

Belt and Road China Connectivity Index

Made to Measure

July 2017



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The use of 'we', 'our' throughout this document refers to ICBC Standard Bank and Oxford Economics jointly

Executive Summary

Formally launched in 2013, China's Belt and Road (B&R) initiative, spanning 65 countries across Asia, the Middle East and Europe, has the potential to accelerate economic development both in China and across individual countries through mutually beneficial increased economic connectivity. Many of the B&R economies are constrained by infrastructure bottlenecks, inhibiting growth and trade both in the countries concerned, and more widely, via the disruption to global trade. B&R aims to make a decisive contribution to upgrading infrastructure across these continents, unleashing increased connectivity, and boosting sustainable and inclusive growth for all of the 65 countries.

The initiative is the most ambitious of its kind ever attempted. Over the course of the next generation, China will work with governments in 64 other countries as well as a range of multilateral organisations and commercial institutions, to deliver the financing and technical expertise necessary to upgrading infrastructure along the B&R. These efforts will be complemented by additional policies in areas such as trade and Renminbi internationalisation.

New evidence bases are required to aid understanding of B&R. Policymakers, businesses, investors, and other stakeholders in B&R and beyond need to be able to assess how the outcomes of B&R are progressing, and the impact it is having on economies across the three continents.

The new and unique China Connectivity Index (CCI) is a foundation stone for this evidence base. Developed in partnership between Oxford Economics and ICBC Standard Bank, the CCI leverages a wide range of consistent data sources to develop a unique metric for tracking broad-based economic connectivity between China and B&R economies.

The CCI demonstrates how China's changing economic priorities and growth have influenced economic connectivity between itself and the B&R countries. Trends in the CCI for earlier years (2005-2011) captured China's growing demand for commodity imports and other vital inputs to its growing industry base in the years following WTO accession. Trends in the CCI for more recent years capture the shift to service sector trade (in particular outbound tourism) and different priorities for outbound investment.

Changing Chinese economic priorities and growth model have meant important shifts in the pattern of economic connectivity. Although ASEAN economies remain the deepest-connected with China across different pillars of connectivity (trade, capital and people), the rising importance of new forms of connectivity has meant several Central and Eastern European economies, as well as several key tourism destinations, have made substantial gains in connectivity in the years since 2011. China's economic connectivity has become less bound by geography and proximity, as its economic reach has grown and further-afield countries have increased their economic connectivity with China.

B&R connectivity with China has already increased via market forces in the past decade. Our analysis demonstrates that though the initiative is still in its early stages, connectivity between B&R economies and China has increased faster than for non-B&R economies in some key areas. Moreover, our analysis demonstrates that countries that have experienced the fastest growth in trade connectivity with China have also experienced faster economic growth overall.

Looking ahead, we expect further deepening of economic connectivity between China and the B&R region. China's growing middle class will continue to become

a more powerful driver of the global tourism market, including for B&R economies. China's goal to move further up the global manufacturing value chain will mean different forms of trade connectivity with different partners in the years to come. And through the cross-border investment in B&R infrastructure as well as to support domestic economic goals, capital connectivity is likely to rise too.

CCI will be a key resource for understanding these developments in B&R in the years ahead. To be updated semi-annually, CCI will track connectivity developments in the region, and provide a valuable evidence base for understanding how China's changing economic priorities and growth impact on countries across the three continents.

1. Introduction

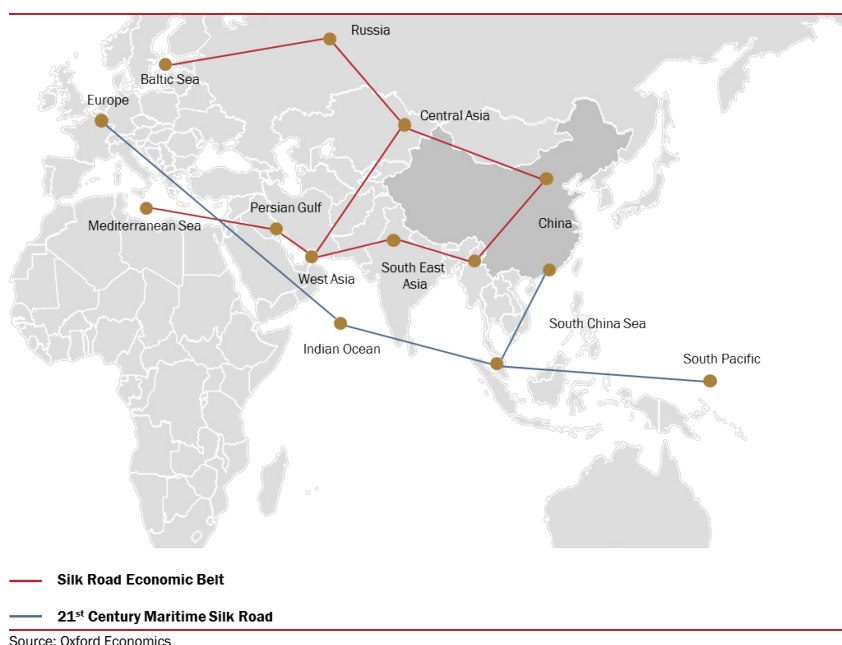
1.1 A modern-day “Silk Road”

China’s growth as an economic force has had huge ramifications the world over. China has become the world’s second-largest economy and its largest exporter of goods. China’s rise has lifted millions of people out of poverty, and had a profound global economic impact. Indeed, such unprecedented success has attracted both admiration and concern.

Nevertheless, China has reached an inflection point where a comprehensive economic rebalancing has become essential to ensure sustainable growth. The investment and export led growth model that characterised China’s previous two-decade economic success has hit its limitations. While the 2001 accession to the World Trade Organisation (WTO) defined the apex of this growth model, the Global Financial Crisis (GFC) revealed its vulnerabilities. It highlighted the need for China to re-orient from investment to consumption, to move up the global value chain, and to diversify its exposure away from the stagnating markets of the developed world and towards faster growing emerging and frontier markets.

Amid such background, China’s B&R Initiative aims to support inclusive economic development through the lens of infrastructure investment. In 2013 China launched a major policy initiative, aimed at addressing logistical obstacles along the ancient “Silk Road” routes by land and sea. Over the coming decades, China will work with a range of partners to upgrade infrastructure; overland to Europe along a “Silk Road Economic Belt” and across the sea via a “Maritime Silk Road”. Together, these form the B&R, spanning 64 countries¹ and three continents (Fig. 1).

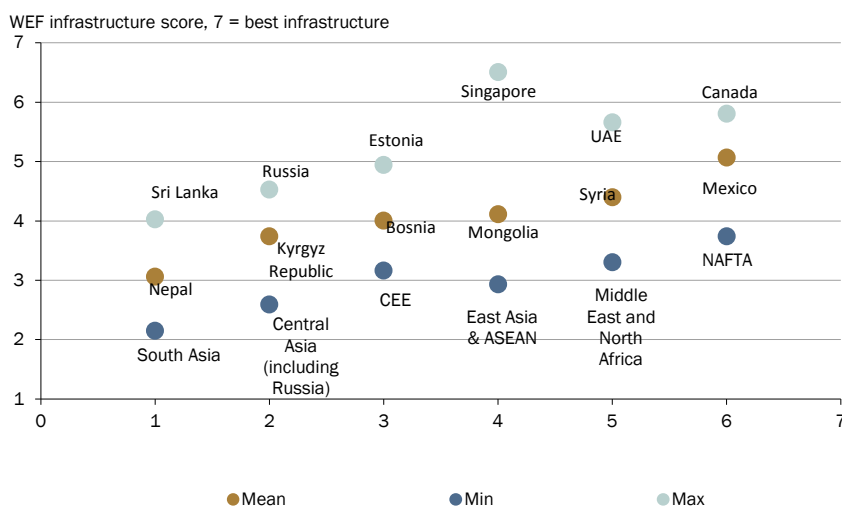
Fig. 1. Extent of the B&R region, spanning three continents



¹ There are various definitions of the breadth and scope of China’s B&R initiative by different sources. The 64 countries we selected to examine in the Index and in this white paper are the set of countries identified as official B&R countries in a document published by the China International Trade Institute, Industrial Cooperation Between Countries Along the B&R.

The challenge is substantial, with weak infrastructure in many B&R countries.

Average infrastructure quality in several key regions for the B&R initiative is low by global standards (Fig. 2) and will require substantial investment to facilitate ever-increasing connectivity. In order to achieve this, China is committing substantial resources to dedicated investment vehicles, leveraging finance from other sources such as commercial banks and Multilateral Development Banks, and supporting these efforts with new measures in areas such as trade policy and currency management.

Fig. 2. Infrastructure in South & Central Asia especially weak

Source: Oxford Economics / World Economic Forum

But the prize is potentially transformative for China and B&R countries alike.

Modern infrastructure will reduce the frictions associated with the movement of goods, ideas, capital and people while the multiplication property associated with the network effect means successful implementation will dramatically scale up potential economic activity. For China, such infrastructure will allow it to connect more effectively with the higher value-add markets in the west, create more dynamic markets closer to home, and create an outlet for expertise in its excess capacity infrastructure industries. The latter point, far from being a one-sided opportunity as some critics have suggested, offers the region a golden chance to take advantage of the lower costs of infrastructure offered by China's rebalancing.

1.2 Connectivity and our index

In essence, B&R is a multi-generational project that looks beyond infrastructure and is, instead, “rooted in a shared vision for global development”² While tackling the infrastructure deficit is a necessary step to unleash inclusive economic development, measuring broader economic benefits is of equal, if not more profound, importance. As a practical matter, both the implementation and longevity of B&R will depend on the realisation of broad mutual benefits across B&R participants. **The China Connectivity Index (CCI) is specifically designed to capture these broader economic benefits by quantifying the dynamics of bilateral connectivity between B&R countries and China.**

² Remarks by UN Secretary-General Antonio Guterres at the opening of the Belt and Road Forum, United Nations Secretary General, 17th May 2017

The CCI is a first of its kind research tool offering a unique solution to the challenge of tracking the evolution of the still nascent B&R project. The purpose of the CCI is to build out a dynamic evidence base from which investors and policy makers can assess the high level themes and challenges that emerge from the massive efforts of B&R.

As the first CCI white paper, it is natural and necessary to examine the index from a retrospective viewpoint. We take this opportunity to explore, through the lens of the CCI, what trends and insights can be distilled from the changing nature of China's connectivity to the B&R countries over the last 10 years.

Chapter 2 presents the index framework and previews the headline results of the inaugural index. In Chapter 3, we discuss the key insights from the CCI based on in-depth empirical research. Chapter 4 looks forward to identify themes critical for future B&R developments, and sets out our vision to establish B&R thought leadership.

2. China Connectivity Index

2.1 Building the China connectivity index

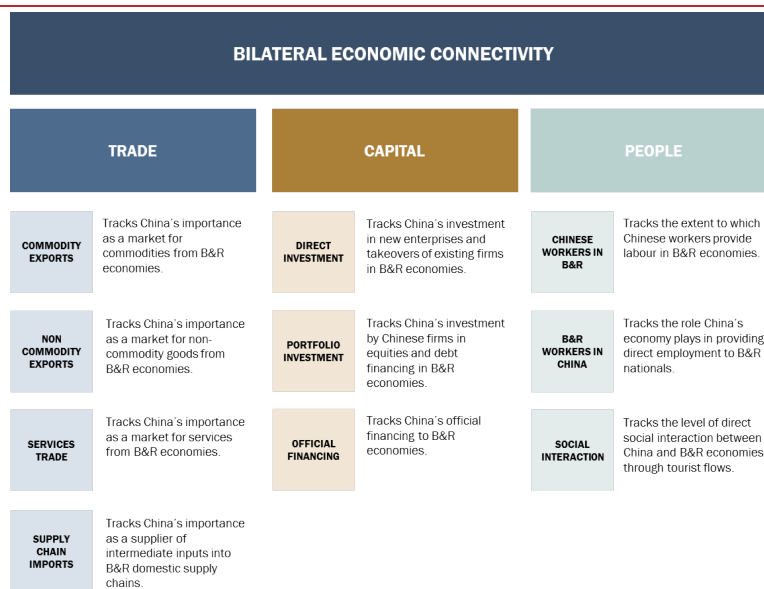
Economies that are well-connected are those which have a high degree of exchange of both the inputs into economic activity, and the outputs from economic activity. For instance, in the case of the European Union (EU), by liberating barriers to movement in output, capital and people, the EU's member states have achieved an increasingly better-connected continent. Our index replicates this principle, looking at how China and B&R countries are connected by flows in both output and the factors of production.

The index comprises three principle dimensions and 10 secondary pillars.

'Economic connectivity' has three principle dimensions—trade in economic output (incorporating trade in goods and services, specifically tourism³), the exchange of capital (including different types of investment flows), and the people connectivity (specifically, the exchange of workers and tourists across borders).

Each of these dimensions of economic connectivity is subsequently broken down into individual pillars, reflecting, for example, the different sources and types of capital flows between economies and how trade is made up of goods, commodity and non-commodity, and services. These channels of connectivity are measured in terms of the relative importance of Chinese connectivity, and the importance of each connectivity metric toward overall economic activity in that economy. More details of our methodology and data sourcing are set out in Annex 1.

Fig. 3. Dimensions and pillars of economic connectivity



Source: Oxford Economics

³Data for Chinese services imports at a bilateral level is not available, but aggregate data for Chinese imports of services indicate that travel and tourism accounts for around half of all Chinese services imports. The remainder of Chinese services imports consists of high value-added sectors such as financial services, professional services, and other sectors more typically produced by advanced economies than B&R countries.

As such, with good bilateral data for tourism trade between China and B&R from Oxford Economics' own databases, for the China Connectivity Index we feel tourism exports from B&R to China closely reflects overall services exports.

Box 1 - How to use the China connectivity index

Our index answers important questions about China's economic relationship with B&R countries. The index enables us to explore how connectivity has evolved over the past decade, even before the initiative's launch. In particular, understanding the relationship between connectivity and China's changing economic objectives over the past decade.

It allows us to examine the relationship between connectivity and other key economic variables. For example, we can explore if increased connectivity with China is correlated with faster economic growth, with obvious implications for policymakers in the negotiation of trade and investment agreements, or businesses thinking about investment opportunities.

The index can be also used in assessing other near-term priorities. For example, in 2016 accelerated capital outflows raised suggestions that the Chinese government might tighten rules regarding outbound portfolio investments. Using the China Connectivity Index, we can assess which economies might be most affected by this.

Finally, in the future the index will be a useful metric for understanding how B&R has aided inclusive economic growth. It can help to explore whether the countries with the largest increases in bilateral funding also see the greatest increase in connectivity, or whether one type of connectivity spurs another (for example, does capital connectivity spur trade connectivity?). And it can help assess which other policy measures are most effective in enhancing connectivity. These are questions that will only be answered well into the future, but doing so is reliant on the establishment of a solid evidence base now.

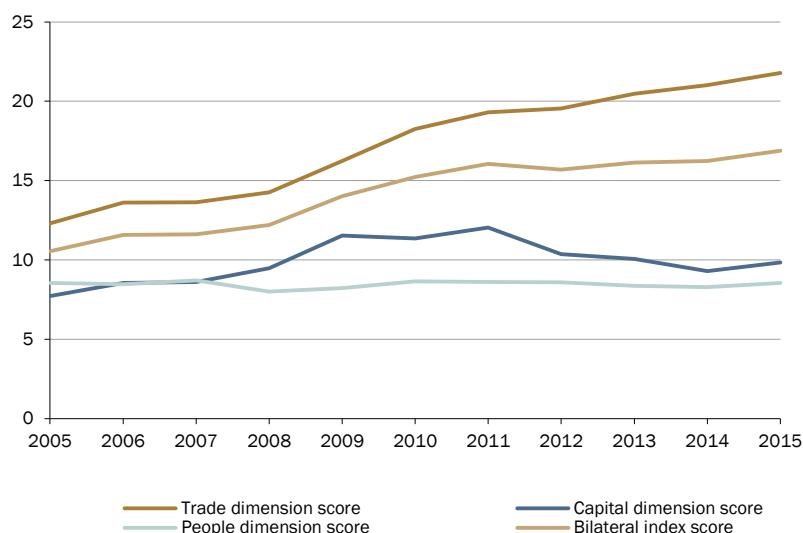
2.2 Headline results

Overall economic connectivity between China and the median B&R economy is around twice as deep in 2015 as it was in 2005. Only nine of our 64 economies experienced a decline in aggregate connectivity from 2005 to 2015, which in many cases was due to conflict or political instability.

Despite the headline increase in overall connectivity, a closer look at the three dimensions of connectivity reveals a more nuanced picture (Fig. 4). Not surprisingly, trade has been the primary driver of the increase in connectivity while the people dimension has struggled to rise off a low base over the past decade. We explore the reasons for this later in the paper but, for now, note that tourism is included in the trade dimension and has registered extremely strong growth in recent years.

Reflecting the commodities bias of B&R countries, capital connectivity demonstrates strong inflows in the run up to the GFC. The subsequent flat lining can be explained by China responding to the crisis by focusing resources on its massive domestic stimulus program. The stimulus effect is also evident in the trade dimension where the pre-GFC growth trend remained intact up until 2011. The post 2011 period is characterised by a contraction in capital connectivity and a slowdown in trade trend growth as the new priorities of China's rebalancing has seen competition from more advanced, western economies. Indeed, the top movers within B&R connectivity from 2011 to 2015 reflect a similar bias towards more sophisticated economies. Interestingly, the CCI has captured an evident rebound in capital connectivity following Chinese President Xi's announcement of the B&R in late 2013.

Fig. 4. Average connectivity across B&R economies by dimension



Source: Oxford Economics / Haver Analytics

Based on the latest results of our CCI in 2015, the top 10 most connected B&R countries reflect a bias for geographic proximity with Mongolia, Singapore and Vietnam topping the list (Fig. 5). Oman, a major oil supplier to China, is the only exception to this observation. This baseline predilection for proximity is not surprising as the logistical costs of trade, as well as cultural and linguistic differences typically increase with distance.

Fig. 5. B&R Connectivity, 2015, top 10 most-connected

China Connectivity Index results summary - 2015								
Overall rank	Country	Overall score	Trade score	Capital score	People score	Trade rank	Capital rank	People rank
1	Mongolia	65.4	71.5	56.2	56.2	1	2	2
2	Singapore	57.1	61.6	47.4	58.9	3	3	1
3	Vietnam	42.1	62.5	4.7	31.9	2	57	6
4	Thailand	38.6	53.5	13.3	25.3	4	12	7
5	Malaysia	37.8	49.7	14.3	36.4	6	10	4
6	Cambodia	36.4	50.6	19.1	2.9	5	6	19
7	Maldives	31.6	47.4	8.6	6.2	7	22	14
8	Oman	28.6	42.3	10.5	0.9	8	17	43
9	Philippines	25.9	26.9	17.0	47.2	14	8	3
10	Brunei	25.8	9.0	63.8	13.0	45	1	9

Source: Oxford Economics

More intriguingly, the top CCI movers during the period of 2011 – 2015 reflect the structural shift of China's rebalancing and lean towards more sophisticated economies (Fig. 6). The top ten movers over this period are strongly represented from countries further afield. The list is generally dominated by economies that represent a more sophisticated sub-group of B&R countries. For instance, the Maldives tops this list of movers as a major beneficiary of the Chinese outbound tourism boom. Georgia and Armenia, the two former Soviet Union (FSU) states, are among the emerging market's most reform oriented economies. Montenegro, Slovak Republic, Czech Republic, Poland and Serbia also appear in the top 10, indicating recent strong connectivity performance of emerging European countries within the newly launched "16+1" initiative between China and Central and Eastern European Countries (CEE countries).

Fig. 6. B&R Connectivity rankings, biggest movers 2011-2015

China Connectivity Index - Biggest Movers 2011-2015					
Increase in connectivity ranking	Country	Change in overall score	Change in trade score (60% weighting)	Change in capital score (30% weighting)	Change in people score (10% weighting)
39	Maldives	11.0	18.1	-0.8	4.2
25	Montenegro	7.1	3.6	18.9	-7.2
24	Slovak Republic	4.9	7.8	0.9	-0.6
23	Armenia	3.8	9.0	-5.3	0.1
20	Czech Republic	7.3	14.8	1.5	-20.9
20	Lao PDR	6.5	21.1	-20.3	-0.6
16	Poland	4.3	8.5	-1.8	-3.1
15	Qatar	6.7	12.3	-2.5	0.3
13	Georgia	3.3	6.4	-1.6	-1.1
12	Serbia	3.8	6.3	0.1	0.5

Source: Oxford Economics

3. Key insights from the index

3.1 What can we already learn from the index?

The first key insight from the China Connectivity Index (CCI) is that it closely reflects the changing priorities and needs of China's economy over the past decade. The index captures China's emergence as "workshop of the world" following accession to the World Trade Organisation, via two key pillars of trade connectivity. In the years after the global financial crisis, as China reoriented to a new growth model driven by domestic demand and a shift up the global value chain, metrics tracking these priorities show substantial connectivity growth. And throughout the decade covered by our index, the data shows China has continued to become increasingly important to manufacturing supply chains worldwide. These changing priorities help explain the aggregate movement in components of our index, relative rankings of connectivity between countries, and how these rankings have changed over time.

The second (related) key insight is that as these priorities have evolved, China connectivity with B&R countries has become less bound by distance. Theory suggests trade, capital and people connectivity evolves first with neighbouring economies, and this is reflected in our index. But as economic activity shifts towards trade in services and human capital (reflecting changing economic goals for China), connectivity becomes less tied by proximity. CCI captures this well, with some of the furthest B&R economies showing major movements in the index in the post-crisis period.

Third, we can assess whether the B&R region has already increased connectivity with China by more via natural market forces (pre-the official launch of the B&R initiative) compared to other parts of the world economy. We find that in some key metrics, the region is outperforming non-B&R economies in its increased trade and investment flows with China. This is evident even before the announcement of B&R as a policy initiative in 2013, and especially impressive since the policy is still very much in its initial stages.

The index provides important new evidence on the importance of infrastructure for trade connectivity and economic growth. Across the B&R there is a high degree of correlation between infrastructure quality, trade connectivity, and overall GDP growth in the past decade. But the uneven performance of countries in our index, and variable infrastructure quality, suggest that bottlenecks in infrastructure financing might well be a barrier to future prosperity. We highlight countries where B&R investment finance could be critical in unlocking better connectivity for the future.

Finally, bearing in mind the above key insights, we can look ahead to likely future developments in connectivity. We know the index does a good job tracking connectivity improvements driven by China's changing economic priorities and market forces. Looking ahead, China's government is clear about its macroeconomic objectives and the role B&R can play in achieving these. We can therefore offer some thoughts on likely future developments in economic connectivity, including how the outlook may evolve in high and low implementation scenarios.

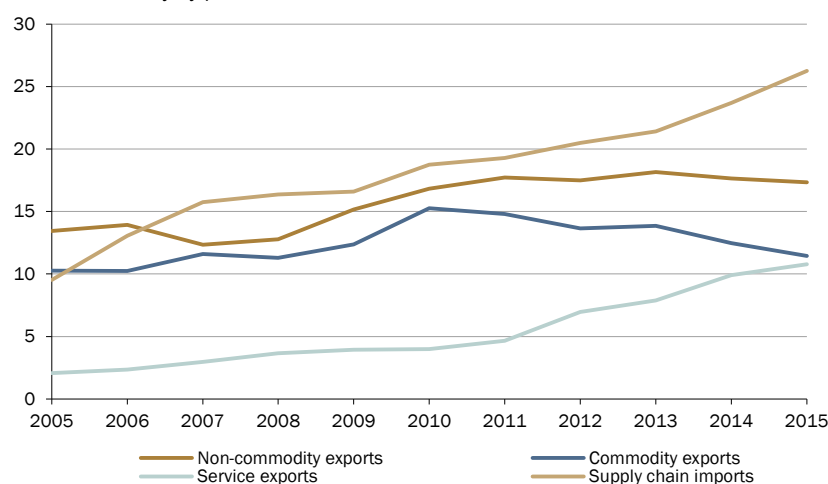
3.2 China connectivity index reflects China's changing economic priorities

In the years following WTO accession, China became regarded as the "workshop of the world", accounting for an ever-increasing share of global manufacturing and industrial activity. Two channels of connectivity were crucial to this achievement. Firstly, to fuel this growth in industrial output, China became

an increasingly important consumer of raw materials in the global economy – for example, accounting for 10% of world oil consumption by 2011, up from 6% at the start of the decade. And secondly, its role as workshop of the world meant China became an increasingly important destination for supply chain inputs from economies around the world (as well as a source of supply chain exports). These trends are well-tracked by our index.

Fig. 7. Trade connectivity reflects China's economic rise

B&R Connectivity by pillar, Trade Dimension



Source: Oxford Economics / Haver Analytics

China's commodity demand in the first 5-6 years of our index period is mirrored by a steady rise in the commodity export connectivity index between China and B&R economies. Commodity connectivity in our index rises by 50% from 2005 to 2010, edging down only very slightly in 2011. It is worth being clear though that both price and quantity effects are important here – and indeed the two are linked, since stronger Chinese demand also raises world prices. The contribution of commodity exports to GDP in B&R⁴ doubled over this period (from 0.5% of GDP to 0.9% in 2011), and for a select group of economies the rise was substantially greater. For Oman, commodity exports to China rose from 16% of GDP to 19% in 2011, in Iraq the corresponding rise was from 1% of GDP in 2005 to over 6% by 2011. This demand was also felt outside the Middle East, with Laos, Mongolia and Kazakhstan all also becoming increasingly-crucial commodity suppliers for China, and seeing their commodity connectivity scores rise as a result.

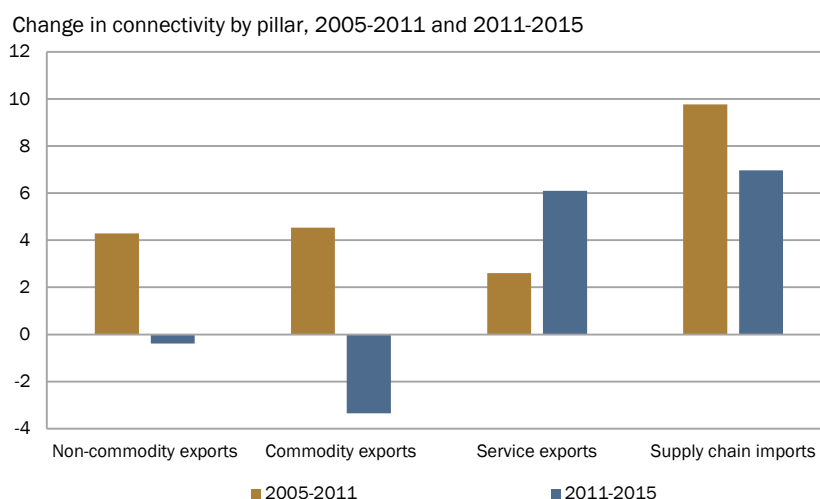
China's role as the workshop of the world is also reflected in being an increasingly important export market for non-commodity goods. Our pillar for non-commodity goods trade between China and B&R rises from a score of 13 in 2005 to 18 in 2011. In macroeconomic terms this rise reflects a rise in the contribution of non-commodity exports from 1.1% of B&R GDP in 2005 to 1.4% by 2011. Likely reflecting the outsourcing of manufacturing from high-cost Asian economies to lower-cost firms in China, key movers in this respect include Malaysia (whose score on this metric rises from 57 in 2005 to 90 in 2011), and Thailand (whose score on this pillar rises from 46 to 65). In both economies, non-commodity goods exports to China accounted for 1.5-3pp more of GDP in 2011 than they did in 2005.

Since the global financial crisis though, China's economic objectives have evolved, and so has its economic connectivity. Aware of the economic and

⁴ Calculated on a nominal US dollar GDP weighted basis

environmental limitations of growth driven by industrial activity, the 12th five-year plan (covering the period 2011-2015) set out bold objectives to start a process of economic rebalancing. Key in this respect were to increase the contribution of domestic demand to overall activity, to reduce the resource-intensity of the economy, and to accelerate movement up the value chain in the manufacturing sector. These are all themes developed further in the 13th five-year plan, covering the period to 2020.

Fig. 8. New drivers of trade connectivity post-2011



Source: Oxford Economics / Haver Analytics

As shown in Fig. 8, B&R connectivity with China via commodity and non-commodity goods has fallen off in the years since 2011. Indeed, as China's demand for raw materials has grown at more modest rates, and domestic fuels production has increased, connectivity via commodity trade has gradually declined. It is of course important to note that this does not necessarily mean trade values between China and B&R countries in these areas have been falling, only that their role as a driver of economic growth for the countries concerned has stabilised. Non-commodity trade could also be easing as Chinese firms increasingly tailor their production to Chinese consumers, taking market share from B&R producers.

Other pillars have taken up the baton of trade connectivity growth. Specifically, as China has aimed to become a more consumer-driven economy, with large increases in household spending power via faster real wage growth, more generous social safety nets, and more readily available consumer credit, it has also substantively liberated outbound tourism. In 2011, the government added 140 new countries to the Approved Destinations list (countries to which Chinese citizens are permitted to travel on government-affiliated tour groups). In the years since 2011, outbound Chinese tourism almost doubled, from 41m outbound visitors in 2011 to 78m in 2015.

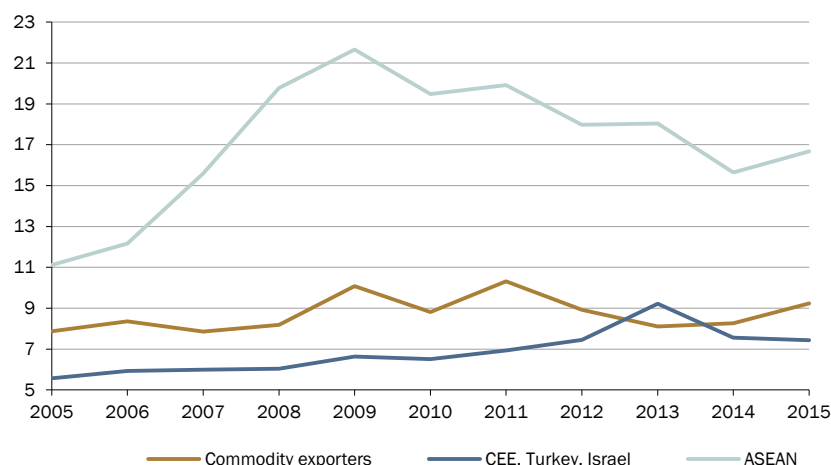
B&R countries have been amongst the key beneficiaries of increased outbound travel. Indeed, the growth of tourism trade means that for the B&R overall, tourism is now as important a driver of economic connectivity as is commodity trade (Fig. 7). Moreover, the direction of travel in this respect is very clear. A growing and increasingly prosperous Chinese middle class will continue to demand increasing leisure time, including overseas. Meanwhile China's coal demand fell for the third year in a row in 2016, while domestic sources of other fuels (especially crude oil) have become more plentiful. Looking ahead therefore, based on our current

assessment for Chinese commodity demand and world prices, we anticipate further long-term declines in commodity connectivity.

China's changing economic priorities are also being felt through capital connectivity. As shown in Fig. 9, capital connectivity with commodity-exporting economies rose gradually from 2005-2011, but has declined in more recent years, as securing raw materials for industrial activity gave way to other economic priorities (and lower commodity prices undermined the financial case for investment into the sector). At the same time, capital connectivity with (relatively) higher value-added economies, particularly in Central and Eastern Europe and surrounding countries became more important. Rather than accessing materials, China is increasingly focussed on accessing technology. Israel has been a particularly key beneficiary in this respect, with the stock of inward investment from China rising from \$300m in 2011 to just under \$800m in 2015.

Fig. 9. Capital connectivity tilting gradually westwards

Capital connectivity by country type



Source: Oxford Economics / Haver Analytics

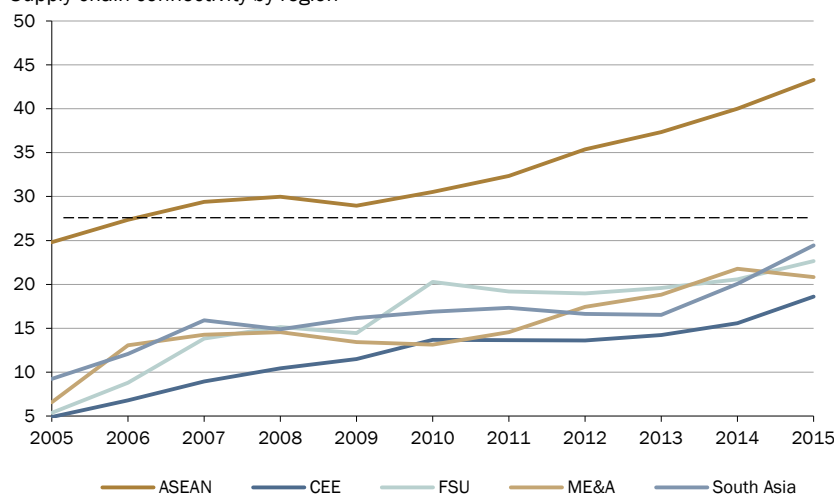
One key priority for China through the past decade, and one which will persist into the future, is increasing China's contribution to the supply chain of other economies. China is moving away from a role as workshop of the world, exploiting labour cost advantages to take the labour-intensive parts of industrial activity, towards a role where its inputs form part of the supply chain for firms elsewhere. Often this is pursued in tandem with outbound investment - using foreign direct investment to access technologies that can be adapted by domestic firms and enabling access to new markets. Industries such as pharmaceuticals and semiconductor manufacturing are two key examples in this respect.

China's supply chain connectivity has risen across B&R regions over the past decade, but ASEAN economies remain the closest-connected in this regard.

This is likely to reflect a continuation of outsourcing to China from high-cost economies in the region, such as Singapore and Malaysia, while Chinese firms themselves outsource lower value-added processes to the region's cheapest economies such as Cambodia and Laos. Meanwhile, supply chain connectivity has also deepened across other B&R regions (Fig. 10). The Former Soviet Union and South Asia regions are now almost as connected to Chinese suppliers as were ASEAN economies ten years ago, and the trend across all regions continues to be strongly towards deeper supply chain integration.

Fig. 10. Supply chain growing globally, but strongest with ASEAN

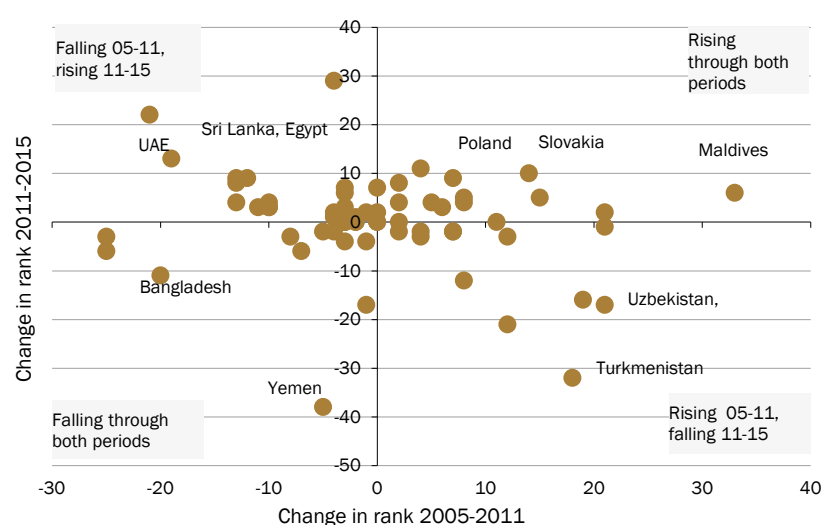
Supply chain connectivity by region



Source: Oxford Economics / Haver Analytics

These changing economic priorities for China, and different modes of connectivity becoming more or less important, have meant major changes in the connectivity rankings across economies. Detailed ranking tables for connectivity across our time horizon are set out in Annex A, but it is worth picking out some of the key movers in this respect (Fig. 11), and interpreting these in the context of changing economic priorities in China.

A couple of Central Asian economies made major moves up the connectivity rankings through the first half of our decade, when China's demand for commodities was growing rapidly. But these have since slipped back substantially, as their relatively-undiversified economies do not provide targets for Chinese investment focussed on new technologies, customers for supply-chain imports, nor are attractive destinations for outbound Chinese tourism.

Fig. 11. Changes in connectivity rankings, 2005-2011 and 2011-2015

Source: Oxford Economics

On the other hand, some important tourism destinations have seen the opposite trend, falling through the first half of our decade, before major growth since 2011, when China's regulations on outbound tourism were eased. Although Egypt and

UAE are both major commodity exporters, our dataset suggests that direct links with China via commodity exports contribute less to China Connectivity than does tourism. Indeed, in the case of UAE, by 2015 1 in 20 dollars spent by tourists was spent by Chinese visitors, up from 1 in 100 a decade earlier.

Some economies have achieved improvements in connectivity in both the pre-crisis and post-crisis period. In Poland and Slovakia, this has been driven by gradually deepening supply-chain connectivity, as well as growing non-commodity exports to China. This could reflect two forms of deeper economic connectivity – from China to CEE as a supplier of imports, and from Germany and other high-income economies outsourcing part of their manufacturing activity to CEE.

3.3 Connectivity unbound – geography matters less

Intuitively, the index demonstrates that geographical proximity has a role in deepening trade connectivity. Except for Mongolia, ASEAN economies were the most-connected with China in 2005, and remained so in 2015. Given the logistical costs of trade, as well as the cultural and social ties that often facilitate business, countries tend to trade and invest most with other economies close by.

Fig. 12. Connectivity rankings, 2005

Overall rank	Country	Trade rank	Capital rank	People rank
1	Mongolia	1	1	2
2	Singapore	2	15	1
3	Malaysia	3	20	4
4	Thailand	8	7	6
5	Vietnam	5	25	7
6	Philippines	10	19	3
7	Kazakhstan	4	22	23
8	Oman	7	17	51
9	Yemen, Rep.	6	57	25
10	Iraq	9	12	49

Source: Oxford Economics

Fig. 13. Connectivity rankings, 2015

Overall rank	Country	Trade rank	Capital rank	People rank
1	Mongolia	1	2	2
2	Singapore	3	3	1
3	Vietnam	2	57	6
4	Thailand	4	12	7
5	Malaysia	6	10	4
6	Cambodia	5	6	19
7	Maldives	7	22	14
8	Oman	8	17	43
9	Philippines	14	8	3
10	Brunei	45	1	9

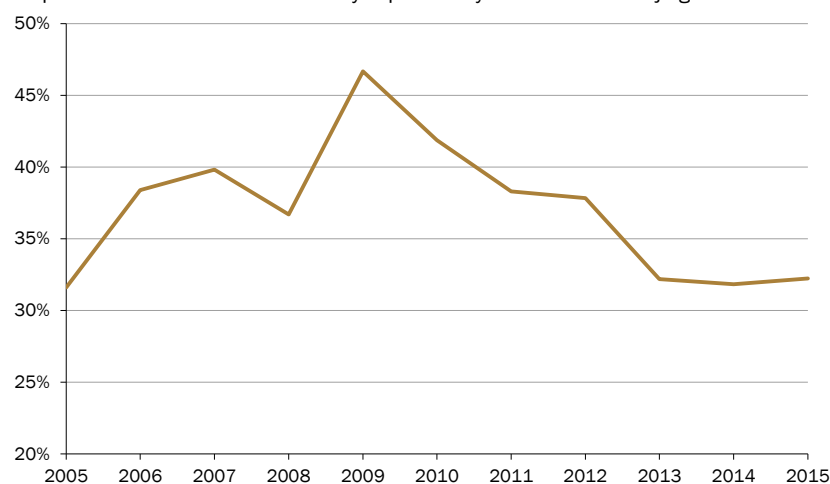
Source: Oxford Economics

The importance of geographical proximity strengthened through the first half of our decade. As shown in Fig. 14, the sensitivity of connectivity to geographical distance from China increased between 2005 and 2009—that is, closer neighbours to China became more connected more rapidly than economies further afield. A simple correlation of proximity to connectivity reveals that geography explained 32 percent of the variance in connectivity in 2005, and this had risen to 46 percent by 2009. This matches well with the findings of our previous section, which found that connectivity with some key commodity producers in the (geographically relatively close) Central Asia region rose through the first half of our index, while China’s role as “workshop of the world” meant that trade connectivity with higher-income economies in Asia also strengthened.

A couple of caveat to this early trend are important. Firstly, the global financial crisis may have skewed China's trade and investment towards neighbouring economies, and as such, 2009 could be an outlier. Secondly, the lower degree of correlation between connectivity and distance at the start of our historical sample is partly due to at least a few outliers in the data in 2005⁵. These strong degrees of connectivity in 2005 for distant economies weakens the measured correlation between connectivity and distance, but their subsequent weakening in 2006-2007 means the correlation between distance and connectivity rises. It is also worth bearing in mind that Fig. 14 displays the average correlation between connectivity and distance, rather than a formal econometric estimation.

Fig. 14. Connectivity versus distance, 2005-2015

Proportion of variation in connectivity explained by distance from Beijing



Source: Oxford Economics / Haver Analytics

In more recent years though, connectivity has clearly broadened out, and become less bound by geography. China's increasingly-important role as an intermediate supplier for firms around the world is a key part of this – for example, one of the furthest countries from China, Czech Republic, now sources supply chain imports worth 8.5% of GDP from China, four times the share in 2005. Chinese tourists go farther afield, Thailand still being their number 1 destination, but with European and Middle Eastern destinations becoming more popular. Meanwhile, investment is increasingly targeted at firms and sectors that can help China move up the value chain, rather than resources (although some high-value investments in commodity-producers such as Saudi Arabia and Egypt have also helped lower the link between geography and connectivity).

The proportion of variation in connectivity has therefore fallen back, from a peak of 46% in 2009, to just 32% by 2015. This metric has remained relatively stable for the last couple of years of the index. But as supply-chain connectivity continues to supplant commodity connectivity, and increasingly mobile Chinese tourists and investors scour the globe for destinations and opportunities, it may well be that there is further weakening of the link between geography and connectivity ahead.

⁵For example, in 2005 China held a stock of FDI in Iraq totalling US \$500 million, equivalent to around a third of total direct inward investment in Iraq at the time. China's stock of investment in Iraq fell rapidly in the following couple of years, and was close to zero in 2007. Commodity exports from Yemen to China, and official financing from China to Sri Lanka both also show major volatility in the early years of the index.

3.4 B&R connectivity in a comparative context

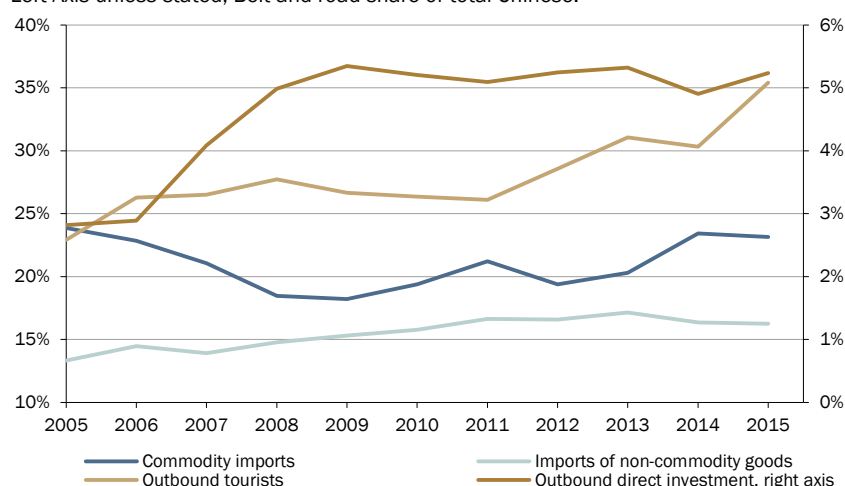
As well as examining B&R connectivity across time and geography, it is important to compare this against China's connectivity with the rest of the world. China's increasingly outward-looking economy has led it to develop trade and investment links across the world, not only with the B&R countries. But does the evidence suggest B&R connectivity with China has increased faster than its connectivity with other regions?

One way to assess this would be to construct a China Connectivity Index for all countries around world. But this would require a substantive additional data exercise for relatively little gain. After all, the B&R policy initiative is focussed on boosting connectivity with B&R countries, and it is for these economies that we will use CCI to assess the economic impact of the initiative looking ahead – not the whole world economy.

A simpler way is to assess B&R economies' aggregate share of key economic flows with China. In the interest of brevity, we focus on four key flows—commodity exports, non-commodity exports, Chinese tourists, and Chinese outbound direct investments⁶. 13 percent of China's non-commodity imports came from B&R in 2005; this had risen by three percentage points by 2015 (Fig. 15). As such, over the decade B&R economies have “outperformed” the rest of the world in their connectivity growth with Chinese on this measure. B&R's share of total outbound Chinese tourists has exhibited the opposite growth trend—a stable share from 2005-2010, followed by a rapid rise from 27% in 2010 to 36% in 2015. ASEAN economies have seen particularly rapid growth in tourist arrivals from China.

Fig. 15. B&R share of key economic flows with China

Left Axis unless stated, Belt and road share of total Chinese:



Source: Oxford Economics / Haver Analytics

⁶Although there is a broad consensus amongst economists that non-commodity exports are better for long-term economic development than commodity exports, the latter are nevertheless key for government revenues and foreign exchange in several B&R economies. As such, considering both is relevant. Our selection of direct investment also reflects the consensus that this type of investment contributes more to long-run economic development than other forms of investment. We also pick out Chinese outbound tourism as this is likely to see continued rapid growth in the years ahead given the expected growth in the Chinese middle class and easing restrictions on outbound travel.

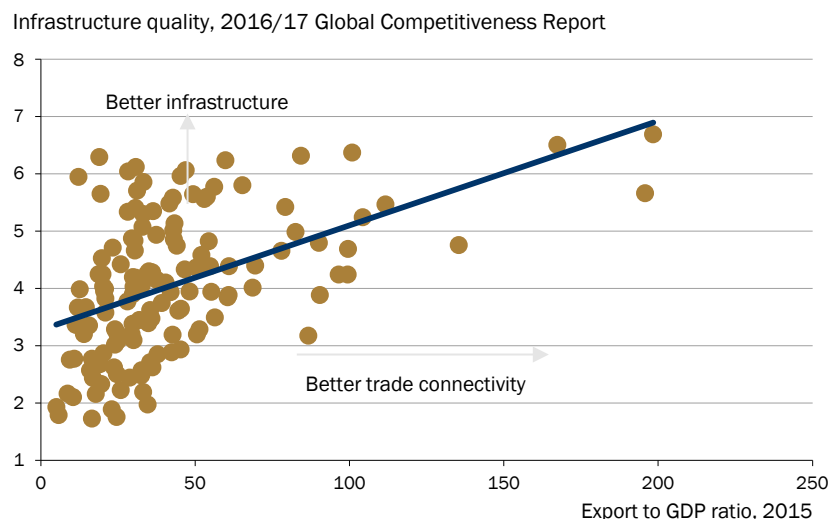
Less positively, the share of Chinese direct investment heading to B&R has remained stable around five percent in recent years. This may reflect China's priorities shifting from commodity-producers to those that can help shift China up the global manufacturing value chain. In this respect a stable overall share could reflect rebalancing of capital connectivity within B&R economies (see Fig. 7). It could also reflect China's increased need to use outward investment to tap into new technologies, more typically found in advanced economies than in the predominantly-emerging B&R. Alternatively, this could reflect blockages in financing for investment, which China is looking to address via a range of channels as discussed in the next chapter. Finally, the share of Chinese commodity imports sourced from B&R has edged up gradually over much of the past decade, after slipping in the early years of our index, and is now 5 percentage points higher than in 2008.

Nevertheless, on three of our four key benchmarking metrics, B&R connectivity to China is increasing faster than other regions of the world. Market forces have therefore over the past ten years been a powerful driver of greater connectivity between China and B&R countries. Looking ahead, the resources being marshalled for B&R investment (see section 4) should increasingly focus resources on cross-border investment into B&R economies, boosting the share of outbound direct investment from China heading to these countries, at the same time as supporting faster connectivity growth in other areas also.

3.5 The infrastructure-trade-growth nexus

The CCI also provides important new evidence about the relationship between infrastructure, trade and growth in B&R economies. As shown in Fig. 16, at the global level, there is a clear correlation between the capacity of an economy to facilitate trade and the strength of its infrastructure (as measured by the World Economic Forum's Global Competitiveness Report).

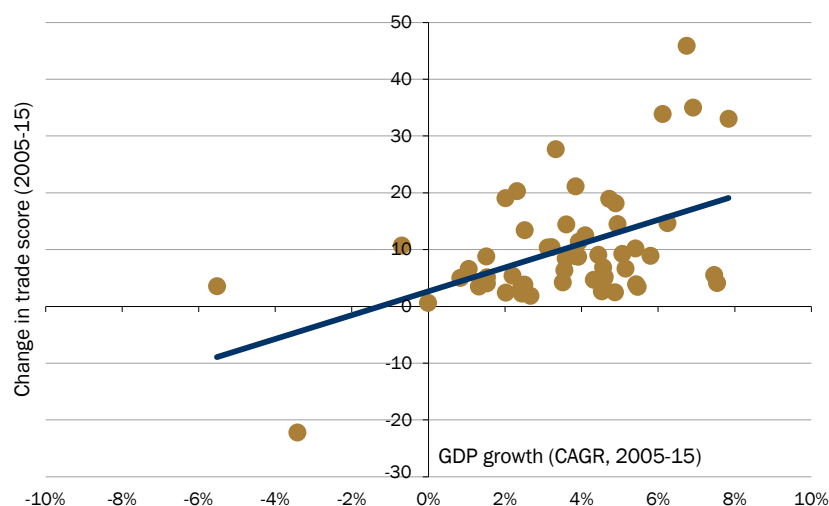
Fig. 16. Trade connectivity demands good infrastructure



Source: World Economic Forum / Oxford Economics

In turn, within B&R economies, growth of trade connectivity with China is well-correlated with average GDP growth over our sample period. Excluding a small number of outlier economies ⁷ there is a clear correlation between improvements in China trade connectivity and average GDP growth (Fig. 17).

Fig. 17. Trade connectivity and GDP growth



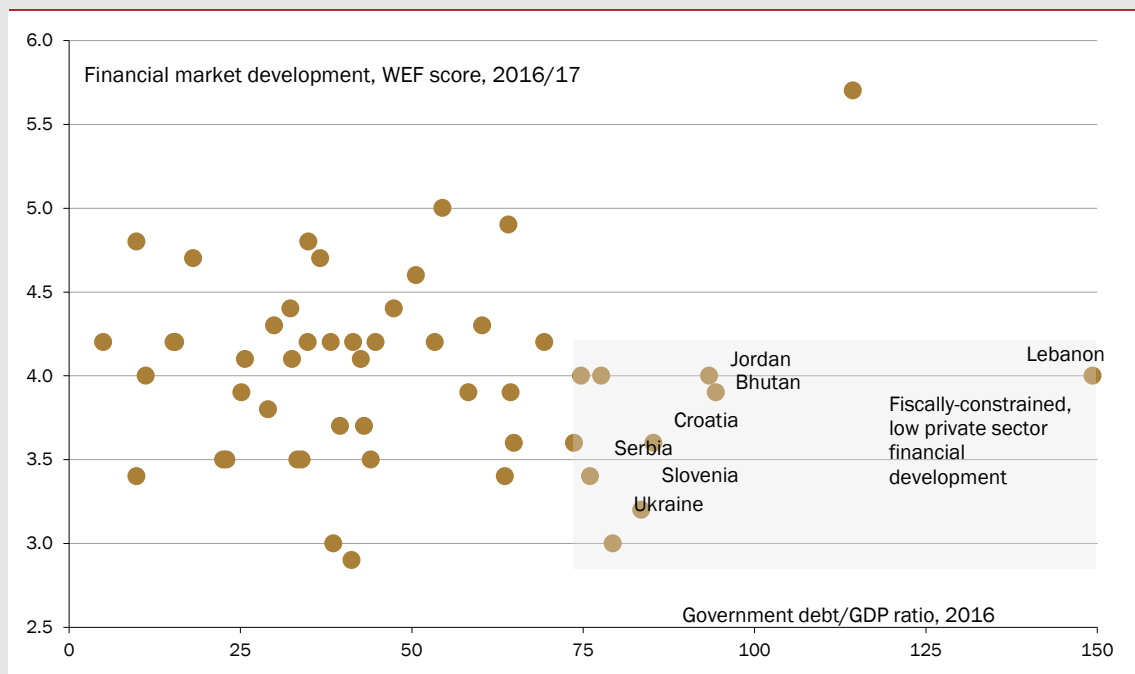
Source: Oxford Economics

The link between investment in infrastructure and overall economic prosperity in B&R is clear. But as we have seen in Fig. 2 and Fig. 16, too many economies around the world, including in the B&R region, still suffer from substantial infrastructure constraints. In fast-growing economies such as those in South, South East and Central Asia in particular, poor infrastructure can act as a bottleneck to growth. Boosting investment in infrastructure is therefore crucial to long-term prosperity – and it is here where B&R can play a key role.

⁷ For example countries which have seen; post-conflict reconstruction (such as Iraq and Afghanistan); the discovery of major new hydrocarbon reserves and subsequent investment (e.g. Azerbaijan, Turkmenistan), or; one-off investment projects (e.g. the building of World Cup infrastructure in Qatar).

Box 1 – Where can B&R unlock infrastructure investment?

Fig. 18. Bottlenecks to infrastructure investment in B&R



Source: Oxford Economics/World Economic Forum

We examine in detail the vehicles set up for infrastructure investment in the B&R region in chapter 4. But while these vehicles are still in their relatively early stages, it is worth identifying economies where extra financing could unlock infrastructure investment. In Fig. 18 we examine financial market development (using the World Economic Forum's Global Competitiveness Index) across B&R, alongside the indebtedness of governments. This is important in the context of understanding where new financing might unblock bottlenecks, and support ongoing connectivity improvements and growth across the B&R.

In countries with high financial market development a major contribution to infrastructure investment can be made from private finance, for example via bonds or bank lending. In these economies, Chinese investment can be used to leverage wider private sector participation. In economies where financial markets more broadly are less developed but the government has better access to credit and a relatively low debt stock, government investment can be mobilised to improve infrastructure, again potentially in cooperation with B&R funding.

But where financial development is relatively weak and governments are heavily indebted, B&R financing will be crucial. In this respect we highlight Jordan and Lebanon. Both are struggling with the economic, financial and fiscal impacts of the crisis in Syria. Ukraine's debt crisis and the fiscal impact of conflict is likely to limit public investment in the years ahead, while weak financial development will impinge upon private financing. Bhutan is also fiscally-constrained, and has relatively low financial sector development. In these economies, B&R financing will have a crucial role to play in stimulating investment.

In EU member countries (e.g. Croatia and Slovenia) and candidate countries (such as Serbia) B&R could also play a key role. In these economies, the EU's own structural funds might also be expected to make a major contribution to infrastructure investment—as has been the case in other new EU member states. But as we discuss in the next chapter, China is set to play a far more important role in infrastructure investment in these economies in the years ahead, given the formation of several new financing and policy initiatives with CEE economies.

3.6 Conclusions – Outlook for B&R connectivity

Our analysis shows that the CCI reflects closely several key features of China's economic evolution over the past decade, as well as the impacts of these changes across the 64 countries of the B&R region. We find that the impact of these changing priorities has been to decouple connectivity from geography, although ASEAN economies remain the most connected.

We also demonstrated new evidence on the importance of infrastructure for trade connectivity, and trade connectivity in turn for growth and prosperity in the B&R region. Finally, we identified where B&R financing could make the most crucial contribution to new infrastructure development in the years ahead. But as we look forward, a range of possible outcomes for B&R connectivity are possible.

For example, in a “high implementation” scenario whereby China successfully and efficiently mobilises internal and external resources, we might expect a broad-based improvement in infrastructure quality and China Connectivity - albeit with faster connectivity growth in countries that will also benefit from “market-led” connectivity”.

Alternatively, if implementation were slower, held up by either internal bureaucratic hurdles, weaker domestic growth reducing resources available for investment, or difficulty in agreeing cost-sharing with partners, a “low implementation” scenario is possible. In this scenario, a greater divergence of connectivity is likely, between those countries whose channels of connectivity with China are in China's priority sectors, and those whose channels of connectivity are not.

In our next section we examine the broad policy agenda the Chinese government has set out for B&R implementation. Like the initiative itself, these policies are in large part still in their infancy. But the CCI (alongside our complementary Economic Health Index) will provide a valuable tool to track the implementation of B&R, and its economic impacts across the region.

4. B&R connectivity in the future

“The Belt and Road Initiative aims to deepen “connectivity” across countries and regions: connectivity in infrastructure, trade, finance, policies and, perhaps most important of all, among peoples. [...] It is rooted in a shared vision for global development.”

UN Secretary-General Antonio Guterres, Opening remarks at the B&R Forum for International Cooperation, Beijing, May 2017

4.1 B&R as a multi-generational process

Deepening economic links with China are already having a profound effect on the B&R countries, and we can expect this to continue in the years ahead. As we have seen in the previous chapters, our China Connectivity Index closely reflects China’s changing economic priorities over the past decade, with connectivity pillars tracking commodity trade showing a decline in connectivity and those tracking consumer demand and a shift up the value chain displaying rising connectivity. In turn, countries best placed to exploit opportunities from China’s new economic agenda have risen up the overall connectivity rankings.

But the B&R programme is only just beginning. Development of globally-connected infrastructure and economic connectivity is a multi-generational process. The evolution of trade and investment flows between the member countries of NAFTA, EU or ASEAN have all required substantial commitments over a period of decades. This will also be the case for the B&R initiative—which in a geographical sense is far more ambitious than any of these previous attempts to boost economic connectivity.

4.2 Marshalling resources for B&R

Working in partnership with B&R governments to tackle the infrastructure deficit is a key objective for China in the years ahead. The Chinese government is committing substantial funding to several new investment vehicles, as well as bolstering existing institutions with a new mandate to support B&R. It is important to note the bulk of this funding has yet to be deployed, so current CCI results reflect little of this investment.

To support infrastructure development outside of China itself the **Asian Infrastructure Investment Bank (AIIB)** has the potential to be the most powerful. The AIIB is a multilateral organisation, with 52 members, including several outside of Asia. Total capitalisation of the bank is US \$100 billion, with China providing a quarter. The bank has a mandate to finance “Asia-related” infrastructure in member economies. The Bank lent approximately US \$1.7 billion in 2016 to nine projects across Asia and the Middle East.

Elsewhere, the **New Development Bank (NDB)**, previously the BRICS Development Bank) also has a mandate to lend for projects that promote infrastructure and development with a significant impact in member countries. Three of the five member economies of the NDB are part of B&R (China, Russia and India), and the bank’s Vice President said in 2016 that expansion to new members was a priority.

China is also acting through new investment funds, over which it will have more autonomy. **The Silk Road Fund** is a Chinese state-owned investment fund, set up in 2014 with an endowment of US \$40 billion from the Chinese government. The fund’s mandate is to upgrade infrastructure along the B&R, and it has so far made

three investments – most significantly in the China-Pakistan Economic Corridor, which is discussed in more depth below.

In 2016, China set up the **Sino-CEE Fund**, with an endowment of €10 billion and the aim to leverage a further €50 billion. The fund will focus on Central and Eastern Europe but could extend its operations to other regions for projects supporting China-CEE connectivity.

Fig. 19. Principle B&R investment vehicles

Institution	Capital	Focus	Membership/Control
Asia Infrastructure Investment Bank	US \$100 billion	Asia	Broad-based
New Development Bank	US \$50 billion	BRIC economies	BRIC economies
Silk Road Fund	US \$40 billion	B&R	China
Sino-CEE Fund	US \$10 billion	B&R European economies	China

Source: Oxford Economics

China has also increasingly permitted the **China Development Bank (CDB)** to start invest overseas in recent years. The bank was founded in 1994, and at end-2015 had RMB 9.2 trillion (US \$1.4 trillion) in loans outstanding. However, the CDB is likely to remain primarily focussed on domestic economic development—supporting transition away from heavy industry in the north-east and financing economic development in western provinces.

Chinese commercial banks are also increasing their financing to B&R projects, supported by official co-financing. For example, the **China-Pakistan Economic Corridor (CPEC)** is a network of connected projects boosting maritime, rail and road connectivity between the two countries, as well as upgrading utilities infrastructure in Pakistan. Total financing committed across the CPEC is expected to amount to US \$62 billion over the period from 2015-2030, coming from a wide range of sources, including commercial and multilateral banks. Analysis of the “big four” Chinese state-owned commercial banks suggests they lent a total of US \$90 billion into B&R economies in 2016. However, it not clear how much of this lending related to the infrastructure related objectives of the B&R initiatives, as opposed to more standard commercial activity.

Finally, **the initiative has also been formally recognised by the global development financing community**. At the B&R summit, a Memorandum of Understanding was signed by the Asian Infrastructure Investment Bank, the New Development Bank, the Asian Development Bank, the World Bank, the European Investment Bank, and the European Bank for Reconstruction and Development. At the summit, Jean-Christophe Laloux, Director-General of the European Investment Bank said “We appreciate the tremendous efforts of all involved and recognise the clear the leadership that China has shown to develop this key initiative”.

4.3 Policies to unlock soft barriers to B&R

The Chinese government is also acting in several other areas to stimulate B&R connectivity.

Trade agreements are the most visible (and probably most powerful) means of spurring flows of economic factors across borders. To this end China is currently negotiating no fewer than 19 Free Trade Agreements (FTA). These include FTAs with several B&R economies, as well as with existing customs unions such as ASEAN and the Eurasian Economic Union. The ultimate prize from a B&R perspective would of course be a China-European Union FTA, and this is a long-term objective for the EU. However, the initial priority is the conclusion of a bilateral investment agreement, as well as the resolution of several sectoral trade issues between the two parties.

Broader diplomatic and political fora are also being established to develop dialogue on economic connectivity between China and B&R. For example, the China-CEE regional cooperation initiative, which aims to intensify and expand cooperation between China and 11 EU member states and 5 Balkan economies (some of whom are candidates for EU membership). The initiative aims at encouraging cooperation in the fields of investment, transport, finance, science, education, and culture. In the framework of the initiative, China has defined three potential priority areas for economic cooperation – infrastructure, high technology industries, and green technology.

China is also aiming to internationalise the Renminbi, to spur its use as a means of exchange for international trade and investment flows. Exchange rate management is a key lever of Chinese economic policy though, so a fully-convertible currency is unlikely for some time. Nevertheless, through a range of policy measures at home and abroad, the government is aiming to make it easier and faster for overseas firms and investors to access Renminbi (RMB) and exchange it for other currencies—thereby reducing logistical barriers to trade. China agreed its first currency swap with South Korea in 2009, and since then has agreed swaps with 33 central banks (including the ECB), 19 of which are in B&R economies. China has also gone further in selected key financial centres, licensing offshore clearing banks for RMB in 23 economies around the world. However, these are more heavily concentrated in advanced economies outside of the B&R, with only six in the B&R region. Looking ahead, further internationalisation of RMB is likely, but Fig. 20 summarises the current state of play.

Fig. 20. Policy measures to unlock connectivity

		Free Trade Agreement	Central Bank currency swap	RMB clearing centre
1	Thailand			
2	Malaysia			
3	United Arab Emirates			
4	Sri Lanka			
5	Singapore			
6	Russian Federation			
7	Qatar			
8	Pakistan			
9	Indonesia			
10	Hungary			
11	Vietnam			
12	Uzbekistan			
13	Ukraine			
14	Turkey			
15	Tajikistan			
16	Philippines			
17	Nepal			
18	Myanmar			
19	Mongolia			
20	Maldives			

Source: Oxford Economics

	Denotes policy agreement in place or in negotiation between B&R economy and China
	No policy agreement in place or in negotiation

5. Conclusion

Much has already been achieved in boosting B&R connectivity, even prior to the formal announcement of the initiative in 2013. B&R exports are accounting for a steadily rising portion of China's demand in some key areas, allowing B&R economies to tap into China's rapid growth. But within B&R there have been some important shifts in relative connectivity between regions – largely driven by changing priorities for the Chinese economy.

The outlook is clearly positive for the future of B&R connectivity. Resources are being marshalled for a substantial financial stimulus to boost infrastructure spending across the B&R regions, while trade, investment and financial sector policies are also being liberalised to unlock potential economic flows.

We expect China's domestic economic agenda to continue to be a key factor in connectivity developments looking ahead. The growing importance in recent years of services trade, supply chain connectivity, and outward investment in higher value-added economies are all set to persist. So while ASEAN economies may remain the most-connected with China, those in CEE and key tourism destinations are likely to close the gap. Connectivity with commodity-based Middle Eastern and Central Asian economies may fall further if these countries fail to diversify into sectors better-aligned with China's own priorities.

Trends in the wider global economy should be supportive of B&R connectivity in the years ahead. After several years of very slow global trade growth, data from the first half of 2017 suggests a reinvigoration of global trade activity. With an increasingly-positive economic outlook across many developed and emerging economies, global trade flows and demand for Chinese goods and services should strengthen in the coming years.

But several key sources of risk remain, particularly with respect to an uncertain global geopolitical landscape. An increase in protectionism in key advanced economies could prevent market forces from driving global trade growth, and therefore China's trade connectivity. In the Middle East, diplomatic tensions could undermine the freedom of movement of goods and people across a key region for China-Europe trade. And slower-than-expected growth in China would cut resources available for B&R investment – even as it makes better connectivity more crucial. Finally, from a political perspective, it will be important to ensure the consensus over economic connectivity between China and B&R being mutually-beneficial is sustained, and that partner economies see plenty of direct economic gain.

The China Connectivity Index will be a crucial tool in the years ahead. CCI will remain the key resource for B&R stakeholders seeking to stay informed of connectivity enhancements in the years ahead. This report will be updated on a semi-annual basis, reviewing latest trends in China-B&R economic connectivity, as well as progress made in delivering against policy pledges. Moreover, our work on China Connectivity will be complemented by an ongoing monitoring of economic health in B&R economies. For our initial assessment of economic health in B&R, please see the complementary paper accompany this China Connectivity report.

Annex 1 – Methodology

5.1 One index, three dimensions, ten pillars

The China Connectivity Index comprises of three dimensions of bilateral economic connectivity, and within each of these dimensions there are several distinct pillars. Dimensions of connectivity can be thought of as a factor of production or output being exchanged between China and the respective B&R economy, while a pillar reflects specific types of that factor or output. It is important to note that the overarching purpose of the index is to gauge relative, not absolute, connectivity between China and B&R countries. For example, countries that do a greater share of their trade with China will show greater connectivity, rather than countries with the highest dollar values of trade being the most connected.

To gauge how bilateral connectivity between China and B&R economies has evolved over time and across countries, we have benchmarked each country against the most-connected economy in 2015, on each pillar within each dimension. For example, in the trade dimension, we have calculated the share of each country's exports bound for China from 2005 to 2015, and benchmarked this against Singapore, which is the most-connected economy on this dimension. The most-connected economy in 2015 is assigned a score of 100 on that dimension, and others are benchmarked against this.

We have then weighted together scores across pillars using their relative importance to GDP in each country. This enables connectivity to be calculated in each dimension depending on what matters to that specific economy. For example, tourism flows are clearly crucial for the economy of the Maldives and tourism spending is therefore a much greater share of GDP than commodity or non-commodity goods exports. This method allows the China Connectivity Index to more accurately reflect connectivity as relevant to specific economies.

Finally, we have weighted together connectivity across the three dimensions to an overall index score using a 60-30-10 weighting for trade, capital and people connectivity. This reflects the fact that in aggregate, trade typically accounts for a far greater proportion of GDP than does capital investment, and the fact that people and capital connectivity is often a means to deepening trade.

In the section below we briefly set out the metrics used for each pillar of connectivity across the three dimensions.

5.2 Trade dimension

Non-commodity goods exports: China's economic growth has propelled it from being the world's 10th-largest importer of non-commodity goods in 2000 to 2nd-largest in 2016. China is a key export market for B&R manufacturers. This pillar uses UN COMTRADE data to track the importance of China as a consumer for B&R economies for non-commodity goods.

Commodity exports: Thanks to rapid economic growth and investment in recent decades, China accounted for almost half of global consumption of all major base metals in 2015. This pillar tracks how important commodity trade with China has become for B&R economies, again using UN COMTRADE data for relevant product codes.

Services trade: Chinese outbound tourism totalled 122 million visitors in 2016, with a total outbound spend of US \$108 billion. This pillar tracks how important these Chinese tourists are to B&R economies, using Oxford Economics' Tourism Decision Metrics database.

Supply chain: China's reputation as "workshop of the world" is well-deserved, as the country makes an ever-increasing contribution to the manufacturing and service sector supply chain in other economies. This pillar tracks intermediate imports from China to B&R economies, again using UN COMTRADE data for relevant product codes. Note, this does not track imports of consumer goods from China.

5.3 Capital dimension

Direct investment: China's early growth phase typically consisted of inbound direct investment as major global corporations sought to take advantage of China's competitive advantage. But China's role as an outbound investor has become increasingly important, and indications are that Chinese outbound investment surpassed inbound investment for the first year in 2016. This pillar tracks direct investment from China into B&R economies using the IMF's Coordinated Direct Investment Survey and UNCTAD.

Portfolio investment: China's portfolio assets overseas have risen from US \$92 billion in 2004 to over US \$260 billion in 2015. This pillar tracks the importance of portfolio flows from China to B&R economies. This pillar tracks direct investment from China into B&R economies using the IMF's Coordinated Portfolio Investment Survey and data from the Chinese State Administration for Foreign Exchange.

Official investment: China's overseas aid finance has grown from close to zero in 2000 to US \$9 billion in 2016, with the promise of a US \$20 billion package for Africa in the coming three years. This pillar tracks how crucial these flows are to B&R economies, using data from AidData.org.

5.4 People dimension

Chinese workers in B&R: Chinese workers form a key part of the workforce in several B&R economies. This pillar tracks which countries rely most heavily on Chinese workers to support growth, using data from the UN's Migration and Remittance databases.

B&R workers in China: Several other economies have a large expatriate workforce in China, with remittances growing ten-fold between 2000 and 2015. This pillar tracks which countries gain most from their citizens working in China, using the same UN databases as the above pillar.

Social connectivity: Around 68 million overseas citizens visited China in 2016. While not directly a driver of economic prospects in B&R countries, we include the importance of China as a tourist destination given the potential longer-term spill over benefits from trade and investment that are linked to tourism. Again, we use Oxford Economics' Tourism Decision Metrics.

Fig. 21. Structure of China Connectivity Index

Dimension	Pillar	Indicator	Weight within dimension
Trade Connectivity (60% weighting)	Commodity Exports	Non-commodity goods exports to China % GDP	18.75%
		Non-commodity goods exports to China % total non-commodity exports	18.75%
	Non-Commodity Exports	Commodity exports to China % GDP	6.25%
		Commodity exports to China % total commodity exports	6.25%
	Services Trade	Tourism spending from China % GDP	18.75%
		Tourism spending from China % total inbound tourism spend	18.75%
	Supply Chain Imports	Supply chain imports from China % GDP	6.25%
		Supply chain imports from China % total supply chain imports	6.25%
Capital Connectivity (30% weighting)	Direct Investment	Inward direct investment from China % GDP	25.00%
		Inward direct investment from China % total inward FDI	25.00%
	Portfolio Investment	Total portfolio investment from China % GDP	15.00%
		Total portfolio investment from China % total inward portfolio investment	15.00%
	Official Financing	Official financing from China % GDP	10.00%
		Official financing from China % total government expenditure	10.00%
People Connectivity (10% weighting)	Chinese Workers in B&R	Migrants from China % national employment	17.50%
	B&R workers in China	Migrants to China % national employment	17.50%
	Social interaction	Visitors to China & national population	32.50%
		Visitors to China % total outbound tourists	32.50%

Source: Oxford Economics

Annex 2 – Connectivity Tables

Connectivity index results summary - 2005

Overall rank	Country	Overall score	Trade score	Capital score	People score	Trade rank	Capital rank	People rank
1	Mongolia	68.8	71.2	68.9	53.4	1	1	2
2	Singapore	40.7	51.5	11.6	63.1	2	15	1
3	Malaysia	26.6	31.6	9.6	47.6	3	20	4
4	Thailand	23.3	25.8	16.0	29.5	8	7	6
5	Vietnam	22.7	28.6	9.1	27.6	5	25	7
6	Philippines	22.1	23.0	9.8	53.4	10	19	3
7	Kazakhstan	20.6	29.3	9.3	2.0	4	22	23
8	Oman	19.9	27.9	10.4	0.4	7	17	51
9	Yemen, Rep.	18.7	28.4	4.8	1.9	6	57	25
10	Iraq	18.1	23.5	13.2	0.4	9	12	49
11	Cambodia	18.0	15.7	28.0	1.8	13	3	28
12	Brunei	15.8	5.5	37.6	12.3	29	2	10
13	Indonesia	15.4	17.9	9.1	19.9	12	23	9
14	Russian Federation	15.3	20.6	7.6	7.0	11	29	14
15	Kyrgyz Republic	12.7	14.0	13.0	4.3	14	13	17
16	Bangladesh	12.5	9.8	18.6	10.4	18	4	11
17	Nepal	10.8	11.0	12.4	5.1	15	14	15
18	Sri Lanka	9.6	4.5	13.2	29.5	35	11	5
19	Jordan	9.6	10.7	7.2	10.2	16	32	12
20	Myanmar	9.1	8.5	5.9	22.4	23	49	8
21	India	8.5	10.2	6.9	3.1	17	37	19
22	Pakistan	8.4	8.8	7.0	10.1	21	36	13
23	United Arab Emirates	8.3	9.1	9.5	0.2	19	21	54
24	Azerbaijan	7.8	3.6	18.6	1.2	39	5	33
25	Afghanistan	7.5	9.1	6.9	0.0	20	39	57
26	Belarus	7.4	7.0	10.7	0.2	26	16	55
27	Iran, Islamic Rep.	7.1	8.7	5.7	1.5	22	52	29
28	Hungary	6.8	7.8	6.5	1.9	24	44	27
29	Macedonia, FYR	6.8	2.2	18.2	0.0	47	6	57
30	Saudi Arabia	6.7	7.4	7.3	0.4	25	30	48
31	Lao PDR	6.5	3.7	13.5	2.3	38	10	21
32	Estonia	6.2	6.7	7.1	0.3	27	35	53
33	Kuwait	5.5	4.9	8.1	1.1	32	28	34
34	Egypt, Arab Rep.	5.4	6.1	5.3	1.3	28	54	31
35	Israel	5.4	4.6	7.2	4.3	34	34	16
36	Tajikistan	5.1	1.0	15.1	0.0	57	8	56
37	Lebanon	4.9	3.5	8.1	3.9	40	27	18
38	Qatar	4.8	4.6	6.7	0.6	33	42	43
39	Uzbekistan	4.8	5.0	5.1	3.0	31	55	20
40	Czech Republic	4.6	4.4	6.5	0.8	36	46	41
41	Bahrain	4.5	4.1	6.7	0.8	37	40	39
42	Ukraine	4.5	5.3	3.8	1.2	30	61	32
43	East Timor	4.3	2.3	9.9	0.0	46	18	57
44	Bulgaria	4.3	3.4	7.2	1.0	41	33	36
45	Bhutan	3.9	-0.8	14.6	0.0	64	9	57
46	Maldives	3.9	1.6	9.1	2.2	52	24	22
47	Montenegro	3.5	2.1	7.3	0.9	49	31	38
48	Albania	3.5	2.8	5.8	0.3	44	51	52
49	Turkmenistan	3.5	1.4	8.8	0.0	54	26	57
50	Turkey	3.4	2.7	5.3	1.9	45	53	26
51	Slovak Republic	3.3	2.2	6.5	0.5	48	43	46
52	Serbia	3.3	1.8	6.9	1.4	51	38	30
53	Poland	3.3	3.2	4.3	0.7	42	60	42
54	Romania	3.2	3.0	4.4	0.8	43	59	40
55	Croatia	2.8	1.0	6.7	1.9	56	41	24
56	Palestine	2.6	1.5	5.9	0.0	53	50	57
57	Moldova	2.6	1.9	4.8	0.0	50	56	57
58	Slovenia	2.6	0.9	6.5	0.4	58	45	50
59	Lithuania	2.3	0.5	6.5	0.5	60	47	47
60	Syrian Arab Republic	2.0	1.1	4.4	0.6	55	58	44
61	Latvia	1.9	-0.2	6.5	0.9	63	48	37
62	Bosnia and Herzegovina	1.4	0.5	3.8	0.0	61	62	57
63	Georgia	0.8	-0.1	2.8	0.5	62	63	45
64	Armenia	-0.1	0.6	-2.1	1.0	59	64	35

Source: Oxford Economics

Note: Top 10 ranking countries by dimension are shaded green; bottom 10 ranking countries are shaded red

Connectivity index results summary - 2010

Overall rank	Country	Overall score	Trade score	Capital score	People score	Trade rank	Capital rank	People rank
1	Mongolia	79.2	81.2	83.0	56.1	1	1	2
2	Singapore	51.5	53.1	44.8	62.2	2	4	1
3	Vietnam	35.3	49.8	6.7	33.6	3	47	5
4	Cambodia	34.1	28.1	56.1	3.8	10	3	18
5	Malaysia	33.5	41.2	14.1	45.7	4	14	4
6	Thailand	30.2	35.0	22.4	24.9	7	11	7
7	Philippines	27.7	27.0	22.1	48.6	12	12	3
8	Oman	27.1	39.5	10.8	1.3	6	17	32
9	Kazakhstan	26.7	39.8	8.4	3.3	5	29	20
10	Brunei	25.1	7.5	63.8	14.8	42	2	10
11	Pakistan	22.5	19.8	32.7	7.9	17	6	13
12	Iraq	22.4	34.0	6.3	0.7	8	53	51
13	Kyrgyz Republic	19.4	27.0	10.2	1.1	13	20	36
14	Yemen, Rep.	18.9	28.5	4.8	3.3	9	60	21
15	Indonesia	18.8	21.7	12.7	19.4	15	16	9
16	Iran, Islamic Rep.	18.6	27.9	5.5	2.3	11	57	26
17	Myanmar	18.5	11.7	30.6	22.6	28	8	8
18	Bangladesh	18.4	12.9	32.6	8.1	26	7	12
19	Lao PDR	17.6	15.8	26.7	1.2	21	10	35
20	Afghanistan	17.0	24.8	6.9	0.0	14	42	57
21	Russian Federation	15.3	20.0	9.1	6.0	16	27	14
22	Maldives	14.4	18.6	9.6	3.9	18	24	17
23	Belarus	14.2	8.4	30.4	0.4	39	9	55
24	India	13.2	16.4	10.3	2.8	20	19	24
25	Tajikistan	12.9	4.9	33.2	0.0	50	5	56
26	Czech Republic	12.4	16.9	6.9	1.2	19	41	33
27	Uzbekistan	11.8	15.2	8.3	2.1	22	31	27
28	Hungary	11.8	15.0	8.4	2.5	23	30	25
29	Saudi Arabia	11.7	14.2	10.5	0.9	25	18	44
30	Kuwait	11.3	14.7	8.1	1.0	24	33	40
31	Jordan	10.6	12.7	6.3	11.0	27	52	11
32	Sri Lanka	9.9	7.2	8.7	29.7	43	28	6
33	Nepal	9.5	10.5	9.6	3.9	32	23	16
34	Ukraine	9.2	8.4	13.3	1.9	40	15	29
35	Bahrain	9.0	11.3	6.8	1.3	29	44	31
36	Slovak Republic	8.8	11.2	6.6	0.8	30	49	47
37	Israel	8.7	9.8	7.4	5.7	33	37	15
38	Qatar	8.7	11.0	6.7	0.8	31	48	48
39	United Arab Emirates	8.4	9.3	9.3	0.7	35	25	52
40	Armenia	8.0	9.2	8.0	1.0	36	34	42
41	Estonia	7.7	9.1	7.3	0.4	37	38	54
42	Poland	7.1	8.7	5.9	0.8	38	55	46
43	Macedonia, FYR	7.1	9.3	5.0	0.0	34	58	57
44	Turkey	6.2	6.7	6.8	1.9	44	46	28
45	Azerbaijan	6.1	5.1	9.8	1.2	49	22	34
46	Lebanon	5.9	5.2	8.3	3.4	47	32	19
47	Egypt, Arab Rep.	5.9	6.4	6.0	2.8	45	54	23
48	Moldova	5.9	7.5	4.6	0.0	41	61	57
49	Serbia	5.3	4.9	7.4	1.1	51	36	37
50	Montenegro	5.2	3.1	10.2	3.0	56	21	22
51	Albania	5.1	5.4	5.8	0.8	46	56	49
52	East Timor	5.0	3.8	9.2	0.0	55	26	57
53	Slovenia	4.9	4.7	6.8	1.0	53	45	39
54	Romania	4.6	5.1	4.8	0.9	48	59	45
55	Bhutan	4.2	-0.2	14.6	0.0	64	13	57
56	Syrian Arab Republic	3.9	4.2	4.3	0.9	54	62	43
57	Georgia	3.9	4.7	3.3	0.6	52	64	53
58	Bulgaria	3.8	2.6	7.3	1.0	57	39	41
59	Croatia	3.6	2.3	6.8	1.7	59	43	30
60	Palestine	3.2	1.8	7.0	0.0	60	40	57
61	Turkmenistan	3.1	1.4	7.7	0.0	61	35	57
62	Latvia	2.8	1.2	6.5	1.1	62	51	38
63	Lithuania	2.7	1.2	6.5	0.7	63	50	50
64	Bosnia and Herzegovina	2.6	2.4	3.8	0.0	58	63	57

Source: Oxford Economics

Note: Top 10 ranking countries by dimension are shaded green; bottom 10 ranking countries are shaded red

Connectivity index results summary - 2013

Overall rank	Country	Overall score	Trade score	Capital score	People score	Trade rank	Capital rank	People rank
1	Mongolia	64.1	71.9	51.1	56.1	1	2	2
2	Singapore	55.5	58.9	47.0	60.0	2	3	1
3	Cambodia	40.0	45.5	41.2	3.4	6	4	18
4	Vietnam	39.3	56.7	6.1	34.5	3	54	5
5	Malaysia	36.8	48.6	12.3	39.8	4	17	4
6	Thailand	35.9	46.8	17.5	25.5	5	8	7
7	Iraq	28.0	43.2	6.8	0.5	7	46	52
8	Maldives	27.3	39.4	10.0	6.9	8	21	14
9	Kyrgyz Republic	27.0	36.6	16.2	1.4	10	10	31
10	Kazakhstan	26.0	38.9	7.9	2.8	9	29	22
11	Philippines	25.6	24.9	19.2	49.3	15	7	3
12	Brunei	24.5	6.7	63.8	13.1	49	1	9
13	Yemen, Rep.	22.7	30.9	13.1	2.3	11	15	25
14	Indonesia	21.1	26.0	12.4	18.5	14	16	8
15	Pakistan	19.4	27.5	7.1	7.4	13	39	13
16	Iran, Islamic Rep.	19.2	28.8	5.5	2.5	12	57	24
17	Qatar	16.1	23.2	7.3	0.5	16	35	51
18	Lao PDR	15.4	22.5	6.1	1.2	17	53	35
19	Afghanistan	15.2	21.9	6.8	0.0	18	47	57
20	Russian Federation	14.8	20.0	7.9	5.0	19	30	17
21	Saudi Arabia	14.5	19.3	9.2	1.0	20	22	39
22	United Arab Emirates	13.0	17.2	8.8	0.7	21	24	48
23	Oman	12.7	15.4	11.4	0.9	26	18	44
24	Sri Lanka	12.6	13.0	5.3	32.3	30	59	6
25	Czech Republic	12.5	17.0	7.0	1.4	22	40	32
26	Slovak Republic	12.1	16.7	6.7	0.9	23	48	42
27	Kuwait	11.9	15.6	8.1	1.0	24	27	37
28	Bahrain	11.5	15.6	6.8	1.0	25	45	38
29	India	11.2	14.3	7.6	2.9	28	32	21
30	Nepal	11.2	10.5	14.4	5.3	35	12	15
31	Poland	10.9	9.3	17.4	0.8	40	9	47
32	Hungary	10.7	13.2	8.4	2.7	29	25	23
33	Georgia	10.7	6.2	22.8	0.6	50	5	49
34	Uzbekistan	10.6	14.9	5.1	1.7	27	60	30
35	Jordan	10.4	12.7	6.5	8.3	31	51	11
36	Myanmar	10.1	11.5	7.7	8.1	33	31	12
37	Israel	9.8	11.3	8.2	5.1	34	26	16
38	Bangladesh	9.2	8.4	10.7	9.0	42	20	10
39	Ukraine	9.0	12.7	4.2	1.8	32	62	28
40	East Timor	8.8	4.6	20.1	0.0	53	6	57
41	Estonia	8.5	10.5	7.3	0.3	36	34	55
42	Belarus	8.2	9.9	7.4	0.4	38	33	54
43	Bulgaria	7.8	7.3	11.0	1.0	46	19	41
44	Armenia	7.5	8.8	7.2	0.8	41	37	46
45	Macedonia, FYR	7.5	10.3	4.5	0.0	37	61	57
46	Turkey	7.2	8.1	7.1	1.9	43	38	27
47	Montenegro	7.1	7.7	7.3	3.1	44	36	20
48	Moldova	7.1	9.8	3.9	0.0	39	63	57
49	Lebanon	7.0	7.1	8.1	3.2	47	28	19
50	Egypt, Arab Rep.	6.9	7.7	6.8	2.3	45	43	26
51	Syrian Arab Republic	6.7	4.3	13.3	0.6	56	13	50
52	Serbia	6.3	6.8	6.8	1.2	48	44	34
53	Azerbaijan	5.4	4.4	8.9	0.8	55	23	45
54	Slovenia	5.3	5.2	6.9	1.2	51	41	36
55	Palestine	5.2	2.0	13.3	0.0	59	14	57
56	Bhutan	5.1	1.2	14.7	0.0	62	11	57
57	Albania	4.7	4.9	5.7	0.5	52	56	53
58	Romania	3.9	3.5	5.8	1.0	57	55	40
59	Bosnia and Herzegovina	3.9	4.6	3.8	0.0	54	64	57
60	Latvia	3.8	2.8	6.5	1.3	58	52	33
61	Croatia	3.4	1.9	6.9	1.7	60	42	29
62	Lithuania	3.0	1.6	6.6	0.9	61	49	43
63	Tajikistan	2.4	0.8	6.5	0.0	64	50	56
64	Turkmenistan	2.2	0.9	5.4	0.0	63	58	57

Source: Oxford Economics

Note: Top 10 ranking countries by dimension are shaded green; bottom 10 ranking countries are shaded red

China Connectivity Index results summary - 2015

Overall rank	Country	Overall score	Trade score	Capital score	People score	Trade rank	Capital rank	People rank
1	Mongolia	65.4	71.5	56.2	56.2	1	2	2
2	Singapore	57.1	61.6	47.4	58.9	3	3	1
3	Vietnam	42.1	62.5	4.7	31.9	2	57	6
4	Thailand	38.6	53.5	13.3	25.3	4	12	7
5	Malaysia	37.8	49.7	14.3	36.4	6	10	4
6	Cambodia	36.4	50.6	19.1	2.9	5	6	19
7	Maldives	31.6	47.4	8.6	6.2	7	22	14
8	Oman	28.6	42.3	10.5	0.9	8	17	43
9	Philippines	25.9	26.9	17.0	47.2	14	8	3
10	Brunei	25.8	9.0	63.8	13.0	45	1	9
11	Lao PDR	24.5	36.7	7.7	1.3	9	29	35
12	Kazakhstan	22.5	32.7	9.0	1.6	11	20	29
13	Kyrgyz Republic	21.9	32.9	6.8	1.2	10	40	38
14	Indonesia	21.2	26.7	11.1	18.0	15	16	8
15	Pakistan	20.5	29.9	6.2	6.9	12	48	11
16	Iran, Islamic Rep.	19.3	29.0	5.4	2.3	13	52	23
17	Russian Federation	17.3	23.8	8.4	4.9	16	24	16
18	Iraq	17.0	21.2	14.2	0.5	19	11	51
19	Nepal	17.0	15.6	24.2	4.0	28	5	17
20	Czech Republic	16.4	23.3	7.4	1.5	17	33	30
21	Sri Lanka	16.0	19.1	3.9	33.3	20	59	5
22	Montenegro	15.5	12.4	25.9	2.9	35	4	20
23	Qatar	15.0	21.4	7.1	0.6	18	37	50
24	Kuwait	14.8	18.3	12.2	1.3	22	13	33
25	Saudi Arabia	14.7	18.7	11.3	1.1	21	15	40
26	Jordan	13.2	17.5	6.6	6.8	23	43	12
27	Slovak Republic	12.0	16.6	6.7	0.9	24	41	41
28	India	11.9	15.7	7.6	2.6	27	31	22
29	United Arab Emirates	11.7	15.4	8.0	0.7	29	26	48
30	Belarus	11.5	16.0	6.3	0.4	25	47	52
31	Israel	11.5	13.3	9.7	6.1	30	19	15
32	Ukraine	11.2	16.0	4.5	2.2	26	58	24
33	Myanmar	11.0	12.6	7.9	10.7	33	27	10
34	Hungary	10.4	12.8	8.2	2.6	32	25	21
35	Estonia	9.2	11.7	7.2	0.3	38	36	55
36	Uzbekistan	9.2	12.4	5.2	2.0	36	55	26
37	Poland	9.2	12.0	6.3	0.8	37	46	47
38	Macedonia, FYR	9.1	12.6	5.1	0.0	34	56	57
39	Egypt, Arab Rep.	8.5	8.8	10.2	2.0	46	18	25
40	Serbia	8.5	10.6	6.6	1.3	40	44	34
41	Armenia	8.4	13.1	1.4	0.9	31	64	42
42	East Timor	8.3	4.6	18.3	0.0	56	7	57
43	Afghanistan	8.2	11.0	5.3	0.0	39	54	57
44	Turkey	8.1	9.3	7.8	1.9	42	28	27
45	Bahrain	7.7	9.2	6.8	0.8	43	38	46
46	Lebanon	7.5	8.2	7.6	3.0	47	30	18
47	Bangladesh	7.3	7.5	7.3	6.4	49	35	13
48	Moldova	7.3	10.3	3.7	0.0	41	63	57
49	Slovenia	6.8	7.5	7.3	1.2	48	34	36
50	Georgia	6.7	9.1	3.8	0.8	44	62	45
51	Bulgaria	6.7	7.1	7.5	1.1	50	32	39
52	Yemen, Rep.	6.2	6.1	8.5	0.4	52	23	54
53	Palestine	6.0	3.9	12.1	0.0	58	14	57
54	Albania	6.0	7.0	5.8	0.4	51	51	53
55	Azerbaijan	6.0	5.4	8.6	1.4	54	21	31
56	Bhutan	5.1	1.2	14.7	0.0	62	9	57
57	Romania	4.9	4.9	6.2	1.2	55	49	37
58	Bosnia and Herzegovina	4.6	5.8	3.8	0.0	53	60	57
59	Syrian Arab Republic	4.6	4.6	6.0	0.6	57	50	49
60	Latvia	4.4	3.8	6.5	1.3	59	45	32
61	Lithuania	3.7	2.7	6.7	0.9	60	42	44
62	Croatia	3.2	1.6	6.8	1.7	61	39	28
63	Turkmenistan	1.8	0.4	5.3	0.0	64	53	57
64	Tajikistan	1.6	0.8	3.8	0.0	63	61	56

Source: Oxford Economics

Note: Top 10 ranking countries by dimension are shaded green; bottom 10 ranking countries are shaded red

Trade connectivity summary - 2015

Overall rank	Country	Overall trade connectivity	Non-commodity goods exports to China % GDP	Commodity exports to China % GDP	Supply chain imports from China % GDP	Tourism spending from China % GDP	Non-commodity goods exports to China % GDP	Commodity exports to China % GDP	Supply chain imports from China % GDP	Tourism spending from China % GDP
		0-100					Rank	Rank	Rank	Rank
1	Mongolia	71.5	0.62%	31.70%	9.68%	1.17%	27	1	6	5
2	Vietnam	62.5	6.64%	2.02%	23.50%	1.35%	3	6	1	4
3	Singapore	61.6	16.24%	0.05%	11.35%	1.07%	1	37	4	6
4	Thailand	53.5	4.58%	1.25%	8.98%	3.55%	4	11	9	2
5	Cambodia	50.6	2.10%	0.14%	20.37%	2.62%	7	28	2	3
6	Malaysia	49.7	8.03%	0.74%	9.23%	0.55%	2	15	7	11
7	Maldives	47.4	0.00%	0.00%	3.68%	21.93%	61	63	20	1
8	Oman	42.3	0.71%	19.44%	1.77%	0.03%	23	2	51	42
9	Lao PDR	36.7	3.54%	7.17%	9.23%	0.59%	5	4	8	10
10	Kyrgyz Republic	32.9	0.43%	0.12%	10.85%	0.25%	30	30	5	15
11	Kazakhstan	32.7	1.64%	1.42%	2.21%	0.13%	9	9	43	20
12	Pakistan	29.9	0.64%	0.08%	3.74%	0.01%	26	34	19	48
13	Iran, Islamic Rep.	29.0	0.71%	0.18%	1.02%	0.00%	22	25	61	50
14	Philippines	26.9	1.77%	0.42%	3.18%	0.16%	8	20	28	17
15	Indonesia	26.7	1.17%	0.57%	3.08%	0.12%	14	16	29	23
16	Russian Federation	23.8	0.76%	1.37%	1.88%	0.10%	21	10	49	25
17	Czech Republic	23.3	0.97%	0.03%	8.51%	0.14%	17	44	10	18
18	Qatar	21.4	2.73%	0.46%	1.74%	0.03%	6	18	52	40
19	Iraq	21.2	0.00%	5.58%	4.36%	0.00%	63	5	14	55
20	Sri Lanka	19.1	0.28%	0.09%	3.84%	0.33%	35	32	17	14
21	Saudi Arabia	18.7	0.84%	0.02%	2.57%	0.00%	19	46	37	51
22	Kuwait	18.3	0.69%	0.02%	3.20%	0.00%	24	47	27	53
23	Jordan	17.5	0.57%	0.00%	5.50%	0.09%	29	60	12	26
24	Slovak Republic	16.6	1.29%	0.01%	5.80%	0.04%	13	52	11	36
25	Belarus	16.0	1.42%	0.01%	3.50%	0.02%	11	50	24	45
26	Ukraine	16.0	0.79%	1.86%	3.08%	0.01%	20	7	30	49
27	India	15.7	0.38%	0.08%	2.70%	0.03%	32	33	36	43
28	Nepal	15.6	0.05%	0.01%	3.57%	0.34%	50	54	22	13
29	United Arab Emirates	15.4	0.65%	0.03%	4.53%	0.21%	25	43	13	16
30	Israel	13.3	1.06%	0.03%	1.19%	0.03%	15	42	59	44
31	Armenia	13.1	0.01%	1.56%	2.16%	0.63%	58	8	44	9
32	Hungary	12.8	1.46%	0.02%	3.56%	0.00%	10	49	23	56
33	Myanmar	12.6	0.11%	0.85%	2.13%	0.50%	43	13	45	12
34	Macedonia, FYR	12.6	1.39%	0.03%	2.94%	0.07%	12	39	31	28
35	Montenegro	12.4	0.03%	0.19%	3.45%	0.00%	54	24	25	56
36	Uzbekistan	12.4	0.87%	1.03%	2.81%	-	18	12	32	-
37	Poland	12.0	0.41%	0.02%	3.37%	0.04%	31	48	26	39
38	Estonia	11.7	0.61%	0.16%	3.94%	0.07%	28	27	16	29
39	Afghanistan	11.0	0.02%	0.03%	1.91%	-	55	40	48	-
40	Serbia	10.6	0.05%	0.01%	2.70%	1.01%	51	53	35	7
41	Moldova	10.3	0.13%	0.00%	4.04%	0.03%	42	58	15	41
42	Turkey	9.3	0.11%	0.17%	2.36%	0.06%	45	26	40	33
43	Bahrain	9.2	0.14%	0.00%	3.64%	0.00%	41	59	21	52
44	Georgia	9.1	0.07%	0.83%	2.72%	0.14%	49	14	34	19
45	Brunei	9.0	0.30%	0.40%	1.96%	0.82%	34	21	47	8
46	Egypt, Arab Rep.	8.8	0.04%	0.10%	2.37%	0.04%	52	31	38	37
47	Lebanon	8.2	0.01%	0.02%	3.83%	0.06%	59	45	18	32
48	Slovenia	7.5	0.32%	0.07%	2.73%	0.10%	33	36	33	24
49	Bangladesh	7.5	0.15%	0.12%	2.28%	0.00%	40	29	42	54
50	Bulgaria	7.1	1.00%	0.22%	1.67%	0.09%	16	23	53	27
51	Albania	7.0	0.02%	0.44%	2.01%	0.13%	56	19	46	21
52	Yemen, Rep.	6.1	0.01%	0.01%	1.09%	0.01%	57	55	60	47
53	Bosnia & Herzegovina	5.8	0.10%	0.00%	2.32%	0.07%	46	57	41	30
54	Azerbaijan	5.4	0.07%	0.00%	0.80%	0.06%	48	62	62	34
55	Romania	4.9	0.28%	0.05%	1.48%	0.02%	36	38	55	46
56	East Timor	4.6	0.00%	0.00%	0.51%	-	62	56	64	-
57	Syrian Arab Republic	4.6	0.11%	0.03%	2.37%	0.06%	44	41	39	31
58	Palestine	3.9	0.00%	0.00%	1.87%	-	64	64	50	-
59	Latvia	3.8	0.20%	0.25%	1.33%	0.04%	38	22	57	38
60	Lithuania	2.7	0.20%	0.08%	1.41%	0.05%	37	35	56	35
61	Croatia	1.6	0.15%	0.01%	0.73%	0.13%	39	51	63	22
62	Bhutan	1.2	0.00%	0.00%	1.25%	-	60	61	58	-
63	Tajikistan	0.8	0.08%	0.56%	12.52%	-	47	17	3	-
64	Turkmenistan	0.4	0.04%	17.60%	1.56%	-	53	3	54	-

Source: Oxford Economics

People connectivity summary - 2015

Overall rank	Country	Overall people connectivity	Visitors to China % population	Visitors to China % total outbound tourists	Migrants from China % national employment	Migrants to China % national employment	Visitors to China % population	Visitors to China % total outbound tourists	Migrants from China % national employment	Migrants to China % national employment
0-100							Rank	Rank	Rank	Rank
1	Singapore	58.9	16.32%	9.92%	12.34%	0.00%	1	6	1	11
2	Mongolia	56.2	10.61%	66.40%	0.84%	0.00%	2	1	3	11
3	Philippines	47.2	0.99%	21.22%	0.09%	0.19%	8	2	14	1
4	Malaysia	36.4	3.55%	12.76%	0.07%	0.04%	3	5	17	4
5	Sri Lanka	33.3	0.28%	7.22%	0.03%	0.07%	21	8	25	2
6	Vietnam	31.9	0.42%	15.57%	0.01%	0.05%	11	3	34	3
7	Thailand	25.3	0.94%	8.80%	0.26%	0.04%	9	7	7	5
8	Indonesia	18.0	0.21%	6.33%	0.06%	0.03%	32	9	18	6
9	Brunei	13.0	2.10%	0.78%	1.07%	0.00%	4	32	2	11
10	Myanmar	10.7	0.15%	13.24%	0.12%	0.00%	37	4	10	11
11	Pakistan	6.9	0.06%	5.48%	0.00%	0.01%	48	10	39	7
12	Jordan	6.8	0.35%	2.84%	0.62%	0.00%	16	16	4	11
13	Bangladesh	6.4	0.02%	2.33%	0.31%	0.01%	51	20	5	8
14	Maldives	6.2	1.20%	2.51%	0.00%	0.00%	6	18	40	11
15	Israel	6.1	1.33%	3.34%	0.02%	0.00%	5	12	29	11
16	Russian Federation	4.9	0.34%	2.72%	0.08%	0.00%	17	17	16	9
17	Nepal	4.0	0.05%	4.09%	0.14%	0.00%	49	11	8	11
18	Lebanon	3.0	0.38%	1.83%	0.13%	0.00%	13	23	9	11
19	Cambodia	2.9	0.25%	3.26%	0.02%	0.00%	23	13	28	11
20	Montenegro	2.9	1.07%	1.69%	0.00%	0.00%	7	24	40	11
21	Hungary	2.6	0.22%	0.47%	0.27%	0.00%	30	43	6	11
22	India	2.6	0.02%	2.44%	0.00%	0.00%	52	19	38	10
23	Iran, Islamic Rep.	2.3	0.11%	2.94%	0.00%	0.00%	43	15	40	11
24	Ukraine	2.2	0.35%	1.66%	0.04%	0.00%	15	25	21	11
25	Egypt, Arab Rep.	2.0	0.08%	3.05%	0.00%	0.00%	46	14	36	11
26	Uzbekistan	2.0	0.20%	2.32%	0.00%	0.00%	34	21	40	11
27	Turkey	1.9	0.17%	2.01%	0.01%	0.00%	36	22	33	11
28	Croatia	1.7	0.39%	1.36%	0.03%	0.00%	12	26	23	11
29	Kazakhstan	1.6	0.42%	1.20%	0.02%	0.00%	10	27	26	11
30	Czech Republic	1.5	0.24%	0.43%	0.09%	0.00%	25	45	13	11
31	Azerbaijan	1.4	0.30%	0.91%	0.00%	0.00%	20	29	40	11
32	Latvia	1.3	0.37%	0.58%	0.02%	0.00%	14	36	27	11
33	Kuwait	1.3	0.31%	0.28%	0.00%	0.00%	19	50	40	11
34	Serbia	1.3	0.19%	0.45%	0.09%	0.00%	35	44	15	11
35	Lao PDR	1.3	0.12%	0.48%	0.10%	0.00%	40	42	12	11
36	Slovenia	1.2	0.00%	0.00%	0.11%	0.00%	54	54	11	11
37	Romania	1.2	0.23%	0.83%	0.04%	0.00%	27	30	20	11
38	Kyrgyz Republic	1.2	0.23%	0.80%	0.01%	0.00%	28	31	31	11
39	Bulgaria	1.1	0.28%	0.52%	0.03%	0.00%	22	40	22	11
40	Saudi Arabia	1.1	0.13%	0.68%	0.00%	0.00%	38	35	40	11
41	Slovak Republic	0.9	0.21%	0.26%	0.04%	0.00%	31	51	19	11
42	Armenia	0.9	0.22%	0.51%	0.00%	0.00%	29	41	40	11
43	Oman	0.9	0.13%	0.54%	0.00%	0.00%	39	39	40	11
44	Lithuania	0.9	0.32%	0.42%	0.00%	0.00%	18	46	35	11
45	Georgia	0.8	0.24%	0.55%	0.01%	0.00%	24	38	30	11
46	Bahrain	0.8	0.23%	0.11%	0.00%	0.00%	26	53	40	11
47	Poland	0.8	0.20%	0.71%	0.01%	0.00%	33	34	32	11
48	United Arab	0.7	0.10%	0.39%	0.00%	0.00%	44	48	40	11
49	Syrian Arab Republic	0.6	0.05%	1.00%	0.00%	0.00%	50	28	40	11
50	Qatar	0.6	0.12%	0.17%	0.00%	0.00%	41	52	40	11
51	Iraq	0.5	0.06%	0.75%	0.00%	0.00%	47	33	40	11
52	Belarus	0.4	0.12%	0.40%	0.00%	0.00%	42	47	40	11
53	Albania	0.4	0.08%	0.34%	0.00%	0.00%	45	49	40	11
54	Yemen, Rep.	0.4	0.01%	0.57%	0.00%	0.00%	53	37	40	11
55	Estonia	0.3	0.00%	0.00%	0.03%	0.00%	54	54	24	11
56	Tajikistan	0.0	-	-	0.00%	0.00%	-	-	37	11
57	Afghanistan	0.0	-	-	0.00%	0.00%	-	-	40	11
58	Palestine	0.0	-	-	0.00%	0.00%	-	-	40	11
59	Moldova	0.0	0.00%	0.00%	0.00%	0.00%	54	54	40	11
60	Bosnia and	0.0	0.00%	0.00%	0.00%	0.00%	54	54	40	11
61	Turkmenistan	0.0	-	-	0.00%	0.00%	-	-	40	11
62	East Timor	0.0	-	-	0.00%	0.00%	-	-	40	11
63	Bhutan	0.0	-	-	0.00%	0.00%	-	-	40	11
64	Macedonia, FYR	0.0	0.00%	0.00%	0.00%	0.00%	54	54	40	11

Source: Oxford Economics

Capital connectivity summary - 2015

Overall rank	Country	Overall capital connectivity	Inward direct investment from China % GDP	Total portfolio investment from China % GDP	Official financing from China % GDP	Inward direct investment from China % GDP	Total portfolio investment from China % GDP	Official financing from China % GDP
		0-100				Rank	Rank	Rank
1	Brunei	63.8	24.12%	0.00%	0.00%	2	43	8
2	Mongolia	56.2	0.28%	6.55%	0.00%	9	1	8
3	Singapore	47.4	37.98%	0.83%	0.00%	1	2	8
4	Montenegro	25.9	0.29%	0.00%	19.15%	8	43	1
5	Nepal	24.2	0.03%	0.00%	1.49%	32	41	2
6	Cambodia	19.1	0.63%	0.00%	0.00%	7	35	8
7	East Timor	18.3	0.03%	0.00%	0.00%	35	43	8
8	Philippines	17.0	0.69%	0.12%	0.00%	6	6	8
9	Bhutan	14.7	0.21%	0.00%	0.00%	12	43	8
10	Malaysia	14.3	2.47%	0.09%	0.00%	3	8	7
11	Iraq	14.2	0.01%	0.00%	0.00%	48	38	8
12	Thailand	13.3	0.93%	0.14%	0.00%	4	4	8
13	Kuwait	12.2	0.74%	0.00%	0.00%	5	33	8
14	Palestine	12.1	0.03%	0.00%	0.00%	31	43	8
15	Saudi Arabia	11.3	0.24%	0.00%	0.00%	11	30	8
16	Indonesia	11.1	0.10%	0.20%	0.00%	21	3	8
17	Oman	10.5	0.13%	0.00%	0.00%	16	43	8
18	Egypt, Arab Rep.	10.2	0.02%	0.02%	0.00%	43	18	8
19	Israel	9.7	0.27%	0.11%	0.00%	10	7	8
20	Kazakhstan	9.0	0.04%	0.00%	0.00%	27	34	8
21	Azerbaijan	8.6	0.00%	0.01%	0.00%	52	28	8
22	Maldives	8.6	0.07%	0.00%	0.00%	23	43	8
23	Yemen, Rep.	8.5	0.03%	0.00%	0.00%	38	43	8
24	Russian Federation	8.4	0.03%	0.05%	0.00%	39	12	8
25	Hungary	8.2	0.18%	0.12%	0.00%	13	5	8
26	United Arab Emirates	8.0	0.15%	0.05%	0.00%	14	11	8
27	Myanmar	7.9	0.13%	0.00%	0.00%	17	43	8
28	Turkey	7.8	0.03%	0.09%	0.00%	40	9	8
29	Lao PDR	7.7	0.05%	0.00%	0.00%	24	43	8
30	Lebanon	7.6	0.02%	0.01%	0.02%	44	23	5
31	India	7.6	0.03%	0.04%	0.00%	33	14	8
32	Bulgaria	7.5	0.12%	0.00%	0.00%	18	29	8
33	Czech Republic	7.4	0.10%	0.03%	0.00%	20	16	8
34	Slovenia	7.3	0.10%	0.03%	0.00%	22	15	8
35	Bangladesh	7.3	0.00%	0.01%	0.00%	56	21	8
36	Estonia	7.2	0.00%	0.00%	0.00%	55	37	8
37	Qatar	7.1	0.01%	0.02%	0.00%	49	17	8
38	Bahrain	6.8	0.02%	0.02%	0.00%	42	19	8
39	Croatia	6.8	0.01%	0.00%	0.00%	47	32	8
40	Kyrgyz Republic	6.8	0.14%	0.00%	0.00%	15	43	8
41	Slovak Republic	6.7	0.03%	0.00%	0.00%	37	36	8
42	Lithuania	6.7	0.03%	0.00%	0.00%	34	43	8
43	Jordan	6.6	0.11%	0.00%	0.00%	19	31	8
44	Serbia	6.6	0.00%	0.01%	0.00%	60	20	8
45	Latvia	6.5	0.00%	0.00%	0.00%	63	43	8
46	Poland	6.3	0.04%	0.07%	0.00%	26	10	8
47	Belarus	6.3	0.02%	0.00%	0.00%	41	40	8
48	Pakistan	6.2	0.01%	0.01%	0.00%	46	26	8
49	Romania	6.2	0.03%	0.00%	0.00%	30	39	8
50	Syrian Arab Republic	6.0	0.04%	0.00%	0.02%	28	43	4
51	Albania	5.8	0.00%	0.00%	0.00%	57	43	8
52	Iran, Islamic Rep.	5.4	0.01%	0.00%	0.00%	45	42	8
53	Turkmenistan	5.3	0.00%	0.00%	0.00%	61	43	8
54	Afghanistan	5.3	0.05%	0.00%	0.00%	25	43	8
55	Uzbekistan	5.2	0.00%	0.00%	0.00%	59	43	8
56	Macedonia, FYR	5.1	0.03%	0.00%	0.00%	36	43	6
57	Vietnam	4.7	0.00%	0.01%	0.00%	54	27	8
58	Ukraine	4.5	0.04%	0.01%	0.00%	29	25	8
59	Sri Lanka	3.9	0.01%	0.01%	0.00%	50	24	8
60	Bosnia and Herzegovina	3.8	0.00%	0.00%	0.00%	62	43	8
61	Tajikistan	3.8	0.00%	0.00%	0.00%	58	43	8
62	Georgia	3.8	0.00%	0.04%	0.00%	53	13	8
63	Moldova	3.7	0.01%	0.00%	0.00%	51	43	8
64	Armenia	1.4	-0.27%	0.01%	0.24%	64	22	3

Source: Oxford Economics

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