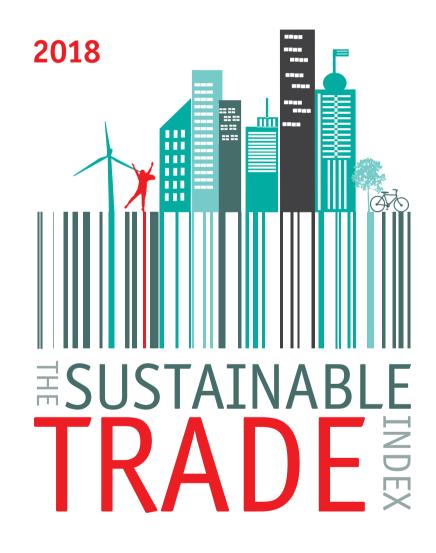
promoting sustainable global trade hinrich foundation

## The Hinrich Foundation Sustainable Trade Index

A report by The Economist Intelligence Unit





Produced and written by Econ

## Acknowledgements

The Hinrich Foundation Sustainable Trade Index was devised by The Economist Intelligence Unit research team led by Christopher Clague and John Ferguson. The 2018 edition of the index was constructed by Michael Frank and Trisha Suresh. Sudhir Vadaketh wrote this report and Christopher Clague was the editor.

During research for the construction of the index and in writing this report, The Economist Intelligence Unit interviewed executives and experts from across the world. Their time and insights are greatly appreciated. We take sole responsibility for the construction of the index and the findings of this report.

#### About The Economist Intelligence Unit

The Economist Intelligence Unit is the research and analysis division of The Economist Group, the sister company to The Economist newspaper. Created in 1946, we have over 70 years' experience in helping businesses, financial firms 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 nonprofit organisation that undertakes trade-related policy research and development work in Asia. It focuses on creating opportunities, choice and engagement through sustainable and mutually beneficial global trade. Through the Sustainable Trade Index, the Foundation aims to stimulate positive thinking about global trade and promote behaviors that will lead to better developmental outcomes, engagement and stability.



## Interviewees (arranged alphabetically by institution)

- Stephen P. Groff, vice-president for East Asia, Southeast Asia and the Pacific, Asian Development Bank
- Jayant Menon, lead economist, Asian Development Bank
- **Deborah Elms**, executive director, Asian Trade Centre
- Saik Aun Tan, senior vice-president of procurement Asia-Pacific, BASF
- Bruce Blakeman, vice president corporate affairs, Cargill
- Jean-Marie Fouque, global sourcing director, textiles, Carrefour
- Christof Ehrhart, executive vice-president of corporate communications and responsibility, DHL

- Andrew Schroth, board member, Global Apparel and Footwear Textile Initiative and partner, GDLSK
- **Vivek Pathak**, regional director, East Asia and the Pacific, International Finance Corporation
- **Rob Sinclair**, president of supply-chain solutions, Li & Fung
- Jeremy Nixon, CEO, Ocean Network Express
- Jason Kibbey, CEO, Sustainable Apparel Coalition
- **Colin Browne**, chief supply-chain officer, Under Armour
- Idah Pswarayi-Riddihough, country director for Sri Lanka and the Maldives, World Bank

## Expert panel (arranged alphabetically by institution)

- **Gwyneth Fries**, senior sustainability advisor, Forum for the Future
- Andrew Crosby, managing director, ICTSD
- Daria Taglioni, lead economist and global solutions
- lead on global value chains, The World Bank
- Mia Mikic, director at trade, investment and innovation division, United Nations ESCAP
- Name withheld upon request



### Preface

The 2018 Hinrich Foundation Sustainable Trade Index is an Economist Intelligence Unit index and benchmarking study commissioned by The Hinrich Foundation. This is the second edition of the study, which was first published in 2016. This report discusses the key findings of the index and the accompanying model.

The index seeks to measure the capacity of 20 economies—19 in Asia along with the US—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 index includes 24 indicators, grouped in these three pillars, that together measure whether a country is engaged in sustainable trade. (Refer to the appendix for more details on index construction.)

The key message of the index is that although trade is an indispensable ingredient in economic development, it cannot be sustainably pursued without responsible environmental stewardship and a commitment to fully developing social capital. Countries that come up short on the environmental and social pillar will be unable to continue to trade successfully over the long term, become less attractive destinations for critically needed foreign direct investment (FDI), and be less able to secure funding and support from multilateral development agencies. The index thus serves as a proxy for each country's progress in meeting the UN's Sustainable Development Goals.

The index offers citizens, corporations, civil society and policymakers alike an opportunity to engage in discussions about the optimal ways to foster local development through sustainable global trade.



## Contents

Executive summary	5
About the Hinrich Foundation Sustainable Trade Index	8
Introduction: Sustainable trade matters more than ever	9
Overall results	13
Economic pillar	19
Social pillar	26
Environmental pillar	32
Conclusion	37
Methodology	38

## Executive summary

The global rules-based trading system is facing its biggest threat in recent history as protectionist forces are on the march across many developed countries in the West.

Yet the enthusiasm in Asia for trade does not appear to have waned. This broad societal consensus behind international trade has enabled Asian countries to continue broadening and deepening existing trading relationships, for example, by quickly hammering out a deal for the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in early 2018 following the US's withdrawal from its predecessor in 2017.

Asia, then, finds itself in the unique position of helping lead and sustain the global economy's commitment to free and fair trade. It is in this context that the need for sustainability in trade is ever more crucial.

The Hinrich Foundation Sustainable Trade Index was created for the purpose of stimulating meaningful discussion of the full range of considerations that policymakers, business executives, and civil society leaders must take into account when managing and advancing international trade.

This, the second edition of the study, seeks to

measure the capacity of 20 economies—19 in Asia along with the US—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 index's key findings include:

- Countries in Asia, especially the richer ones, have broadly regressed in terms of trade sustainability, with improvements in the economic pillar more than offset by significant declines in the social and environmental pillars. This suggests that even as many countries continue to enjoy torrid rates of growth, they have not done enough to mitigate certain negative externalities such as air pollution and inadequate labour standards.
- Hong Kong is developed Asia's bright spot, recording a slight increase in its score and topping the 2018 index. Its strong performance in technological infrastructure and labour force growth (economic pillar) is coupled with steady increases in educational attainment and political stability (social).
- Several middle-income countries perform admirably, led by Sri Lanka. Although sustainable trade tracks closely with wealth as might be expected—there are some notable



outliers, including Sri Lanka (ranked 7th), China (8th) and Vietnam (9th), which have all leapfrogged much richer (in per-head terms) Malaysia (12th), Thailand (13th) and Brunei (15th), the scores of which have declined sharply.

- For the economic pillar, countries generally performed well in terms of growing their labour forces as well as their per-head GDPs; in other words, compared with 2016, today more people across Asia are able to work and are producing more on average. Governments have also made progress on liberalising current accounts, deepening financial sectors and lowering trade costs. Taken together, this reaffirms the commitment of Asian countries to creating a business environment as favourable to trade as possible.
- For the social pillar, sharp drops for some countries in certain social pillar indicators contribute to an overall decline. For instance, inequality in Cambodia has worsened dramatically over the past two years, as has tertiary education enrolment in Indonesia. Political stability has become shakier everywhere from Brunei and Laos to the US. That said, educational attainment is one of the best performing indicators in the index, with countries from China to Brunei and Singapore recording marked improvements.
- For the environmental pillar, with deteriorating environmental sustainability in many rich countries, China, Laos and Pakistan

are the only countries to record increases in scores. China's air pollution score has improved dramatically; Laos and Pakistan are the only two countries with reduced transfer emissions; and Pakistan also saw a vastly reduced rate of deforestation. The most impressive gains have been made in reducing the share of natural resources in trade, particularly by countries such as Indonesia, Myanmar and Laos. This suggests that they have been successful in diversifying their trade base away from natural resources.

- Sustainability is an ever more important determinant of FDI and vendor selection in choosing supply-chain partners. According to interviewees, its relevance has evolved tremendously in the past 20 years—from something that was merely "nice to have" to a grudgingly accepted necessity to, finally, what it is today: a source of competitive advantage, one that helps companies win clients and countries attract FDI.
- Companies are improving the sustainability of their supply chains by restructuring and broadening relationships with competitors and vendors. Companies are increasingly collaborating with competitors to shift sustainability efforts from firm-level to industry-wide initiatives, recognition and awards—making it more strategic and scalable. These efforts have occurred alongside a fundamental shift in the relationship between buyers and brands and their tier one suppliers—from a transactional,



possibly short term one to a much longer-term strategic engagement.

The 2018 Hinrich Foundation Sustainable Trade Index shows that there is still much work to be done in terms of promoting sustainability in trade in Asia. The broad regression on the social and environmental pillars is a cause for concern. Future editions of the index will reveal if this is a temporary downward blip or the onset of a more worrisome trend. Yet, at a time when the word "trade" has negative connotations in many parts of the world, it is comforting to see that Asia's commitment to trade-related growth and success appears stronger than ever.

#### STRONG-PERFORMING AREAS

- 1. Per-head GDP growth
- 2. Current-account liberalisation
- 3. Financial sector depth
- 4. Trade costs
- 5. Labour force growth

#### **AREAS FOR IMPROVEMENT**

- 1. Exchange-rate volatility
- 2. Export market concentration
- 3. Labour standards
- 4. Deforestation
- 5. Water pollution
- 6. Transfer emissions



## 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 US\$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 countries 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 exclude many sectors of society, leading to extreme inequality.

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 the broader development of human or social capital. It 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, The Hinrich Foundation commissioned The Economist Intelligence Unit to build an index to measure the capacity of 20 economies—19 in Asia along with the US—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.



# Introduction: Sustainable trade matters more than ever

The global rules-based trading system is facing its biggest threat in recent history. Protectionist forces are on the march across many developed countries in the West, as societies plagued by persistent inequality seek some form of redress. Scepticism about the benefits of trade is part of a broader nationalist backlash against multinational corporations, migrants and other foreigners believed to be profiting at the expense of locals.

Today's global trade landscape is one in which small farming and fishing communities are, buoyed by nativist impulses, eschewing the very trade on which their livelihoods depend; a Republican administration in the US is more protectionist than its Democratic predecessor; and the leader of the Chinese Communist Party has positioned himself as one of the world's foremost trade champions. Countries, companies and citizens everywhere are trying to make sense of it all as they plan for an uncertain future.

Central to their worries is the prospect of a fullblown trade war between China and the US. The US's imposition in 2018 of tariffs on Chinese steel and aluminium imports, under the guise of national security, is seen as possibly the first salvo in a long, bitter fight—one set against the backdrop of domestic nationalist sentiment, shifting economic fortunes, a strategic rivalry and a bid for technological supremacy during the fourth industrial revolution.<sup>1</sup>

Among the many potential victims of such a trade war is the World Trade Organisation (WTO), and its integrity and role—primarily today as a dispute resolution mechanism—is under threat. In particular, if consultations fail and the WTO is forced to make a judgement in China's case against the steel and aluminium tariffs, any decision could have far-reaching implications. A judgement in favour of the US might incentivise other countries to abuse the national security clause in order to erect their own trade barriers. A ruling in China's favour could—assuming that the US fails to comply and drop the tariffsultimately undermine confidence in the WTO. "We need to thrash this out at the WTO, and set standards for how members can behave towards each other," says Jayant Menon, lead economist at the Asian Development Bank (ADB). "It is the biggest challenge to sustainable trade right now."

On the assumption that protectionism will rise but that a trade war will be averted. The Economist Intelligence Unit forecasts that global trade growth will continue to slow in



2019-22, to an average of 3.5% a year (from 4.7% in 2017, the strongest growth in six years, according to the WTO).<sup>2</sup>

All these events are of direct relevance to many interviewees for this paper. For Deborah Elms, the executive director of the Singapore-based Asian Trade Centre and senior fellow at the Singapore Ministry of Trade and Industry's Trade Academy, the prospects of a trade war are real and the potential ramifications immense. "People don't appreciate the importance of the WTO," says Ms Elms. "We have gotten so used to the operation of the global system for trade that people don't realise what happens if that just evaporates...everything you do as a company is based on those rules that we've had for more than 70 years."

Yet Asia's general enthusiasm for trade offers hope. The region, after all, has proved beyond a doubt the power of trade in raising people out of poverty—contributing far more than its fair share of the billion-plus people in the past generation whose incomes have risen above the poverty line.

"[In Asia] everyone in their lifetimes has seen that transformation because of trade and they get it," says Ms Elms. Asians are not blind to the difficulties or disruptions of trade, she says, but they know there are few alternatives.

Free-trade critics in the West would probably mock this Asian enthusiasm for trade—no surprise, they might say, given how China's supposedly mercantilist policies have tilted the playing field (and helped power large parts of the pan-Asian supply chain).

Nevertheless, this broad societal consensus behind international trade has enabled Asian countries to continue broadening and deepening existing trading relationships, for example, by quickly hammering out a deal for the CPTPP in early 2018 following the US's withdrawal from its predecessor in 2017.

Asia, then, finds itself in the unique position of helping lead and sustain the global economy's commitment to free and fair trade. It is in this context that the need for sustainability in trade is ever more crucial.

For emerging Asian economies, Mr Menon suggests they would do well to emulate Japan, South Korea and Taiwan, the places he believes have best managed trade-dependent growth. "They have had dramatic improvements in their economic conditions without the huge disparities that we see in other countries."

He points to three common factors in the countries: a system of land distribution and land reform that worked well; a broad focus on education, from primary to tertiary levels, encompassing even technical education; and luck—the fact that they were industrialising at a time when the global economy was growing.

Asia's richer countries face a novel challenge today, according to Ms Elms. Many did not have to bother with an extensive social



safety net when growth was high and new employment opportunities aplenty. But as their economies mature, growth is slowing while the population is ageing, and "the ability for you [individuals] to find an alternative source of income is more difficult."

These governments recognise the need to help people who cannot find work on their own. But they are unlikely, she says, to follow a Western high-tax, social welfare model. Instead they might further emphasise education as well as skills development throughout a person's lifetime.

"They're in a really weird spot that hasn't been dealt with before," she says. "So I think you'll see a lot of experimenting here in Asia. How do you solve this challenge of dealing with labour that is no longer easily available and easily able to move from where they were to some other sector that is still growing."

(See boxout: Technology and automation.)

As a result, Ms Elms believes these governments will place more focus on employment and worker rights than other aspects of trade sustainability, such as environmental concerns. Indeed, from Singapore's efforts to retrain middle-aged workers to Bangladesh's push to improve the working conditions of textile workers, around Asia one observes governments, businesses and non-government organisations (NGOs) working together to ensure that the benefits of trade are distributed more equitably. "In properly functioning democracies, the institutions have been built up to protect all sorts of liberties and social and public goods, but they can come under challenge," says Mr Menon. "We must address the uneven distribution of gains and losses when we pursue globalisation, so we can avoid this backlash."

For students of globalisation and its discontents, there is nothing radically new about this prescription. Yet the message is more salient today precisely because the decades-old warnings appear to have gone unheeded the spectre of isolationism and nativism is now upon us.



#### Technology and automation

When analysing the roots of middle-class wage stagnation and other forms of economic malaise in the developed world, trade is often unfairly maligned, say some free-trade advocates. Insufficient blame is apportioned to what they see as the real (job destroying) culprits: technology and automation.

Part of the reason for this, according to the lead economist of the Asian Development Bank (ADB), Jayant Menon, is the oversimplification of the trade narrative by some politicians, who ignore other factors and instead become obsessed with bilateral trade balances.

Yet Mr Menon also suggests that "trade versus technology" is perhaps a false dichotomy, as the two are intertwined. Technological change has been crucial in the disaggregation of supply chains across the world. When the finger-pointing is done, it is still incumbent on governments to manage both technological- and trade-related change.

For Mr Menon and his colleague Stephen P. Groff, vice-president for East Asia, South-east Asia and the Pacific at the ADB, worries about massive unemployment as a result of automation are overdone. For sure, some affected groups will need help. "A focus on the critical importance of skills and upgrading should be a part of all governments' response to the fourth industrial revolution," Mr Groff says.

Support must be given to particular constituencies that are hard to reach, says Mr Groff, including those with fewer skills and rural dwellers (he cites a high correlation between the two groups). "You need to focus not just on productivity growth in manufacturing and services, you need to focus on productivity growth in agriculture." In turn, for the surplus rural labour created by higher agricultural productivity, governments need to think about retraining workers for manufacturing or value-added agriculture.

"There's a whole chain you need to be paying close attention to. That means differential approaches to how you address the vulnerable in urban and rural areas. There's not a one-size-fits-all educational or vocational programme."

In recent years, says Mr Groff, countries across Asia have been requesting policy advice from the ADB on these areas. Despite the worries of automation and premature deindustrialisation, Mr Menon believes that many countries, including the "frontier economies" of Myanmar, Cambodia and Laos, are still actively trying to "engage further in the global value chain, which promises labour intensive employment opportunities."

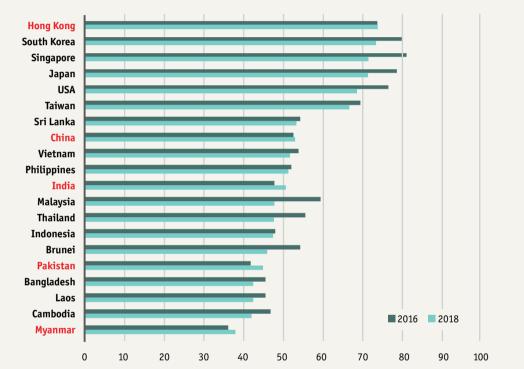
In short, while some societies are increasingly sceptical about the impact of technology and trade, it appears as if most Asian countries are still eager to embrace both as a means for promoting inclusive, sustainable growth.



## **Overall results**

#### A few bright spots amid a general decline





CATEGORY OVERVIEW	NO. OF COUNTRIES WHERE SCORES INCREASED	NO. OF COUNTRIES WHERE SCORES DECREASED	CHANGE	
Overall score	5	15	(10)	•
Economic pillar	13	7	6	
Social pillar	8	12	(4)	-
Environmental pillar	3	17	(14)	▼



Between 2016 and 2018, at a broad level, countries in Asia have regressed in terms of trade sustainability, with improvements in the economic pillar more than offset by significant declines in the social and environmental pillars.

- Countries generally performed well in terms of growing their labour forces as well as their per-head GDPs; in other words, compared with 2016, today more people across Asia are able to work and are producing more on average.
- Governments have also made progress on liberalising current accounts, deepening financial sectors and lowering trade costs. Taken together, this reaffirms the commitment of Asian countries to creating a business environment as favourable to trade as possible.
- Compared with 2016, scores have generally declined in terms of exchange-rate volatility and export market concentration. What that means is that countries in Asia are becoming more dependent on their top four trading partners and their exchange rates with those top trading partners are becoming more uncertain.
- For the social and environmental pillars, the only clear improvements are in educational attainment and the share of natural resources in trade. For most other indicators, there has been a general decline across the region, with particularly poor performances in labour standards, deforestation and

transfer emissions. This suggests that even as trade grows around Asia, specific social and environmental problems may be brewing ones that could eventually affect the sustainability of trade.

#### **Top performers**

Asia's richer economies, including South Korea (ranked 2nd), Singapore (3rd), Japan (4th) and Taiwan (6th), have all experienced score declines. Japan and South Korea, key competitors in many sectors of merchandise trade, perform poorly on similar metrics: exchange-rate volatility; export market concentration; inequality; labour standards; and transfer emissions. Singapore is hobbled by a particularly poor environmental performance while Taiwan has seen both economic and environmental scores deteriorate.

Hong Kong, however, is developed Asia's bright spot, recording a slight increase in its score and topping the 2018 Hinrich Foundation Sustainable Trade Index. Its strong performance in technological infrastructure and labour force growth (economic pillar) is coupled with steady increases in educational attainment and political stability (social). Meanwhile, compared with the more worrying environmental degradation around the region, the slight dip in Hong Kong's environmental pillar score is of less concern.

As a whole, Asia's rich countries continue to top the index, outperforming the region's emerging



markets. This might support the presumed correlation between a country's wealth and its ability and willingness to promote sustainability in trade.

However, movement in the middle of the index from 2016 to 2018 suggests that the correlation may not always hold—poorer countries can outperform. Sri Lanka (ranked 7th, see boxout), China (8th), Vietnam (9th), the Philippines (10th) and India (11th) have all leapfrogged much richer (in per-head terms) Malaysia (12th), Thailand (13th) and Brunei (15th), the scores of which have declined sharply.

#### **Bottom of the index**

South and South-east Asia's less developed economies are again the ones that find it hardest to participate sustainably in international trade. However, Pakistan (ranked 16th) and Myanmar (20th) have shown considerable progress from 2016 to 2018. Both countries experienced strong per-head GDP growth alongside sharp falls in the share of natural resources in trade, suggesting that their economies are shifting away from resource extraction towards higher valueadded-and more sustainable-manufacturing and services. Additionally, Myanmar saw consistent improvements in all four social pillar indicators, which indicates that, as the country opens up and integrates ever more with the global economy, it is trying to spread the benefits of trade equitably.

OVER AND UNDER PERFORMERS COMPARED TO GDP PER HEAD				
COUNTRY	INCOME RANK - INDEX RANK	GDP PER HEAD RANK		
Vietnam	+6	15		
India	+5	16		
Sri Lanka	+4	11		
South Korea	+3	5		
Philippines	+3	13		
Hong Kong	+2	3		
Taiwan	+1	7		
China	+1	9		
Pakistan	+1	17		
Bangladesh	+1	18		
Japan	0	4		
Cambodia	0	19		
Myanmar	0	20		
Singapore	-1	2		
Indonesia	-2	12		
Thailand	-3	10		
Laos	-3	14		
USA	-4	1		
Malaysia	-4	8		
Brunei	-9	6		



#### Sri Lanka

Sri Lanka punches above its (economic) weight in the Hinrich Foundation Sustainable Trade Index, ranking 7th overall, the highest-placed of the middle-income and emerging markets. It reflects the country's focus on sustainable development following its decades-long civil war, particularly in terms of attracting and absorbing foreign direct investment (FDI) in a manner beneficial to workers and the environment.

The country's economic development is being guided by its Vision 2025 masterplan, the year by when it aims to achieve high-income status "with a knowledge-based, highly competitive, social-market economy". The plan "foresees a move from a public investment and non-tradable sector to a private investment and trade sector-led growth model," says Idah Pswarayi-Riddihough, the World Bank's country director for Sri Lanka and the Maldives.

As part of these efforts, Sri Lanka has been striving to reduce tariff and non-tariff barriers (it ranks joint 4th on this indicator). At the end of 2017 it eliminated "para-tariffs" (fees or duties on imports other than customs tariffs) on over a thousand tariff lines. It is also creating a National Single Window for trade, which will help reduce the time taken for import clearances including those relating to non-tariff measures, says Ms Pswarayi-Riddihough.

There remains much work to be done in terms of growing labour force participation particularly for women—and broadening access to education and skills training. Ms Pswarayi-Riddihough cheers some recent achievements in these areas. "A revision of the Shop and Office Employees Act is planned, which will address some regulatory barriers to female employment," she says. Additionally she cites two recent education initiatives: raising the proportion of the school-aged population that completes at least 11 years of schooling from 82% in 2012 to 88% in 2017; and boosting the enrolment in vocational training and technical education courses from around 178,000 in 2014 to about 188,000 in 2016.

Sri Lanka ranks 5th on the environmental pillar, with the best air pollution score, in part due to a slew of interventions such as a vehicle emissions inspection programme and a national Clean Air Initiative. In order to maintain this performance, Ms Pswarayi-Riddihough argues that the country will need to mitigate the impact of certain aspects of industrialisation and development, such as a rapid expansion of coal-based energy generation and private



transport. "Increasing the modal share of public transport would significantly reduce the fossil fuel import cost and the cost of public health," she says.

Sri Lanka also has low transfer emissions (ranked 5th) and a low share of natural resources in trade (4th). This partly reflects its efforts to grow its service sector. Tourism's share of total exports increased from 7.7% in 2012 to 20.5% in 2017. "More needs to be done to boost efficiency of services in other sectors, including backbone services such as banking, logistics and shipping," says Ms Pswarayi-Riddihough.

Sri Lanka ranks joint 8th in terms of political stability, a remarkable achievement for a nascent democracy still vulnerable to destabilising forces in a post-conflict era. This has provided the base for healthy debates about everything from factory worker's rights to the need to manage the inevitable economic and geopolitical interests from China and India.

If, indeed, Sri Lanka continues to balance industrialisation with impressive social and environmental protections, while growing to reach high-income status, it may even in the future be seen as a developmental model for other small emerging economies.



#### Sustainable Development Goals

The Sustainable Development Goals (SDGs), set by the UN in 2015, are 17 different developmental categories—such as poverty reduction and quality education—each with their own specific targets to be achieved by 2030.

This Hinrich Foundation Sustainable Trade Index serves as a proxy for each country's progress on meeting these SDGs.

It is important to note that the index assesses relative performance—each country compared with the rest—while the SDGs are absolute targets that countries can independently work towards in their own way.

That said, it is worth contemplating country performance on indicators that are relevant to the SDGs. Two interesting narratives emerge. (Numbers in parentheses refer to the SDG goal numbering system.)

- First, Bangladesh appears to be performing well on certain SDGs, such as (1) no poverty;

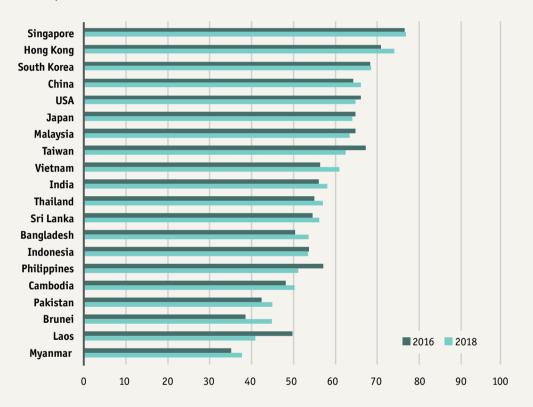
   (8) decent work and economic growth; and (10) reduced inequalities, but poorly on others, including (4) quality education; (6) clean water and sanitation; and (11) sustainable cities and communities. China and Pakistan exhibit a similar performance disparity. This may indicate that certain lower- and middle-income countries are focusing their SDG efforts in areas they believe are the most crucial at this stage of development.
- Certain SDGs, such as (4) quality education; (6) clean water and sanitation; (9) industry, innovation and infrastructure; and (16) peace, justice and strong institutions, are the ones in which rich countries outperform. The relationship is probably reflexive—citizens of rich countries are those with the ability and willingness to invest in certain SDGs, yet at the same time it is some of those very achievements—such as strong institutions—that serve as the bedrock for economic growth.



## Economic pillar

#### A general improvement, particularly in the middle

Economic pillar scores





ECONOMIC PILLAR	NO. OF COUNTRIES WHERE SCORES INCREASED	NO. OF COUNTRIES WHERE SCORES DECREASED	NO. OF COUNTRIES WHERE SCORES STAYED THE SAME	CHANGE	
Overall score	13	7	-	6	
Growth in per-head GDP	15	3	2	12	
Current-account liberalisation	4	2	14	2	
Tariff and non-tariff barriers	6	4	10	2	
Exchange-rate volatility	3	17	-	(14)	•
Financial sector depth	17	2	1	15	
Foreign trade and payments risk	10	10	-	0	
Export market concentration	3	16	1	(13)	•
Export product concentration	9	9	2	0	
Foreign direct investment	5	13	2	(8)	$\bullet$
Gross fixed capital formation	11	7	2	4	
Trade costs	16	3	1	13	
- Infrastructure	18	-	2	18	
- Logistics performance	12	7	1	5	
- Corruption	9	1	10	8	
- Legal system	5	1	14	4	
<b>Technological innovation</b>	10	7	3	3	
Technological infrastructure	1	2	17	(1)	•
Growth in labour force	18	1	1	17	

Countries generally performed well in terms of growing their labour forces as well as their per-head GDPs. In other words, compared with 2016, today more people across Asia are able to work and are producing more on average. Amid misgivings about the impact on global workforces of automation and trade, this is an encouraging sign. This offers governments the political capital necessary to continue with vital reforms.  Governments have made progress on liberalising current accounts, deepening financial sectors and lowering trade costs. Taken together, this reaffirms the commitment of Asian countries to creating a business environment as favourable to trade as possible. In particular, 18 of the 20 countries have improved their infrastructure scores. The ADB claims that Asia has unmet infrastructure



investment of some US\$1.7trn a year.<sup>3</sup> Yet the vast majority of countries are at least headed in the right direction.

- Compared with 2016, scores have generally declined in terms of exchange-rate volatility and export market concentration. What that means is that countries in Asia are becoming more dependent on their top four trading partners and their exchange rates with those top trading partners are becoming more uncertain. It is understandable for the two to go hand in hand: a greater export market concentration makes a country's exchange rate more vulnerable to shifts in those bilateral trading relationships. The upshot is that individual economies within the broader pan-Asian supply chain may be becoming less diversified—this could dampen overall resilience and trade sustainability.
- FDI as a share of GDP appears to be on a downward trend across Asia. This could be reflective of the broader retreat from globalisation witnessed over the past few years or the fact that as Asian countries have recorded impressive economic growth, FDI's share has waned. For instance, even though China's inbound FDI in 2017 rose to a record US\$135bn, its rate of growth in recent years has lagged GDP growth. Meanwhile, there are also signs that foreign investors' selection criteria is becoming more stringent as the notion of sustainability is growing in importance to their shareholders and other constituents.

- The majority of economies either improved or remained the same in terms of technological innovation, as measured by their shares of GDP invested in research and development. Although this is encouraging, the manner in which countries pursue greater technological sophistication is becoming an increasing flash-point in trade relations. Industrial policies, underpinned by subsidies, government incentives and a variety of non-market behaviours are triggering trade tensions, and raising questions about the compatibility of these policies with both the letter and the spirit of multilateral trade commitments.
- Encouragingly for Asia, the region's legal systems appear to be getting fairer—almost every country's legal indicator score has either improved or stayed the same since 2016. This offers hope that any domestic disputes, economic or otherwise, will increasingly benefit from greater transparency and due legal process.

## Foreign direct investment and vendor selection: choosing sustainability

The East Asian Tiger economies—Hong Kong, Singapore, South Korea and Taiwan, traditionally, but arguably today China's eastern seaboard too—have over the past few decades pioneered a model of rapid industrialisation based on huge inflows of FDI. There are some common characteristics in all these economies—



from special economic zones and tax holidays to a bountiful labour supply—that have made them attractive to FDI as their economies have evolved from low-skilled to higher valueadded manufacturing and services. All that has occurred in tandem with dramatic improvements in standards of living. It is a model that many other emerging markets are trying to emulate.

Yet increasingly today there is a new and important component to the business environment of FDI-seeking countries and companies: sustainability. Its relevance has evolved tremendously in the past 20 years—from something that was merely "nice to have" to a grudgingly accepted necessity to, finally, what it is today: a source of competitive advantage, one that helps companies win clients and countries attract FDI.

For small businesses in Asia, their first brush with sustainability often comes when they seek external funds to grow, according to Vivek Pathak, regional director of East Asia and the Pacific at the International Finance Corporation (IFC). "They need to be able to diversify lenders, attract more capital, either through the public or private markets, and that's when they come under more scrutiny in terms of being managed well, having good governance and sound environmental practices," says Mr Pathak. "There are times when we speak to companies not willing to do that...we'd rather not finance them."

Mr Pathak describes an IFC client: a retail company in Myanmar that is committed to

supply-chain management and good governance, including maintaining a well-structured board. "We are quite confident that this is the sort of company that will be able to attract a much higher calibre of investor as the market opens up."

Jason Kibbey, the CEO of the Sustainable Apparel Coalition, agrees that sustainability has shifted from a corporate social responsibility (CSR) initiative to a profitability concern. "Sustainable development is conducive to better business and better trade. That we see at the level of the firm in working with suppliers. We see that the highest performers both within their supply chains and the companies themselves on our [sustainability] indices, they tend to be the ones getting the highest multiples from the prime investors."

It is an issue of great interest, particularly for certain northern European pension funds and several sovereign wealth funds, including the Nordic Investment Bank. "They want more visibility [on supply-chain sustainability], so they can use it for equity screenings and purchases," he says.

Although other interviewees in the textile industry have yet to see sustainability concerns affecting consumer purchasing decisions, Carrefour has. It has raised supplier selection criteria over the years, partly in response to customer needs. "The majority of customers put [sustainable] sourcing into their decisionmaking process, this is now embedded in everything we do," says Jean-Marie Fouque,



global sourcing director of textiles at Carrefour. "We are not only doing it for protecting our brand reputation...but looking at the customer and how their needs are evolving. Social responsibility is important." Partly as a result, Mr Fouque says Carrefour conducts five different audits, including a social-environmental one, before engaging any supplier.

It is clear, then, that growing awareness about sustainability and pressure for change is emanating from several sources: consumers, investors, companies eager to stay ahead of the curve and destination countries themselves. where sustainability standards rise as the country become wealthier. Contrary to popular belief, governments are unlikely to engender change in other countries. "Governments just don't have the profit incentives or the political drive to promote or enforce improvements in local factory conditions, worker welfare, environmental protection in other countries," says Andrew Schroth, a board member of the Global Apparel and Footwear Textile Initiative. "It's the people who actually make money off the global trading system who actually move the needle."

That said, governments can influence locally domiciled firms through legislation, says Carrefour's Mr Fouque, pointing to a "duty of vigilance" law passed in 2017 in France, which requires firms to establish labour and human rights safeguards at production sites from which they source. Environmental and social sustainability also has a direct impact on a firm's competitiveness, as this enables it, in today's world, to attract and retain the best workers. According to Mr Pathak, factories in Asia are competing to provide better social support such as complimentary health schemes and assistance to mothers. Along with good governance and environmental initiatives, all this helps to boost the firm's reputation in the local community. He believes that younger workers, particularly, in developing countries want to work for companies that have values aligned with theirs. "Sustainability goes a long way to create reputable companies, which in turn attracts and retains talent."

All this, collectively, is influencing vendor selection decisions and the direction of FDI flows. And companies are becoming more vocal about their roles in the sustainable development process. According to Colin Browne, chief supply-chain officer at Under Armour, the textile industry is best placed to foster growth as a rural economy transforms into an urban one. "We've not done a very good job of explaining our role in that process," he says. "We tend to look for countries where there is a demographic dividend; how do we work with that young, rural workforce as they move towards that more urban developed model. How do we help ensure that we're doing that the right [sustainable] way."

Mr Browne says that low labour costs are no longer a key driver of investment. Firms need to identify value propositions in rapidly evolving supply chains. "It's often around lead times,



product quality, [and the] value proposition of product to brand. And it's a question of how you balance all those things, including geopolitical risk and reputational risk, risks around sustainability, [and] CSR," he says. "It's about understanding how countries—not just factories—countries are engaging in those discussions."

The implication of all this is clear. The idea that labour-intensive manufacturing shifts from country to country blindly pursuing low-cost arbitrage is no longer true, if it ever was. In a digitally connected world where firm-level sustainability victories and failures get amplified and broadcast instantly, there is far more attention paid to it by investors, consumers and workers. For firms, sustainability is a key facet of competitive differentiation.

Moreover, when it comes to sustainability reputations, firms and the countries in which they operate are inextricably bound by association. Purchasers and investors are increasingly assessing countries with a view to establishing a presence in those with a clear commitment towards sustainability.



#### **Non-tariff barriers**

Given growing hostility to free trade in many parts of the developed world, non-tariff barriers have again emerged as potential speed bumps to trade. From post-Brexit Britain's concerns about new regulatory non-tariff barriers in Europe to puzzling suggestions in South Africa that imported chickens may be contaminated by bird flu, there are any number of ways for protectionists around the world to discriminate against imports of goods and services in order to make them costlier and less competitive.

There are also suggestions that as countries enter free-trade agreements and see tariffs decline, vested interests are then incentivised to simply substitute tariffs with non-tariff barriers, in order to maintain prevailing protections. Research shows that EU chemical exports to the US face non-tariff barriers that amount to a tariff of around 20%.<sup>4</sup>

For South-east Asia, the establishment of the ASEAN Economic Community in 2015 has been heralded as a major step towards creating a single market and production base. However, non-tariff barriers and measures in the region rose from 1,634 to 5,975 between 2000 and 2015. Governments are focusing their efforts on lowering these.

At an Asia-wide level, there are differing views on the direction of tariffs and non-tariff barriers. In May 2018 Shamshad Akhtar, executive secretary of the UN's Economic and Social Commission for Asia and the Pacific, was quoted as saying that "If you look at the trends, there has been a post-2008 crisis, there has been an increase in nontariff barriers that face the Asia Pacific region as a whole."

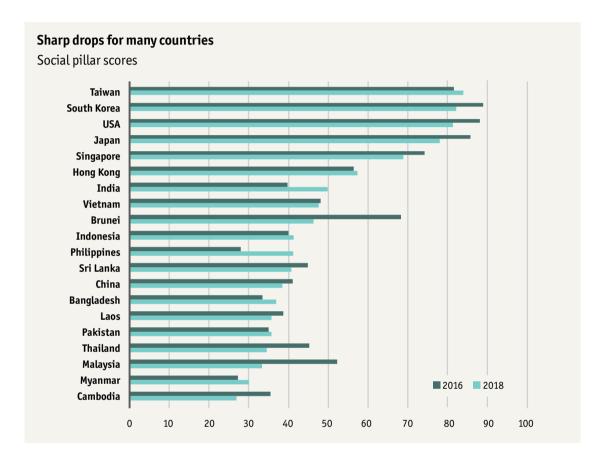
Mr Groff at the ADB has a slightly different assessment. "We haven't seen any restoration of tariffs or non-tariff barriers, but ebbs and flows in terms of the momentum in addressing these," he says. "Overall the progress has been positive and that's revealed in the most recent intra-Asia trade numbers, where the rate of annual increase markedly exceeds global trade rates as well."

The index lends support to Mr Groff's view, indicating a general improvement over the past two years in tariff and non-tariff barriers, with 16 countries either improving or maintaining their scores, and just four declining.

According to Dr. Saik Aun Tan, senior vice president of procurement Asia Pacific at BASF, for a long time one of the non-tariff barriers the company faced in China was the fact that there were differing environmental and raw material usage standards. "Some local competitors had a competitive advantage because they weren't operating to the same rules in terms of safety and environmental standards as we were," he says. However in recent times, he says, China's more stringent environmental regulations and enforcement has made the playing field "more level".



## Social pillar



SOCIAL PILLAR	NO. OF COUNTRIES WHERE SCORES INCREASED	NO. OF COUNTRIES WHERE SCORES DECREASED	NO. OF COUNTRIES WHERE SCORES STAYED THE SAME	CHANGE	
Overall score	8	12	-	(4)	•
Inequality	10	8	2	2	
Educational attainment	12	6	2	6	
Labour standards	9	9	2	0	
Political stability	7	10	3	(3)	•

Note: Inequality scores are inversely proportional to Gini coefficients. Thus an increase in score implies a relatively lower inequality; a decrease in score implies relatively higher inequality. (Relative to other countries in the index.)



- Sharp drops for some countries in certain social pillar indicators contribute to an overall decline. For instance, inequality in Cambodia has worsened dramatically over the past two years, as has tertiary education enrolment in Indonesia. Political stability has become more tenuous everywhere from Brunei and Laos to the US.
- Educational attainment is one of the best performing indicators in the index, with countries from China to Brunei and Singapore recording marked improvements. Across the region, efforts by the public, private and nonprofit sectors to broaden access are bearing fruit.
- Taiwan tops the category with an impressive performance across all four indicators. India and Indonesia are two of the biggest gainers, largely due to improvements in labour standards.
- The labour standards indicator—a composite score of forced labour, child labour and labour rights—appears to neatly reflect relative wealth, with the US (1st) and Hong Kong (2nd) at the top and Myanmar (19th) and Cambodia (20th) at the bottom. The one exception is Vietnam (8th), which ranks much higher than richer countries such as Malaysia (14th) and Thailand (15th).
- Malaysia and Thailand also perform poorly on political stability and educational attainment—the proportion of youths enrolled in tertiary education has declined. Given the years of political turmoil they've experienced, both countries will be hoping that political

stability will translate into a more vibrant economy that will drive demand for graduates.

## What firms are doing to ensure sustainability in their supply chains

The challenge of ensuring sustainability through a supply chain is as old as the division of labour. As soon as production was split between different peoples and geographies, it became possible for the market to mediate between varying skills and working conditions. Indeed, for hundreds of years, much of global (colonial) trade was premised on sustainability arbitrage—getting the colonised to work in conditions that would never have been acceptable in the home country.

Over the past few decades, the issue has slowly been turned on its head by the desire of some governments, NGOs, consumers and companies to export good labour and other sustainability practices. The lightning rod for the movement was apparent sweatshop labour in Asia producing sneakers for global fitness companies.

That sparked a rethink in the apparel industry, traditionally a "laggard in sustainability", says Mr Kibbey at the Sustainable Apparel Coalition. "The fair labour movement started here... environmental and social sustainability is baked into the practices of major firms now."

The apparel industry's evolution reflects broader trends in sustainable supply chains. Apparel has one of the most complicated



and opaque supply chains, according to Mr Kibbey. "Virtually every step of the apparel supply chain can be commodified," he says. This results in hyper-fragmentation, with potentially tens of thousands of suppliers. "Often apparel companies don't even know who their suppliers are."

He contrasts this with the electronics industry, where there is a lot more consolidation at the tier one level, with major manufacturers such as Foxconn. This creates a lot more traceability, he says, for the likes of Apple or Intel. Nevertheless "the vast majority" of major apparel firms have for many years now been implementing codes of conduct and auditing practices throughout their supply chains.

For social issues, this includes: freedom of association; reasonable hours and minimum wages; basic working conditions and worker safety; as well as freedom of movement—passport seizure by employers is a risk to some workers.

For environmental issues, these audits include: energy and chemicals usage; treatment of waste water and waste in general; and air emissions.

Suppliers who fail these audits—probably well below 10% of all firms, says Mr Kibbey—are not immediately banned, but put on a "corrective action plan".

These audits have helped cleanse the industry of "most of the worst abuses in the anti-sweatshop era", says Mr Kibbey, but not much more. With a

simple pass or fail incentive structure, facilities tend to stay at barely compliant levels and don't necessarily get better every year.

Thus the second step in the sustainability journey was to implement scaled assessments with scorecards for these audits. Some purchasers reward high-scoring suppliers by making larger orders.

The next and ongoing step, says Mr Kibbey, is the shift from firm-level to industry-wide initiatives, recognition and awards, in a way that's strategic, scalable and collaborative the raison d'être of the Sustainable Apparel Coalition. This will allow the industry to tackle much bigger challenges, he says, for instance mass reductions in chemicals usage.

Dr Tan at BASF, which is a founding member of the "Together for Sustainability" (TFS) alliance of chemical companies, says that these industry-wide efforts also lead to huge compliance efficiency gains. Once a supplier has undergone TFS's common assessment and audit system by any member—which looks at economic, environmental, social and governance sustainability—its results are entered into a shared database. By 2020 BASF aims to have audited or assessed 70% of relevant higherrisk suppliers. "It's a win-win for the chemical industry. It raises overall standards and makes the process much more efficient for participating companies...it's good for vendors too to have an industry-wide baseline."



Importantly, the cross-border nature of these industry-wide initiatives means that sustainability drives are being elevated from narrow geography-specific concerns—global baselines and standards are being established.

All these efforts have occurred alongside a fundamental shift in the relationship between buyers and brands and their tier one suppliers—from a transactional, possibly short term one, to a much longer-term strategic engagement. "Partnerships" have become more important than ever.

"We want to create value, help them [suppliers] to grow, invest in areas where it matters," says Mr Fouque at Carrefour. He sees sourcing organisations playing an even bigger role in this era, as they provide advice to buyers about the relevant geopolitical, social and technological risks they need to be aware of in particular geographies.

Environmental and sustainability NGOs such as the Roundtable on Sustainable Palm Oil and the Rainforest Alliance are crucial partners in this process, says Bruce Blakeman, vice-president of corporate affairs at Cargill. In an operating environment where it is hard to find consensus between different groups on the very definition of "non-deforestation" and "sustainability", NGOs help with the training and sustainability certification for the millions of smallholder farmers in any supply chain.

Cargill, along with several other big players in the commodity and consumer goods space, signed up

in 2014 to the New York Declaration on Forests, pledging to remove deforestation from its supply chain by 2030.

"How do you bring along the supply chain when working with farmers making US\$200 a month? All of a sudden you [the farmer] have to incur all these costs, and keep all these records, build a shed to store your chemicals over here, because you can no longer keep your chemicals stored under your house like you've been doing for generations," says Mr Blakeman. "How do you touch millions of smallholder farmers to operate in a way that's sustainable and acceptable to NGOs and other stakeholders?"

#### Responsible corporate citizens: educational attainment and labour standards

The sustainability of supply chains is dependent on the protection and development of local communities, stressed corporate interviewees, and brands are increasingly looking for manufacturers who are actively giving back. "The conversation is becoming more common and more relevant," says Rob Sinclair, president of supply chain solutions at Li & Fung.

In terms of factory worker's rights and labour standards, Mr Sinclair says that Sri Lanka's eco-factories, which first came to the world's attention about a decade ago, are still considered industry-leading. They include features such as trees growing between factory lines, lots of



natural light, and placing natural water-cooling systems over air-conditioners. A couple of manufacturers initiated the eco-factories, he says, which then had a knock-on effect, as others realised they have to compete to attract workers who didn't want to leave those factories with great environmental and sustainability practices. "We tell other manufacturers in other countries that they should go to Sri Lanka to see how it's done."

Bangladesh has also quickly become a world leader in eco-factories, following the intense soul searching within the country after the collapse of the Rana Plaza factory building in 2013 left over a thousand dead. Factory architecture and design are today vitally important. Yet the sector is still plagued by its failure to protect union activities and other worker rights—it ranks 17 out of 20 countries on the index's labour standards measure.

Leading the way for emerging markets is Vietnam, which ranks 8th on this measure, just ahead of China and Sri Lanka. Over the past few years Vietnam has enacted some important labour reforms, including broadening legal protections to workers in the informal sector and instituting a tripartite wage bargaining process.

It was feared that the US's withdrawal from the Trans-Pacific Partnership might dent the prospects of further labour reform in Vietnam (the US had been the primary agitator and probable enforcer of labour-related provisions). However, the revived CPTPP also establishes baselines for workers' rights in keeping with the 1998 International Labour Organisation (ILO) declaration. The ILO thus expects that Vietnam will ratify three outstanding conventions from that declaration: on freedom of association; the right to collective bargaining; and the abolition of forced labour. (Implementation and enforcement, as ever, will be critical ingredients for success here).

Firms in Vietnam, meanwhile, will continue enhancing factory conditions and other aspects of workers' rights as they build sustainability into their business models. Mr Sinclair cites Saitex, a firm in Vietnam that makes what has been called the world's most sustainable denim. Denim production is particularly bad for the environment because of water pollution in the dyeing process—it takes on average some 10,000 litres of water to make a pair of jeans. The Saitex factory uses solar panels, harvests rainwater, and recycles 98% of its water. Waste material from the water is turned into bricks for use in low-cost housing while denim scraps are being used in the manufacture of a new denim shoe brand. "There are a few players out there, no-one twisting their arm to do this, just see it as a good business model," says Mr Sinclair.

Most countries made good progress in terms of educational attainment but there is clearly still much to do. DHL-commissioned research found that Asia's actual GDP may be some US\$34bn below its potential because of children dropping out of school. For instance, more than a quarter of Indian children drop out at the secondary level while a fifth of Indonesian kids do so at lower secondary age. Many do so for financial reasons: either to support their families or because they cannot afford to attend.

"If we want to tackle this issue in a meaningful way, private-sector CSR efforts must collaborate far more cohesively with NGOs and governments," says Christof Ehrhart, executive vice-president of corporate communications and responsibility at DHL.

DHL has been working with two NGOs in Asia, Teach For All and SOS Children's Villages, which help children access formal education. DHL supplements their work with "an emphasis on employability and life skills", says Mr Ehrhart. "Our partnerships have always been about couching employability as an add-on to formal education."

This includes workshops in interview skills and resume writing in remote regions of Indonesia, Thailand and Vietnam, as well as internship programmes where youths are exposed to innovation, IT and soft skills.

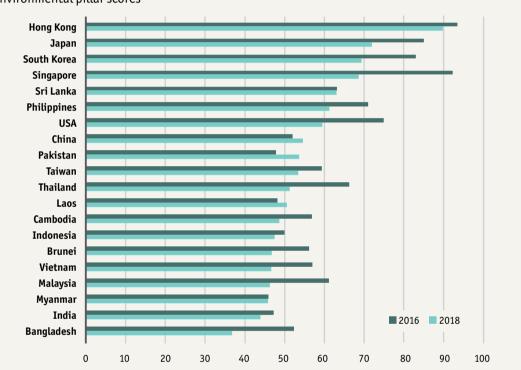
In 2017 close to 700 DHL volunteers lent support through these programmes to over 11,000 children in Bangladesh, India, Indonesia, Malaysia, the Philippines, Thailand and Vietnam.

"In all our interventions with young people, what we try to demonstrate is that having a higher formal education allows you to enter the workforce at a level where you can make a decent living," says Mr Ehrhart.

Given the broad societal appreciation for education across Asia, and with concerted government and NGO efforts to boost access alongside private-sector initiatives by firms like DHL—helping to bridge that crucial gap between school and work—it appears as if educational attainment will remain a high-performing component of this index.



## Environmental pillar



#### China, Laos and Pakistan the only improvements

Environmental pillar scores

ENVIRONMENTAL PILLAR	NO. OF COUNTRIES WHERE SCORES INCREASED	NO. OF COUNTRIES WHERE SCORES DECREASED	NO. OF COUNTRIES WHERE SCORES STAYED THE SAME	CHANGE	
Overall score	3	17	-	(14)	•
Air pollution	8	12	-	(4)	•
Deforestation	3	16	1	(13)	•
Water pollution	7	6	7	1	
Environmental standards in trade	6	2	12	4	
Transfer emissions	2	18	-	(16)	•
Share of natural resources in trade	14	5	1	9	

Note: Higher scores reflect better environmental performance. For example, a higher air pollution score implies lower levels of particular matter 2.5 (PM 2.5) relative to other countries in the index.



- Although richer countries generally perform better, they are also the ones with deteriorating environmental sustainability. Across the region, air pollution, deforestation and transfer emissions worsened, with three South-east Asian neighbours—Malaysia, Singapore and Thailand—experiencing some of the worst score declines.
- China, Laos and Pakistan are the only countries to record increases in scores.
   China's air pollution score has improved dramatically; Laos and Pakistan are the only two countries with reduced transfer emissions; and Pakistan also saw a vastly reduced rate of deforestation.
- Countries have made some progress in terms of water pollution and environmental standards in trade. The most impressive gains have been made in the share of natural resources in trade, particularly by some of the countries at the bottom of this indicator, such as Indonesia (ranked 17th on this measure), Myanmar (18th) and Laos (19th). This suggests that they have achieved some success in diversifying their trade base away from natural resources.

Given that Asia's aggregate population and economic output continues to grow at a torrid rate, it is perhaps unsurprising that its environmental footprint will get bigger over time, and thus its overall environmental pillar score will decline. Referencing index performances on air pollution, deforestation and transfer emissions, for instance, one may conclude that many countries are still at a high natural resource-intensity stage of economic development.

The continued—and some might say inevitable environmental degradation is occurring despite the fact that environmental awareness in the region is growing rapidly. Stories abound of governments (see boxout: China), corporations and individual citizens in Asia working hard towards minimising their environmental impacts.

"Some countries are better than others at dismissing this fallacy in terms of a trade-off between economic growth and environmental preservation," says Mr Groff at the ADB. "We've seen in a number of countries, including Bhutan, Costa Rica, the Nordic countries, Sri Lanka, Switzerland and Zambia, that you can have economic growth without massive environmental degradation."



#### China: Asia's new environmental poster child

If anybody doubts the Chinese government's ability to push through change, go breathe in some of Beijing's air. Over the past few years, a mammoth effort to improve air quality in the Beijing-Tianjin-Hebei greater metropolis area has seen massive decreases in PM10 and other pollutants, according to Mr Groff at the ADB. A city once synonymous with the smog apocalypse now has residents making plans for blue-sky days.

China's air pollution score in the index has risen by 30.6 points—the only double-digit rise for this indicator—contributing to an overall environmental improvement, one of only three countries, along with Laos and Pakistan, to buck the downward trend.

"You've seen a real change on the part of the government, obviously their commitment to the Paris Agreement, but also more generally around issues of environmental sustainability that have arisen out of the challenges around air pollution in major urban areas, but also many concerns about water pollution, about soil pollution and degradation."

The Beijing-Tianjin-Hebei clean-up was driven by many policy decisions, says Mr Groff, including the shift of polluting enterprises and industries (including coal-fired plants, steel and other manufacturing); the establishment of acceptable levels of pollution; and the necessary enforcement around those guidelines.

These aggressive interventions have come at a cost, however. "You do read anecdotally about people being put out of work...[or] homes, or people not getting electricity or heating, as a result of some of these policy changes," says Mr Groff. "In the long run this is something the country obviously needs to do but it is important to be mindful of short-term transitional costs."

China, which until recently was seen by many as an ecological pariah, is now a poster child for change. In May 2018 the World Health Organisation suggested that it is time for India to follow China's lead in addressing air pollution.

"The scale of the challenge in China and the fact that there are very strong efforts under way to address it shows other countries that seemingly insurmountable problems can actually be addressed and progress can be made," says Mr Groff. Responsible corporate citizens: decarbonisation and the circular economy

Part of guaranteeing the sustainability of supply chains is protecting and enhancing the local environment in which firms operate. In this age of social media, factories can no longer haphazardly dispose of toxic materials. "If a company is dumping waste products into the ground or the water, that's a complete show stopper," says Dr Tan, referring to BASF's use of the TFS coalition's audit process.

Moreover, there are clear signs that companies in Asia are moving past these base-level local environmental concerns and have started addressing more complex, longer-term global issues concerning climate change and resource depletion.

At DHL, two medium-to-long-term targets guide their efforts at carbon reduction. By 2025 the company plans to use clean transport, such as bicycles and electric vehicles, for 70% of its own first-and-last-mile services. And by 2050 it plans to have net-zero logistics-related emissions.

It has improved the efficiency of its directly owned assets through a variety of green logistics initiatives, such as the retrofitting of 450 trucks in Thailand with telematics software. "[It] was part of a combined initiative, which included driver training, monthly monitoring and an incentive system to encourage more economical driving," says Mr Ehrhart. It resulted in a 20% fuel saving and a 3% reduction in miles. Moreover, it has also helped its subcontractors improve their own efficiencies, for instance by helping them in 2017 to install 34 "boat tails" on the back of existing trailers for improved aerodynamics—resulting in at least 5% fuel savings.

The shipping industry is also working hard at reducing its environmental impact, says Jeremy Nixon, CEO of the Ocean Network Express, a new container line that is a joint venture between three Japanese carriers.

Current initiatives include using lower-sulphur fuel, reducing the weight of containers and making powered vessels more energy efficient. Mr Nixon stresses the importance of having global standards by which firms can abide. "Standardisation is about efficiency. Environmental global standards are changing... the last thing we want to see is differentiation."

In general, carbon- or energy-efficiency measures like these are intuitive and expected because by lowering costs they align neatly with pre-existing corporate profitability imperatives.

With circular economy business models, however, sustainability initiatives can appear to go against long-term profit motives.

Mr Sinclair from Li & Fung says the drastic reduction in apparel retail prices is forcing significant transformation of business models, towards cheap clothing that may be worn only a few times. This is driving unsustainable practices in the overall industry, he believes.



"As an industry...we have a responsibility and an obligation to pursue and manage businesses that are true to sustainable best practices for shareholders, stakeholders and the community at large...how do we do that better when the advance of retailers offering apparel at exceptionally low prices has created a new phenomenon of 'disposable' apparel? It makes me and my colleagues in the industry wonder and ask the question, 'Are we in the sourcing business or in the landfill business?' I prefer the former."

He believes the best avenue for change is by raising awareness among consumers. "How do we educate the man and woman on the street who's completely removed from the reality?"



# Conclusion

The 2018 Hinrich Foundation Sustainable Trade Index paints a mixed picture. On the one hand, even as Asia's economies have continued to record impressive economic growth, it appears as if they have not done enough, at a broad level, to mitigate certain environmental and social negative externalities such as air pollution and inadequate labour standards. To make matters worse, countries, companies and citizens are bracing themselves for a period of instability in the global trading system that could crimp trade and economic growth.

On the other hand, there are many examples of impressive sustainability progress at every constituent level. Policymakers envy China's recent success in reducing air pollution and Vietnam's efforts to improve workers' rights even if both are still very much works in progress. At the corporate level, there is a more intense focus on guaranteeing the sustainability of supply chains. In a short period of time, the interpretation of sustainability at Asian firms has evolved from nuisance to key competitive differentiator.

This shift is partly being catalysed by pressure from ordinary people, either as citizens, consumers or workers. As Asia's residents become richer and ever more connected to each other via social media, their awareness about sustainability has risen. "You will be amazed by the importance Chinese customers give to traceability," says Mr Fouque at Carrefour. "In Europe it may have started as more of a philosophical issue; whereas in China it is a more practical thing—our responsibility to keep our children safe."

It is also encouraging that Asia appears prepared to accommodate and benefit from the fourth industrial revolution. This is true in terms of installed technological infrastructure—more than half the countries score 75 and above on this measure. Yet it is also true in terms of the philosophical, ethical and economic debates that are occurring in corporate boardrooms and policy circles around Asia. There is hope that the region can reap the benefits of new technologies, such as in the use of blockchainbased supply-chain platforms, while addressing thorny issues around job displacement and the need for better social protections.

There is still much work to be done, then, in terms of promoting sustainability in trade in Asia. Yet at a time when the word "trade" has negative connotations in many parts of the world, it is comforting to see that Asia's commitment to trade-related growth and success appears stronger than ever.



# 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 second 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 14 indicators and four sub-indicators, with the social and environmental pillars consisting of four and six indicators, respectively.

#### **Economic Pillar**

The economic pillar measures a country's ability to ensure and promote economic growth through international trade. In this category, countries 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, countries 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. Furthermore, the educational attainment and political stability also capture human capital and



the environment in which that capital can be productively employed.

#### **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. Countries in the index were subdivided into three income categories to enhance comparison on trade sustainability. As a method to capture the economic development stages of the countries in this index, three income 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 countries, 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.

In some instances, a scale of 1-5 was used, with 1 being the lowest or most negative score, and 5 being the highest or most positive score. Those qualitative indicators scored on a 1-5 basis were transformed to a scale of 0-100 to enable comparison with the other series in the index.



#### **Indicator changes**

We kept the index structure largely the same as the 2016 version of the index. In several instances, we had to change data sources:

#### Labour standards

We updated this indicator to include more sources compared with the same 2016 Index indicator. In 2016, the assessment was limited to data from ILO and EIU data sources. In this version, we have considered additional sources: Global Slavery Index, US Department of Labor and World Bank Doing Business.

#### Environmental standards in trade

We have replaced Membership in the WTO Green Goods Group from the 2016 index with the Basel convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Ban Amendment.

#### **Transfer emissions**

With new research from the Global Carbon Project, we have updated this emissions indicator to reflect the gap between production emissions and consumption emissions.

#### **Data sources**

A team of in-house researchers collected data for the index in January and February 2018. In addition to proprietary data from The Economist Intelligence Unit, which has a range of quantitative and qualitative indictors, 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	1-5 score	EIU	A measure of tariff barriers and non-tariff barriers such as trade quotas, licensing and import inspection. This indicator provides a broad measure of the impediments to trade in a country.
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	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.



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.
Social pillar			
2.1) Inequality	GINI coefficient	World Bank/ CIA	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	0-4 score	EIU custom score	EIU qualitative assessment of labour standards based on three categories: forced labour, child labour, and labour rights. Sources include the Global Slavery Index; the United States Department of Labour "List of Goods Produced by Child Labor or Forced Labor"; ILO's statistics on prevalence of child labour; World Bank Doing Business; and EIU Risk Briefing.
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.
Environmental pillar			
3.1) Air pollution	0 to upper bound	Yale EPI	Levels of particulate matter 2.5 (PM 2.5), to capture the air pollution in a country. 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	1-7 score	EIU/WTO	EIU score based on membership or ratification of international environmental compacts.
			1) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Ban Amendment
			<ol> <li>The Convention on the Prevention of Marine Pollution by dumping of wastes or other matter</li> </ol>
			3) the Convention on the Protection of the Ozone Layer
			<ol> <li>The Kyoto Protocol to the United Nations Framework Convention on Climate Change</li> </ol>
			5) The International Timber Agreement
			6) The Convention on International Trade in Endangered Species of Wild Flora and Fauna
			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). Countries with dirty export industries contribute to an unsustainable model for global trade.
3.6) Share of natural resources in trade	%	UNCTAD Concentration Index	UNCTAD Data assessing natural resources (ores and metals, mineral fuels, lubricants and related materials) as a percentage of a country's total trade







#### LONDON

20 Cabot Square London E14 4QW United Kingdom Tel: (44.20) 7576 8000 Fax: (44.20) 7576 8500 E-mail: london@eiu.com

#### **NEW YORK**

750 Third Avenue 5th Floor New York, NY 10017, US Tel: (1.212) 554 0600 Fax: (1.212) 586 0248 E-mail: newyork@eiu.com

#### HONG KONG

1301 Cityplaza Four 12 Taikoo Wan Rd Taikoo Shing Hong Kong Tel: (852) 2585 3888 Fax: (852) 2802 7638 E-mail: hongkong@eiu.com

#### SINGAPORE

8 Cross Street #23-01 Manulife Tower Singapore 048424 Tel: (65) 6534 5177 Fax: (65) 6428 2630 E-mail: singapore@eiu.com

#### GENEVA

Rue de l'Athénée 32 1206 Geneva Switzerland Tel: (41) 22 566 2470 Fax: (41) 22 346 9347 E-mail: geneva@eiu.com

Whilst every effort has been taken to verify the accuracy of this information, neither The Economist Intelligence Unit Ltd. nor the sponsor of this report can accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out herein.