LOWY INSTITUTE ASIA POWER INDEX

KEY FINDINGS 2021

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TABLE OF CONTENTS

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INTRODUCTION

The annual Asia Power Index — launched by the Lowy Institute in 2018 — measures resources and influence to rank the relative power of states in Asia. The project maps out the existing distribution of power as it stands today, and tracks shifts in the balance of power over time.

The Index ranks 26 countries and territories in terms of their capacity to shape their external environment — its scope reaching as far west as Pakistan, as far north as Russia, and as far into the Pacific as Australia, New Zealand and the United States.

The 2021 edition — which covers four years of data — is the most comprehensive assessment of the changing distribution of power in Asia to date. Among other things, it aims to sharpen the debate on the near- and long-term geopolitical consequences of the Covid-19 pandemic in the region.

The project evaluates international power in Asia through 131 indicators across eight thematic measures: military capability and defence networks, economic capability and relationships, diplomatic and cultural influence, as well as resilience and future resources. Over half of our data points involve original Lowy Institute research, while the rest are aggregated from hundreds of publicly available national and international sources.

This year, the Index includes three new indicators that track Covid-19 vaccine doses administered nationally as well as regional vaccine diplomacy efforts and donations per capita. These are in addition to new indicators introduced in 2020 that measure climate change resilience, bilateral and plurilateral defence dialogues, and perceptions of the domestic and international handling of the Covid-19 pandemic.

Key findings in the Asia Power Index 2021 include:

- The Covid-19 pandemic has driven down the comprehensive power of almost all states in 2021, weakening their capacity to respond to and shape their external environment.
- The United States beat the downward trend in 2021 and has overtaken China in two critical rankings. But its gains are dogged by a rapid loss of economic influence.
- China's comprehensive power has fallen for the first time, with no clear path to undisputed primacy in the Indo-Pacific.
- The region has become more bipolar and less multipolar: Japan and India are lagging behind China, and Australia is more reliant on the United States.
- US partners are enhancing their collective deterrence to support a military balance. Yet Asia's deepening security dilemma presents a significant risk of war.
- Vaccine diplomacy is the new currency of geopolitics, and the United States leads the field.
- Indonesia makes it into the top ten, but Southeast Asian middle powers are struggling to maintain their collective clout or sustain the diplomatic narrative.

DIGITAL PLATFORM

The Lowy Institute Asia Power Index is available through a specially designed digital platform that maximises both interactivity with the data and transparency of the methodology.

Dynamic features — including an interactive map, weightings calculator, network analysis, country comparisons, and drill-down explorations of each indicator across multiple years and tens of thousands of data points — establish the Lowy Institute Asia Power Index as an indispensable research tool for the study of power globally.

Explore now: power.lowyinstitute.org

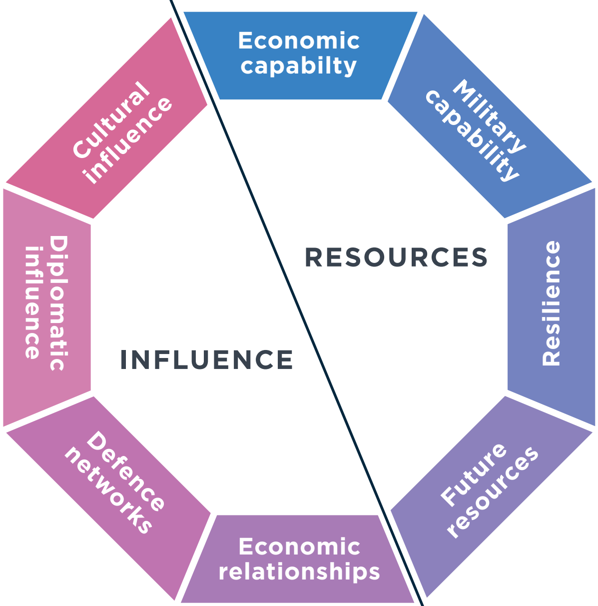
The Index measures the ability of states to shape and respond to their external environment.

Power is defined by the Index as the capacity of a state to direct or influence the behaviour of other states, non-state actors, and the course of international events.

Power can be measured in two ways. The Index distinguishes between resource-based determinants of power – in other words, what countries have – and influence-based determinants of power – what countries do with what they have

Resources measures

The first four measures of the Index — economic capability, military capability, resilience and future resources — are requisite factors in the exercise of power.



Influence measures

The next four measures — economic relationships, defence networks, diplomatic influence and cultural influence — assess levels of regional influence, lending the Index its geographical focus.

A country's comprehensive power is its weighted average across eight thematic measures of power:

ECONOMIC CAPABILITY
Core economic strength and the attributes of an economy with the most geopolitical relevance; measured in terms of GDP at purchasing power parity, international leverage, technological sophistication and global connectivity.

MILITARY CAPABILITY
Conventional military strength; measured in terms of defence spending, armed forces and organisation, weapons and platforms, signature capabilities and Asian military posture.

RESILIENCE
The capacity to deter real or potential external threats to state stability; measured in terms of internal institutional stability, resource security, geoeconomic security, geopolitical security and nuclear deterrence.

FUTURE RESOURCES
The projected distribution of future resources and capabilities, which play into perceptions of power today; measured in terms of estimated economic, defence and broad resources in 2030, as well as working-age population and labour dividend forecasts for 2050.

ECONOMIC RELATIONSHIPS
The capacity to exercise influence and leverage through economic interdependencies; measured in terms of trade relations, investment ties and economic diplomacy.

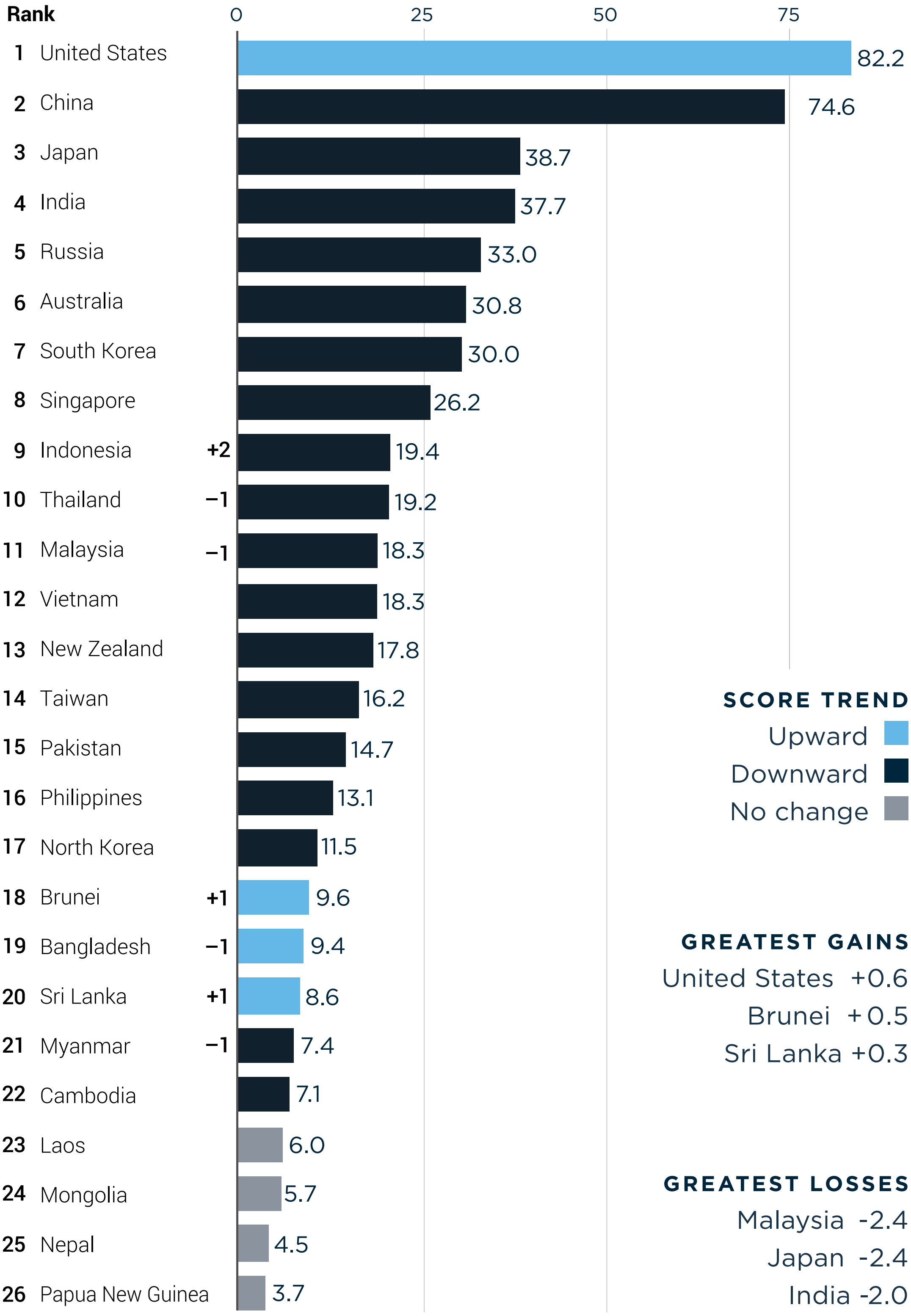
DEFENCE NETWORKS
Defence partnerships that act as force multipliers of autonomous military capability; measured through assessments of alliances, regional defence diplomacy and arms transfers.

DIPLOMATIC INFLUENCE
The extent and standing of a state's foreign relations; measured in terms of diplomatic networks, involvement in multilateral institutions and clubs, and overall foreign policy and strategic ambition.

CULTURAL INFLUENCE
The ability to shape international public opinion through cultural appeal and interaction; measured in terms of cultural projection, information flows and people exchanges.

2021 RANKINGS

COMPREHENSIVE POWER



COMPREHENSIVE POWER

Rank		Country / Territory	Score	Trend†	
1		United States	82.2	↗	**Super powers** ≥ 70 points
2		China	74.6	↘	
3		Japan	38.7	↘	**Middle powers** ≥ 10 points
4		India	37.7	↘	
5		Russia	33.0	↘	
6		Australia	30.8	↘	
7		South Korea	30.0	↘	
8		Singapore	26.2	↘	
9	+2	Indonesia	19.4	↘	
10	–1	Thailand	19.2	↘	
11	–1	Malaysia	18.3	↘	
12		Vietnam	18.3	↘	
13		New Zealand	17.8	↘	
14		Taiwan	16.2	↘	
15		Pakistan	14.7	↘	
16		Philippines	13.1	↘	
17		North Korea	11.5	↘	
18	+1	Brunei	9.6	↗	**Minor powers** < 10 points
19	–1	Bangladesh	9.4	↗	
20	+1	Sri Lanka	8.6	↗	
21	–1	Myanmar	7.4	↘	
22		Cambodia	7.1	↘	
23		Laos	6.0	–	
24		Mongolia	5.7	–	
25		Nepal	4.5	–	
26		Papua New Guinea	3.7	–	

GREATEST GAINS

United States +0.6
Brunei +0.5
Sri Lanka +0.3

GREATEST LOSSES

Malaysia -2.4
Japan -2.4
India -2.0

**Trend arrows track annual changes in scores above a minimum absolute change threshold (≥ 0.15)*

The Covid-19 pandemic has driven down the comprehensive power of almost all states in 2021, weakening their capacity to respond to and shape their external environment.

For a second consecutive year, eighteen states in the region experienced downward shifts in their national resources and international influence.

No country was untouched by the health and economic impacts of Covid-19 in 2021. As a result, a majority are not performing as well in the Index as they were either a year ago or prior to the pandemic. The relative distribution of power in the Indo-Pacific has changed largely as a consequence of some countries sustaining greater losses in their comprehensive power than others.

The effects of the pandemic on state power are varied and will be long running. Covid-19 has tested state capacity, turned societies and governments inwards, and weakened the ability of many state actors to shape and respond to their external environment. Quite apart from the economic toll exacted by the health crisis, countries sustained losses in diplomatic, cultural and economic influence, and even defence diplomacy, as a result of closed borders and interrupted exchanges.

A power contest between increasingly acrimonious Indo-Pacific players competing by degrees of underperformance poses a stark contrast to the 'race to the top' that fuelled regional power dynamics prior to the pandemic. In 2019, seventeen countries registered gains in their Index scores, albeit some by greater margins than others, as Asia's economic transformation and 'long peace' continued to reshape the global distribution of power.

Furthermore, no single tier of powers distinguished themselves above the others in 2021. Middle powers Australia, Taiwan and Vietnam, which were the only countries to improve on their comprehensive power in 2020, have each succumbed to the broader regional downward trend. The one standout exception this year to the pattern of losses among leading powers in the Indo-Pacific is the United States.

COVID-19: A RACE TO THE BOTTOM
YEAR-ON-YEAR CHANGES IN COMPREHENSIVE POWER

Country	2019	2020	2021
Malaysia	1.2	-2.1	-2.4
Japan	-0.3	-1.5	-2.4
India	-0.1	-1.3	-2.0
Thailand	0.8	0.1	-1.7
Australia	-0.2	1.1	-1.6
South Korea	0.0	-1.1	-1.6
China	1.4	0.1	-1.5
Myanmar	0.6	-0.2	-1.3
Singapore	-0.2	-0.4	-1.2
New Zealand	1.0	-0.9	-1.2
Vietnam	1.0	1.3	-1.0
North Korea	1.3	-1.6	-0.8
Indonesia	0.7	-0.7	-0.5
Russia	0.6	-1.8	-0.5
Pakistan	-0.1	-0.1	-0.5
Taiwan	-0.5	0.8	-0.5
Cambodia	0.7	-0.4	-0.2
Philippines	0.7	-0.4	-0.2
Papua New Guinea	0.0	0.0	0.0
Laos	0.6	-0.4	0.0
Nepal	0.6	-0.2	0.0
Mongolia	0.2	-0.5	0.0
Bangladesh	0.6	-0.5	0.2
Sri Lanka	0.4	-0.3	0.3
Brunei	0.2	0.0	0.5
United States	0.0	-3.0	0.6

Uneven economic impacts and recoveries from the pandemic will likely continue to alter the regional balance of power well into the decade. Only Taiwan, the United States and Singapore are now predicted to have larger economies in 2030 than originally forecast prior to the pandemic. Yet richer countries, such as Japan, have seen their economic prospects improve not just relative to 2020, but also to economies with lower vaccination rates. China, which avoided a recession last year, is not far behind.

Meanwhile, many developing economies, including India, have been hardest hit in comparison to their pre-Covid growth paths. This has the potential to reinforce bipolarity in the Indo-Pacific, driven by the growing power differential of the two superpowers, the United States and China, in relation to nearly every other emerging power in the region.

The United States beat the downward trend in 2021 and has overtaken China in two critical rankings. But its gains are dogged by a rapid loss of economic influence.

The United States has defied the prevailing regional downward trend to register its first annual gain in comprehensive power in four editions of the Asia Power Index since 2018. The country that experienced the largest drop in comprehensive power in 2020 has in 2021 registered the most substantial — albeit still modest — upswing in power of any country in the region. An aggregate gain of 0.6 points on the year only begins to make up for a three point loss in overall score in the initial year of the pandemic. Nevertheless, the turnaround should challenge the perception, among friends and rivals alike, that US power is in steady decline.

Notwithstanding the reality of China's rise, America remains a highly dynamic superpower. It now tops six of the Index's eight measures, up from four in 2020. No other country exerts greater, more multi-dimensional power. In addition to maintaining substantial leads in its defence networks, cultural influence and military capability, the United States has in 2021 narrowly overtaken Japan and China in the region for diplomatic influence. In parallel, the United States has for the first time outranked China in the Index's measure of future resources, which is a combined assessment, based on current trends, of the projected distribution of economic and military capabilities to 2030 and demographic strength to 2050.

Much of this improvement in US performance is attributable to a combination of domestic renewal and international coalition building. The new administration under President Joe Biden has made significant inroads into subduing the domestic public health crisis and spurring the economy. The country is up fractionally for its resilience in 2021 and by more than three points on last year in economic capability. Faster than expected US economic recovery and improved prospects to 2030 have coincided with growing economic and demographic headwinds in China.

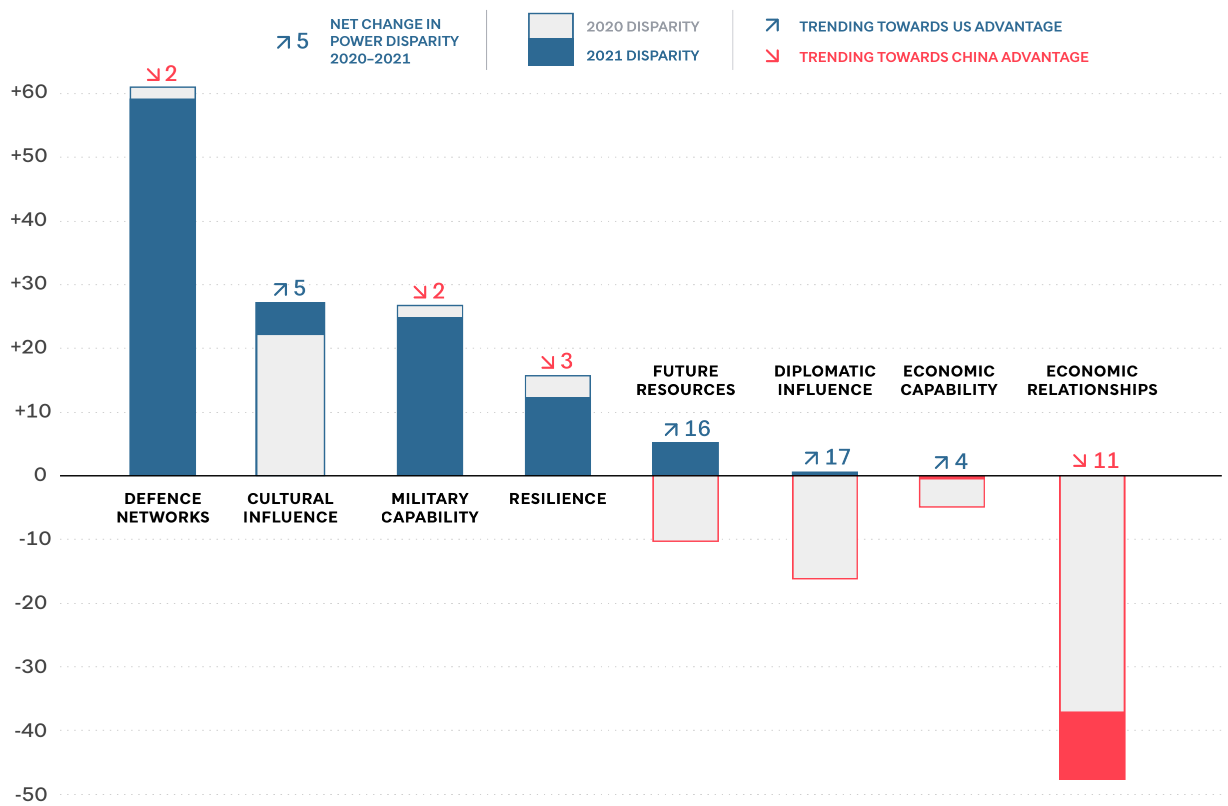
The United States has also gained a remarkable 15.5 points in diplomatic influence this year, albeit starting from a low point set by the former Trump administration. After years of Chinese diplomatic momentum on the world stage and US apathy on transnational challenges, Washington has seized the diplomatic initiative by presenting a broad-ranging global agenda on issues from equitable access to Covid-19 vaccines to development finance and climate action.

Despite Washington's initial vaccine nationalism in early 2021, two new indicators in the Index point to a concerted push by the United States to make vaccine diplomacy a cornerstone of US regional engagement. By October 2021, the United States had donated and delivered more than 90 million Covid-19 vaccine doses to the region — twice as many as China. Washington has also sought to broaden the appeal of the Quadrilateral Security Dialogue (Quad) — alongside its partners Australia, India and Japan — with an expanded focus on the provision of international public goods, and in particular Covid-19 vaccines.

President Biden was judged by the Index's mid-year survey of regional experts to be the most effective Indo-Pacific leader in advancing their country's national interests. America's diplomatic standing in the region appears not to have been significantly diminished by the subsequent chaotic withdrawal of US troops from Afghanistan in August 2021 or, a month later, by the diplomatic fallout with France following the surprise announcement of the AUKUS trilateral pact.

US COMPARATIVE ADVANTAGE IN 2021

DIFFERENCE IN US-CHINA SCORES



Notwithstanding tangible US gains in 2021 and the immediate and long-term benefits of a more competitive US economy, the 'Biden effect' on the overall standing of the United States in the Indo-Pacific has been reduced by deep-seated structural challenges in its competition with China. Improvements relative to China across four measures of US power have been undermined by US losses elsewhere — notably a drop of 1.9 points in military capability and a much more significant 10.7-point decline in economic relationships.

These results point to two concerning trends for the United States. The first is the slow but steady relative decline in US military primacy in the Indo-Pacific. The second is America's growing irrelevance in the political economy of Asia. These dual challenges will require Washington to strengthen and leverage its regional networks as a force multiplier for its economic and military power. However, as the Quad and AUKUS pact illustrate, America has been more proactive at leveraging its regional networks in service of its military power than it has in service of the regional economic balance of power.

The US–China disparity in economic relationships has been a chronic weakness for the United States over many years. But the rate of deterioration in America's economic clout should alarm US decision-makers. China's market size and proximity to its Asian neighbours is difficult for the United States to match. However, obstacles to a more consequential multilateral hedge against China's asymmetric economic power lie chiefly with the anti-trade tilt in US politics. It remains to be seen whether a forthcoming US 'economic framework for the Indo-Pacific' can overcome domestic US opposition on trade and offer the region anything of substance.

In the meantime, alternative models for a rules-based regional trade environment are well underway. The ASEAN-led Regional Comprehensive Economic Partnership (RCEP), for instance, will enter into force in January 2022. Unlike the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), RCEP has low or no commitments on labour, the environment, intellectual property and state-owned enterprises. But it will result in more trade, investment and supply chain integration among fifteen Asian partners — first among them, China.

The 2021 Asia Power Index points to a resurgent and more competitive America. But just how influential it is in Asia will depend in large part on whether it can step up its economic engagement in the region. That will determine too whether America's modest uptick in comprehensive power in 2021 can deliver 'situations of strength' for the superpower or more accurately reflects a short-term reprieve from an established pattern of relative US decline.

There also continues to exist a danger greater than US decline for America's Indo-Pacific partners. The single biggest risk to US power remains the polarisation of US politics and the threat this poses to the stability of its democratic institutions and, ultimately, America's commitment and reliability as an ally and partner in the Indo-Pacific.

China's comprehensive power has fallen for the first time, with no clear path to undisputed primacy in the Indo-Pacific.

China's comprehensive power has dropped for the first time in four editions of the Asia Power Index, as the country lost ground in half of the Index's measures of power in 2021 — from diplomatic and cultural influence to economic capability and future resources. This contrasts with the year before when Beijing emerged diplomatically diminished from the pandemic but was holding ground in overall power, and to 2019 when it netted the highest gains in the region.

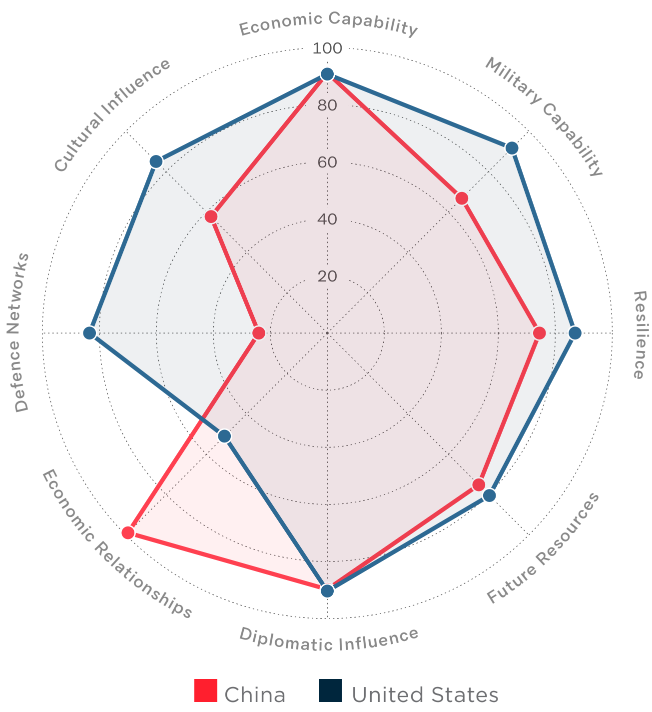
Yet a loss of 1.5 points in 2021 has not substantially undermined China's power differential over the rest of the region, given that lower ranked countries are also less powerful than they were prior to the pandemic. Nor is China necessarily at risk of losing its superpower status, with top-two placements in all but two of the measure rankings. However, in a contested strategic environment, China's rise relative to the United States is more fragile than many may believe, including those in the one-party state.

The results emphasise the narrow but deep foundations on which China's power is built. The country is virtually on par with the United States for its economic capability but is vastly ahead in terms of its regional economic relationships. Trade volumes between China and the region are nearly three times that between the United States and the region. China has also become the primary foreign investor in as many countries in the Indo-Pacific as Japan and the United States combined. The ability to physically connect and shape the choices of countries through economic interdependencies forms the bedrock of Chinese comprehensive power, just as US defence partnerships are the mainstay of US military power. Beijing will likely remain a formidable US adversary on this basis alone.

Yet Beijing does not only depend on economic statecraft to advance its objectives. It has also made good use of its increasing military strength, backed by defence spending now 50 per cent larger than the combined outlays of India, Japan, Taiwan and all ten ASEAN countries. Beijing has

UNITED STATES – CHINA

COMPREHENSIVE POWER IN 2021



deployed the People's Liberation Army (PLA) to intimidate Taiwan, jostle with India along its disputed Himalayan border, press its sovereignty claims against Japan in the East China Sea, and exert extra-legal control over international waters and airspace in the South China Sea.

As Beijing downsizes and professionalises the PLA's armed forces, it has expanded the country's nuclear deterrent and developed advanced weapons that can threaten US and allied bases in the region, as well as the US mainland. The net result is that, although China's score for overall military capability is unchanged from last year, it has gained ground on the United States in 2021 by narrowing the gap in the Index's sub-measure for signature capabilities. Credible reports of a test in July 2021 of a new hypersonic Chinese missile that circled the globe via the South Pole, releasing another missile on board before detonating close to its intended target, corroborate this trend.

China's largest gain in 2021 was in the Index's resilience measure, which assesses the capacity of a country to deter external threats to state stability. The world's largest trading nation is becoming less dependent on its leading trade partners — the European Union and the United States — as it shifts to a domestic consumption model. However, with the onset of Covid-19, an emphasis on economic self-sufficiency and geoeconomic security has become part of a much broader inward turn. This shift has hurt China's relative advantages elsewhere.

In 2019, for instance, China benefited from more arrivals of non-resident visitors from the region than any other country, including business travellers, tourists and students. But in response to the pandemic, China has installed one of the world's strictest systems of border control and quarantine. This has significantly disrupted international travel to and from China with a pronounced knock-on effect on people-to-people links with the region — a key driver in the country's cultural influence.

China's inward turn appears also to have depressed its diplomatic influence. Beijing's pole position in that measure has been very narrowly overtaken by the United States in 2021. Despite a frenetic pace of regional diplomatic activity by senior Beijing officials, President Xi Jinping himself has not left the country for almost two years. His leadership on the international stage this year was outranked in the Index's regional expert survey by the leaders of the United States, Russia and even Singapore.

Nowhere has China lost more ground than in the future resources measure. A growing burden of structural weaknesses weighs on the country's prospects. These include a rapidly ageing population; water scarcity in stretches of the country, and vulnerability to flooding in others; a heavy debt load; and a political system that spends more on projecting power inwards, on internal security challenges, than it does on projecting it outwards, on military expenditure.

China's economy at market exchange rates will still likely overtake that of the United States. But there are inherent limits on the speed at which China can continue to grow beyond 2030. Significant domestic challenges await in coming decades. Few policy levers exist to turn around the decline in its working-age population; productivity growth is slowing; and China's investment-heavy approach for driving the economy will produce diminishing returns over time.

On current trends, Beijing is now less likely to pull ahead of its peer competitor in comprehensive power by the end of the decade. Importantly, this change suggests that there is nothing inevitable about China's rise in the world. Shifts in the relative standing of both America and China in various elements of power, including military spending, are possible and indeed already emerging as policy directions and circumstances change. Across the range of feasible outcomes, however, it appears unlikely China will ever be as dominant as the United States once was.

The region has become more bipolar and less multipolar: Japan and India are lagging behind China, and Australia is more reliant on the United States.

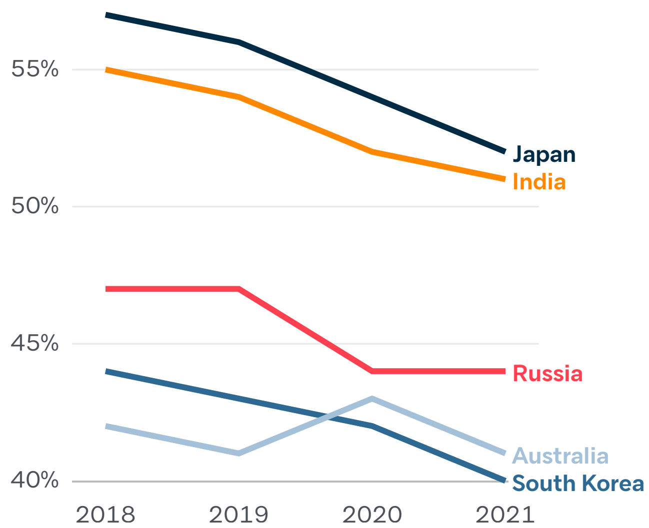
The pandemic has made the region more bipolar and less multipolar. Despite China's lagging power differential with the United States, there has been no diffusion of power away from the top two players to the next tier of regional powers. In fact, the two countries with the most potential to contribute to a regional multipolar order — Japan and India — have each lost more ground in 2021 than did China. Separated by oceans and vast demographic differences representing old and young Asia, Japan and India have nonetheless registered similar rates of decline since 2018. Tokyo and New Delhi now both fall just short of the major power threshold of 40 points in the Index. Their loss of standing relative to China has been more pronounced and continuous than is the case for other middle powers such as Australia.

Japan continues to wield more influence in the region relative to its available resources than any other country. This quintessential smart power has gained several points in defence networks as the lead defence dialogue partner for eleven countries. However, Japan is down on all other measures of power in 2021 and its margins of influence are being eroded. In particular, Tokyo has lost several points and one ranking for diplomatic influence in the year following former Prime Minister Shinzo Abe's resignation. The country has also struggled to sustain its once formidable regional economic clout, with a loss of 7.2 points in economic relationships in 2021. This reflects a relative loss in standing in comparison with China's foreign investment inroads into countries across the region.

Whereas Japan is an overachiever, albeit in long-term decline, India is an underachiever relative to both its resources and potential. India's rise as a truly multipolar power — able to match China's military and economic capabilities — will take a decades-long effort, with no guarantee of success. The country has boosted its resilience and military capability in 2021, yet the world's third largest economy has also been one of the hardest hit in comparison to its growth path prior to the pandemic.

TOP 5 MIDDLE POWERS

AS A PERCENTAGE OF CHINA'S POWER (2018–21)



By the end of the decade, it will only reach 40 per cent of China's economic output on current trends. India also lags in economic diplomacy, dropping one place to finish eighth behind Thailand in the economic relationships measure.

By comparison, sixth-ranked Australia has weathered China's growing power better than most US partners over the course of the last several years. A loss of 1.6 points in its overall score in 2021, after gaining ground last year, means the country's overall standing is now approximately back to its pre-pandemic level. Despite coming under sustained trade sanctions by its primary trade partner, Australia has improved its resilience in 2021. The damage wrought by Chinese trade restrictions has been largely offset by untouched iron ore exports to China and trade diversion in other sectors.

Australia has responded to a more adversarial relationship with China by taking significant steps towards greater integrated deterrence with its longstanding ally, the United States. A new AUKUS trilateral pact, which includes the United Kingdom, creates the bedrock for a future fleet of Australian nuclear-propelled submarines that will eventually allow the country to project power at long range into key theatres of the Indo-Pacific. Nonetheless, Australia is trending down on military capability and, paradoxically, has lost 2.7 points in its regional defence networks in 2021. The first development highlights the fact that the nuclear-powered boats will not arrive for perhaps two decades, during which time Australia's signature military capabilities will remain limited and its navy reliant on an existing fleet of ageing conventional submarines. The second is a reminder that the trilateral pact marks a deepening rather than a widening of Australia's defence partnerships. Though still ranked second for its defence networks behind only the United States, the pace of Australia's regional defence diplomacy with non-allies was disrupted by the country's pandemic-related border closures.

US partners are enhancing their collective deterrence to support a military balance. Yet Asia's deepening security dilemma presents a significant risk of war.

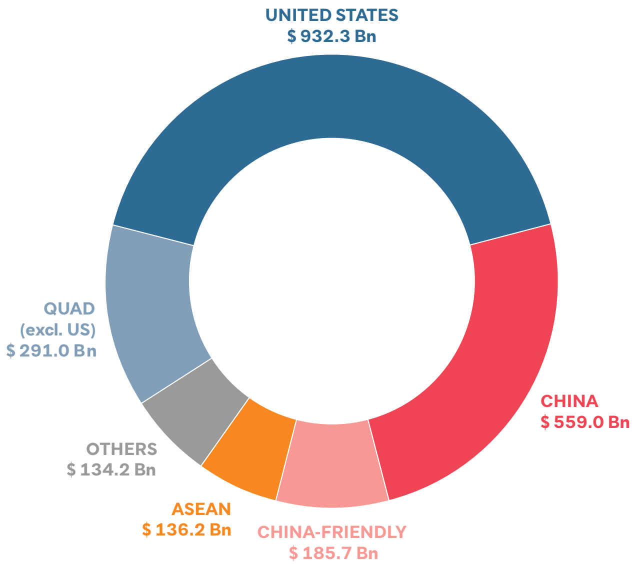
The result of greater bipolarity is that US allies, such as Australia and Japan, and even key balancing powers, such as India, have never been more dependent on American capacity and willingness to sustain a military and strategic counterweight in response to China's rise. Likewise, Washington has recognised that it will not be able to do this by itself. That will require the commitment of allied and non-allied US partners to collectively deter China from altering the status quo in the Indo-Pacific through the use of military force. This approach offers the United States the best hope of upholding a military balance in its favour despite the declining margin of US military superiority in the region.

To this end, the United States has sought to augment its longstanding bilateral alliances with new flexible coalitions that are broadly US aligned, but not exclusively US driven. The Quad, for example, encourages greater cross-bracing between the United States, its allies Australia and Japan, and non-allied India. AUKUS is designed to bolster the sovereign capabilities of a key ally, Australia, with a fleet of nuclear-propelled submarines, which could in time contribute to US efforts to deter China or confront it militarily.

On current trends, China's military expenditure is still forecast to lag US defence spending by a substantial margin until at least the end of the decade. But Beijing can more easily concentrate its expanding military assets in key theatres in its near abroad. Washington's push to dispense with second-order priorities elsewhere in the world, most notably the conflict in Afghanistan, is a tangible sign that it is having to adapt its global military posture in response.

2030 FORECAST MILITARY SPENDING

MILITARY EXPENDITURE FORECAST BASED ON CURRENT TRENDS AT AN ESTIMATED DEFENCE SECTOR PURCHASING POWER PARITY



Asean countries	Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philipines, Singapore, Thailand, Vietnam
Quad countries	Australia, India, Japan, United States
"China-friendly"	Russia, North Korea, Pakistan

Meanwhile, Beijing has sought to disincentivise Southeast Asian countries from joining a US balancing coalition and has upgraded its military exchanges and joint exercises with countries including Russia and Pakistan. These strategic partnerships are still a far cry from the US alliance network, which involves extensive troop-basing agreements and joint operability and military capabilities. Nevertheless, Russia, Pakistan and China's only mutual defence ally, North Korea, form a formidable trio of China-aligned nuclear-armed powers in the region.

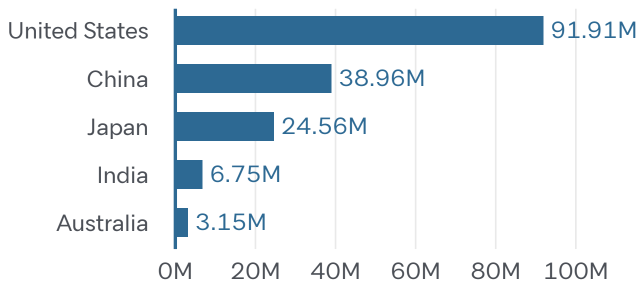
Whether the emerging balance of military power in the Indo-Pacific contributes to deterrence and strategic stability is an open question. The depth of hostilities in the region, the breadth of US–China competition, and the presence of multiple potential flashpoints, with Taiwan being the most immediate concern, mean the risk of war involving two or more parties, or even more than one theatre, is significant. Moreover, the system of safeguards that kept the original Cold War from becoming hot in Europe is still largely absent in the Indo-Pacific.

Vaccine diplomacy is the new currency of geopolitics, and the United States leads the field.

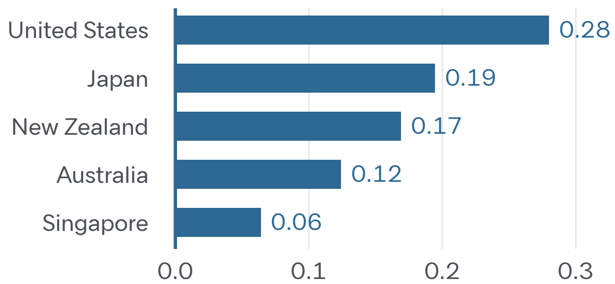
There is a striking disjunction between the traditional security risks centred in Asia, and the fact that in 2021 the region was far more affected by the non-traditional security threat of pandemic disease. The overriding concern of virtually every government has been to minimise the public health impacts and economic burden of the pandemic, and the ability to procure and administer Covid-19 vaccines was crucial to determining their success.

COVID-19 VACCINE DOSES DELIVERED IN THE REGION

TOTAL DONATIONS (TOP 5)



DONATIONS PER CAPITA (TOP 5)



As a result, vaccine diplomacy has emerged as a key conduit of foreign policy as captured in two new indicators of diplomatic influence — aggregate Covid-19 vaccine donations to the region, and donations per capita as a measure of the generosity of donor countries. The United States has led on both counts. By October 2021, the country had donated and delivered more than 90 million vaccine doses to the region — twice as many as China, the next largest donor in aggregate terms — and had been more generous on a per capita basis than any other donor in the Indo-Pacific. China, Japan and India have also been active in donating Covid-19 vaccines to Asia, while New Zealand and Australia have been relatively generous after accounting for their population size.

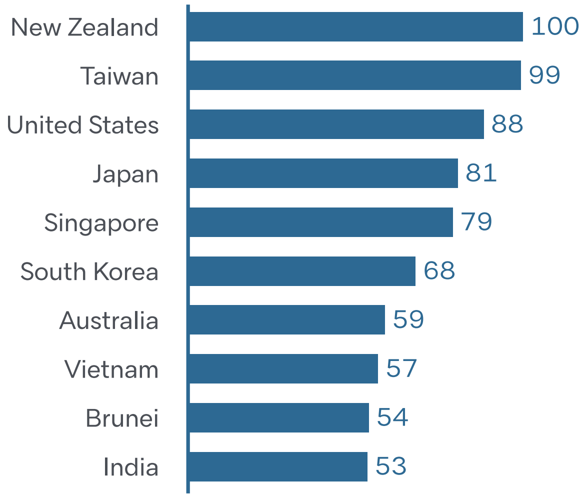
Both commercial sales and donations of Covid-19 vaccines lead to immediate, tangible and crucial benefits for recipient countries. However, donations resulted in greater reputational gains in the region than commercial contracts to supply vaccine doses. China, for example, was ranked just eighteenth of the 26 countries in the Index's regional expert survey for its contribution towards global efforts to end the pandemic, despite being the second largest vaccine donor in the region. The commercial nature of the majority of China's bilateral vaccine deals, and the fact that China's vaccines are generally less effective than leading alternatives, appear to have overshadowed its soft power push and failed to translate into substantial goodwill in recipient countries.

Meanwhile, the generosity of countries such as New Zealand, the United States, Japan and Singapore in donating vaccine doses, and Taiwan in providing masks, correlated with more positive survey results, indicating that there are geopolitical as well as humanitarian payoffs for countries that deliver medical supplies to the region primarily through the form of donations.

Yet vaccine diplomacy has not been the sole driver of shifts in reputation. Among regional actors, the United States and China dominated the race for the development of the first successful Covid-19 vaccines. Few other countries possessed the technology and innovative capacity to develop and manufacture vaccines at record speed. As confirmed by a separate Index survey question, these successes translated into significant reputational boosts for the superpowers with respect to their ability to manage the pandemic. Russia also improved its standing on this measure, reflecting its early mover's advantage in developing and manufacturing its indigenous Covid-19 vaccine technology.

CONTRIBUTIONS TO GLOBAL RESPONSES TO THE COVID-19 PANDEMIC IN 2021

TOP 10 COUNTRIES BY SURVEY RESULT, 0-100



Elsewhere in the region, Singapore's rapid progress in vaccinating its domestic population drove a marked swing upwards in its international reputation for managing the pandemic. Conversely, any recognition of India's significant role in global vaccine manufacturing appears to have been offset by poor perceptions of the country's handling of the major Delta outbreak, which peaked in May 2021. Australia's prolonged border closures similarly weighed heavily on external views of the country, despite its relative generosity in vaccine diplomacy.

Indonesia makes it into the top ten, but Southeast Asian middle powers are struggling to maintain their collective clout or sustain the diplomatic narrative.

Developing countries often register influence shortfalls, reflecting their unrealised power potential and internal constraints on their ability to project power abroad. Indonesia, the most populous nation and largest economy in Southeast Asia, is a prime case in point. Despite ranking fifth just behind Japan in the Index's future resources measure, the country languishes in eleventh place for its economic capability and is ranked thirteenth, behind both Vietnam and Singapore — a city-state just a fraction of Indonesia's size — for its military capability.

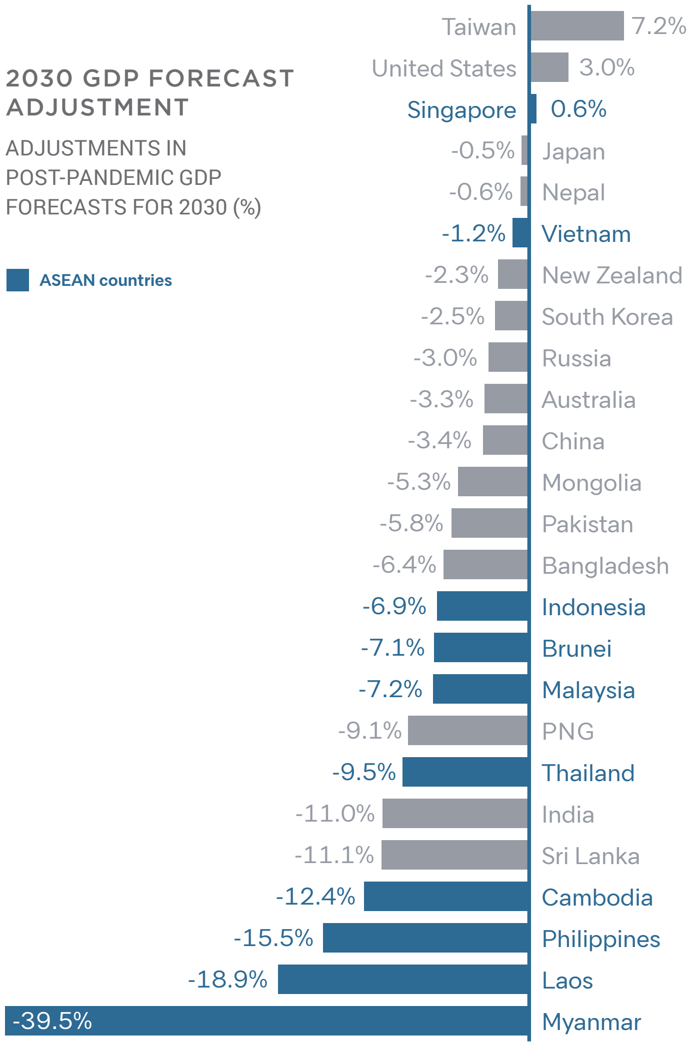
However, Indonesia has for the first time reached a top-ten placement in the Index's overall power rankings. Despite losing 0.5 points in its comprehensive power in 2021, other large Southeast Asian counterparts, including Malaysia and Thailand, sustained losses of even greater margins. Jakarta is also up two rankings in diplomatic influence, and now outranks Singapore as the most diplomatically influential player in Southeast Asia. President Joko Widodo has cemented his position as a leading statesman on the regional stage.

Indonesia's economic fundamentals and prospects have also been marginally less affected by the pandemic than many other developing Southeast Asian countries, despite the nation being one of the hardest hit by the global health crisis in 2021. In fact, Indonesia is currently forecast to benefit from the second highest average annual growth rates in the ASEAN bloc in the period since the start of the pandemic to the middle of this decade (2020–25) — behind only Vietnam. Although there exist key differences between their political systems, Vietnam and Indonesia share a high degree of institutional stability. This is in stark contrast to Myanmar, for example, where political instability and the pandemic have combined to exact a very significant toll on the country.

Major allies and partners of the United States hope that as Indonesia grows powerful it will eventually assimilate anxieties about China's role in the region and become a net contributor to a broader Indo-Pacific balance of power.

2030 GDP FORECAST ADJUSTMENT

ADJUSTMENTS IN POST-PANDEMIC GDP FORECASTS FOR 2030 (%)



However, there are few signs Jakarta will be willing to openly align itself with a US-centred balancing coalition — either now or in the future. To the contrary, Jakarta's reaction to the AUKUS announcement in September 2021 exposed clear differences between Indonesia and Australia in this regard.

Southeast Asian middle powers are inclined to hedge between the superpowers to manage competing influences. This is as true of US treaty allies Thailand and the Philippines, both of which have become more China-friendly, as it is of communist Vietnam, whose embrace of Washington has not ended longstanding party-to-party ties with Beijing. Furthermore, most countries in

Southeast Asia, including Indonesia, lack the military capability required to confront China much outside of their sovereign jurisdictions, and often even from within them.

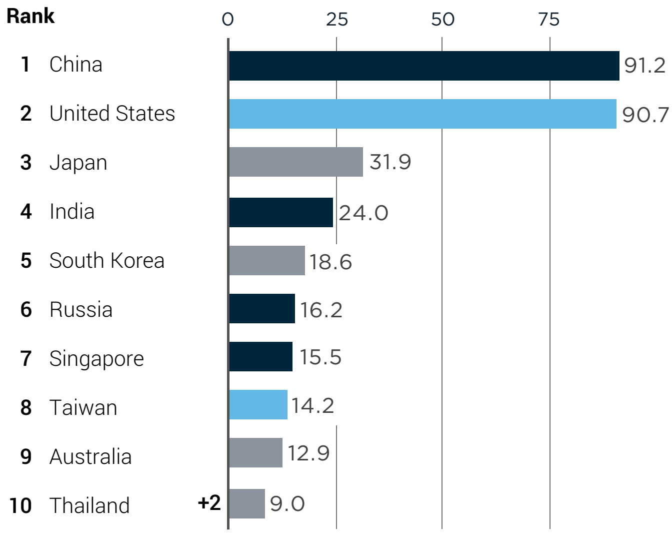
ASEAN countries, as a result, are neither suited nor inclined to participating in a classical concert of powers in the Indo-Pacific. However, their ability to navigate between the United States and China by not choosing sides also faces growing challenges.

Power politics and internal weakness have steadily eroded the ability of ASEAN to uphold a degree of regional order capable of tying both superpowers to the region. This has contributed to a rise in 'minilateral' coalition building and the steady decline in the multilateral influence of the Southeast Asian grouping. AUKUS has raised further concerns that Southeast Asian powers may become bystanders to geopolitical changes driven largely by more powerful outsiders.

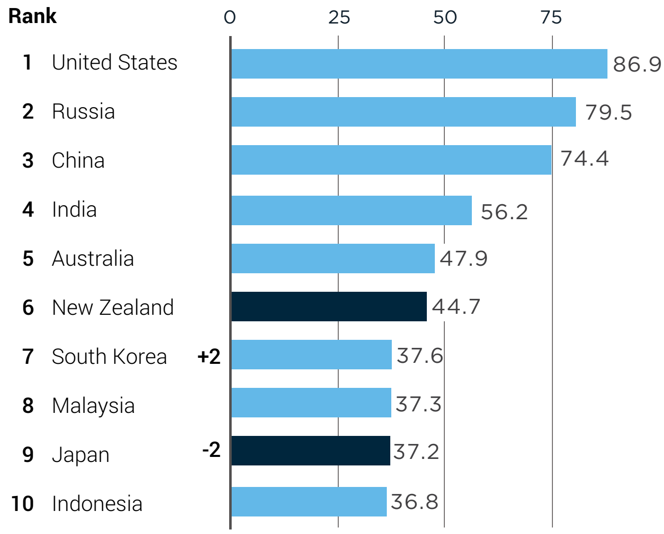
Whether or not ASEAN — which as an organisation remains much less than the sum of its parts — can steer a path through a more bipolar Indo-Pacific, and retain relevance and cohesion as a broad-based, non-aligned grouping will depend largely on the capacity of its largest member state, Indonesia, to exercise leadership and project power within it and through it.

MEASURES OF POWER

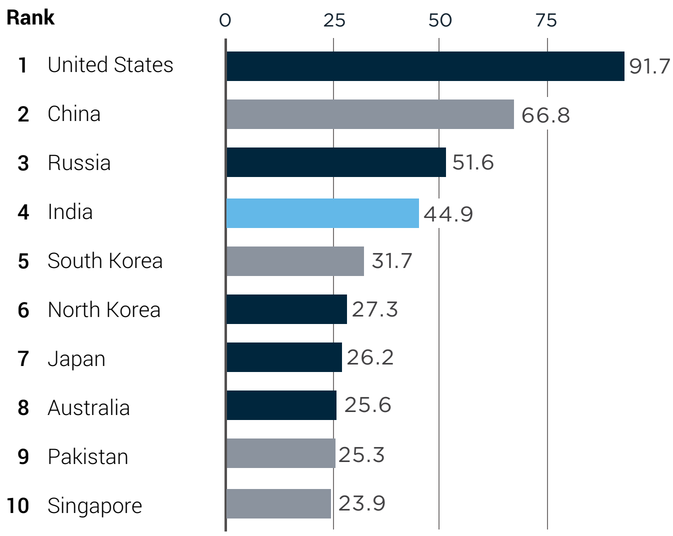
ECONOMIC CAPABILITY



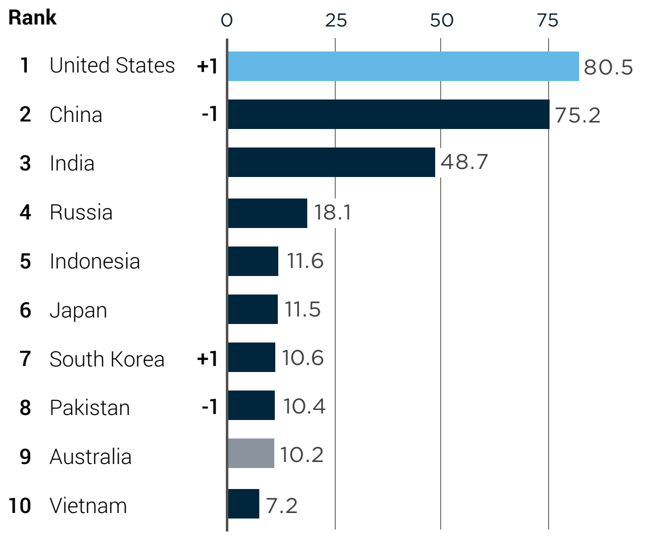
RESILIENCE



MILITARY CAPABILITY



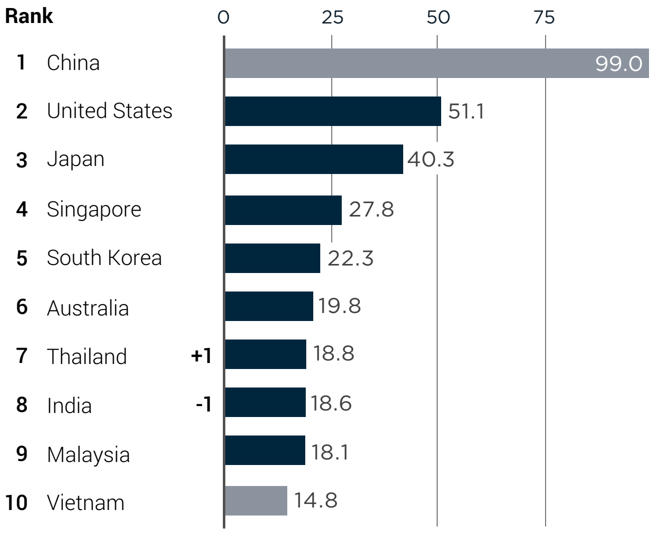
FUTURE RESOURCES



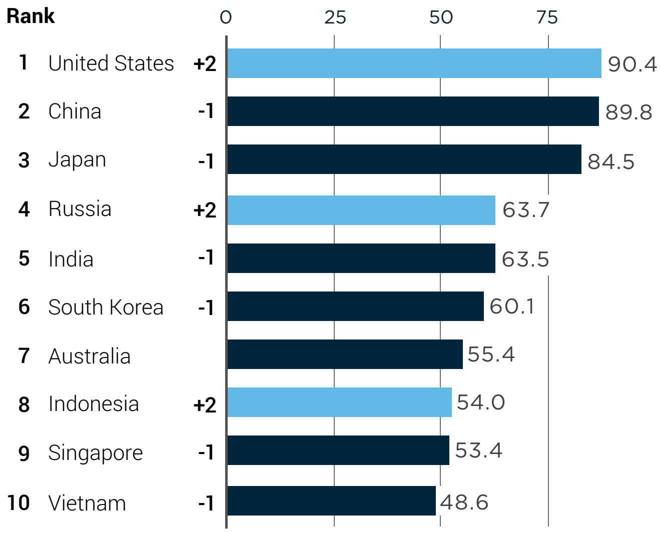
SCORE TREND Upward Downward No change

** Score trends reflect annual changes in measure scores above a minimum threshold (≥ 0.5)*

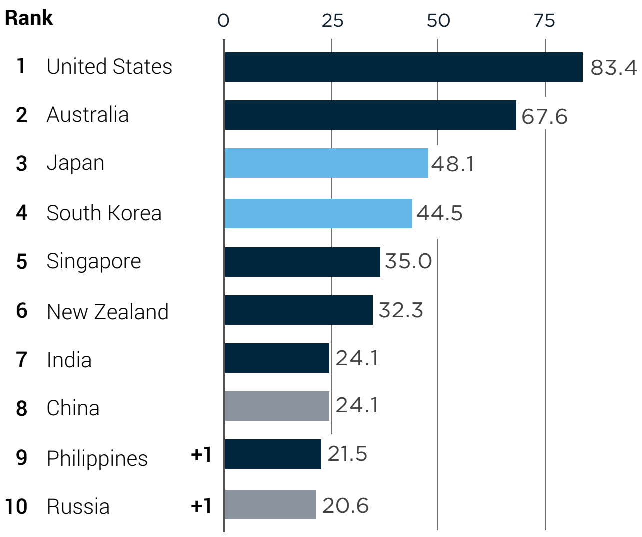
ECONOMIC RELATIONSHIPS



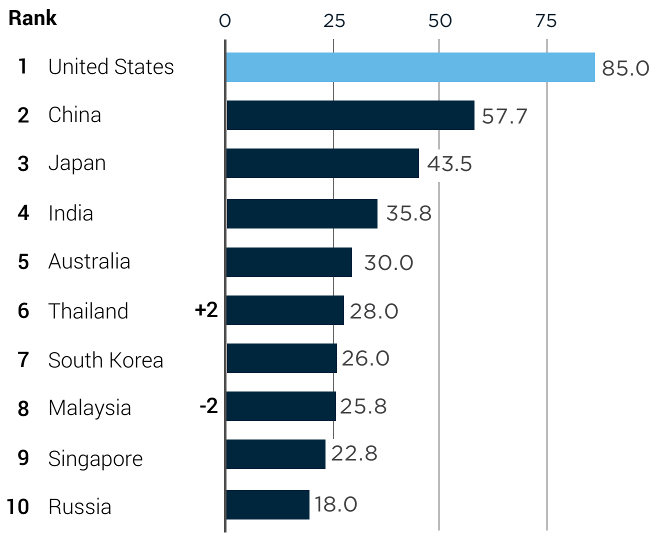
DIPLOMATIC INFLUENCE



DEFENCE NETWORKS



CULTURAL INFLUENCE



SCORE TREND Upward Downward No change

** Score trends reflect annual changes in measure scores above a minimum threshold (≥ 0.5)*

A country's comprehensive power is calculated as a weighted average across eight measures of power, each of which aggregates data from three to five distinct sub-measures.

The Index's measures and sub-measures seek to capture the diverse qualities that enable countries to pursue favourable geopolitical outcomes, as well as to shape and respond to their external environment.

ECONOMIC CAPABILITY

Core economic strength and the attributes of an economy with the most geopolitical relevance; measured in terms of GDP at purchasing power parity (PPP), international leverage, technological sophistication and global connectivity.

Size: The economic weight of a country as reflected by its GDP, which is the total value of all final goods and services produced annually within an economy. Purchasing power parity exchange rates are used to allow for a reliable comparison of real levels of production between countries.

International leverage: Resources that give governments enhanced financial, legal and sanctioning powers abroad. These include global corporations and internationalised currencies, as well as sovereign wealth funds, export credit agencies and official reserves.

Technology: The technological and scientific sophistication of countries. This is measured through indicators such as labour productivity, high-tech exports, supercomputers, renewable energy generation and input variables including R&D spending.

Connectivity: The capital flows and physical means by which countries connect to and shape the global economy, including through international trade, global inward and outward investment flows, merchant fleets and international aviation hubs.

MILITARY CAPABILITY

Conventional military strength; measured in terms of defence spending, armed forces and organisation, weapons and platforms, signature capabilities and Asian military posture.

Defence spending: Annual spending on military forces and activities. This sub-measure looks at current resources devoted to maintaining, renewing, replacing and expanding military capability, measured in terms of military expenditure at market exchange rates and estimated defence-sector PPP rates.

Armed forces: Total active military and paramilitary forces, readiness and organisation. This sub-measure is principally focused on the size of armed forces, but also takes account of their combat experience, training and preparedness, as well as command and control structures.

Weapons and platforms: A country's stock of land, maritime and air warfare assets and capabilities. This sub-measure consists of a number of proxy indicators for capability across the three domains and assesses the sophistication of weapons and platforms.

Signature capabilities: Military capabilities that confer significant or asymmetric tactical and strategic advantages in warfare. These include ballistic missile capabilities, long-range maritime force projection, intelligence networks, and defensive and offensive cyber capabilities.

Asian military posture: The ability of armed forces to deploy rapidly and for a sustained period in the event of an interstate conflict in Asia. This sub-measure consists of qualitative expert-based judgements of a country's ability to engage in either a maritime or continental military confrontation in the region.

RESILIENCE

The capacity to deter real or potential external threats to state stability; measured in terms of internal institutional stability, resource security, geoeconomic security, geopolitical security and nuclear deterrence.

Internal stability: Institutional and environmental factors that enhance domestic governance and provide protection from external interference in internal affairs. This sub-measure includes indicators assessing government effectiveness, political stability, climate change resilience, the absence of internal conflict and the ability of governments to procure and administer Covid-19 vaccinations.

Resource security: Secure access to energy and other critical resources essential to the functioning of a country's economy. This sub-measure looks at dependency on energy imports, energy self-sufficiency levels, refined fuel security and the supply of rare-earth metals.

Geoeconomic security: The ability to defend against other states' economic actions on a country's geopolitical interests and economic activity. This sub-measure looks at an economy's diversity of export markets and products, as well as its levels of dependency on primary trade partners and global trade.

Geopolitical security: Structural and political factors that minimise the risk of interstate conflict and enhance a country's territorial security. This sub-measure includes indicators such as population size relative to neighbours and geographic deterrence based on landmass, as well as active border disputes and legacies of interstate conflicts with neighbours.

Nuclear deterrence: Strategic, theatre and tactical nuclear forces that can be used to deter potential aggressors by threatening a retaliatory nuclear strike. This sub-measure assesses nuclear weapons range, ground-based nuclear missile launchers and nuclear second-strike capabilities.

FUTURE RESOURCES

The projected distribution of future resources and capabilities, which play into perceptions of power today; measured in terms of estimated economic, defence and broad resources in 2030, as well as working-age population forecasts for 2050.

Economic resources 2030: Future economic size and capabilities. This is measured by forecast GDP at purchasing power parity in 2030 and the Beckley formula for estimating economic power; multiplying forecast GDP by forecast GDP per capita.

Defence resources 2030: Future defence spending and military capability enhancements. This sub-measure consists of two indicators. The first looks at forecasts of absolute levels of military expenditure in 2030, holding the current ratio of defence spending to GDP constant. The second looks at expected gains in military expenditure as a proxy for investments in military capability above replacement levels.

Broad resources 2030: Estimated score for a country's broad resources and capabilities in 2030. This sub-measure estimates broad resources in 2030, based on every country's current ratio of GDP and military expenditure to their aggregate score for economic resources, military capability and resilience.

Demographic resources 2050: Demographic variables that are expected to contribute to future GDP beyond 2030. This sub-measure consists of a forecast of the working-age population (15–64) in 2050 as well as the expected labour dividend from gains in the working-age population adjusted for quality of the workforce and climate change resilience.

ECONOMIC RELATIONSHIPS

The capacity to exercise influence and leverage through economic interdependencies; measured in terms of trade relations, investment ties and economic diplomacy.

Regional trade relations: The ability to influence other countries through bilateral trade flows and relative dependencies. This sub-measure focuses on an economy's relative importance as an importer, exporter and primary trade partner for other countries, based on annual bilateral trade flows.

Regional investment ties: The ability to influence other countries through foreign direct investment flows and relative dependencies. This sub-measure focuses on an economy's relative importance as a source and destination of foreign investment for other countries, based on ten-year cumulative flows of foreign capital investment.

Economic diplomacy: The use of economic instruments to pursue collaborative interests and beneficial geopolitical outcomes. This sub-measure tracks economic diplomacy through free trade agreements and outward foreign assistance flows.

DEFENCE NETWORKS

Defence partnerships that act as force multipliers of autonomous military capability; measured through assessments of alliances, regional defence diplomacy and arms transfers.

Regional alliance network: Number, depth and combined strength of defence alliances in the region. This is measured in terms of codified security guarantees, military personnel deployed in Index countries, joint military training exercises, arms procurements from allied partners and combined operation years with allies.

Regional defence diplomacy: Diversity and depth of defence diplomacy in the region. This sub-measure assesses defence dialogues, defence consultation pacts, foreign deployments between non-allied defence partners, joint military training exercises, combined operation years and arms procurements from non-allied countries.

Global defence partnerships: Arms trade patterns indicative of global security partnerships and collaboration across defence industries, measured in terms of annual arms trade flows and number of arms export recipients over a five-year period.

DIPLOMATIC INFLUENCE

The extent and standing of a state's or territory's foreign relations; measured in terms of diplomatic networks, involvement in multilateral institutions and clubs, and overall foreign policy and strategic ambition.

Diplomatic network: The regional and global reach of a country's diplomatic offices, measured in terms of total number of embassies, high commissions, permanent missions and other representative offices.

Multilateral power: A country's participation and diplomatic clout in multilateral forums. This sub-measure examines membership in select summits, diplomatic clubs and intergovernmental organisations, as well as financial contributions to the United Nations and development banks, and voting alignment with other countries in UN resolutions.

Foreign policy: The ability of government leaders and foreign policy bureaucracies to advance their country's diplomatic interests. This sub-measure aggregates qualitative expert-based judgements of how effectively leaders pursue their country's diplomatic interests, their demonstrated level of strategic ambition, and the wider efficacy of a country's foreign policy bureaucracy. The sub-measure includes temporary indicators measuring vaccine donations to the region and perceptions of how countries have handled the Covid-19 pandemic in 2021.

CULTURAL INFLUENCE

The ability to shape international public opinion through cultural appeal and interaction; measured in terms of cultural projection, information flows and people exchanges.

Cultural projection: Cultural influences and exports that help to enhance a country's reputation abroad. This sub-measure looks at online search trends in the region, exports of cultural services, global brands, and the international status of a country's passports, cities and heritage sites.

Information flows: The regional appeal of a country's media outlets and universities. This sub-measure looks at the online search trends in the region for selected national news agencies, newspapers, television and radio broadcasters, as well as the number of inbound international students from the region enrolled in tertiary education.

People exchanges: The depth and influence of a country's people-to-people links in the region. This sub-measure tracks the size of regional diasporas, and the attractiveness of countries as travel and emigration destinations.

2021 POWER GAP

The Asia Power Index consists of four resource measures, which look at what countries have, and four influence measures, which look at what countries do with what they have.

The Power Gap provides a secondary analysis to the Index based on the interplay between resources and influence. Countries can be overperformers or underperformers, irrespective of where they place in the rankings.

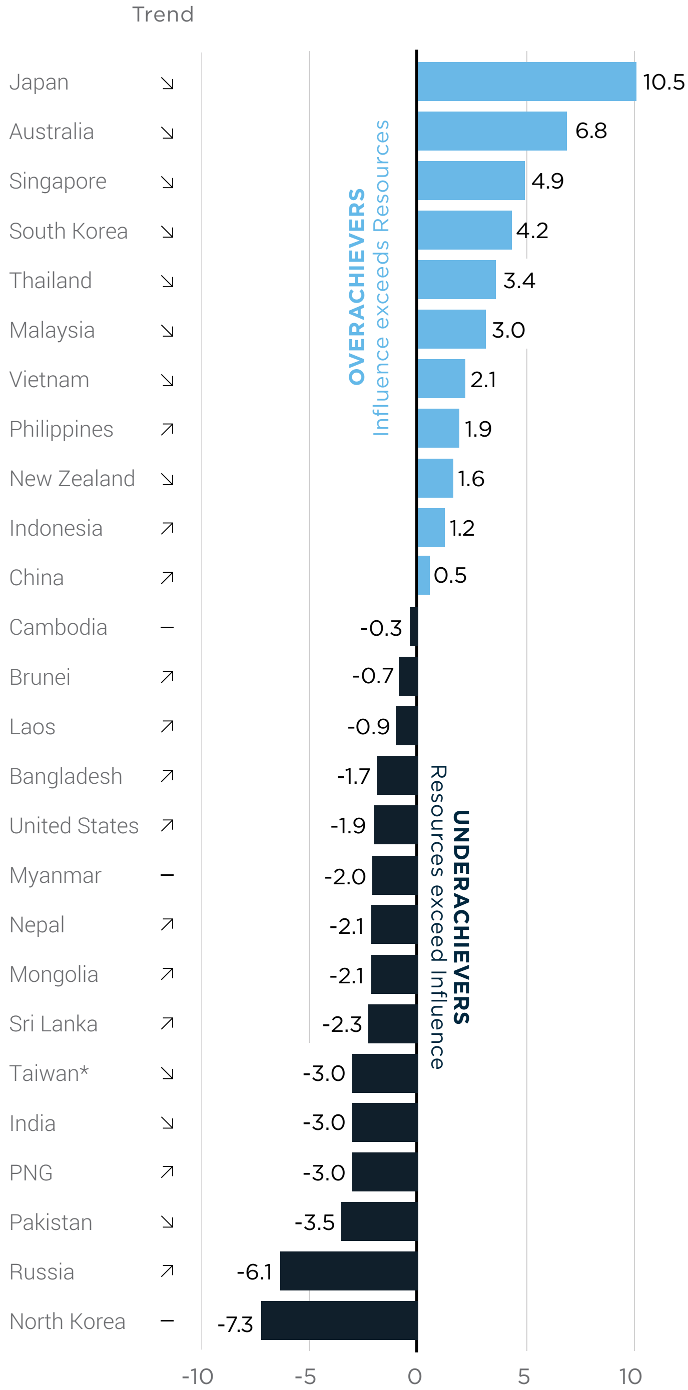
Countries with outsized influence in Asia relative to their resources have a positive Power Gap. Conversely, countries that exert undersized influence relative to their resources register a negative Power Gap.

The distance from the trend line — which is determined using a linear regression — reveals how well each country converts its resources into influence in Asia.

Japan's Power Gap score of 10.5 reveals it to be a quintessential smart power, making efficient use of limited resources to wield broad-based diplomatic, economic and cultural influence in the region. By contrast, North Korea — a misfit middle power — derives its power principally from its military resources and nuclear weapons capability. The country's diplomatic and economic isolation, however, limits its regional influence resulting in a Power Gap score of –7.3.

Australia, Singapore and South Korea have more influence than their raw capabilities would indicate. They are highly networked and externally focused. Positive Power Gap scores among top performing middle powers point to their ability and willingness to work collaboratively with other countries to pursue collective interests.

Developing countries often register influence shortfalls — reflecting their unrealised power potential and internal constraints on their ability to project power abroad. Meanwhile, Taiwan delivers inconsistent performances across the influence measures due to a lack of formal diplomatic recognition and the territory's exclusion from key multilateral forums and initiatives. Russia's Power Gap score of –6.1 indicates its regional influence is limited by its position on the geographic periphery of Asia.



Trend arrows track annual changes in Power Gap scores above a minimum threshold (≥ 0.15)

METHODOLOGY

The Lowy Institute Asia Power Index consists of eight measures of power, 30 thematic sub-measures and 131 indicators. Over half of these indicators involve original Lowy Institute research, while the rest are drawn from hundreds of publicly available national and international sources.

The 2021 edition of the Index has expanded to include three new indicators that track Covid-19 vaccine doses administered nationally as well as regional vaccine diplomacy efforts and donations per capita. These new indicators form part of the Resilience and Diplomatic Influence measures, respectively.

The selection of indicators was driven by an extensive literature review and expert consultations designed to address these methodological hurdles. As such, each indicator represents a carefully selected proxy for a broader category of variables often more difficult, if not impossible, to measure comparatively.

The methodological framework of the Index is informed by the OECD Handbook on Constructing Composite Indicators. A distance-to-frontier approach is used to compare a country's results with the best performing and worst performing countries in each dataset.

The distance-to-frontier method allows for different indicators to be made comparable across a diverse set of metrics, while preserving the relative distance among the original data values. The method also reflects the notion that power in international relations is relative, measured as a comparative advantage in a given frame of reference.

WEIGHTINGS

The Lowy Institute has assigned a set of weightings to the component parts of the Asia Power Index that reflect their relative importance for exercising state power.

These authoritative weightings reflect the collective judgement of Lowy Institute experts based on relevant academic literature and consultations with policymakers from the region. They take into account the dimensions of power considered most advantageous to countries given the current geopolitical landscape of the region.

Measure	Weighting
Economic resources	17.5%
Military capability	17.5%
Resilience	10%
Future resources	10%
Economic relationships	15%
Defence networks	10%
Diplomatic influence	10%
Cultural influence	10%

While our weightings are consistent with broadly held views in the policy and scholarly communities, it is of course possible to reach other value judgements about the relative importance of the measures.

An innovative calculator on the Index's digital platform enables users to adjust the principal weightings according to their own assumptions and reorder the rankings on that basis.

Sensitivity analysis has determined that the large number of indicators included in the Index, and variations across countries within those indicators, are quantitatively more important than our weighting scheme. The data points play the primary role in determining the rankings of the Lowy Institute Asia Power Index.

REVIEW: THREE STAGES

The Index model underwent three stages of review after development. First, the analytical assumptions and findings were submitted through an extensive peer review process. Second, a team of fact checkers verified that the raw data points and their normalised scores were factually correct and drew on the latest available data. Third, PwC provided a limited integrity review of the spreadsheets and formulas used to calculate the eight measures of the Index.

INDICATORS AND SOURCES

ECONOMIC CAPABILITY

Sub-measure	Indicator	Technical description; source
Size	GDP	*Estimated GDP at purchasing power parity, current prices (2021); IMF*
International leverage	Corporate giants	*Number of public companies listed in the Forbes 2000 (2021); Forbes 2000*
	Global reserve currency	*Currency composition of official foreign exchange reserves, annualised average (2020); IMF*
	International currency share	*Share of international financial transactions undertaken in national currency, annualised average (2020); Society for Worldwide Interbank Financial Telecommunication (SWIFT)*
	Official reserves	*Official reserve assets including gold, current dollars (2019); World Bank; Reuters; Central Bank of Taiwan*
	Export credit agencies	*Export credit agencies, total assets, current dollars (2019); Lowy Institute*
	Sovereign wealth funds	*Sovereign wealth funds, total assets, current dollars (2021); Lowy Institute; Sovereign Wealth Fund Institute*
Technology	High-tech exports	*Estimated technological sophistication of exports EXPY, 0–100 (2019); World Bank World Integrated Trade Solutions (WITS) database; Lowy Institute*
	Productivity	*GDP output per worker, constant 2010 dollars (2020); International Labour Organization*
	Human resources in R&D	*Total R&D researchers, full-time equivalent (latest year available); UNESCO; Taiwan Statistical Data Book; Lowy Institute*
	R&D spending (% of GDP)	*Gross domestic expenditure on R&D as a share of GDP (latest year available); UNESCO; Taiwan Statistical Data Book; Lowy Institute*
	Nobel prizes (sciences)	*High achievements in physics, chemistry, and physiology or medicine (1990–2020); NobelPrize.org*
	Supercomputers	*Number of supercomputers in the global top 500 (2020); Top 500.org*
	Satellites launched	*Satellites launched by country of ownership or operation (2017–20); Union of Concerned Scientists Satellite Database*
	Renewable energy	*Annual electricity generation from renewables, gigawatt hours (2019); International Energy Agency; Lowy Institute*
Connectivity	Global exports	*Exports of goods and services, current dollars (2020); World Bank; UN Comtrade; Observatory of Economic Complexity*
	Global imports	*Imports of goods and services, current dollars (2020); World Bank; UN Comtrade; Observatory of Economic Complexity*
	Global investment outflows (%)	*Three-year cumulative flows of outward foreign capital investment (2018–2020); FDI Markets; Lowy Institute*
	Global investment inflows (%)	*Three-year cumulative flows of inward foreign capital investment (2018–2020); FDI Markets; Lowy Institute*
	Merchant fleet	*Total fleet, dead-weight tons (2020); UN Conference on Trade and Development*
	Travel hubs	*Direct international routes from principal airport hub (2021); Lowy Institute; FlightsFrom.com*

MILITARY CAPABILITY

Sub-measure	Indicator	Technical description; source
Defence spending	Military expenditure, market exchange rates	*Estimated military expenditure, current dollars (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance*
	Military expenditure, defence sector PPP	*Estimated military expenditure at defence sector purchasing power parity, current prices (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance*
Armed forces	Military and paramilitary forces	*Active military and paramilitary personnel (2021); IISS Military Balance 2021*
	Training, readiness and sustainment	*Expert survey: Training and preparedness for sustained operations in the event of interstate conflict, two-year rolling average, 0–100 (2020–21); Lowy Institute*
	Organisation: Combat experience	*Expert survey: Combat experience relevant to the ability of armed forces to engage in interstate conflict, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
	Organisation: Command and control	*Expert survey: Exercise of authority and direction over armed forces in the event of an interstate conflict, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
Weapons and platforms	Land warfare: Manoeuvre	*Proxy: Main battle tanks and infantry fighting vehicles (2021); IISS Military Balance 2021*
	Land warfare: Firepower	*Proxy: Attack helicopters, used in close air support for ground troops (2021); IISS Military Balance 2021*
	Maritime warfare: Sea control	*Proxy: Principal surface combatants — frigates, destroyers, cruisers and carriers (2021); IISS Military Balance 2021*
	Maritime warfare: Firepower	*Proxy: Missile vertical launching cells on board surface combatants and submarines (2021); IISS Military Balance 2021*
	Maritime warfare: Sea denial	*Proxy: Tactical submarines (2021); IISS Military Balance 2021*
	Air warfare: Fighters	*Fighter/ground attack aircraft (2021); IISS Military Balance 2021*
	Air warfare: Enablers	*Proxy: Transport aircraft, airborne early warning and control (AEW&C) aircraft, and intelligence, surveillance and reconnaissance (ISR) aircraft (2021); IISS Military Balance 2021*
	Technology, maintenance and range	*Expert survey: Technology, maintenance and range of weapons systems, equipment and materiel, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
Signature capabilities	Ground-based missile launchers	*Launching platforms for intercontinental ballistic missiles (ICBM), intermediate-range ballistic missiles (IRBM), medium-range ballistic missiles (MRBM), short-range ballistic missiles (SRBM), and ground-launched cruise missiles (GLCM) (2021); IISS Military Balance 2021*
	Ballistic missile submarines	*Ballistic missile submarines (2021); IISS Military Balance 2021*
	Long-range maritime force projection	*Proxy: Carriers and principal amphibious ships (2021); IISS Military Balance 2021*
	Area denial capabilities	*Expert survey: Air defence, anti-naval, and intelligence, surveillance, reconnaissance and targeting capabilities, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
	Intelligence capabilities	*Expert survey: Institutional know-how, overseas reach, personnel and technological sophistication of intelligence agencies, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
	Cyber capabilities	*Expert survey: Defensive and offensive cyber capabilities, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
Asian military posture	Ground forces deployment	*Expert survey: Ability of ground forces to deploy with speed and for a sustained period in the event of a major continental military confrontation in the Asia-Pacific region, two-year rolling average, 0–100 (2020–2021); Lowy Institute*
	Naval deployment	*Expert survey: Ability of the navy to deploy with speed and for a sustained period in the event of a major maritime military confrontation in the Asia-Pacific region, two-year rolling average, 0–100 (2020–2021); Lowy Institute*

RESILIENCE

Sub-measure	Indicator	Technical description; source
Internal stability	Government effectiveness	*Government effectiveness: Worldwide Governance Indicators; per centile rank, 0–100 (2020); Worldwide Governance Indicators*
	Political stability	*Political stability and absence of violence/terrorism: Worldwide Governance Indicators; percentile rank, 0–100 (2020); Worldwide Governance Indicators*
	Climate change resilience	*Resilience to threats relating to food risk, water risk, temperature anomalies and natural disasters; global rankings (2021); Ecological Threat Register*
	Internal conflict years	*Number of years since 1946 in which at least one internal armed conflict resulted in 25 or more battle-related deaths (1946–2019); Uppsala Conflict Data Program*
	High-intensity internal conflict years	*Number of years since 1946 in which at least one internal armed conflict resulted in 1,000 or more battle-related deaths (1946–2019); Uppsala Conflict Data Program*
	Infant mortality	*Number of infants dying before reaching one year of age, per thousand live births (2019); World Bank; CIA World Factbook*
	Covid-19 vaccinations	*Doses of Coronavirus (Covid-19) vaccines administered per hundred people (most recently available data as of 31 October 2021); Our World in Data*
Resource security	Energy trade balance	*Net energy exports in million tonnes of oil equivalent, Mtoe (2018); International Energy Agency; Asia Pacific Energy Research Centre*
	Energy self-sufficiency	*Primary energy production as a share of total primary energy use (2019); International Energy Agency; Asia Pacific Energy Research Centre*
	Fuel trade balance	*Net exports of refined petroleum, current dollars (2019); Observatory of Economic Complexity*
	Fuel security	*Deficit of refined petroleum as a proportion of GDP (2019); Lowy Institute; Observatory of Economic Complexity; World Bank; IMF*
	Rare-earth metals supply	*Mining production of rare-earth metals, tonnes (2020); US Geological Survey*
Geoeconomic security	Diversity of export products	*Total products exported to at least one foreign market with a value of at least US$10,000 (2019); World Bank World Integrated Trade Solution (WITS) database*
	Diversity of export markets	*Foreign markets to which exporter ships at least one product with a value of at least US$10,000 (2019); World Bank World Integrated Trade Solution (WITS) database*
	Dependency on global trade	*Trade measured as a proportion of GDP (2020); World Bank; UN Comtrade; Bank of Korea; IMF; Observatory of Economic Complexity; Lowy Institute*
	Dependency on primary trade partner	*Two-way trade with primary trade partner as a share of total trade (2020); IMF Direction of Trade Statistics*
Geopolitical security	Population relative to neighbours	*Population as a share of neighbouring country populations: weighted at 100% for neighbouring countries with land borders; 75% for neighbouring countries divided by a strait; 25% for neighbouring countries with touching or overlapping claimed EEZ boundaries (2019); Lowy Institute*
	Landmass deterrent	*Country landmass, square kilometres (2020); World Bank; Taiwan Statistical Data Book*
	Demographic deterrent	*Total population (2019); World Bank; Taiwan Statistical Data Book*
	Interstate conflict legacies	*Years of interstate conflict with neighbouring Index countries as a primary party (1948–2021); Uppsala Conflict Data Program; Lowy Institute*
	Boundary disputes	*Overlapping territorial claims and/or unresolved land border and maritime demarcations (2020); Lowy Institute*
Nuclear deterrence	Nuclear weapons capability	*States with nuclear weapons (2021); Lowy Institute*
	Nuclear weapons range	*Maximum estimated nuclear missile range, kilometres (2021); CSIS Missile Defense Project; Lowy Institute*
	Ground-based nuclear missile launchers	*Launching platforms for intercontinental ballistic missiles (ICBM), intermediate-range ballistic missiles (IRBM), medium-range ballistic missiles (MRBM), short-range ballistic missiles (SRBM), and ground-launched cruise missiles (GLCM) containing nuclear warheads (2021); IISS Military Balance 2021*
	Nuclear second-strike capability	*Proxy: Ballistic missile submarines (2021); IISS Military Balance 2021*

FUTURE RESOURCES

Sub-measure	Indicator	Technical description; source
Economic resources 2030	GDP baseline	*Estimated GDP at purchasing power parity, current prices (2021); Lowy Institute; IMF*
	GDP forecast 2030	*GDP forecast at purchasing power parity, constant 2021 prices (2030); Lowy Institute*
	Economic capability 2030	*Beckley formula: GDP by GDP per capita forecast at purchasing power parity, 0–100 (2030); Lowy Institute*
Defence resources 2030	Military expenditure baseline	*Estimated military expenditure at defence sector purchasing power parity, current prices (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance*
	Military expenditure forecast 2030	*Estimated military expenditure forecast at defence sector purchasing power parity, constant 2021 prices (2030); Lowy Institute*
	Military capability enhancement 2022-30	*Forecast absolute increase in military expenditure above existing levels at estimated defence sector purchasing power parity, constant 2021 prices (2022–30); Lowy Institute*
Broad resources 2030	Estimated broad resources 2030	*Estimated aggregate score for economic resources, military capability and resilience measures based on GDP and military expenditure trends, 0–100 (2030); Lowy Institute*
Demographic resources 2050	Working-age population baseline	*Total working-age population, 15–64 (2020); UN Population Division; Lowy Institute*
	Working-age population forecast 2050	*Medium variant forecast for total working-age population, 15–64 (2050); UN Population Division; Lowy Institute*
	Labour dividend 2020-50	*Forecast gains in working-age population, adjusted for quality of the workforce and climate change resilience (2020–50); quality is proxied by GDP per worker in 2019 at purchasing power parity; Lowy Institute*

ECONOMIC RELATIONSHIPS

Sub-measure	Indicator	Technical description; source
Regional trade relations	Trade with region	*Total value of trade with Index countries, current dollars (2020); IMF Direction of Trade Statistics; Lowy Institute*
	Primary trade partner	*Number of Index countries in which state is the primary regional trading partner (2020); IMF Direction of Trade Statistics; Lowy Institute*
	Regional selling power	*Average imports share in 25 Index countries (2020); IMF Direction of Trade Statistics; Lowy Institute*
	Regional buying power	*Average exports share in 25 Index countries (2020); IMF Direction of Trade Statistics; Lowy Institute*
Regional investment ties	Foreign investment in region	*Ten-year cumulative flows of outward foreign capital investment in Index countries (2011–20); FDI Markets; Lowy Institute*
	Primary foreign investor	*Index countries in which state is the primary regional inward foreign direct investor, based on ten-year cumulative flows of foreign capital investment (2011–20); FDI Markets; Lowy Institute*
	Average share of foreign investment	*Average share of inward foreign direct investment in 25 Index countries, based on ten-year cumulative flows of foreign capital investment (2011–20); FDI Markets; Lowy Institute*
	Investment attractiveness	*Ten-year cumulative flows of inward foreign capital investment (2011–20); FDI Markets; Lowy Institute*
Economic diplomacy	Global FTAs	*Bilateral and multilateral free trade agreements concluded by Index countries with other countries (2021); World Trade Organization; Lowy Institute*
	Regional FTAs	*Bilateral and multilateral free trade agreements concluded with Index countries (2021); World Trade Organization; Lowy Institute*
	Foreign assistance (global)	*Annual overseas development assistance (ODA) and other official flows (OOF), current dollars (2019); OECD; AidData*
	Foreign assistance (regional)	*Annual overseas development assistance (ODA) and other official flows (OOF) to Asia, current dollars (2019); OECD; AidData*

DEFENCE NETWORKS

Sub-measure	Indicator	Technical description; source
Regional alliance network	Regional military alliances	*Number of codified alliances between Index countries, including a mutual defence clause or actionable security guarantee (2021); Lowy Institute; Alliance Treaty Obligations and Provisions Project*
	Allied foreign forces	*Allied military personnel deployed in Index countries: minimum of 50 personnel deployed on a permanent or semi-permanent rotational basis (2021); Lowy Institute; IISS Military Balance 2021*
	Joint training (allies)	*Number of joint training exercises conducted with allied Index countries (2016–2020); Lowy Institute*
	Combined operation years (allies)	*Cumulative years fought alongside allied Index countries in individual conflicts, as a primary or supporting party (1948–2019); Uppsala Conflict Data Program*
	Arms procurements (allies)	*Arms imports from allied Index countries expressed in SIPRI Trend Indicator Values (2015–20); SIPRI Arms Transfer Database*
	Alliance force multiplier	*Ratio of combined allied military capabilities to autonomous military capability (2021); Lowy Institute*
Regional defence diplomacy	Defence dialogues	*Number of bilateral and plurilateral defence diplomacy meetings held between Index countries (2020); Lowy Institute*
	Defence consultation pacts	*Defence consultation pacts between non-allied Index countries (2021); Lowy Institute*
	Foreign forces and deployments	*Military personnel deployed to and from non-allied Index countries: minimum of 50 personnel deployed on a permanent or semi-permanent rotational basis (2021); Lowy Institute; IISS Military Balance 2021*
	Joint training (non-allies)	*Number of joint training exercises conducted with non-allied Index countries (2016–2020); Lowy Institute*
	Combined operation years (non-allies)	*Cumulative years fought alongside non-allied Index countries in individual conflicts, as a primary or supporting party (1948–2019); Uppsala Conflict Data Program*
	Arms procurements (non-allies)	*Arms imports from non-allied Index countries expressed in SIPRI trend indicator values (2015–20); SIPRI Arms Transfers Database*
Global defence partnerships	Global arms trade	*Annual arms imports and exports, current dollars (2017); US Bureau of Arms Control, Verification and Compliance*
	Arms export partnerships	*Number of arms export recipients, including state and non-state groups (2015–2020); SIPRI Arms Transfers Database*

DIPLOMATIC INFLUENCE

Sub-measure	Indicator	Technical description; source
Diplomatic network	Embassies (regional)	*Number of embassies, high commissions and permanent missions in Index countries (2021); Lowy Institute Global Diplomacy Index*
	Embassies (global)	*Number of embassies, high commissions and permanent missions globally (2021); Lowy Institute Global Diplomacy Index*
	Second-tier diplomatic network (regional)	*Consulates and other representative offices in Index countries (2021); Lowy Institute Global Diplomacy Index*
Multilateral power	Summits, clubs and organisations	*Membership in select summits, diplomatic clubs and regional intergovernmental organisations (2021); Lowy Institute*
	Institutional voting shares	*Average voting shares by subscribed capital in major multilateral development banks (2020); Lowy Institute*
	UN capital contributions	*Net capital contributions to the United Nations Secretariat, share of global total (2021); UN Official Document System*
	Voting alignment	*Voting alignment with other Index countries in adopted United Nations General Assembly resolutions (2020); UN Digital Library*
	Voting partners	*Times country featured among top three voting partners for other Index countries in United Nations General Assembly (2020); UN Digital Library*
Foreign policy	Political leadership (regional)	*Expert survey: Efficacy of political leaders in advancing their country's diplomatic interests in Asia, 0–100 (2021); Lowy Institute*
	Political leadership (global)	*Expert survey: Efficacy of political leaders in advancing their country's diplomatic interests globally, 0–100 (2021); Lowy Institute*
	Strategic ambition	*Expert survey: Extent to which political leaders demonstrate strategic ambition, two-year rolling average, 0–100 (2020–21); Lowy Institute*
	Diplomatic service	*Expert survey: Efficacy of country's diplomatic service and wider foreign policy bureaucracy, two-year rolling average, 0–100 (2020–21); Lowy Institute*
	Covid-19 response	*Expert survey: Perception of international and domestic handling of Covid-19 pandemic (2021); Lowy Institute*
	Vaccine donations	*Doses of Coronavirus (Covid-19) vaccines donated and delivered to the region (October 2021); Think Global Health, Council of Foreign Relations; Lowy Institute*
	Vaccine donations (per capita)	*Doses of Coronavirus (Covid-19) vaccines donated and delivered to the region per capita of the donor country (October 2021); Think Global Health, Council of Foreign Relations; Lowy Institute; World Bank*

CULTURAL INFLUENCE

Sub-measure	Indicator	Technical description; source
Cultural projection	Online search interest	*Online interest for a given Index country in 24 other Index countries; average per cent of total Google and Baidu searches for selected countries (2020); Lowy Institute; Google trends; Baidu*
	Cultural exports	*Exports of cultural services, current dollars (2020); UN Conference on Trade and Development; UNESCO*
	Global brands	*Number of brands in the Global 500 (2021); Brand Directory*
	Prestige: Skyscrapers	*Buildings in financial capital above 150 metres in height (2020); Council on Tall Buildings and Urban Habitat*
	Status: Visa-free travel	*Number of countries that citizens can travel to visa-free (2021); Henley & Partners*
	Cultural heritage	*UNESCO World Heritage listed sites (2020); UNESCO*
Information flows	Asia-Pacific international students	*Pre-pandemic international students enrolled in tertiary education from East, South, West and Central Asia and the Pacific (2018/19); UNESCO; ICEF Monitor; Institute of International Education; Lowy Institute*
	Regional influence: News agencies	*Online interest for a given Index country's news agency in 23 other Index countries; average per cent of total online searches for selected news agencies (2020); Lowy Institute; Google Trends*
	Regional influence: Newspapers	*Online interest for a given Index country's national newspaper in 24 other Index countries; average per cent of total online searches for selected newspapers (2020); Lowy Institute; Google Trends*
	Regional influence: TV broadcasters	*Online interest for a given Index country's international television broadcaster(s) in 24 other Index countries; average per cent of total online searches for selected television broadcasters (2020); Lowy Institute; Google Trends*
	Regional influence: Radio broadcasters	*Online interest for a given Index country's public radio broadcaster(s) in 24 other Index countries; average per cent of total online searches for selected radio broadcasters (2020); Lowy Institute; Google Trends*
People exchanges	Diaspora influence	*Average share of total immigrant populations resident in 25 Index countries from the given Index country of origin (2020); Lowy Institute; UN Department of Economic and Social Affairs; Taiwan Overseas Community Affairs Council*
	Migrant drawing power	*Average share of global migrant populations from 25 Index countries of origin settled in the given Index country (2020); Lowy Institute; UN Department of Economic and Social Affairs;*
	Regional travel destination	*Pre-pandemic arrivals of non-resident visitors from Index countries at national borders (2019); UN World Tourism Organization; Reuters*
	Regional travel connectivity	*Direct international flight routes from principal airport hubs of Index countries (2021); Lowy Institute; FlightsFrom.com*

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