hinrich foundation
advancing sustainable global trade

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The Hinrich Foundation Sustainable Trade Index

A report by The Economist Intelligence Unit

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The Economist INTELLIGENCE UNIT

Foreword

The Covid-19 pandemic has provided a stark and painful reminder of why the concept of sustainable trade is so critical. The primary principle which underpins sustainable trade is balance – balance between economic outcomes and the need to strengthen social capital and environmental stewardship. In order to be sustainable, trade cannot be pursued solely on the basis of economic gains and efficiencies.

The pandemic has highlighted just how important these principles are, especially as we endeavor to build more resilient economies and communities.

Countries that pursue sustainable trade ensure that their trade relationships are diversified and robust. During the pandemic we've seen that countries that allowed their trade relationships to become overly dependent on one partner in pursuit of the greatest economic gains found themselves in highly vulnerable situations. This was most dramatically illustrated in the case of medical supplies and medicines, but recall that in the early days of the pandemic, automotive factories in South Korea had to shut down when factory closures in China cut off their only supply of a single intermediary component.

In managing their social capital, countries that pursue sustainable trade attach great importance to achieving and maintaining political and governmental stability. During the pandemic we've seen that countries which were able to secure broad public buy-in for coherent and intelligently conceived governmental policies to contain the virus have been able to minimize both the social and economic toll. Conversely, those with less highly functioning governments and lower public confidence have paid a high price, both in terms of human suffering and economic loss.

Countries which pursue sustainable trade take the challenge of environmental stewardship seriously, and in particular work hard to avoid deforestation or to mitigate it through effective reforestation policies. We're now learning that rapid deforestation and insufficient environmental protection has increased the threat we face from zoonotic diseases such as Covid-19. In the face of ongoing deforestation, scientists are warning that Covid-19 is unlikely to be the last zoonotic pandemic we confront.

It is precisely these issues which the Hinrich Foundation Sustainable Trade Index tracks and evaluates, by benchmarking the trade sustainability of 20 Indo-Pacific economies across 27 indicators grouped under each of the three pillars of sustainability: economic, social, and environmental.

Kathryn Dioth
Chief Executive Officer
Hinrich Foundation

Contents

Acknowledgements

The Hinrich Foundation Sustainable Trade Index was devised in 2016 by The Economist Intelligence Unit. The original research team was led by Chris Clague and John Ferguson. The 2020 edition of the index was updated and expanded by Michael Frank. Chris Clague wrote this report and Siddharth Ponder was the editor.

About The Economist Intelligence Unit

The Economist Intelligence Unit is the research and analysis division of The Economist Group and is a sister company to The Economist newspaper. Created in 1946, we have over 70 years' experience in helping businesses and governments to understand how the world is changing and how that creates opportunities to be seized and risks to be managed.

About the Hinrich Foundation

The Hinrich Foundation is a unique Asia-based philanthropic organization that works to advance mutually beneficial and sustainable global trade. It supports original research and education programs that build understanding and leadership in global trade. Its team of global trade experts and practitioners apply their deep knowledge and experience in trade, economics, policymaking and education to deliver the Foundation's programs.

Interviewees
(arranged alphabetically by name)

Harry Broadman, chair of the emerging markets practice, Berkeley Research Group

Robert Carnell, regional head of research, Asia-Pacific, ING

Deborah Elms, founder and executive director, Asia Trade Centre

Simon Evenett, professor of international trade and economic development, University of St. Gallen

Caroline Freund, global director of trade, investment and competitiveness, The World Bank

Cassey Lee Hong Kim, senior fellow, ISEAS-Yusof Ishak Institute

Vivek Pathak, regional director, East Asia and Pacific, International Finance Corporation

Mihir Sharma, senior fellow, Observer Research Foundation

Jim Walker, chief economist, Aletheia Capital

Jinny Yan, managing director and chief China economist, ICBC

About the Hinrich Foundation Sustainable Trade Index

That international trade is fundamental to economic growth is well established. Since 1990, when the pace of globalisation began to accelerate, the number of people living in extreme poverty (on less than $1.25 per day) has fallen by over 1bn.

As such, participating in the international trading system has long been a policy priority for national governments and private enterprises. But such participation has not always been pursued sustainably – for the economies themselves or the global economy. For instance, the prospect of earning foreign-exchange income through promoting exports in a particular sector (or commodity) might be tempting, but a lack of diversification could increase the vulnerability of the economy to shocks or might lead to extreme inequality by excluding many sectors of society, a risk that has become more apparent in recent years.

If trade is pursued at the expense of investment in education, or without the proper safeguards for workers and their families, concentrating investment into export industries may undermine a broader development of human and social capital. Such policy might also impose debilitating environmental costs on current and future generations.

It is therefore important to measure whether a country is participating in the international trading system in a sustainable manner and whether it will be able to continue doing so.

Against this background, in 2016 the Hinrich Foundation commissioned The Economist Intelligence to construct an index to measure the capacity of 20 economies—including 19 in Asia, and the US as an external benchmark—to participate in the international trading system in a manner that supports the long-term domestic and global goals of economic growth, environmental protection and strengthened social capital. The 2020 edition of the index is the 3rd, following the 2016 and 2018 versions

ARTNeT preface

International trade has been instrumental in fueling economic growth in Asia and the Pacific more so than in any other part of the world. It has been the cornerstone of the development strategies behind the rise of the Asian Miracle economies. In China alone, trade-led growth has lifted more than 700 million people above the poverty line.

In many cases, that growth also contributed to environmental degradation and left behind or even hurt the most vulnerable groups in society. Fast expansion of manufacturing, driven by demand in markets outside of the region has been detrimental to air quality in corners where it took place because often it was based on using dirty technologies. Demand stemming from trade in agricultural products has had a heavy toll on soil and water quality and availability, as well as wildlife [habitats]. Even the trade in services such as tourism—until recently—was ambivalent to environmental impacts. Furthermore, gains from trade have also been concentrated among the top earners, leaving much of the rest of the society lagging behind. And many low-income or geographically challenged countries have not able to participate at all in this growing network of international production and trade.

With only a decade left to deliver the Sustainable Development Goals (SDGs), it is now accepted that future trade-led growth strategies must be based on sustainability principles. Three aspects of sustainability: economic, environmental and social are embedded in the 2030 Agenda for Sustainable Development. The 17 Sustainable Development Goals recognise that ending poverty and other deprivations must go together with strategies that improve health and education, reduce inequality and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The Hinrich Foundation Sustainable Trade Index (STI) is a helpful proxy to monitor progress in meeting the SDGs through participation in global trade. It is based on solid theoretical and empirical linkages between the three inseparable aspects of sustainable development honed through extensive consultation among key stakeholders. It allows policymakers and other stakeholders to identify policy gaps and opportunities, particularly with regard to collaborative action and knowledge sharing, since by definition international trade is transboundary in nature.

As the Covid-19 pandemic has shown, the interdependencies of economies through trade require a collaborative approach to problem solving, whether it is for addressing shortages and bottlenecks for medical equipment, or for production and allocation of vaccines, or clean air and climate change issues. There is wide consensus on "not wasting a good crisis" and on "building back [or forward] better". It is thus hoped that the STI will inform key stakeholders and contribute towards designing trade policies as a true means of implementation of sustainable development.

Dr Mia Mikic
Coordinator,
ARTNeT

ARTNeT
Asia-Pacific Research and Training Network on Trade

Executive summary

The 2020 STI finds four key areas for policymakers, business leaders and NGOs to address, including: reducing inequality, improving education, (re)lowering barriers to trade and investment and building on the environmental benefits of the pandemic.

Sustainability was gaining more traction in the years leading up to the Covid-19 pandemic. Firms stepped up commitments to corporate social responsibility (CSR) initiatives. Investors started incorporating environmental, social and governance (ESG) issues into their asset allocation decisions. And consumers voted with their wallets to support sustainable production, purchasing goods with certified claims regarding their environmental impact and use of labour.

The question now is whether the pandemic puts that progress in jeopardy. There are those who argue that it does; governments and the private sector are in "survival mode," making sustainability—at least for the duration of the crisis—far less of a priority. The counter-arguments are that, one, the investor community is continuing to use environmental, social and governance standards to guide their allocation decisions and, two, that the best way to prepare for the next crisis, whenever it comes, is to begin preparations now by bolstering sustainability initiatives.

The Hinrich Foundation Sustainable Trade Index (STI) was originally created for the purpose of stimulating meaningful discussion of the full range of considerations that policymakers, executives and leaders from civil society must take into account when managing and advancing international trade. That purpose remains, but we hope that governments and businesses around the world start to also view it as a tool for building resilience into their international trade policy and their economies, more broadly.

This, the third edition of the study, seeks to measure the capacity of 20 economies—19 in Asia along with the US as an external benchmark—to participate in the international trading system in a manner that supports the long-term domestic and global goals of economic growth, environmental protection and strengthened social capital.

The key results and findings from the 2020 STI include:

- **For the first time, there is a tie atop the index. Japan and South Korea both receive scores of 75.1 (out of 100),** placing them five points clear of Singapore in third place (70.0) and a group of three other economies—Hong Kong, Taiwan and the US—in the high 60s. These six together have been the mainstays at the top of the index throughout the three, slightly different iterations of the STI that have now been published since 2016. But this is also the first time for either Japan or South Korea to rank first in the index; Singapore was number one in 2016 and Hong Kong in 2018.
- **The economic pillar is, in this edition, by far the most tightly packed, which was also the case in 2016.** The difference in scores between the top-ranked economy, Hong Kong at 69.1, and the economy at the bottom, Laos at 44.6, is just barely over 25 points. The only consequential moves in the top half of

the pillar were by China and the Philippines. China continued its ascent up the ranks, although more because of consistency than progress. The Philippines rebounded to 9th, where it began in 2016 before slumping to 15th in 2018.

- **To the praise Taiwan already garnered this year for its effective handling of the Covid-19 outbreak, we can add the accolade of being first in the social pillar of the STI**, the second time it achieved the rank. It is further recognition that the economy is getting many things right.
- **Japan registers the strongest performance in the environmental pillar (80.0), leading the same group of four**—Singapore (78.7), Hong Kong (77.4) and South Korea (75.2), being the other three—that has excelled, with a few exceptions, across all three pillars of the STI from the start. Then there's a considerable drop. China and the US come next in the rankings, but are both 20 points below the top four in scores.
- **Pretty much all we can be certain of is that there is going to be another crisis at some point. Preparedness matters.** The original intention behind the STI was not necessarily to serve as a tool for crisis preparation. But it has taken on that dimension. We hope that governments and firms around the world, not just in Asia, will use it as such.

Key recommendations

A good start towards avoiding having to ask what if when the next crisis hits would be for policymakers, business leaders, international institutions and NGOs to address the following four areas:

Reducing inequality

The pandemic has just exacerbated an existing trend. Unless significant steps are taken now, the gap between the rich and the poor will only widen further when the next crisis comes, making sustainable trade all the more difficult.

Improving education

Without progress in education, many economies in the STI may find themselves left behind.

(Re)lowering barriers to trade and investment

None of the developing economies (in the STI) have the internal demand or the capital base to grow, let alone grow in a manner that will alleviate poverty and create a middle class. Trading, and trading sustainably, are really their only paths. That means keeping their economies open and welcoming the kind of foreign investment that supports those goals.

Building on the environmental benefits of the pandemic

Governments have an opportunity to apply the environmental lessons learned from the crisis to their policy decisions and ask themselves questions about how to retain the gains already made, such as:

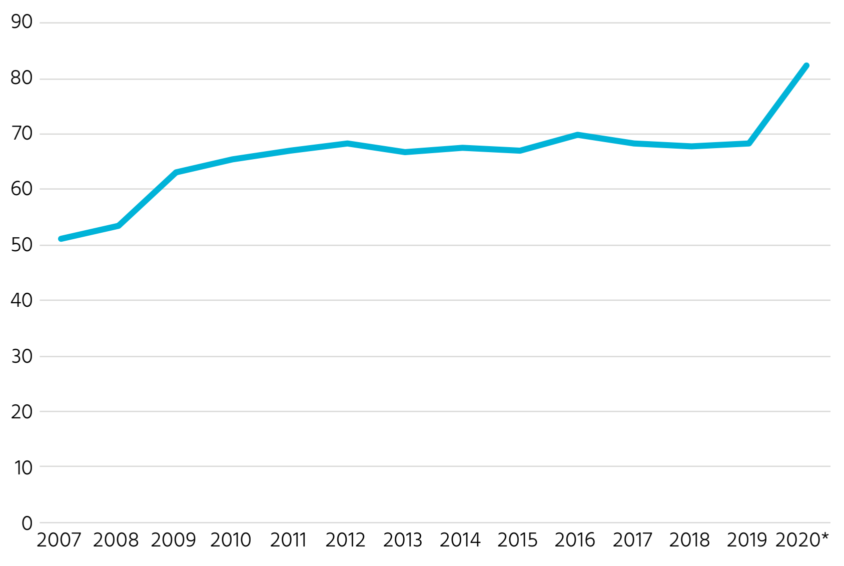
- With fewer cars on the road, and industrial demand for electricity down, how can we continue reducing air pollution when those two return to normal? Should they return to normal?
- Similarly, how do we build upon and accelerate the drop in emissions that the world will see in 2020?
- What can be done to ensure that the improvements in freshwater pollution levels are not lost?

Introduction

In his July 1st column, The Financial Times' chief economics commentator Martin Wolf asked "how should we create the future we should want, one in which there is the least possible damage and the strongest feasible recovery into an economically sustainable future?"[1] At the time the scope and scale of the crisis caused by the Covid-19 pandemic was becoming clearer. The trickle of bad data for Q1 turned into a deluge as Q2 results emerged and organisations like the IMF, World Bank, WTO and the ILO started revising their forecasts for the global economy, trade and employment in 2020, with all firmly in the negative.

Mr Wolf is right to prescribe more economically sustainable policies. The Sustainable Trade Index (STI) was launched by The Economist Intelligence Unit, with the support of the Hinrich Foundation, in 2016 to encourage governments and firms to do just that. Sustainability is a tough sell even in the best of times, however. It was gaining more traction leading up to the pandemic. Firms stepped up commitments to corporate social responsibility (CSR) initiatives. Investors started incorporating environmental, social and governance (ESG) issues into their asset allocation decisions. And consumers voted with their wallets to support sustainable production, purchasing goods with certified claims regarding their environmental impact and use of labour.

Chart I – Global debt as a percentage of GDP, most recent data

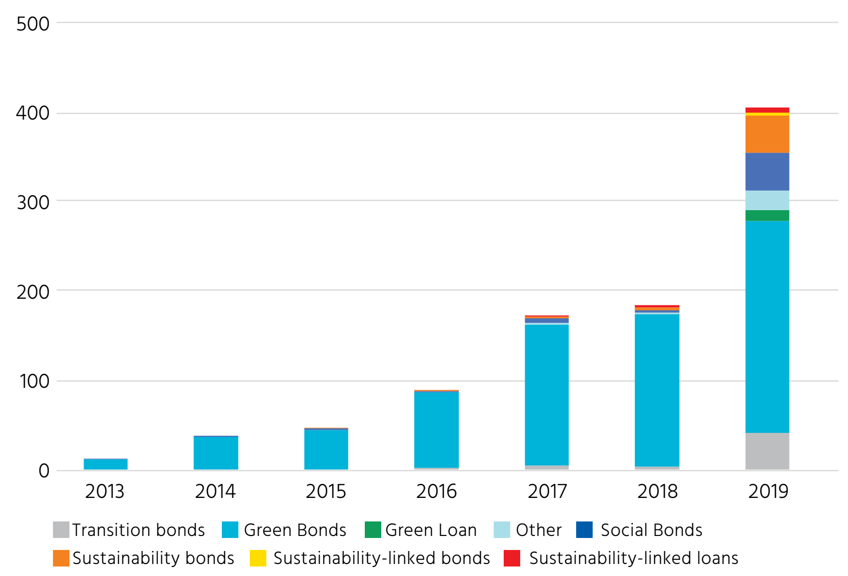


Source: Hinrich Foundation Sustainable Trade Index 2020 and The Economist Intelligence Unit

But now everyone is in "survival mode", says Deborah Elms, executive director of the Asian Trade Centre, a think tank, and the imperative is for firms to stay in business and people—whether they've lost their jobs already or are worried they might do so soon—to mind their spending far more carefully. Governments, meanwhile, are dealing with the second major global crisis in 12 years. "Saying we're committed to a carbon-neutral future [for example] is fantastic," says Ms Elms, "until you look at the amount of debt the average government is now carrying as a result of all the rescue plans." Under these circumstances, it's hard not to see a consensus emerging around pledges "to revisit [sustainability]" once the crisis has abated and minimise the attention paid to it in the meantime.

Jinny Yan, managing director and chief China economist at ICBC, a bank, is more sanguine. She points to the enduring interest among her clients for ESG standards and "impact investing" as evidence that sustainability is not falling off the agenda. "Previously it was an either/or discussion," says Ms Yan in reference to the perceived trade-off between investment returns and sustainability goals. "Now you're able to discuss the two together." A string of anecdotes don't amount to data, but until the end of 2019—admittedly a different time—sustainable capital raising had exploded, more than doubling to US$406bn in one year alone, according to S&P Global Ratings. And during the pandemic, 51 out of 57 sustainable finance indices have outperformed "their broad market counterparts".[2]

Chart 2 – Sustainable capital-raising, 2013-2019 (in USD billion)



Source: Hinrich Foundation Sustainable Trade Index 2020 and Climate Bonds Initiative, S&P Global Ratings

Mr Wolf, Ms Elms and Ms Yan may all be proven prescient in the end. The pandemic could, finally, provide the necessary spark for the robust sustainability policies Mr Wolf called for, steeling countries around the world against the next crisis, be it viral, economic or otherwise.

Ms Elms' assessment of the real and legitimate reasons for the current pause in concern among firms, consumers and governments about these same issues could mean there will be a lag between that spark and actual implementation. Lastly, Ms Yan's seemingly contrarian view, that investors—a group often maligned for their short-term thinking—are serving as the bridge between the two with a newfound interest in preserving the fate of the world, appears to be supported by at least some available data.[3]

What if Asia had been trading more sustainably?

Every crisis presents as many "what ifs" as it does supposed opportunities. In the aftermath of the Global Financial Crisis, the what ifs were manifold. What if the economic and social policy of successive US administrations in the late 1990s and early 2000s hadn't pushed a massive expansion in home ownership, which seeded the ground for a massive bubble in the housing market?[4] What if regulators had discouraged rather than encouraged complex financial engineering and leverage?[5] And what if global imbalances hadn't been allowed to balloon in the years leading up to the crisis?[6]

And that is by no means an exhaustive list.

While counterfactuals are impossible to prove, they can be an important part of the recovery process and hopefully help to prevent the next crisis – or at least a similar crisis – from happening again. In the context of the Covid-19 pandemic and its impact on trade flows, the initial discussion has centred around building more "resilience" into the global trading system as a whole and global supply chains more specifically.[7] On September 1st, for example, the economic ministers of Australia, India and Japan released a joint statement announcing a new initiative on supply chain resilience. In it, they vowed to "take a lead in delivering a free, fair, inclusive, non-discriminatory, transparent, predictable and stable trade and investment environment and in keeping their markets open".[8]

For those who read the "About the index" section in the preface to this report, the language in that statement should sound familiar. This is, more or less, what the STI was designed in 2016 to measure and promote. Pre-pandemic, when asked about attitudes towards sustainability, Caroline Freund, global director of trade, investment and competitiveness at The World Bank, noted that it was an "increasing consideration" because of the risk of "having the supply chain broken for various reasons". Resilience and sustainability are not synonyms, but it is worth asking whether the effects of the pandemic wouldn't have been better contained in Asia had it been trading more sustainably.

What would that have looked like in the economic pillar of the index? Certain trade-related shocks from the pandemic were unavoidable; quarantine and social distancing measures meant—and continue to mean—that factories can't produce at capacity, or at all. Technologies and technological infrastructure have provided vital work-arounds, however, allowing some firms across the world to continue operating.[9] In many economies in the STI, these options are limited. Ten of the 20 received scores on technological infrastructure that are average or below, and the average score for all economies on technological innovation was 24.6 out of 100.

What if more had been invested in IT networks and R&D prior to the crisis?

In the social pillar, political stability is one of the five indicators and is based on The Economist Intelligence Unit's Risk Briefing for more than 200 countries and jurisdictions. It's been a persistent concern in the region for decades and between 2018 and 2020, there were not any improvements overall in the STI in this area. And in some economies the situation has deteriorated during the pandemic (though not as a direct result of it). Malaysia is an example. "The instability hasn't helped," says Dr Cassey Lee Hong Kim of Yusof Ishak Institute in Singapore, referring to the sudden change in leadership and shifting political allegiances among the rank-and-file. "It affects your ability to attract foreign investment, to some extent," Dr Lee says, as well solving other policy problems, such as labour and immigration policy.

Given the strong relationship between FDI and trade, what if countries had been more politically stable?

Overall results

The pandemic could, finally, provide the necessary spark for the robust sustainability policies needed to enact to steel themselves against the next crisis, be it viral, economic or otherwise.

For the first time, there is a tie atop the index. Japan and South Korea both receive scores of 75.1 (out of 100), placing them five points clear of Singapore in third place (70.0) and a group of three other economies—Hong Kong, Taiwan and the US—in the high 60s. These six together have been the mainstays at the top of the index throughout the three, slightly different iterations of the STI that have now been published since 2016. But this is also the first time for either Japan or South Korea to rank first in the index; Singapore was number one in 2016 and Hong Kong in 2018.

A combination of factors finally propelled the two East Asian economies to the top. Performance in the economic pillar, has consistently held Japan back. The country ranks towards the bottom in GDP per capita growth, partly a product of its high level of development relative to the other economies, as well as difficulty attracting foreign direct investment (FDI) and the volatility of its trade-weighted exchange rate. While in the 2020 STI those constraints remained, they were offset more than in the past by improvements in the social and environmental pillars, aided by the inclusion of a number of new and revised indicators (see brief explanation in the box out below and in the methodology appendix to this report). Japan, for example, is only one of three economies covered by the index that, as of the end of 2019, had implemented a carbon pricing scheme, and it also scores well on assessments to combat human trafficking, another new indicator.

South Korea, by contrast, has over the years been solid across all three pillars despite having many of the same, persistent economic conditions as Japan, such as low levels of FDI and a volatile currency. In the 2020 STI, it continued to excel in educational attainment and technological infrastructure and technological innovation—all areas where it ranks first and which are increasingly core to ensuring strong, sustainable trade. Like Japan, it also benefited from the inclusion of new indicators on carbon pricing and human trafficking, but not the new indicator on currency manipulation. For South Korea we found indication of currency intervention in the period covered by the STI, although not evidence that it moved the won relative to baseline fundamentals (whereas Japan was found to have actively depreciated the yen).

The rest of the top half: The US and China

Given the trade war, talk of decoupling and that China was the origin of the Covid-19 pandemic and the US the country hardest hit by the virus so far, at least in absolute terms, it's worth highlighting how these two countries fared. They are close in ranking, though farther apart in scores, with the US coming in 6th at 66.1 and China 7th at 56.1.

The US surely would have cracked the top five, and perhaps even neared the top spot, were it not for the massive number of new tariff and non-tariff measures the Trump administration has implemented. By the our calculations, using data from Global Trade Alert, a research group that monitors trade policy across the globe, from the beginning of October 2018 to the end of November 2019, the US enacted 841 new tariffs and 1,430 new non-tariff barriers, the latter including actions such as quotas, import licensing systems or other regulations that discriminate against imports. On both accounts, no other economy in the STI comes close.

With an election approaching in the US this fall, there is hope that the damage done to trade—and sustainable trade as defined in the context of the STI—by these actions could be ameliorated, if not reversed. That is unlikely to be the case, according to Harry Broadman, chair of the emerging markets practice at Berkeley Research Group, a consultancy, and a former assistant US trade representative. "The damage is going to be lasting," says Mr Broadman, unless there is "an extraordinarily well thought-out policy" from a new administration.[10] "If you're China or Japan or Europe or South Korea, can you really ever trust the US again? Is there anything that can be done to assuage your concerns at this point?"

Trust of course cuts both ways and China, in particular, is far from blameless for the current conflagrations roiling the global trading system, much as it claims at opportune times to be the system's staunchest supporter.[11] Since it acceded to the WTO in 2001, it has been accused by various parties of violating not only the letter of its accession agreement via subsidies and a litany of other trade-distorting measures, but also the spirit by manipulating its currency to prop up exports and dampen imports, as well as attaching technology-transfer conditions to foreign investment. Some of these matters have been litigated at the WTO, where China has lost more often than won.[12] Others, especially those related to currency interventions, are outside the mandate of any international organisation with a semblance of enforcement power (to the extent any such organisation exists). Both accusers and accused have, as a result, been left without judgement rendered on their claims.

To its credit—or arguably due to a mix of exigent and expedient circumstances—China has nevertheless made strides in sustainable trade in recent years, moving up four spots overall from the inaugural STI in 2016. Most notably, our analysis concluded it had, as of year-end 2019, stopped intervening in currency markets to depreciate the renminbi. Elsewhere, it has improved its ranking by reducing inequality (albeit from a low base), increasing educational attainment and curtailing deforestation, an issue that has gained attention with the pandemic and its assumed zoological origins (see box out in the section on the environmental pillar of the STI).

The bottom half: Backsliding in Asia's latest darling

The grip China's eastern seaboard has held on global supply chains over the past 20 years has long been predicted to be loosening. It's a comfortable call for prognosticators, which is why it's so often made. Foremost it appears to make economic sense, albeit only insofar as your audience buys into China as still being solely a wage arbitrage play for manufacturers and, more recently, that a 10-20% change in tariff rates is enough to compel MNCs to reconfigure supply chains they have spent massive amounts of time, money and effort to establish. It also has the benefit, to these forecasters, of being impossible to verify in anything approaching real time. Anecdotes are thus extrapolated into data masquerading as hard evidence.

Vietnam is the poster-child for this argument. It has a large population and is in the prime of its demographic dividend years; labour is cheap and abundant. Additionally, it shares a border with China, is an ASEAN member and has an ambitious trade policy of its own, having signed a number of free trade agreements, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). If China is the past, as far as supply chains go, then Vietnam should already be a big part of the present and even bigger part of the future.

The evidence up until the end of 2019, however, is not very compelling, especially among indicators in the STI. As of the end of 2019, growth in exports—which is not included in the STI but is an obvious headline indicator for supply chain integration—slowed for the second year in row and was just 8.5%, according to our data. In the STI, Vietnam has fallen from 8th overall in 2016 to 12th in 2020, the largest drop by far over the entirety of the STI. It's rank in FDI as a percentage of GDP, which is an indicator in the index, has moved little since 2016 and is once again behind Cambodia. Its rank in export market concentration, the share of exports going to the economy's top four trading partners, is down again and its export product concentration is more or less the same. In the social and environmental pillars, as well, there are few positive developments to point to; the best that might be said is that not much has changed in the last five years, which is of course damning praise for an economy that is allegedly at the fore of an allegedly massive shift in global trade flows.

Asked about this shift, though not with specific reference to Vietnam, Simon Evenett, professor of international trade and economic development at the University of St. Gallen and the coordinator of Global Trade Alert, the trade policy monitor, says "I don't buy it."

"The companies have been able to absorb these 25% tariffs [in the US] and still stay in business," Prof Evenett points out. "And that tells you how profitable [the supply chain] strategy was in the first place." To the extent that there are shifts as a result of tariffs or rising labour costs, they are more likely going to be around margins—producers pushing downward on suppliers to reduce their prices, trimming their own expenses and passing along, where they can, costs to consumers—rather than wholesale supply chain reconfigurations. Vietnam needs to improve its sustainable trade policies, to be sure. It just might not be trading as much as some hope.

The new indicators

Almost all indexes that are published more than once require updating. The updates can take many forms: changes in indicator and/or category weightings; the addition of new indicators; use of new or alternative sources of data or scoring.

We have made a number of updates to the 2020 Sustainable Trade Index. There are three entirely new indicators, two existing indicators that have been bolstered by adding new constituent parts and one indicator where the third-party data source has changed their methodology. Each is explained in brief below; for more details, please see Appendix 1.

New indicators

1. **Currency manipulation** (Economic pillar)

   Added to the 2020 STI to penalise economies that are intervening in markets to devalue their currencies to stimulate exports, this indicator is scored on a scale of one to three and uses current account balances and foreign currency sales/ purchases as metrics. A score of 1 indicates evidence of intervention that depreciated the local currency, whereas a score of 2 indicates intervention but without sufficient evidence the intervention depreciated the currency relative to fundamentals. A score of 3 is given to economies where there is no indicator of currency manipulation.

2. **Carbon pricing** (Environmental pillar)

   A growth indicator included for future iterations of the STI, only three economies in the index currently have a carbon pricing scheme in effect at the national level – South Korea, Japan and Singapore. They receive a score of 2 as a result. China has a scheme scheduled for implementation, but it is not yet in effect, giving it a score of 1. The remaining 16 economies in the STI do not have a scheme in place or one scheduled for implementation. They receive a score of 0.

3. **Human trafficking** (Social pillar)

   Human trafficking is an abhorrent practice regardless of its impact on an economy's ability to engage in sustainable trade. Reliance on slave labour, estimated to be the largest type of human trafficking, does make trade far less sustainable, however. To that end, economies in the STI were assessed across three policy areas: risk, criminalisation and the existence of a national strategy to combat human trafficking. The aggregate score is a weighted sum of performance in these areas.

Revised indicators

1. **Tariff and non-tariff barriers** (Economic pillar)

   To bolster this indicator, we added two new sub-indicators. One is "new tariff measures", which counts the new tariff barriers announced in 2019. The other is "new non-tariff measures" announced over the same period and includes barriers such as trade quotas and licensing and import inspections that discriminate against foreign commercial interests. Data for both are sourced from Global Trade Alert, a group that monitors trade policy across the globe.

2. **Labour standards** (Social pillar)

   The number of constituent sub-indicators has been expanded from one to four for the 2020 STI. Labour standards now include goods produced by forced labour and by child labour, calculated based on reporting by the US Department of Labor, and gender non-discrimination in hiring and the right to association, taken from the World Bank's *Doing Business report and the EIU's Risk Briefing*, respectively.

Change in methodology

Air pollution (Environmental pillar)

The 2020 Yale EPI changed its methodology for measuring air pollution. While previously defined as mean annual exposure, the new indicator uses disability-adjusted life years (DALYs). According to the World Bank, "population-weighted exposure to ambient PM2.5 pollution is defined as the average level of exposure of a nation's population to concentrations of suspended particles measuring less than 2.5 microns in aerodynamic diameter, calculated by weighting mean annual concentrations of PM2.5 by population in both urban and rural areas." DALYs are the sum of years lost due to premature death from air pollution and years lost due to pollution-induced disability. The shift represents Yale EPI's move from environmental impacts to health impacts from the same cause—ambient air pollution—though both indicators are strongly correlated with underlying environmental factors and one another.

Economic pillar

China and the Philippines were the biggest movers in the pillar, but many of the developing economies continue to bounce up and down along the bottom.

The economic pillar is, in this edition, by far the most tightly packed, which was also the case in 2016. The difference in scores between the top-ranked economy, Hong Kong at 69.1, and the economy at the bottom, Laos at 44.6, is just barely over 25 points. In the social pillar, where the gap between the first and the last has always been the widest, the difference is 52.3 points; in the environmental pillar it's 46.2. Nor are there any major drop-offs in the economic pillar. The largest, the 4.6-point difference between Singapore at number three and China at number three, is marginal compared to the 20-point separation between the US and Singapore, ranked at four and five in the social pillar; there is a nearly 21-point separation between South Korea and China at four and five in the environmental pillar.

The top of the pillar

Hong Kong and Singapore have traded places at the top, with Hong Kong taking the number one ranking for the first time after Singapore held it in the previous two editions. And even then there's still very little that differentiates the two when it comes to economically sustainable trade. They remain small, open economies with deep financial sectors, low costs of trade and strong technological infrastructure. The small amount of ground Singapore lost to its rival regional entrepot this time around is mainly attributable to the new indicator on currency manipulation.

Before moving on, it should be noted that Hong Kong's presence atop the STI—and a great many other indexes—has come into jeopardy, especially over the past six months. Its trade costs have been low, for example, not only because of its infrastructure and strategic location, but because of its political stability, integral to which is an independent judiciary. Having rubber-stamped a new national security law in June that was written in Beijing, together with its poor response to the protests which had begun long beforehand, indicate that at least political stability and an independent judiciary—along with a host of other characteristics— seem to be disappearing. "There's zero confidence in this [Hong Kong's] government and not just about their economic abilities," says Jim Walker, chief economist at Aletheia Capital, an investment advisory firm. "So there's a real mood of concern and despondency that is going to be very difficult to turn around anytime soon."

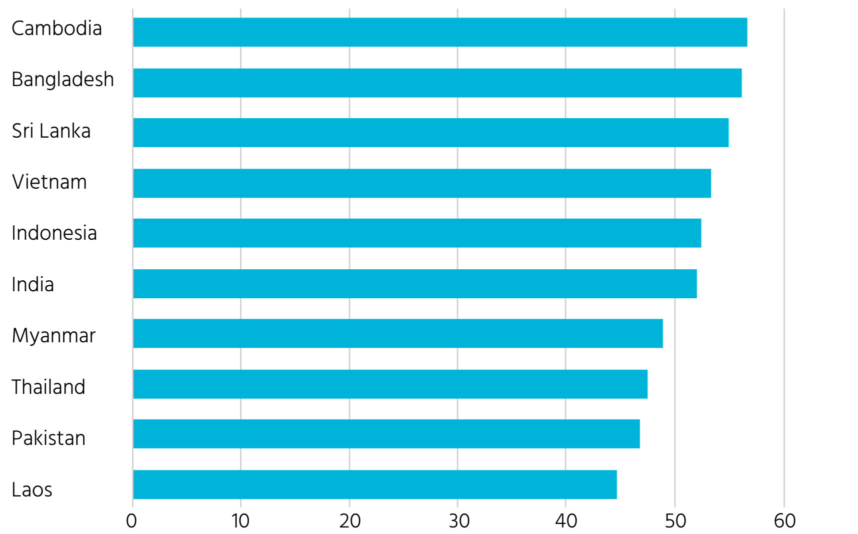
The only other consequential moves in the top half of the pillar were by China and the Philippines. China continued its ascent up the ranks, overtaking South Korea to assume the third spot, although more because of consistency than progress. Among the legacy indicators, it jumped from 7th to 2nd on export market concentration and as already noted above, received the highest score (out of three) for not intervening in currency markets to depreciate the value of the renminbi. Otherwise, it remained in place or fell in the pillar's thirteen other indicators.

The Philippines rebounded to 9th, where it began in 2016 before slumping to 15th in 2018. Growth in per capita GDP improved a bit from the period covered in the last index, as did the depth of the financial sector (it's still 12th) and gross fixed capital formation. It just held steady, give or take a place or two, on many of the indicators where it needs to make gains, such as export market concentration (15th), trade costs (16th) and technological innovation (15th). Moving up by not regressing is not an encouraging trend for an economy that, like Vietnam, has been marked by many as representing the future of the Asian region.

The bottom of the pillar

Leaving aside under-performing Japan in 10th place, the remaining 10 countries in the bottom half of the economic pillar are home to close to two billion people, each of whom lives in an economy classified as either as least-developed or developing (or low and lower-middle income, depending on the designation of your international organisation of choice). Since 2016, only two of these 10 have cracked the top 10 in the economic pillar: Vietnam, which rose to ninth in 2018, and India which rose to 10th the same year. All of the rest have been bouncing up and down along the bottom, a discouraging sign not only for sustainable trade but, relatedly and more importantly, for the prospects of widespread poverty alleviation in the region any time soon.

Chart 3 – Bottom 10 economies' rankings and scores



Source: Hinrich Foundation Sustainable Trade Index 2020

What is keeping them down, at least on the economic pillar? Among the five lowest ranked economies in the 2020 STI—India (16th), Myanmar (17th), Thailand (18th), Pakistan (19th) and Laos (20th)—there are telling similarities. Thailand has a liberalised current account, to its credit. The other four do not. All of them present businesses and investors with high levels of payment risk, a measure of the difficulty of getting money and inputs in and out of a country. That depresses trade and the FDI that underpins it. And separate from the factor of payment risk, their other costs of trade have remained persistently high: each features some combination of poor infrastructure and logistics, rampant corruption and a weak legal system. In the cases of Pakistan and Myanmar, it's more or less all four.

Even the rare bright spots are still relatively dim, aside from the glimmer of hope in the near to medium term for certain regions of India aside (see box below). Pakistan, for example, is ranked 3rd in export market and 1st in export product concentration. It seems like a good result, until you consider that Pakistan's exports, never that strong, have been mostly stagnant over the past decade. Similarly, four of the five scored the best in the currency intervention indicator, but that's less a policy choice than a product of lack of resources to intervene and having currencies that are anyway not liquid enough to do so.

Trade, infrastructure and the three Indias

The quality and reach of India's infrastructure have long been cited, by domestic and foreign firms alike, as one of the main constraints in the country's ability to integrate into global supply chains and become an export powerhouse. Assessed at the national level, India's infrastructure is indeed poor. Its score in the infrastructure sub-indicator (26.7) in the STI, which measures transport, energy and office space, is just above that of Bangladesh, placing it 19th out of 20. It fares slightly better on technological infrastructure (50.0), tying with the likes of China and Thailand, and logistics performance (63.6), where it also ranks 11th. Overall, however, it's a bleak picture.

Chart 4 – India: Infrastructure and logistics performance (ranking in parentheses)

Source: Hinrich Foundation Sustainable Trade Index 2020

Yet infrastructure is not the main problem inhibiting India's trade aspirations, says Mihir Sharma, senior fellow at the Observer Research Foundation, a think tank in India, and author of *Restart: The last chance for the Indian economy.* "We have three countries in India," says Mr Sharma. "One is a medium-sized European country of about 80 to 85m people. And that country has world-class skills. Then there's a reasonably-sized Asian country of about 150 to 200m people who have access to the kind of skills you [need] for manufacturing." The third country is the rest of India, he says, and that country has no access to skills at all because of low educational standards.

In that third country, which in this framing has a population of roughly 700-800m people, the quality and reach of India's current infrastructure doesn't really matter for trade and investment (it of course matters greatly for ensuring access to electricity, water, food and other essentials). Building power plants, roads and rail links is a good in and of itself, but if they don't lead to factories and office spaces where the local labour force is equipped with the basic knowledge and training necessary to produce goods, there won't be investment in manufacturing and there won't be any exports.

Unfortunately, India has not made progress in education over the span of the STI. We use percentage of individuals receiving tertiary education as a proxy for the overall level of educational attainment in the population and since 2016, it has gone from 13th to 12th to 14th in the index. It is "politically problematic" to admit this is a major issue, says Mr Sharma, and to support the assertion, he points to the fact that after coming "dead last or second to last" in the OECD's Programme for International Student Assessment (commonly known as PISA), years ago India just stopped participating in the exercise altogether.

As the saying goes, the first step is admitting there's a problem. India doesn't appear to be there yet and expectations for trade should be managed accordingly until it is.

Social pillar

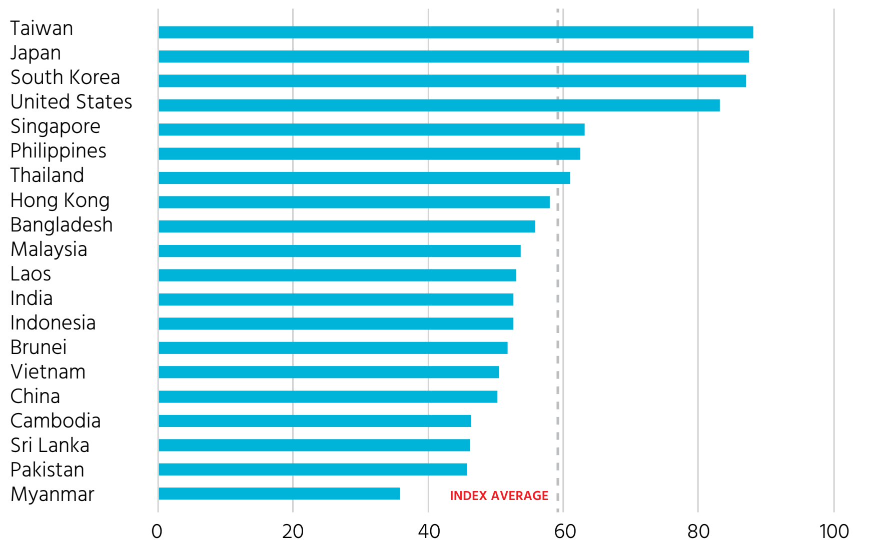
The social pillar features the highest average score (59.1) of the three pillars, but the largest gap between the top and the bottom, raising questions about inequality, how it is measured and whether the pre-pandemic drop in trade is affecting social sustainability.

To the praise Taiwan already garnered this year for its effective handling of the Covid-19 outbreak, we can add the accolade of being first in the social pillar of the STI, the second time it achieved the rank. It's further recognition that the island nation is getting many things right.

And that's no mean feat (on either account). Taiwan's only real shortcoming in the pillar has been political stability (ranked 6th), and that's less because of the myriad internal issues other economies in the STI contend with than the threat it faces from across the strait. Otherwise, it's been fairly solid and at a score of 88.0 in 2020, it comes closest of any economy in any pillar to a perfect score. It is not perfect, of course; it fell to the 5th spot in the inequality indicator, for example. And were the index to be expanded to other regions, particularly Europe, it would surely experience a decline relative to the Nordic countries. But it does mean other economies in Asia can look to it for lessons in areas such as labour standards and educational attainment, two other indicators in the pillar.

Overall, the social pillar features the highest average score of the three (59.1), but also the largest gap between the top and bottom scores. And the gap is expanding – from 43.9 points in 2018 to 52.3 this year.

Chart 5 – Social pillar: Economy scores



Source: Hinrich Foundation Sustainable Trade Index 2020

This raises a set of important questions. One of the reasons trade has come under fire in recent years is for its estimated effect on rising inequality *within* economies.[13] There is a debate over whether technological change, especially in the developed world, has been a stronger factor in creating unemployment and depressing wages. It's far from settled. At the same time, however, trade was assumed to be reducing inequality *between* economies.[14] At least in Asia, and as measured by the STI, the trend appears to be moving in the opposite direction.

One of those questions is whether there simply hasn't been enough trade. Even before the pandemic, global merchandise trade had been experiencing a decade-long slowdown in growth and in fact declined by 0.1% in volume terms and 3% in value terms in 2019 (Asia managed a minor increase in value terms).[15] Trade in services was growing at a faster pace, creating a narrative that the exchange of data, entertainment, IP and all the rest included in that bundle would be the future. If and when there is a recovery from the pandemic, that may very well prove accurate. But for most of the economies at the bottom of the STI, relying on services for growth is a distant option, requiring significant leaps up the value chain they are not capable of making at this time.

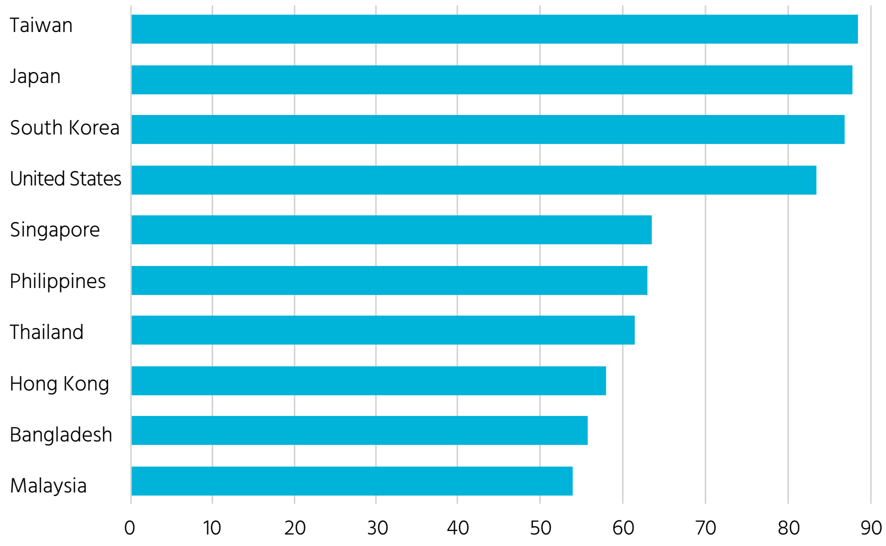
Another question is if inequality is being too narrowly defined. Almost all studies focus on income, using per capita GDP as the yardstick. The STI includes growth in per capita GDP as an indicator (in the economic pillar), as well as Gini coefficients in the social pillar. But it goes beyond those, into indicators already mentioned earlier like education, labour and political stability. These are as much quality of life measures as they are economic and trade-related. Bhutan's Gross National Happiness is one such concept and other organisations and committees have pursued similar lines of research by reevaluating how progress can be better measured.[16]

The top of the pillar

There are a few economies that have made gains (or recoveries if we look back to the 2016 STI), landing them at the top of the social pillar. The Philippines, for one, jumped to 6th in 2020, having ranked 19th in 2016 and 10th in 2018. It benefited from the refined labour standards indicator, with one notable exception. On the constituent sub-indicators covering goods produced by forced labour, gender non-discrimination in hiring and the right to association, the Philippines does well – the volume of goods produced by forced labour is relatively low, there is little gender discrimination in hiring and the right to association is high. The list of goods produced by child labour in the country, however, is distressingly long and varied, ranging from fruits and vegetables, rice and meat, precious metals and manufactured goods.[17] That needs to change, and not just for sustainable trade.

Thailand made advances too, rising to 7th place from 17th in 2018, but like the Philippines, largely because the more detailed evaluation of labour standards raised its score. Bangladesh, which likewise moved into the top 10 for the first time (ranked 9th), didn't reap the same rewards – it backtracked in the labour standards category as a result of the new stricter measurements. It maintained its position at second overall on inequality, a place one hopes it keeps on any prospective development path it may be on.

Chart 6 –Social pillar: Top 10 economies



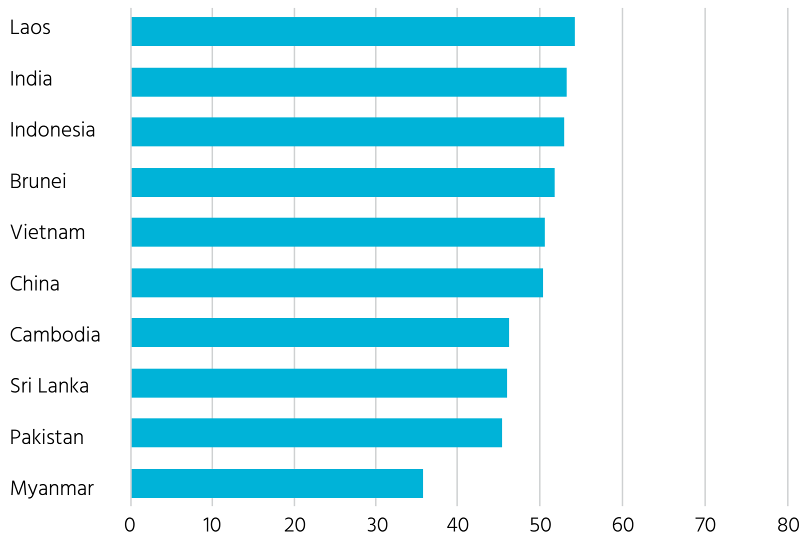
Source: Hinrich Foundation Sustainable Trade Index 2020

The bottom of the pillar

For all its progress elsewhere in the index, China continues to struggle in the social pillar, finishing 16th. It was helped somewhat by another rise in educational attainment, but that was outweighed by a marked fall in labour standards and it's poor performance—along with India, Indonesia and Myanmar—in one of the new indicators, human trafficking. Human trafficking has become a major issue in the country as a result of the one-child policy, which has created two deficits in the population. The first is a gender deficit. There are more men than women, leaving a significant portion of the male population without marriage prospects. As a result, women are trafficked in from countries like Myanmar and Vietnam to compensate.[18]

The second deficit is in labour. It's hard to think about a country with a billion-plus people as having a shortage of available workers. But its population is now aging and shrinking, putting upward pressure on wages. For a country—and companies located within that country—that still relies on low-cost manufacturing to drive growth, that presents a daunting prospect. And so human trafficking across borders for forced labour is becoming more widespread.[19] To its discredit, the government doesn't appear to be exerting much effort to combat this, or the so-called "bride trafficking" mentioned above. There is a national strategy, according to the 2019 Trafficking in Persons Report from the US State Department, though no criminalisation – the report notes that the Ministry of Justice "seldom initiate[s] prosecution" under anti-trafficking statutes.[20]

Chart 7 – Social pillar: Bottom 10 economies



Source: Hinrich Foundation Sustainable Trade Index 2020

Joining China at the bottom of the pillar—only Myanmar because of human trafficking—are Cambodia, Sri Lanka and Pakistan. The *what if* about political stability discussed in the introduction applies no more to any other countries in the STI than these four. Sri Lanka is 17th, Pakistan and Myanmar tie for 18th and Cambodia is last (20th) in the indicator. They all present a mix of political causes to give investors and trading partners pause: social unrest, corruption, political show-trials, legislative deadlock, separatism and religious extremists. Unless and until they are resolved, growing trade itself will be difficult, let alone engaging in sustainable trade.

Environmental pillar

There is a substantial distance between the top four economies in the pillar and the rest. There is some hope that the environmental gains made as a result of pandemic lockdowns and other policies can built upon and improved once the pandemic is over.

It didn't take long into the pandemic for people to begin noticing the positive impact it was having on the environment. By May, there was already published research in the science journal Nature showing that daily carbon emissions had fallen by 17% compared to mean levels in 2019, with the authors estimating that the annual drop in 2020 could be between 4-7% depending on when restrictions are lifted.[21]

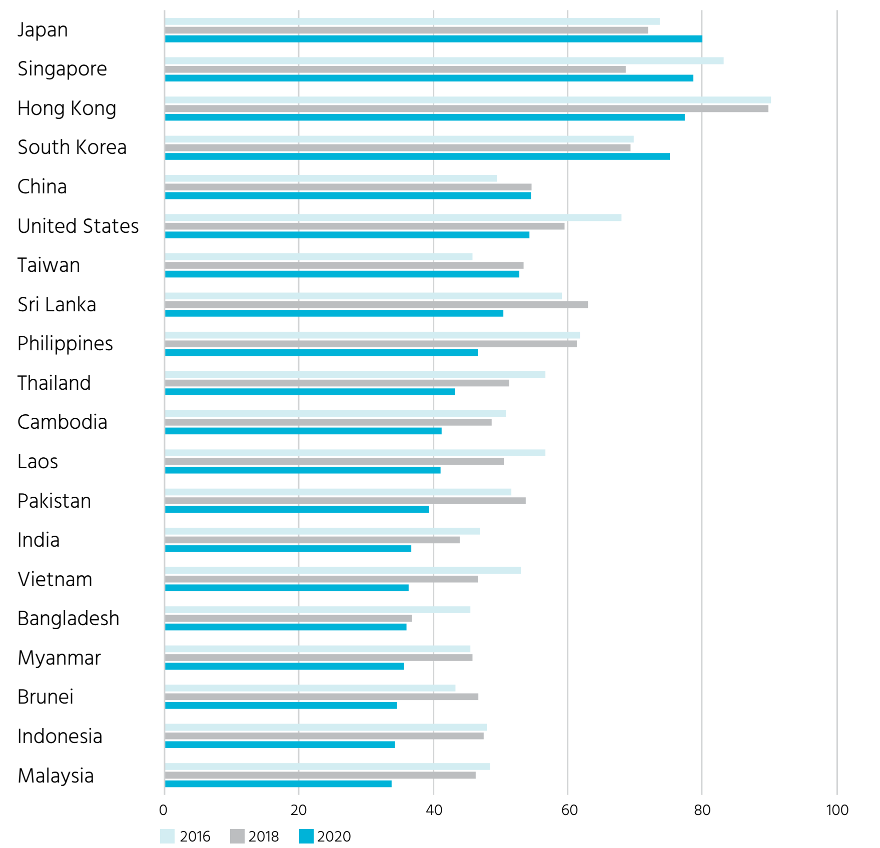
Urban air quality improved too. In some countries, like India, this was a continuation of a trend already underway; in others, it put a stop—however temporary—on rising concentrations of particulate matter, especially PM2.5, the most harmful to health.

These short-term benefits, and various others, have of course come at immense economic and social cost that will take years to recoup. But the pandemic may have a longer term benefit in regards to the environment, argues Robert Carnell, regional head of research, Asia-Pacific, with ING, a Dutch bank. "There's been quite an awakening," Mr Carnell says, referencing public awareness of the scale of the decline in pollution and citing additional examples, such as the reduction in car use and the sudden return of birds and other animals to cities. "People won't forget this too quickly and once the basics [of the recovery] are covered, they will drive policymakers and corporate executives to start redelivering on environmental sustainability."

We should hope Mr Carnell is right because the direction of scores in the environmental pillar of the STI is not a cause for optimism. Between 2016 and 2018, the average decline among all economies in the index was -1.9 points and just six of the twenty made improvements if you include Myanmar's meagre gain of 0.3 points. Between 2018 and 2020 it was even worse: the average decline was -6.4 points and only three economies made improvements: Japan, Singapore, and South Korea.

Some comparability is lost due to the new and revised indicators in 2020, as already noted above. But those changes were made to bolster the index. Ultimately, if holding economies to higher account results in lower performance, that reflects more on the individual economies than on the construction of the index. And if the pandemic doesn't alter policies and behaviours on the environment for the better, perhaps nothing will.

Chart 8 – Environmental pillar scores: 2016 / 2018 / 2020



Source: Hinrich Foundation Sustainable Trade Index 2020

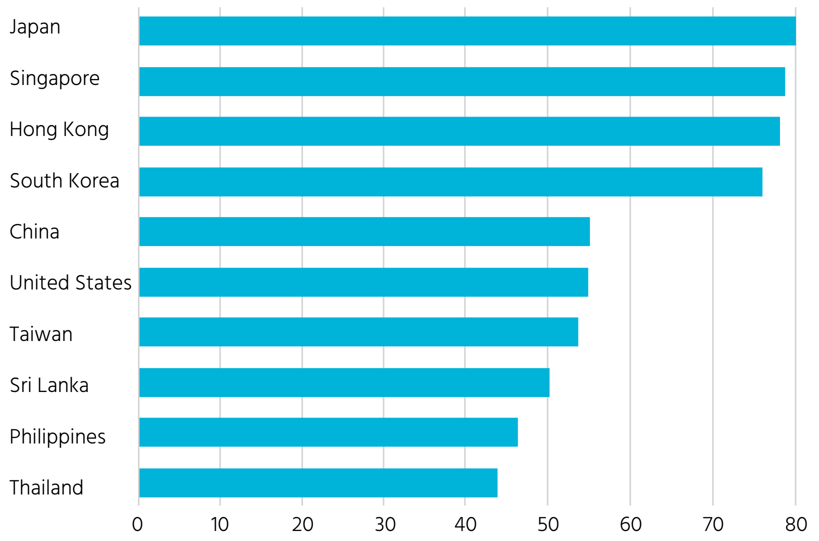
The top of the pillar

Japan registers the strongest performance in the environmental pillar (80.0), leading the same group of four—Singapore (78.7), Hong Kong (77.4) and South Korea (75.2), being the other three—that has excelled, with a few exceptions, across all three pillars of the STI from the start. Then there's a considerable drop. China, the US come next in the rankings, but are both 20 points below the top four in scores.

There are some commonalities among the top four. Three of them—Japan, South Korea and Singapore—have implemented carbon pricing schemes, one of the seven indicators in the pillar and a new indicator in the 2020 STI. Japan was first with its Tax for Climate Change Mitigation, a carbon tax that began in 2012 and was set at JPY289/tCO2e, or around $3 per tonne of carbon emitted. South Korea followed in 2015 with Korea ETS (emissions trading scheme), the first national cap-and-trade system in East Asia. Singapore's scheme, like Japan's, taxes CO2e at a cost of S$5/tCO2e, or $4 per tonne of carbon emitted. It was implemented in January 2019.[22]

[Hong Kong does not have a carbon pricing policy scheduled or under consideration as of this writing, but mainland China does have a national ETS scheduled for the power sector alone. It's unclear whether, when and how this might eventually apply to the SAR.]

Chart 9 – Environment pillar: Top 10 economies



Source: Hinrich Foundation Sustainable Trade Index 2020

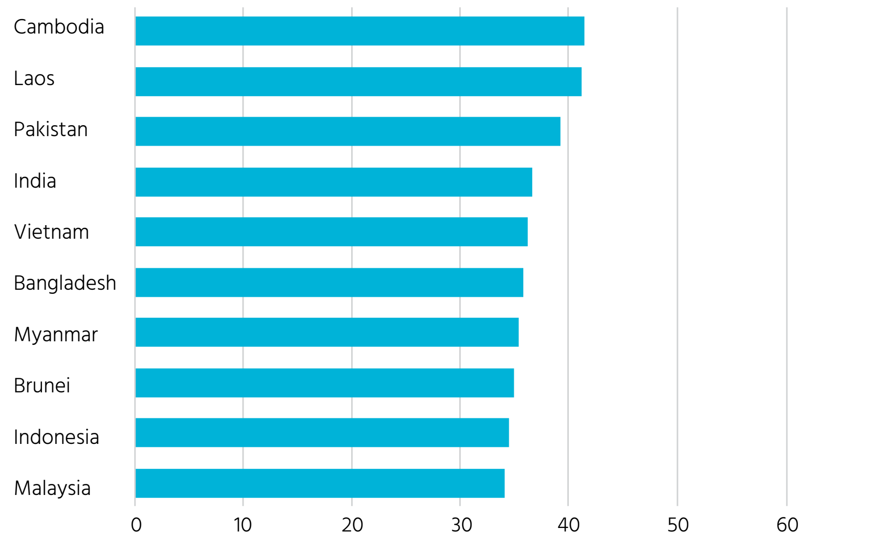
Elsewhere, all four receive high marks for low levels of water pollution, which is calculated using the percentage of wastewater treated and the percentage of households connected to a sewage system.[23] Singapore is one of only five economies in the world that can boast of 100% on both accounts and the only one in Asia. In the context of the STI, South Korea (3rd) and Japan (4th) do quite well on the indicator; but measured against the rest of the world, they lag in the area, as does the rest of Asia – Malaysia, the next strongest country in the region, ranks below Bulgaria and Oman and slightly better than Saudi Arabia and Turkmenistan.

The top four are alike in their successes but are, for the most part, unsuccessful in their own ways. Singapore, for example, is 16th in the STI in the deforestation indicator, which tracks the change in an economy's forest cover over time. In neighboring Indonesia, forests are burned every year to make way for palm plantations, an activity that Singaporeans become acutely aware of when winds blow smoke from the fires across the sea and cover the city in a thick haze.[24] In land-starved Singapore, the extensive deforestation that has taken place over the years is to clear space for housing and activity. For the 10-year period ending in 2019, Singapore's performance in this area is down -16.5%.[25] (See box out on deforestation, the pandemic and sustainable trade).

The bottom half of the pillar

There are few bright spots among the economies at the bottom of the environmental pillar and they shine only so long as you don't look at them very hard. Bangladesh, at 16th in the pillar, is number one in the share of natural resources in trade, a distinction it shares with Cambodia. Neither is particularly well-endowed with natural resources, making it quite an easy decision of industrial policy not to export them. Brunei, 18th in the pillar, comes third on air pollution, which is again not a surprising result for an economy with a tiny population and little economic activity beyond oil and gas production. However, it could be argued that it exports air pollution in the form of hydrocarbons: Brunei is 18th in transfer emissions and 20th in share of natural resources in trade.

Chart 10 – Environmental pillar: Bottom 10 economies

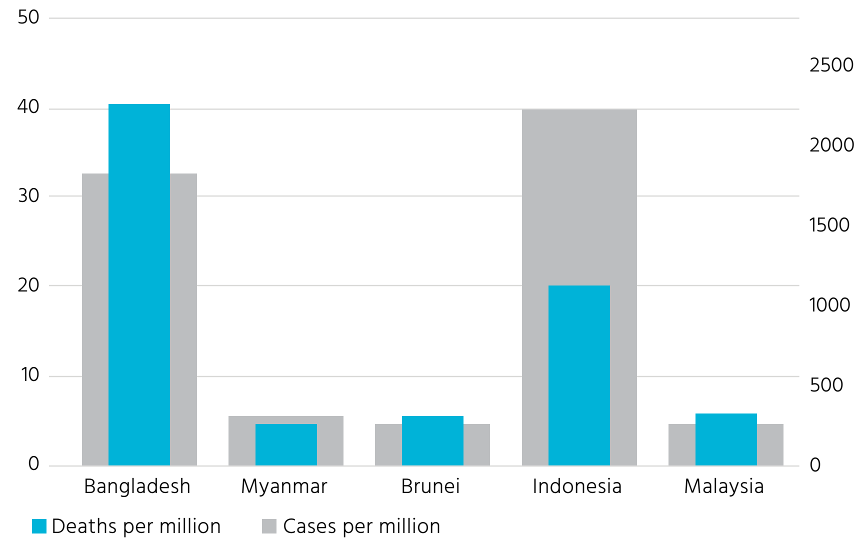


Source: Hinrich Foundation Sustainable Trade Index 2020

The point, if it's not apparent, is that most of the economies dwelling at the bottom of the pillar are mostly saved from not performing even worse by factors they don't control: resource endowments, geographic size, terrain. For those they do, progress has been minimal at best.

What can change this trend? Mr Carnell's hope for a lasting, Covid-19-induced "awakening" on the environment is a valid one, but it's hard to apply to places that not have been greatly affected by the pandemic, haven't thus had to go into severe lockdowns and ones where popular opinion wouldn't—to be generous—anyway weigh heavily on government policy decisions. Each of the economies that continue to lag in the environmental pillar meet these conditions, to varying degrees. As of mid-September, the number of confirmed cases and deaths in Myanmar and Brunei were so low as to be almost non-existent; in the others, the number was larger overall but still low relative to their respective percentages of global population.[26] As such, the levels of lockdown restrictions were milder compared to other countries in the world.[27]

Chart 11 – Bottom five STI economies, Covid-19 cases/deaths vs. population



Source: Hinrich Foundation Sustainable Trade Index 2020, WHO, CDC, ECDC, NHC of the PRC, JHU CSSE, DXY, QQ, and various international media. Data as on 1 October 2020 and U.S. Census Bureau, International Data Base (demographic data) and USA Trade Online (trade data). Data as on 1 July 2020.

Their answer may be "green finance" or "ESG investing", or whatever appellation or acronym is attached to the pools of private sector money and donor funding chasing a combination of yield and development results in a way deemed sustainable.[28] Vivek Pathak, regional director, East Asia and Pacific for the International Finance Corporation, a for-profit arm of The World Bank Group, says that we've reached an "inflexion point" and that profit and purpose are now "very well-aligned in most cases [of sustainable investment]".[29] We're still in early stages, but Mr Pathak argues that already investors are recognizing that higher upfront-costs of capital for sustainable projects, be they energy or green buildings, are coming down and that the long-term residual value of these assets is going to prove greater than unsustainable assets.

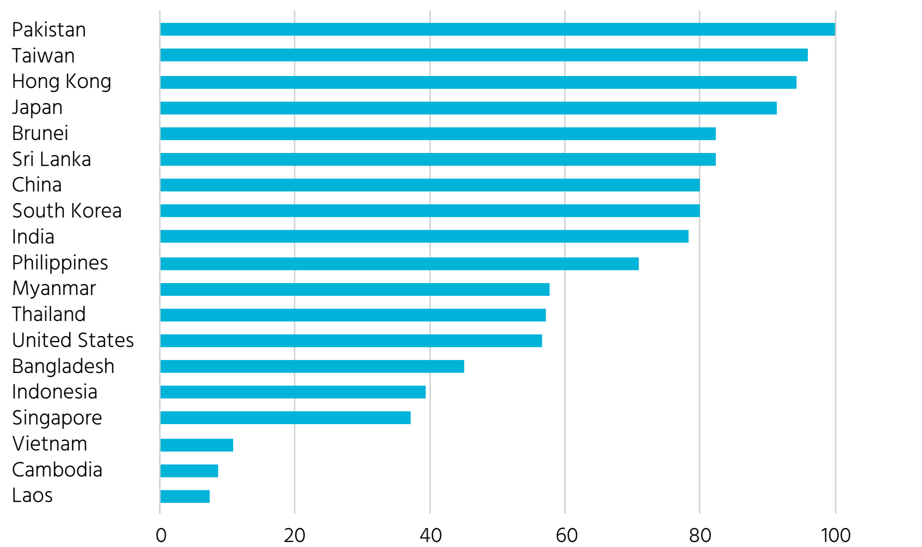
Sustainable trade, deforestation and the next pandemic

Like an epidemiological version of the classic murder mystery board game Clue, the culprit behind the Covid-19 pandemic may have been the bat served in the soup in the main wet market in Wuhan. Or it may have not. The origin of the virus could remain unconfirmed for years—if it ever is—and the attendant speculation and accusations of cover-ups, while in many respects warranted, obscure a fundamental issue: zoonotic diseases—those transferred from animals to humans—represent an increasing threat to humans everywhere. And if there's agreement on anything, it's that as with SARs in the early years of the 21st century, and MERs close to a decade later, Covid-19 is zoonotic. A human contracted it from an animal of a species yet to be determined. The virus spread across the globe from there.

The initial STI was not constructed with this in mind. Deforestation was included as an indicator because of its contribution to climate change, not because it increases the number of potential vectors for animal-to-human disease transmission. It does do that, however. Destroying animals' natural habitat pushes them into closer and more regular contact with humans and so needs to be considered on that basis, as well.[30]

The trend in this regard was not a positive one to begin with, and the pandemic looks to only be exacerbating it, potentially miring us in a negative feedback loop that could prove difficult to escape. No economy in the STI had positive data on deforestation in the latest edition, not even Pakistan and there's little to deforest in the country. The report accompanying the 2020 Yale Environmental Performance Index, a source of data for the STI, notes that at a global level, "the years 2016–2018 exhibited the three highest levels of annual tree cover loss ever recorded, with losses of 29.7, 29.4, and 24.8 million hectares respectively."[31]

Chart 12 – STI deforestation rankings



Source: Hinrich Foundation Sustainable Trade Index 2020 and Yale Environmental Performance Index

The best real-time data, which comes from the Global Land Analysis and Discovery group and with some qualifications, shows that deforestation has accelerated in 2020.[32] It's still early, but it's hard not to see causation in the economic fallout from the pandemic. Strapped companies are reneging on pre-pandemic commitments to conservation. The un- or under-employed are forced to resort to any means to support themselves and their families, including illegal logging. Governments, under duress and bereft of immediate solutions, look the other way for fear of angering further already struggling, angry populations.[33]

Hence the negative feedback loop. If and when Covid-19 is under control, the next pandemic may not be far off. We shouldn't be surprised if it's again zoonotic and can be traced to Malaysia, Indonesia, or Vietnam—or any of the other countries around the world not in the index but that are also allowing their forests to be stripped bare.

Conclusion

The world is waiting for a Covid-19 vaccine. Once discovered, approved, manufactured and distributed, we can begin returning to some semblance of normal, allowing the economy—and by extension, trade—to recover. That might be later in 2020. It could be in 2021.

"Whether there's a vaccine, whether there's an antidote, whether there [are] renewed waves of the virus, all of that is immaterial," he says. "The process has started."

Or so much of the prevailing thinking goes.

It's a soothing narrative for frayed nerves. Mr Walker is not convinced. "Whether there's a vaccine, whether there's an antidote, whether there [are] renewed waves of the virus, all of that is immaterial," he says. "The process has started."

And by "the process" he means a cycle of falling corporate profitability, resulting in reduced investment, followed by a credit crunch that limits the immediate scope and scale of the global recovery, which he and his firm are predicting won't happen until the "second half of 2022 or even 2023."

Time will tell if Mr Walker or the more optimistic among us are right in the short-term. After that, pretty much all we can be certain of is that there is going to be another crisis at some point. Preparedness matters. The original intention behind the STI was not necessarily to serve as a tool for crisis preparation. But it has taken on that dimension. We hope that governments and firms around the world, not just in Asia, will use it as such, reducing the need for another catalogue of *what ifs*.

Looking ahead

A good start towards avoiding having to ask what if when the next crisis hits would be for policymakers, business leaders, international institutions and NGOs to address the following four areas:

"The real drive behind supply chain reconfigurations are these rapid advancements in digital technologies"

Reducing inequality

The World Bank's baseline scenario for the impact of the pandemic is that it could push 71m people into extreme poverty, a figure that swells to 100m in its downside scenario.[34] In the developed world, it is likewise worsening an already precarious situation for the middle class through job losses, shorter working hours and depressed wages.

We could label these "setbacks" but that would suggest progress was being made prior to the pandemic. It wasn't. By most measures, inequality was stagnant at best and was increasing in many economies.[35] The pandemic has just exacerbated an existing trend. Unless significant steps are taken now, the gap between the rich and the poor will only widen further when the next crisis comes, making sustainable trade all the more difficult.

Improving education

One of those steps is to improve access to quality education, a subject that we have been covering closely for the past four years.[36] As the case study on India argues, while infrastructure is important, it matters little for trade if there isn't an educated labour force ready and able to justify the investment required to establish an export-focused manufacturing base.

And education is becoming even more important because of the ongoing digital shift/ digital transformation. "I'm not too sure whether policymakers, particularly in the developing countries and in Southeast Asia recognize [the shift] right now," says an official from the Asia-Pacific Economic Cooperation, an international forum. "The real drive behind supply chain reconfigurations are these rapid advancements in digital technologies," the official says. Without progress in education, many economies in the STI may find themselves left behind.

(Re)lowering barriers to trade and investment

For the most part, in 2019 few of the economies covered by the STI raised their tariff or non-tariff barriers to trade—the US, China and India being the major exceptions. The picture since then is less clear, however, and there is growing concern that, after abstaining from following the world's larger economies down the path to protectionism, many countries have relented during the pandemic, with new tariffs, export controls, discriminatory regulations and restrictions on FDI.[37]

That is unlikely to serve these countries well, just as it hasn't benefited the US, China or India. None of the developing economies (in the STI) have the internal demand or the capital base to grow, let alone grow in a manner that will alleviate poverty and create a middle class. Trading, and trading sustainably, are really their only paths. That means keeping their economies open and welcoming the kind of foreign investment that supports those goals.

Building on the environmental benefits of the pandemic

The concept of "Building Back Better" (BBB) was originally developed by the UN as policy framework for "recovery, rehabilitation and reconstruction" following natural disasters.[38] Environmental resilience is one of the core areas of focus in the BBB framework.

The Covid-19 pandemic has been unique as far as crises and disasters go in that its impact on the environment has been probably been a net positive (as detailed above). So while BBB—which has received increased attention as a result of the pandemic—should remain a guiding principle, governments have an opportunity to apply the environmental lessons learned from the crisis to their policy decisions and ask themselves questions about how to retain the gains already made, such as:

- With fewer cars on the road, and industrial demand for electricity down, how can we continue reducing air pollution when those two return to normal? Should they return to normal?
- Similarly, how do we build upon and accelerate the drop in emissions that the world will see in 2020?
- What can be done to ensure that the improvements in freshwater pollution levels are not lost?

Frequently asked questions

How do methodological changes from STI2018 impact the scores?

The Economist Intelligence Unit follows best practices in collecting time series benchmarking data. Data from third party sources routinely undergoes methodological reviews that can change collection or units. In these cases, the analyst team scrutinises the methodological change and updates data with the goal of preserving comparability to the greatest possible extent. There is little evidence that methodological changes can explain variation in scores between 2018 and 2020.

What factors are included in The Economist Intelligence Unit's political stability ratings?

This category addresses the degree to which political institutions are sufficiently stable to support the needs of businesses and investors. It covers the following issues:

- What is the risk of significant social unrest during the next two years?
- How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?
- How likely is it that an opposition party or group will come to power and cause a significant deterioration in business operating conditions?
- Is excessive power concentrated, or likely to be concentrated, in the executive, so that executive authority lacks accountability and possesses excessive discretion? Is there a risk that international disputes/tensions will negatively affect the economy and/or polity?

How does the index differ from a simple ranking of wealth and economic development?

The index focuses on social and environmental measures of trade sustainability, in addition to a more conventional economic analysis. Outcomes can be scaled for expected performance based on GDP per capita or other similar measures of development.

What is the role of environmental stewardship in sustainable trade?

We consider environmental sustainability as a coequal factor in sustainable trade. However, index consumers are invited to explore the "Weights" tab to see how index outcomes change with different scoring weights.

To what extent does the index forecast future trade sustainability?

The index represents a benchmark for current trade sustainability. While the index is not intended to predict future outcomes, we do note in the 2020 in addition that it could serve as a useful tool for helping economies prepare for the next crisis.

Due to the large number of economic indicators, each individual indicator in that pillar counts for less than individual indicators in the social and environmental pillars. Does that undervalue each economic indicator?

The pillars are weighted equally; as mentioned, index consumers can change pillar weights under the "Weights" tab to bring individual indicators into parity. Within each pillar, there is no ideal number of indicators. A higher number of indicators contributes to a more complete picture for pillar, albeit while lowering the impact of a particular indicator.

How is it possible that a country can fall in the rankings despite a score improvement?

In rare cases, a country's indicator score may rise, though its rank may fall (and vice versa). Our index uses a min-max calculation so that all scores are relative in some respect. These changes can generally be interpreted in two ways:

- Movement at the extremes: significantly different underlying data for either/both of the best and worst performers.
- Broad movement: the region is broadly improving/deteriorating on a particular indicator, and a country is off the pace of that movement.

Economic pillar

What explains some of the dramatic changes in 1.3) tariff & non-tariff barriers?

New barriers to trade have been receiving a significant amount of attention over the past few years, especially tariffs. Since the STI is a min-max model (see above), that the US imposed 841 new tariff barriers in 2019 alone caused a massive change in the min score in the index. The second explanation for the change is that the overall indicator was expanded to include data from Global Trade Alert covering non-tariff barriers to trade.

Why was currency manipulation included in this edition of the STI after having been left out of the previous two editions?

We believe we developed a methodology for assessing currency manipulation that was appropriate in the context of the STI. For further explanation, of the methodology, please see the methodology appendix in this report.

Social pillar

What is the reason for Singapore's fall to 13th in labour standards?

The expansion of the indicator to provide a more detailed assessment of labour standards did not benefit Singapore. While it continues to be at the top of the sub-indicators on use of forced and child labour, The World Bank's Women, Business and the Law report scored it a zero on gender non-discrimination in hiring The EIU's own assessment of the right to association placed it near the bottom, along with China and Cambodia, among others.

Environmental pillar

The environmental pillar featured methodological changes from STI1.0 STI2.0 to STI3.0. To what extent are the results comparable?

We must attach caveats to any comparisons when there are methodological changes between indices. For that reason, we have included a feature in the workbook that enables the consumer to zero-out indicators where there were changes. For index consumers interested in how the environmental scores changed from STI2.0, we suggest they zero-out 3.1) Air pollution, where the methodology was changed by the 3rd party source.

What are transfer emissions?

Transfer emissions represent the difference between the emissions a country produces and the emissions associated with a country's consumption. Countries with dirty export industries have higher transfer emissions. There is some debate around the economics behind delegating dirty production to countries that can better manage it – or, through cost savings, contribute more towards alleviating pollution. However, for the purposes of this index, we have considered high transfer emissions as something to avoid.

How does the index address Taiwan's unique role in international environmental compacts?

Taiwan scored a '0' in STI1.0 for environmental standards in trade. In STI2.0, Taiwan remained tied for last place but received credit for participating in three of the seven conventions measured, a reflection of participation through NGOs. In STI3.0, Taiwan was evidence that, for six of the seven treaties covered, it had ratified/accepted/acceded to the agreement, raising it to 3rd place overall in the indicator.

Methodology

The Hinrich Foundation Sustainable Trade Index measures a country's capacity to participate in the international trading system in a manner that supports the long-term domestic and global goals of economic growth, environmental protection, and social capital development. Every country in the Index is scored across these three categories, or pillars. This year's index represents the third iteration of a research programme first launched in 2016.

Pillars of trade sustainability

Following an extensive literature review of the three pillars of sustainability – economic, environmental and social – the research team selected a number of indicators and sub-indicators to capture these concepts. The economics pillar consists of 15 indicators and six sub-indicators. The social pillar features five indicators with seven sub-indicators. Seven indicators and seven sub-indicators make up the environmental pillar.

Economic pillar

The economic pillar measures a country's ability to ensure and promote economic growth through international trade. In this category, economies receive scores for a number of measures that demonstrate a link between the trading system and economic growth. Some indicators capture the ease of conducting international trade, such as current account convertibility and various trade costs associated with conducting cross-border transactions. We measure export diversification through bilateral trade destinations and export goods concentrations for each country—economies with diversified export markets and products are better equipped to absorb external economic shocks. We also consider investment and the quality of infrastructure for each country, as these factors encourage domestic production and foreign trade at the firm-level. For a full list of economic pillar indicators, see the table below.

Social pillar

The social pillar captures social factors that relate to a country's capacity to trade internationally over the long term and a population's tolerance for trade expansion given the costs and benefits of economic growth. Central to this pillar is the concept of human capital. In this regard, economies are measured on the environment that encourages and supports the development of human capital in the country. For example, the extent of inequality and labour standards within the country are both measured in this pillar. Educational attainment and political stability also capture human capital and the environment in which that capital can be productively employed. Human trafficking measures the risk and policy environment for a major labour protection issue in international trade.

Environmental pillar

The environmental pillar measures the extent to which a country uses natural resources and manages the externalities that arise from economic growth and participation in the global trading system. Indeed, while a country's capacity to participate in the global trading system is dependent on economic development, a country still must try to exercise prudent stewardship over natural resources and limit externalities in its economic calculus to promote its overall environmental capital. The indicators chosen in this section attempt to quantify a country's environmental capital, including resource use and externalities. This pillar includes air and water pollution. Relating to the future impacts of trade, we measure national environmental standards, carbon emissions and share of natural resources in exports.

Indicators and income groupings

Based on the findings of the research phase, a neutral view was taken on the relative weightings of the three pillars. It was clear from the literature on sustainability that a strong case could not be made for the pre-eminence of one pillar over the others. From this position, each pillar was given a neutral weighting of 33.3%, with each indicator representing an equal share of its category. Economies in the Index were sub-divided into three wealth categories to enhance comparison on trade sustainability. As a method to capture the economic development stages of the economies in this Index, three wealth groups were classified based on GDP per head:

HIGH INCOME	MIDDLE INCOME	LOW INCOME
Brunei	China	Bangladesh
Hong Kong	Malaysia	Cambodia
Japan	Thailand	India
Singapore		Indonesia
South Korea		Laos
Taiwan		Myanmar
United States		Pakistan
		Philippines
		Sri Lanka
		Vietnam

Indicator normalisation

In order to compare data points across economies, as well as to construct aggregate scores for each country, we normalised all indicators on a scale of 0-100 using a min-max calculation. The score represents the standard deviation from the mean, with the best country scoring 100 points and the worst scoring 0. Qualitative indicators with unique scoring frameworks (e.g 1-5 points) were transformed to a scale of 0-100 to enable comparison with the other series in the Index.

New and updated indicators

We kept index structure largely the same as the 2018 version of the Index, though with three new indicators and four methodological updates to existing indicators.

New indicator: 1.15) Currency manipulation

This new indicator seeks to objectively assess the level of currency manipulation in support of export competitiveness in managed float exchange rate regimes. We award one "manipulation point" to economies with current account surpluses at the 3% threshold, two points to economies with surpluses at 6% of GDP, and so on. Then, we award one manipulation point for each 2% of GDP spent buying foreign assets to depress the value of its currency. Finally, we assess the real effective exchange rate for an appreciation of the currency, indicating that any intervention to depreciate the currency was not successful. Our country analysts then review the results and compare them two benchmarks at the IMF and the US Treasury Department. Our scoring guidelines can be found in the table below.

New indicator: 2.5) Human trafficking

We have included three subindicators: risk, criminalisation and strategy. Risk caters to businesses considering market expansion, while country-specific explanation of criminal codes and national strategies assess the policy environment around human trafficking prevention.

New indicator: 3.7) Carbon pricing

We assess the policy environment on carbon pricing, evaluating the implementation of national-level carbon pricing schemes--including carbon taxes and quotas. Where applicable, the workbook describes the carbon pricing scheme in a one paragraph summary.

Updated indicator: 1.3) Tariff and non-tariff barriers

Our assessment of tariff and non-tariff barriers includes two sub-indicators from previous years that measure the general level of market openness (1.3.1a and 1.3.2a). We have also added two new quantitative sub-indicators from Global Trade Alert that measure the number of new tariff and non-tariff measures announced in the past year (1.3.1b and 1.3.2b). Global Trade Alert assesses the number of announced trade barriers that involve discrimination against foreign commercial interests.

Updated indicator: 2.3) Labour standards

We unpacked indicator 2.3) to include four sub-indicators for greater granularity. The indicator clearly explains scoring based on factors including goods produced by forced labour or child labour; (2.3.1 and 2.3.2); laws on gender non-discrimination in hiring (2.3.3); and protections for labour regarding the right to association (2.3.4).

Updated indicator: 3.4) Environmental standards in trade

The indicator on environmental standards in trade uses the same seven conventions (see the table below for a comprehensive list) but clearly explains how a country scores based on each convention.[39]

Updated indicator: 3.1) Air pollution

The Yale Environmental Performance Index changed its methodology for measuring air pollution from mean annual exposure to PM2.5 to disability-adjusted life years attributable to excess PM2.5 exposure.

Data sources

A team of in-house researchers collected data for the Index in November and December 2019. In addition to proprietary data from The Economist Intelligence Unit, which has a range of quantitative and qualitative indicators, publicly available information from official sources has been used where applicable. Primary sources include the World Bank, UNESCO and various others (see table below).

INDICATOR	UNIT	SOURCE	DESCRIPTION
Economic pillar			
1.1) Growth in per capita GDP	%	EIU	Year-on-year growth of real GDP per head. As a proxy for personal income, this indicator reflects consumers' ability to spend on imported goods.
1.2) Current account liberalisation	1-5 score	EIU	A measure of a country's current account liberalisation, with consideration of restrictions in this area; used to capture the ease with which a country trades goods across its border.
1.3) Tariff & non-tariff barriers	0-100 score	EIU/Global Trade Alert	An assessment of the country's openness to trade based on tariff and non-tariff barriers. Subindicators include tariff barrier risk, new tariff barriers, non-tariff barrier risk, and new non-tariff barriers.
1.3.1a) Tariff barriers	1-5 score	EIU	EIU analysis of the risk to businesses stemming from tariff barriers in the country.
1.3.1b) New tariff measures	# of new tariff measures	Global Trade Alert	Global Trade Alert assesses the number of announced new tariff barriers that involve discrimination against foreign commercial interests in the past year.
1.3.2a) Non-tariff barriers	1-5 score	EIU	EIU analysis of the risk to businesses stemming from non-tariff barriers such as trade quotas, licensing and import inspection.
1.3.2b) New tariff measures	# of new non-tariff measures	Global Trade Alert	Global Trade Alert assesses the number of announced new non-tariff barriers, such as trade quotas, licensing and import inspection, that involve discrimination against foreign commercial interests in the past year.
1.4) Exchange rate volatility	Trade-weighted standard deviations	EIU	The standard deviation of a country's exchange rate to its major trading partners. It is a trade-weighted measure to reflect that volatility matters more for higher volumes of trade. As an indicator, exchange rate volatility is a potential source of uncertainty when conducting trade.
1.5) Financial sector depth	% of GDP	EIU	Domestic credit to the private sector, as a percentage of GDP. This indicator is a proxy for the availability of trade finance to provide a hedge against exchange rate volatility.
1.6) Foreign trade and payments risk	1-100 score	EIU	A measure that assesses a company's risk in getting money or inputs in and out of a country. This indicator captures the risks to conducting trade, which provide an additional barrier to trade for trading companies.
1.7) Export market concentration	Average of percents	EIU	The share of a country's exports by destination, calculated as the average of the country's top four trading partners. This indicator provides a measure of export market concentration, as a highly concentrated export market is a trading vulnerability.
1.8) Export product concentration	Average of percents	EIU	The share of a country's exports by product (as opposed to destination), calculated as the average of the country's top four product shares. This indicator provides a measure of product market concentration, signalling vulnerability if this share is highly concentrated on certain products.
1.9) Foreign direct investment	% of GDP	EIU	Inward FDI as a share of GDP. The indicator measures this source of investment that supports a country's trade and economic growth.
1.10) Gross fixed capital formation	% of GDP	EIU	Gross fixed investment in the national economy. Like FDI, a country's gross investment encourages trade and economic growth.
1.11) Trade costs – a composite of four factors: infrastructure, logistics, corruption and legal system.	0-100 score	EIU/World Bank	A composite measure of the factors that contribute to increasing costs to trade. These indicators capture the extra burden to trade created by inefficiencies in the trading system.

INDICATOR	UNIT	SOURCE	DESCRIPTION
1.12) Technological innovation	% of GDP	UNESCO/ World Bank	A measure of a country's investment in research and development as a percentage of total GDP. This indicator captures a country's ability to innovate and participate in the trading system as it moves towards more sophisticated goods.
1.13) Technological infrastructure	1-5 score	EIU	A measure of a country's technological infrastructure in the use of telecommunications and computers. This indicator measures a country's IT infrastructure to attract FDI and have a competitive infrastructure for exporting.
1.14) Growth in labour force	%	EIU	The year-on-year change in a country's labour force. A growing labour force supports economic growth.
1.15) Currency manipulation	1-3 score	EIU	An assessment of currency manipulation based on current account balance, foreign currency sales/purchases, or changes in the real effective exchange rate. Scoring guidelines: 3: There is no indication of currency manipulation based on the current account balance, foreign currency sales/purchases, or changes in the real effective exchange rate. 2: There is an indication of intervention based on the current account balance and foreign currency sales/purchases, but there is insufficient evidence that the outcome was a significant depreciation in the local currency relative to baseline fundamentals. 1: There is an indication of intervention based on the current account balance and foreign currency sales/purchases, and an indication that such an intervention depreciated the local currency relative to baseline fundamentals.
Social pillar			
2.1) Inequality	GINI coefficient	World Bank/ CIA/UNDP/EIU	From World Bank: "Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality."
2.2) Educational attainment	%	UNESCO/ World Bank	Percentage of individuals receiving tertiary education. This indicator provides a proxy for the level of educational attainment in a population, reflecting the relationship between human capital and trade.
2.3) Labour standards	0-100 score	US Department of Labor/ World Bank/EIU	EIU assessment of labour standards based on three categories: forced labour, child labour, gender discrimination in hiring, and right to association. Sources include the United States Department of Labor "List of Goods Produced by Child Labor or Forced Labor"; World Bank Doing Business; and EIU Risk Briefing.
2.3.1) Goods produced by child labour	US Department of Labor	# of goods	The US Department of Labor's Bureau of International Labor Affairs (ILAB) "maintains a list of goods and their source countries which it has reason to believe are produced by child labor or forced labor in violation of international standards... The List of Goods Produced by Child Labor or Forced Labor comprises 148 goods from 76 countries, as of September 20, 2018."

INDICATOR	UNIT	SOURCE	DESCRIPTION
2.3.2) Goods produced by forced labour	US Department of Labor	# of goods	The US Department of Labor's Bureau of International Labor Affairs (ILAB) "maintains a list of goods and their source countries which it has reason to believe are produced by child labor or forced labor in violation of international standards... The List of Goods Produced by Child Labor or Forced Labor comprises 148 goods from 76 countries, as of September 20, 2018."
2.3.3) Gender non-discrimination in hiring	World Bank	0-1 score	World Bank's Women, Business and the Law's assessment of whether the law mandates nondiscrimination based on gender in employment. Scoring guidelines: 1: Yes 0: No
2.3.4) Right to association	EIU	1-5 score	The EIU's assessment of protections for labour regarding the right to association.
2.4) Political stability	0-100 score	EIU	The EIU scores countries on the level of political stability in a given year, linking trade with political and social stability in a country. It covers the following issues: What is the risk of significant social unrest during the next two years? How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another? How likely is it that an opposition party or group will come to power and cause a significant deterioration in business operating conditions? Is excessive power concentrated, or likely to be concentrated, in the executive, so that executive authority lacks accountability and possesses excessive discretion? Is there a risk that international disputes/tensions will negatively affect the economy and/or polity?
2.5) Human trafficking	0-100 score	EIU/US Department of State	An assessment of the policy environment on human trafficking, focusing on risk, criminalisation, and national strategy.
2.5.1) Human trafficking risk	1-4 score	EIU/US Department of State	An assessment of human trafficking risk based on the US Department of State's 2019 Trafficking in Persons Report. Scoring guidelines: 4: Tier 1 (lowest risk) 3: Tier 2 2: Tier 2 Watch List 1: Tier 3 (highest risk)
2.5.2) Human trafficking criminalisation	0-1 score	EIU/US Department of State	An assessment of whether national law specifically criminalises human trafficking. Scoring guidelines: 1: National law specifically criminalises human trafficking 0: National law does not specifically criminalise human trafficking
2.5.3) Anti-human trafficking strategy	0-1 score	EIU/US Department of State	An assessment of the existence of a national strategy to combat and prevent human trafficking. 1: The government has an active national strategy to combat and prevent human trafficking 0: The government does not have an active national strategy to combat and prevent human trafficking.

INDICATOR	UNIT	SOURCE	DESCRIPTION
Environmental pillar			
3.1) Air pollution	0 to upper bound	Yale EPI	Exposure to air pollution is measured in terms of disability-adjusted life years (DALYs). DALYs equal the sum of years of life lost (YLLs) and years lived with disability (YLDs) attributable to elevated levels of particulate matter 2.5 (PM 2.5). This indicator highlights the link between economic growth, trade and pollution.
3.2) Deforestation	Lower bound to 0	Yale EPI	The change in a country's forest cover. This indicator measures the rate of deforestation in a country over time, reflecting the links between growth, trade and the degradation of natural resources.
3.3) Water pollution	% of wastewater treated	Yale EPI	A proxy for water pollution in a country. This indicator reflects the links between economic growth, trade and pollution in a country.
3.4) Environmental standards in trade	0-14 score	UN/ International Maritime Organization/ CITES	EIU score based on membership or ratification of international environmental compacts. Scoring guidelines for each compact: 2: There is evidence that the compact is effective in the country. 1: The country has signed the compact but there is insufficient evidence that the compact is effective in the country. 0: There is insufficient evidence that the compact is effective or the country has signed the compact. List of compacts: 3.4.1) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Ban Amendment 3.4.2) The Convention on the Prevention of Marine Pollution by dumping of wastes or other matter 3.4.3) the Convention on the Protection of the Ozone Layer 3.4.4) The Kyoto Protocol to the United Nations Framework Convention on Climate Change 3.4.5) The International Timber Agreement 3.4.6) The Convention on International Trade in Endangered Species of Wild Flora and Fauna 3.4.7) The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
3.5) Transfer emissions	Net share of total production emissions	Global Carbon Project	Transfer emissions as a share of a country's total territorial emissions (MtCO2). Economies with dirty export industries contribute to an unsustainable model for global trade.
3.6) Share of natural resources in trade	%	UNCTAD	UNCTAD Data assessing natural resources (ores and metals, mineral fuels, lubricants and related materials) as a percentage of a country's total trade
3.7) Carbon pricing	1-3 score	EIU/World Bank Carbon Pricing Dashboard	EIU analysis of the state of carbon pricing (carbon tax, cap and trade, or quotas) in the country. Scoring guidelines: 3: Carbon pricing is currently in effect at the national level 2: Carbon pricing is scheduled for implementation but is not currently in effect 1: Carbon pricing is neither scheduled for implementation nor currently in effect

Endnotes

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hinrich foundation

advancing sustainable global trade

The Hinrich Foundation is a unique Asia-based philanthropic organization that works to advance mutually beneficial and sustainable global trade. It supports original research and education programs that build understanding and leadership in global trade. Its team of global trade experts and practitioners apply their deep knowledge and experience in trade, economics, policymaking and education to deliver the Foundation's programs.

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