications for the pace of advancement towards a clean energy economy across countries. Global climate action can benefit from narrowing these gaps in the pursuit of decarbonisation, also called the 'decarbonisation divide'.<sup>9</sup> On the other hand, renewable energy technologies as well as green



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hydrogen (renewable powered hydrogen production) lend themselves to some degree of decentralisation that potentially aid regions in gaining a sense of energy independence and power resilience.

### • **Reviewing Climate Action from a Social Justice Lens**

- **Collaborative Climate Action:** For the developing world, the sustainable development goals are paramount for long term well-being. Climate change impacts pose risks to this development process. At the same time, the more a region is socio-economically dependent on the sector that is soon to become obsolete, the greater the need for a just transition.<sup>10</sup> When done in a 'just' manner, climate action through green transitions and development processes can account for these risks, while also providing livelihoods that prevent vulnerabilities from worsening. This includes thinking of justice as recognition of the different stakeholders, their vulnerabilities, and their needs. It also includes procedural justice and distributive justice, which ensure access to decision-making processes as well as to any benefits emerging from the transition. Just transition calls for a whole system approach to climate action with people at the centre. Therefore, securing public awareness and buy-in through practicing equity and inclusion in transition processes, can make the experience relatively smooth and collaborative for all parties involved.<sup>11</sup> Governments can further support economic diversification and job seeking, such that workers are able to apply their skills across sectors.

- **Human-Centred Approach to Transition Planning:** To prevent unintentional externalities resulting from

climate mitigation activities, 'just transition' must be integrated within these goals. This would demand that the process of nationally determined contributions goals achievement is inclusive and supplemented with participatory and bottom-up approaches.<sup>12</sup> For India, this would entail strong collaboration between the Centre and the State ("cooperative federalism") as well as with local governments and organisations that are closer to communities. This implies thinking of transitions with a 'human-centred design' approach<sup>1</sup>. This approach could potentially open up pathways for pure-play decarbonisation efforts and sustainable development to converge.

### • **Reimagining Transition in Employment**

- **Beyond Job Creation:** As mentioned above, just transition is about more than job creation. The 'number of jobs created' does not help understand the quality of jobs, for instance, and by itself cannot speak to the goals of environmental, energy, or climate justice. Just transition highlights importance of job accessibility, quality of jobs, security of jobs, as well as resultant impacts on lives and livelihoods.
- **From Informal to Formal Jobs:** According to the ILO, even today, more than 60 percent of workers are part of the 'informal economy', usually characterised by the absence of 'decent work' conditions, or adequate labour and social protection, in other words.<sup>13</sup> Informal jobs can severely dent the adaptive capacity of individuals and households embedded in such jobs, especially in the face of major shocks like the COVID-19 pandemic, or industrial obsolescence. Context-specific social characteristics can further determine specific outcomes. In India, for instance, female participation in the workforce

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contracted by 9.4 percent between 2020 and 2022.<sup>14</sup> Unlike the male workforce, the female workforce has not returned to pre-pandemic levels, owing to increasing domestic responsibilities during the pandemic.<sup>15</sup> In the case of the clean energy transition, therefore, addressing systemic socio-economic inequities and inequalities will be important from the perspective of how well vulnerable stakeholder groups are able to adapt to the transition.

- **Transition Support:** A potential temporal lag between job elimination and securing new jobs can be expected, and governments should offer transition support to that end. This can prevent vulnerable communities from experiencing adversities while transitioning between jobs and offer temporary sustenance. The absence of socio-economic support for communities can exacerbate negative outcomes and put development and equity goals at risk.
- **Cross Sectoral and International Cooperation and Collaboration:** It is crucial to examine the informal sector so that it can be included in any government or private sector plans for training and skilling, and that these training programmes can be better designed for workers. Private sector collaboration will be instrumental to this effort, given that they have direct access and reach to workers, and can be first movers in taking informal labour associated with their operations into the ambit of formal labour. Such collaborative action on labour transition should extend internationally as well. International assistance and partnerships in enabling countries to implement a just transition will be crucial,

but given the shortfall in climate finance and lack of partnerships all these years, it may not be prudent for national governments to depend on such an avenue.<sup>16</sup>

### Conclusion

As we journey on, it is evident that the low carbon pathways—while unquestionably desirable from a climate mitigation standpoint—will be more socially beneficial than the fossil fuel regime only with active interventions to ensure a just transition. A clean energy future is not an equitable future by default. In other words, they do not do away with the creation of ‘winners’ and ‘losers’ by virtue of being clean. It will be important to question where and how the average person fits in large-scale transition, who this transition is for, who is impacted, who is paying for it, and what role can different people play in it, such that both their lives and livelihoods are secure. These questions will have different answers across countries and, therefore, just transition principles need to be contextualised.

However, what is clear is that the pursuit of a just transition means to ensure that the most vulnerable do not get further pushed back. Certain clear pathways to integrate justice in green transitions will rely on: Global collaboration and partnerships, as well as strong enforcement of rules and laws that determine social outcomes for people engaged in resource intensive industries; view climate action from a social justice lens and adopt bottom up approaches to drawing up energy transition and climate mitigation plans and activities, such that they serve just transition principles of recognition, and procedural and distributive justice; and looking beyond job creation towards the nature of jobs, and support in between jobs to gauge how the emerging clean energy industry is faring on justice and equity fronts.

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In this transition from universe to Metaverse, a dangerous metamorphosis of culture is at stake: From a tool of soft power to a weapon of hard power.



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# Meta-Soft Power: Flipping the Scales Between Art & Culture

## How Art Corrupts Money

Ten thousand paintings—seemingly identical—mimic one another with same-sized polka dots and can only be differentiated by a watermark in an imbedded hologram. Like banknotes, the canvases are difficult to counterfeit. The same analogy goes for NFTs (non-fungible tokens). On 14 July 2021, an NFT was created for each art piece from Damien Hirst's remarkable undertaking, The Currency Project. One year from the auction's closing, each buyer will have to decide whether to take possession of the real, physical masterpiece (i.e., the tenger) or its corresponding NFT. Depending on the buyer's choice, the other option will be permanently destroyed. On 27 July 2022, the auction will come to a close. The dawn of NFTs, and more generally, the metaverse, will make its mark on the art world, offering a dashboard to the constant evolution of digitisation. The shift had been underway since 23 August 2021, when the project first generated US \$25 million—a figure made public by the artist on his Instagram profile. Outlining the silhouette of his famous Shark in Formaldehyde on a sales chart, Hirst commented, “Just when you thought it was safe to go back in the water”.<sup>1</sup> Simply put, the metaverse represents a vast ocean of opportunities for the art world, which, like the Hirst's shark, “seems alive when it is dead and dead when it is alive”.<sup>2</sup> Living in a post-pandemic era, the idea of an alternate universe offers unexplored avenues to expose, profit, and transform the cultural sphere. In the “age of [...] digital reproduction” and virtual reality, NFTs offer a unique and authentic opportunity to own a piece of art via smart contracts and blockchain technology.<sup>3</sup> Within this context, cultural- and art-focused NFTs could serve as complementary currency. Joe Hage, the founder of the Heni Group and publisher of Hirst's masterpieces, stated that, “it is often said that money corrupts art, but this is an attempt by art to corrupt money”<sup>4</sup>—an opinion or perspective that surpasses The Currency Project to potentially influence any crosspollination between artistic expression, culture, and the metaverse.

## Culture as a Currency: The Next Reality?

Culture is one of the most relevant, intangible forms of power—and so it has been for centuries. Soft power—worth pointing out—is a nation's ability to exert a certain level of influence to shape preferences by influential leverage. It is the ability to “make others change their behaviour in a desired direction as a result of persuasion” via invisible currency.<sup>5</sup> As a conceptually attractive and, consequently, influential medium, culture maintains a critical role in understanding contemporary reality. The prominent ArtReview rankings proved that out of the 100 most influential people in the art realm, an individual failed to take the number one seat. Instead, for the first time in history, the algorithm ERC-721, a standard for NFTs in Ethereum, won the grand title. This is a clear demonstration of how culture, flourishing in the metaverse, wields intangible influence in the real world as it does in the other dimension. For the foreseeable future, global citizens and their nations will also come face-to-face with this fork in the road of binary realism. Within this pretext, governments will need to invest in soft power to go beyond their image in the physical world, and project their brand and values into the metaverse.

Well before the rise of virtual dimensions, countries were continuously evolving their foreign policies and interactions with the outside world. However, this emergent and increasingly relevant reality is confronting global leaders to participate in an alternate dimension. According to DappRadar's analytical report, the NFT market reached US \$10.67 billion in 2021—a 704 percent increase between Q2 and Q3<sup>6</sup>. When the year ended, the industry rose to an impressive US \$23 billion.<sup>7</sup> Equally remarkable is the growth rate despite a 2022 cryptocurrency crash in January. Grasping the potential of a new dominion for action, expression, and profit, matched with market traction, governments need to proactively extend the current soft power



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strategies into the metaverse. This would be achieved by using culture as an intangible currency capable of creating measurable value in both universes.

### Meta-Soft Power, Beyond the Real World's Borders

To date, the political expansion of soft power is often implemented through geographical dissemination of important museums, such as the Louvre in Abu Dhabi or Pompidou in Shanghai. With the rise of the metaverse—devoid of territorial and physical boundaries—museums could, in theory, be accessible to everyone. Over the last two years of the pandemic, the creation of corresponding virtual spaces has become an essential component to addressing museum and art gallery closures. Like physical spaces, 3D experiences are used to showcase art and cultural heritage to global audiences, eventually persuading and influencing the real world. It seems no coincidence that Meta's first commercial, published by Zuckerberg on his account, was set in a museum, with four students experiencing an immersive reality in front of an artwork by Henri Rosseau. By seizing both artistic and economic opportunities, some of the major—and mostly state-owned—museums around the world have embraced this new virtual market. Russia's Hermitage is the first art gallery to enter the metaverse by displaying an exhibition of NFT digital artworks, *There Ethereal Aether*, in a virtual reconstruction of its physical venue.<sup>8</sup> The British Museum created an NFT marketplace and auctioned 200 masterpieces from its unique collections. Other prominent examples include the tokenisation of 200 drawings by the Japanese artist Hokusai<sup>9</sup> (in collaboration with the LaCollection.io platform) and the recent limited edition of Klimt's *The Kiss*, which was sectioned into 10,000 digital tiles<sup>10</sup>—each a

reproduction of the original painting—launched by the Belvedere Museum in Vienna on Valentine's Day. Museums have improved their knowledge and development strategies not only in economic terms, but also from an artistic standpoint, by demonstrating the potential of the metaverse's authenticity and uniqueness.

Museums worldwide are progressively showing the public a new form of art by bridging the past and the present. The bewilderment once caused by modern and contemporary forms of art, such as Impressionism or the Expressionist avant-garde "Die Brücke," is now generated by Cryptoart—a combination of art, technology and money—which manifests its proprietary qualities simply through its name. However, the most striking example of Cryptoart's success is linked to the auction house Christie's, which sold the digital work *Everydays: The First 5000 Days* by Beeple (Mike Winkelmann) for US \$69 million,<sup>11</sup> and *The Merge* by Pak for US \$91.8 million.<sup>12</sup>

### Creative Industries: A New Conquest

As in our physical universe, soft power can also be virtually applied through recognisable symbols. The Arco della Pace in Milan was the first monument to venture into the virtual space in collaboration with the Italian start-up Reasoned Art.<sup>13</sup> They initially created an architectural data sculpture and then transformed the piece into an NFT. The proceeds went towards financing the construction of an educational arena dedicated to digital art and technology. This single metaverse-oriented initiative consolidated the existing influence of soft power and, at the same time, generated a deeper fascination towards Italy—a strategy that can be replicated anywhere. Regardless of the type of monument, architecture and the metaverse are gradually showing their mutual dependence. To confirm this, the 2021

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Art Basel Miami Beach presented a virtual gallery “NFTism”<sup>14</sup> designed by Zaha Hadid Architects to demonstrate the coupling of spatial and interactive experiences.

### Music Enters a New Virtual Reality

The COVID-19 pandemic exposed the painful fault lines across the music industry. Amidst the challenges, artists and record labels spotted emergent opportunities to profit and boost visibility in the virtual world. Warner Music Group inaugurated a musical theme park in The Sandbox,<sup>15</sup> a virtual world, to host events and concerts potentially visible from all over the world, and launched a project in China with virtual DJs and musicians converted into NFTs.<sup>16</sup> Universal Music also closed a deal with the avatar technology company Genies to bring celebrities, such as Billie Eilish and Taylor Swift, into the metaverse.<sup>17</sup> Artists like Justin Bieber have already performed with real-time motion capture in this new dimension, just as ABBA recently confirmed their upcoming virtual tours.<sup>18</sup> Within this context, the considerations of Cryptoart may also apply to music: When it comes to soft power, the advantages include the potential sale of NFTs and heightened prominence on a global stage via a low-cost platform. This is especially beneficial for those artists—and their country of origin—who lack presence and visibility. The premise lies in institutionalising an existing but hidden heritage within a new dimension.

### The Metaverse Disrupts the Future of Cinema

For decades, the global film culture enjoyed soft power in attracting foreign and domestic travellers through screen

tourism.<sup>19</sup> Immersive cinema seems to achieve the utopia of the Twentieth-Century avant-garde movements, which crave more immersive and synesthetic artworks. When an audience actively engages in a new narrative using VR headsets, it presents an opportunity to refill the now-empty seats in movie theatres. However, a parallel world, where our avatars go to the cinema, has likewise emerged: The case of Christopher Nolan’s Tenet screening on Fortnite in June 2020<sup>20</sup> is the forerunner of this trend, representing an untapped potential for the film and TV sector. In relation to media streaming, now inseparable from cinema, the future remains unpredictable. Yet, a group of DAO’s investors—who operate on blockchains—plans to buy the Blockbuster brand from Dish Network to relaunch the platform as an on-demand virtual streaming service.<sup>21</sup>

### Literature Works Go 3D

Finally, it is worthwhile to consider the role of literature, whose texts have fed people’s collective imagination and willingness to travel to faraway countries. Today, the intersection with the metaverse is still rare, but herein lies several interesting findings. Alessandro Baricco is the first author to turn literary masterpieces – his novel *Novecento* – into an NFT, which sold at a higher bid compared to the printed version (today at US \$179.73 on OpenSea).<sup>22</sup> Miyuki Ono published *Pure*’s NFT to make the text available in several languages – unusual for Japanese literary works – and, therefore, reach global audiences.<sup>23</sup> These examples could encourage other authors to approach blockchain technology, particularly to avoid editorial brokerage fees. For instance, the self-publishing platform NFTBooks,<sup>24</sup> which also operates as a low-cost digital bookstore, is now moving in this direction.

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## Decentralisation, Emerging Economies and Emerging Risks

By leveraging digital in both creation and sales processes, artists obtain rewarding benefits from the metaverse in terms of attribution and distribution. Firstly, thanks to NFTs, this alternate exhibit space overcomes the problem of ownership and disposal of previously unsaleable works: unlike before, now it is possible to certify properties in the virtual world. Cryptoart creatives can also showcase their works to a wider international audience, earning royalties on sales. This “copyright” secured by smart contracts are particularly relevant for American artists, who are not protected under specific federal law. Despite the progressive entry of auction houses into the metaverse (e.g., Sotheby’s metaverse) and the presence of marketplace giants (e.g., SuperRare, OpenSea, Nifty, Rarible), Cryptoart remains a broker-free space. The decentralisation of art, beyond conventional art galleries and auction houses, has enabled even less well-known creators to reach high valuations. These authors perform independently, often only supported by marketplace platforms that assist amateur artists to mint their NFTs (e.g., Artsted).

Why should governments participate in this modern artform? How can such investments increase their soft power? To answer these questions, it is worthwhile to highlight relevant data compiled by the Finder Editorial Review Board. To date, the Philippines observe the highest number of NFT owners (32%) compared to 20 other nations, followed by Thailand (27%), Malaysia (24%), UAE (23%), and Vietnam (17%). In contrast, Japan has the lowest percentage of the sample (2%), behind the UK and US (3%), Germany (4%), Australia (5%), and

Canada (6%). As the NFT 2021 report demonstrates, there is an inverse correlation between NFT ownership and average wage per capita. An increasing number of citizens from emerging economies are replacing or supplementing their earned income with profits through the creation and trade of NFTs (related to the world of play-to-earn and art). This phenomenon is now developing into a fully-fledged economic sector and, therefore, represents a new source of income.<sup>25</sup>

Beside the several benefits brought by these platforms and technologies, it is anyway important to mention the main risks brought by this union convergence among Metaverse, culture, and soft power. Through social media, it is already possible to control such a large wealth of information and have such a strong influence on our choices as consumers; in the Metaverse, it may be even easier to monitor each of our individual preferences and then nudge them. As far as the topic addressed in this paper is concerned, this scenario could lead to the accumulation of an enormous amount of power in the hands of a few governmental subjects – severely jeopardising the international democratic stability. Being related to the possible manipulation of our social interactions, this risk falls on the possible influence of a state—in this way, anything but indirect—not only on individuals, but also on countries. Therefore, we must urgently regulate the issue of privacy and the protection of personal data also in the Metaverse, in order to mitigate the danger of data breach or even insider trading (currently not prosecutable, considering that NFTs are not valued as financial instruments). Equally necessary is to guarantee anti-trust legislation also in the cultural sphere, to avoid the abuse of dangerous dominant positions. In this

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transition from universe to Metaverse, in fact, a dangerous metamorphosis of culture is at stake: From a tool of soft power to a weapon of hard power.

### Meta-Policy Implications

By now, any cultural event can be transformed into a digital sequence and launched into the metaverse. This reshapes the way countries exert their intangible power. Legislative and political interventions are required to capitalise on this influence and maximise the impact of such technologies on socio-economic development.

At the legislative level, adopting public policies to safeguard NFT investments could be a measure to ease job insecurity not only in the artistic field but also across Generation Z – whose members are now entering decentralised finance with considerable profits and significantly impacting the markets. However, governments should guarantee protection from the risk of harmful market speculation through urgent regulation on digital assets. For example, the Italian society of authors and publishers (SIAE) is teaming up with Algorand, an Italian blockchain, to create a platform where copyrights can be represented as digital assets.<sup>26</sup> The individual rights brokered by SIAE will be registered as NFTs: Four million assets paired with different accounts – each corresponding to a member of the organisation. The founder of Algorand, Silvio Micali, stated that this process will lay the groundwork to “create and manage NFTs, i.e., digital rights in the interest of the authors themselves,” with the hopes “that creators will not have to do side jobs but obtain adequate compensation for

their creativity.”<sup>27</sup> This strategy protects intellectual property and secures the economic growth of an entire sector that has always offered an exportable cultural model.

Politically—since culture is the most powerful means to identify a country and, consequently, the strongest driver of its intangible power—there is a pressing need to invest in the metaverse. For governments, this new space can open new channels of action while strengthening those already in use. South Korea stands out for its involvement in this new virtual enterprise as the nation funds its soft power influence through “Hallyu”, the Korean “wave” that continues to sweep international markets. In May 2021, the Ministry of Science and Information Technology created a metaverse board to coordinate and develop virtual and augmented reality platforms. Throughout 2022, President Moon Jae-in will deploy 30 billion Won, equivalent to US \$26 million, as part of the Digital New Deal 2.0.<sup>28</sup> However, the potential risk of a speculative bubble to crash the market remains unchecked. Yet, as such technologies mature—and government subsidies can be crucial to facilitating this shift—a growing number of citizens will invest in the metaverse.

Paul Klee, an influential Swiss-born German artist, wrote that “art does not reproduce the visible; rather, it makes visible.”<sup>29</sup> He describes the art world as the only form of expression that can detach itself from a sense of perception. In other words, it is essential to keep culture “visible” by showcasing the “invisible,” regardless of its economic merit. However, it is just as reasonable to harness the intangible potential of culture in an alternate universe to reveal its hidden materiality

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