ICBC Standard Bank

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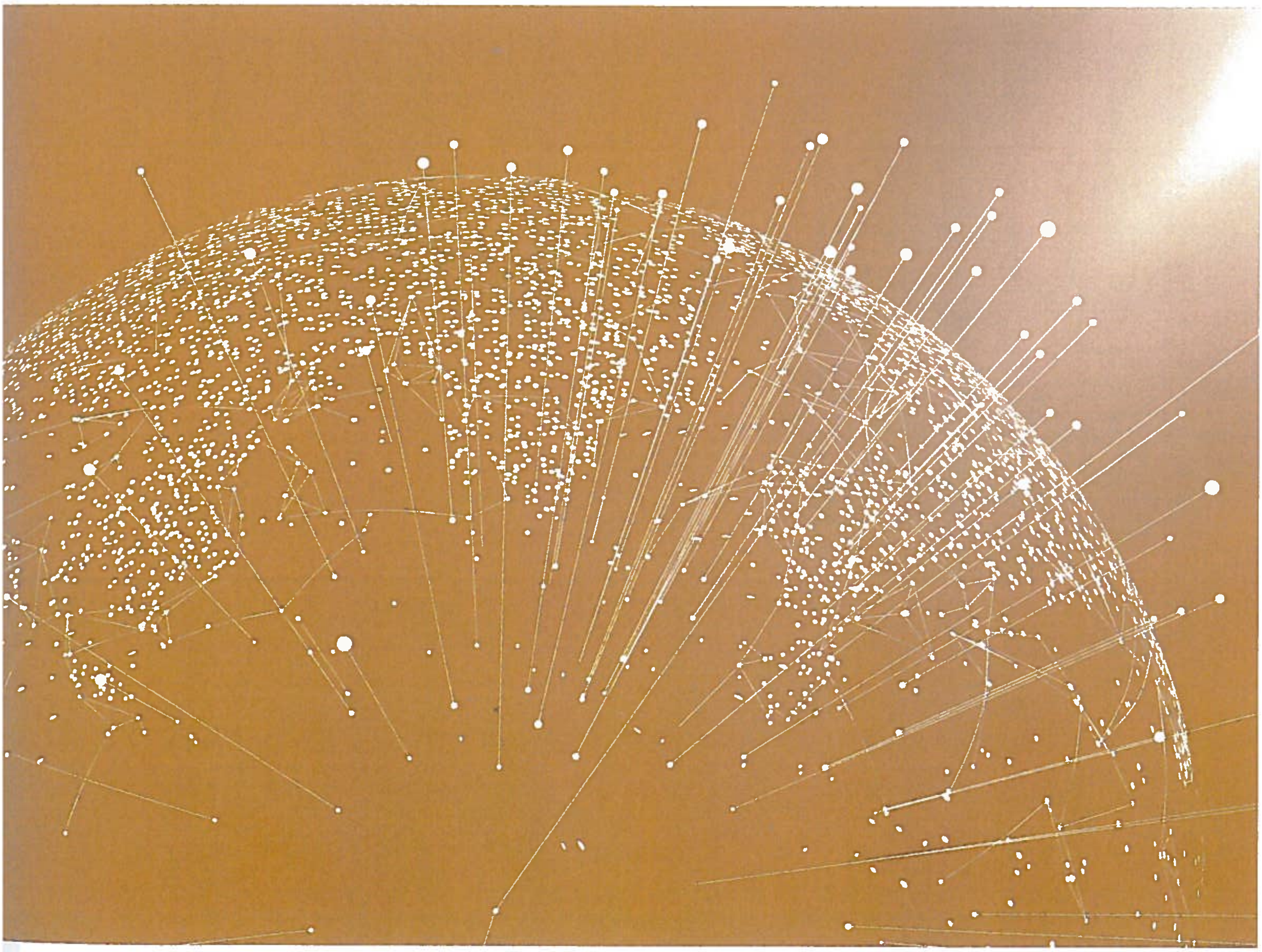
Belt and Road

Interim Report

Tracking evolving scope, discovering expanding opportunities

April 2018



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April 2018

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

Executive Summary

China's Belt and Road (B&R) initiative is well underway five years on from its conception. Countries around the world are starting to feel the impact of billions of dollars' worth of investment in transport and power infrastructure and in a host of other sectors.

Consistent with China's broad shift from bilateral to multilateral co-operation, the scope and nature of B&R has continued to evolve and expand as China seeks to consolidate its global activity under the coordinating framework of B&R. With more countries becoming involved, the initiative has expanded beyond the initial aim of improving connectivity across Eurasia and ASEAN nations to encompass a broader swathe of China's key trade links.

There is no formal definition of what constitutes a B&R project, but as we highlighted in our previous reports[1], five cooperation principles underscore the priorities of the B&R initiative: policy coordination, facilities connectivity, unimpeded trade, financial integration and people-to-people bond.

The scale of investment to date has been vast: we have tracked more than $750 billion in financing across 1,100 projects linked to the B&R. The transport and logistics sector has been the largest recipient of funds, with projects worth over $330 billion announced, in progress or completed since 2013. The energy sector is the next largest at $266 billion.

The B&R programme is estimated to ultimately require up to $8 trillion in investment spending but so far, less than 10 percent of funding has come from outside China. Over 80 percent of financing to date has been provided by large Chinese state-backed corporates and financial institutions. However, recent developments have hinted at increased interest from private sector banks and overseas governments. In addition, the private sector in China is helping to provide some financing alongside state-backed institutions.

There is no clear answer to exactly how many countries are involved in the B&R. But we have assessed 87 B&R partner countries to understand how they can benefit from investment opportunities. Our objective methodology assesses each country against its need for infrastructure investment, ability to supply finance and construction expertise, economic importance to China and its connectivity.

Our findings suggest that the other members of the BRICs (Brazil, Russia and India) as well as South Africa and Mexico are well placed to benefit from broad opportunities under the B&R initiative. These countries are well connected, economically important to China and able to provide financing and expertise into third-party countries.

Resource-rich but economically less-developed countries such as Indonesia are likely to see a broad range of investment interest from China, across natural resources, energy and transport infrastructure.

Smaller, strategically important countries such as Singapore and the UAE are economic hubs facilitating the international movement of goods and people, enhancing China's likely interest in logistics investments locally. Moreover,

[1] Belt & Road China Connectivity Index, 2017
https://www.icbcstandardbank.com/CorporateSite/BRIThought Leadership

both countries are well positioned to export finance and expertise in support of projects elsewhere across the B&R.

Elsewhere, developed economies such as Australia with natural resource reserves or large domestic markets are a likely key target for joint ventures and local business development, as unexploited resource assets are likely to be rarer or unavailable in these locations.

1. Introduction

China's Belt & Road (B&R) initiative is now entering its fifth year, with billions of dollars invested in new infrastructure across the world. The B&R programme, announced in 2013 by Chinese President Xi Jinping, has spurred investment in shipping, rail and road transport infrastructure and energy projects across Eurasia and Africa and is starting to attract private capital and financing from foreign governments.

The B&R initiative has evolved in sync with China's shift from a bilateral to a multilateral trade strategy. The ultimate aim of the programme is to provide a unifying framework to co-ordinate and increase the pace of China's efforts to build global trade corridors. It began with a core of countries geographically proximate to China but has subsequently expanded to absorb activities with China's traditional trading partners. A key focus of the shift to multilateralism is to spur inclusive economic growth by moving from simple transport corridors towards higher value economic corridors. In practice, this means the scope of B&R has expanded with investments not necessarily constrained to transport and energy infrastructure projects. Given the constantly evolving nature and scope of the initiative, tracking developments is complex, particularly with the lack of publically available official dataset.

In this context, this report can be viewed as a timely contribution to a currently fragmented literature. Much of the current commentary on B&R is underpinned, by necessity, more by rhetoric than by fact. This report aims to shed further light on the topic, first by describing events to date, and then by introducing a framework that can be used to understand how each country can gain from the initiative.

The report complements two reports released in 2017 by ICBC Standard Bank and Oxford Economics: the B&R Economic Health Index (EHI) and the B&R China Connectivity Index (CCI), which will both be updated in mid-2018. These publications are designed to help investors to find the right opportunities in this emerging web of B&R activity.

The rest of this report is set out as follows:

- **Chapter 2** examines the evolving nature and unifying role of B&R in the context of China's shift from bilateral economic cooperation to that of multilateralism;
- **Chapter 3** documents the composition of investment flows to date, assessing how they have been financed and where they have been focused at both an industry- and country-level;
- **Chapter 4** examines how each of the B&R countries can benefit from the initiative, assessing each objectively against themes of connectivity, economic importance, infrastructure need and financing and construction capability;
- **Chapter 5** offers concluding remarks and outlines future research;
- **Chapter 6** is an appendix detailing our methodological approach and data sources used in previous chapters.

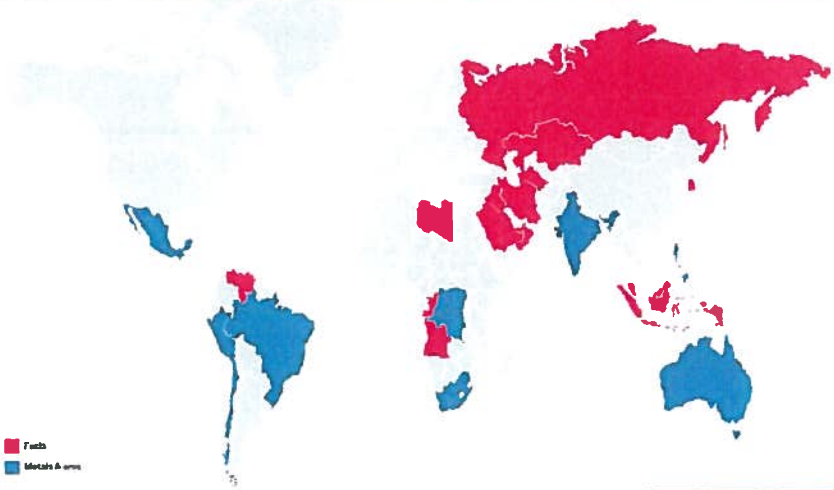
2. Evolving bilateral corridors to multilateral networks

2.1 China's evolving trade strategy

From the late 1970s China began implementing economic and political reforms, opening its borders to trade and significantly increasing integration with the wider world.

Chinese imports and exports rose rapidly in the 1980s through to the 2000s, helping to fuel resource-hungry economic expansion. To secure flows of the commodities and raw materials necessary to this growth, China started to develop closer bilateral ties with countries across Latin America, Africa and East Asia. Trade deals and foreign direct investment into the natural resources sector of developing countries helped to secure China's access to the energy and commodities essential to support rapid economic growth (Fig.1).[2]

Fig.1. Selected top 20 suppliers of fuel and metals & ore imports by value into China, 2012



Source: Oxford Economics

More recently, China has sought to alter its growth model in a number of directions including: increasing the share of consumer spending in GDP at the expense of investment; moving up the production value chain; and shifting towards a more environmentally sustainable pattern of growth. As part of this move, a greater emphasis on multilateralism is likely to be required, including developing closer ties with the further afield developed markets of Europe and North America. The evolution of the B&R initiative is consistent with this broad narrative which has seen China's trade policy shift away from securing commodity flows and bilateralism and towards wider co-ordination.

Co-operation discussions under B&R between China and other groups of nations began shortly after President Xi Jinping's announcement of the initiative in late 2013. The initial core of the B&R initiative was centred largely around China's most proximate major trading partners.

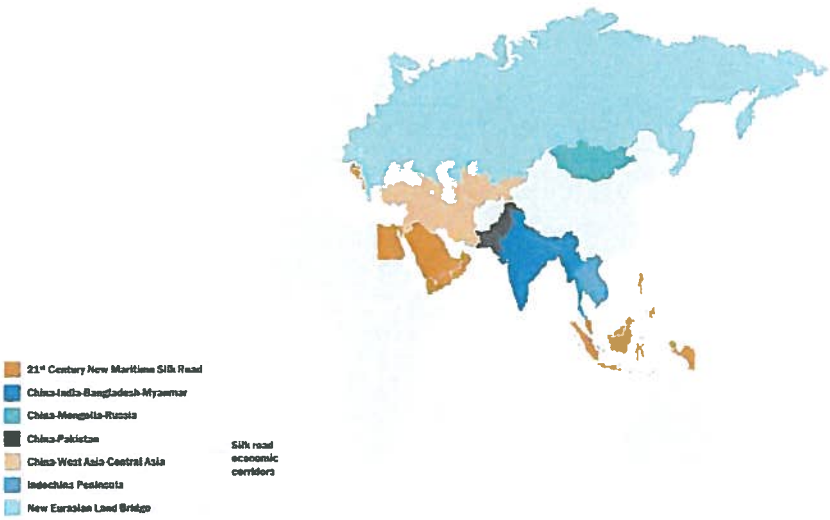
[2] Some countries are top 20 suppliers for both categories: in these cases, the largest category by value is used on the map.

The output of these diplomatic talks started to crystallise into what has become known as the land-based Silk Road Economic Belt and the 21st Century New Maritime Silk Road. Together, these cover 65 nations, with the concept based on that of the ancient cross-continental trading network (Fig.2). However, as we discuss in section 2.3, recent developments suggest that B&R is by no means limited to any fixed number of countries.

The land-based Silk Road Economic Belt portion of the B&R has evolved into six further 'economic corridors':

1. **the China – Pakistan Economic Corridor:** the concept was first raised in Pakistan in 2013 by Premier Li Keqiang
2. **the Bangladesh – China – India – Myanmar Economic Corridor:** first joint working group meeting convened in 2013
3. **the New Eurasia Land Bridge Economic Corridor**
4. **the China – Indochina Peninsula Economic Corridor:** Premier Li Keqiang put forward proposals towards deepening relationships in 2014
5. **the China – Mongolia – Russia Economic Corridor:** the three country leaders officially adopted a co-operation plan in 2015
6. **the China – Central Asia – West Asia Economic Corridor:** a declaration was signed by five Central Asian countries in 2015

Fig.2. Map showing the original 65 B&R countries



Source: Oxford Economics

2.2 Primary functions of the B&R economic corridors

The economic corridors and the maritime silk road fall into several groups based on how they allow China to achieve its strategic objectives, whether that be through improving access to export markets, raw materials or manufactured goods.

2.2.1 Improving access to export markets

The following corridors facilitate smoother trade links between China and some of the world's largest markets, with shorter lead times and fewer frictions.

- The **China – Pakistan Economic Corridor** helps improve maritime access between China and the world by building an improved route from Western China down to Pakistan's coast and the Gwadar Port, on which further development is underway.
- The **New Eurasian Land Bridge** improves access between the large European market and China through an improved rail network across the Eurasian continent. Both this corridor and the China - Pakistan Economic Corridor will help to provide greater access to market for China's Western Provinces, the industrialisation of which has been an aim of the central government since the "Go West" policy was introduced around the turn of the millennium.
- The **New Maritime Silk Road** joins countries inaccessible by land such as Indonesia and the Philippines to the B&R initiative, and helps to provide greater access to other large markets by sea, such as Europe via the Suez Canal.

2.2.2 Improving access to raw materials

These corridors focus on countries with geographical proximity to China from which a large quantity of natural resources are currently sourced.

- The **China – Mongolia – Russia Economic Corridor** improves access for China to raw materials. The Russian end of the corridor is proposed to extend to Ulan-Ude, home of the Zharchikhinski molybdenum mine, which is a significant input into steel manufacturing. Mongolia itself is a large provider of coal imports into China.
- The **China – Central Asia – West Asia Economic Corridor** includes the Central Asian Gas Pipeline, which provides China with new infrastructure to import natural gas from Kazakhstan.

2.2.3 Improving access to supply chains

The final two corridors relate to countries with developed manufacturing sectors that act as key links in China's supply chain. As wages continue to rise in China, improved transport links to lower-wage economies will be required for outsourcing additional manufacturing processes.

- **China – India – Bangladesh – Myanmar Economic Corridor.** China has a significant amount of trade with India and Bangladesh with high flows of intermediate goods as China outsources some manufacturing.
- The **Indochina Peninsula Economic Corridor** includes Thailand and Vietnam, to whom China exports significant volumes of intermediate goods.

2.3 Evolution of B&R beyond the economic corridors

Although the original core of B&R coalesced around 65 geographically close nations, the concept and scope of the initiative is constantly evolving and expanding and is not limited to a static definition. Indeed, Chinese officials have emphasised that the initiative is open to all countries regardless of geography[3]. Momentum is building in 2018 to take B&R even further afield, with China encouraging businesses in its first Arctic policy paper to build infrastructure and trial shipping routes to create a Polar Silk Road.

3 http://english.gov.cn/news/top_news/2015/04/18/content_281475091262006.htm

Beyond infrastructure and trade, the B&R initiative also targets people-to-people exchange through the culture and tourism industries. In the northern area of B&R, China and Mongolia recently have set up a Joint Council to boost tourism and culture exchange alongside the China-Mongolia-Russia economic corridor. Similarly, close to the southern maritime route, Yunnan and Myanmar are in close dialogues to improve bilateral people exchange through education and tourism to better link the Myanmar Economic corridor with ASEAN members.

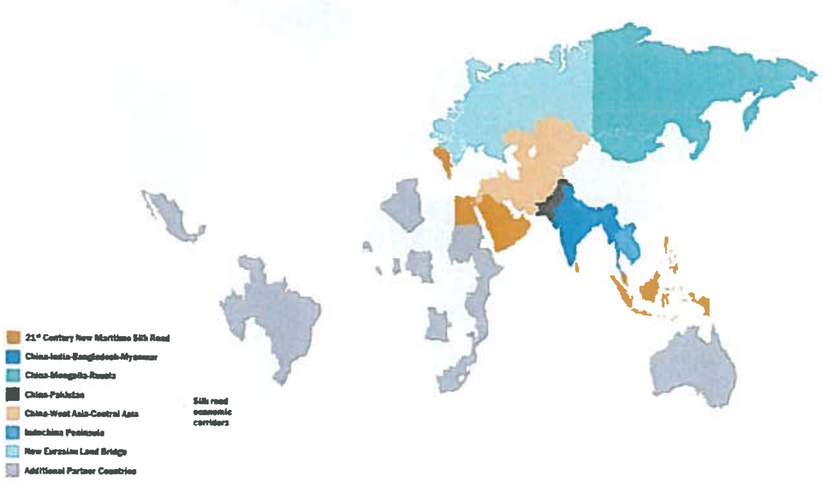
The first B&R Forum was held in 2017, providing one route for new members to join the initiative. The Forum marked the project's first official meeting, with 30 world leaders and a host of diplomats and other government representatives in attendance. A long list of new Memoranda of Understanding (MoU) were signed into effect, covering topics such as improving transport and trade connectivity, financial co-operation and knowledge transfer.

This wave of new agreements in the organised forum comes alongside a constant flow of additional MoUs being drawn up and signed bilaterally, as well as the Asian Infrastructure Investment Bank (AIIB) accepting a steady stream of new members.

Given this chain of events, in this paper we expand our focus beyond the 65 countries that China originally confirmed as being part of the scheme and that were the subject of 2017's EHI and CCI papers (Fig.3).

As such, we have identified 22 new partner countries worth adding into the B&R universe (Fig.4). The new set of partner countries is spread across three continents, including much of sub-Saharan Africa and South America. Key examples include Australia, which signed a limited MoU with China in late 2017, and Brazil, which signed an MoU with China in 2017 aimed at diversifying trade into the service sector.

Fig. 3. Expanded geographic scope of the B&R initiative



Source: Oxford Economics

Fig.4. 88 B&R countries (including China) considered in this paper

Original 65 countries plus China in B&R			*New 22 partner countries*
Afghanistan	Iran	Palestine	*Algeria*
Albania	Iraq	Philippines	*Angola*
Armenia	Israel	Poland	*Australia*
Azerbaijan	Jordan	Qatar	*Brazil*
Bahrain	Kazakhstan	Romania	*Cameroon*
Bangladesh	Kenya	Russia	*Dem. Rep. Congo*
Belarus	Kuwait	Saudi Arabia	*Ecuador*
Bhutan	Kyrgyz Republic	Serbia	*Ethiopia*
Bosnia & Herzegovina	Laos	Singapore	*Ghana*
Brunei	Latvia	Slovakia	*Jamaica*
Bulgaria	Lebanon	Slovenia	*Liberia*
Cambodia	Lithuania	Sri Lanka	*Mexico*
China	Macedonia	Syria	*Mozambique*
Croatia	Malaysia	Tajikistan	*Nigeria*
Czech Republic	Maldives	Thailand	*Peru*
East Timor	Moldova	Turkey	*Senegal*
Egypt	Mongolia	Turkmenistan	*South Africa*
Estonia	Montenegro	Ukraine	*Sudan*
Georgia	Myanmar	UAE	*Tanzania*
Hungary	Nepal	Uzbekistan	*Uganda*
India	Oman	Vietnam	*Venezuela*
Indonesia	Pakistan	Yemen	*Zimbabwe*

Source: Oxford Economics

3. B&R projects to date

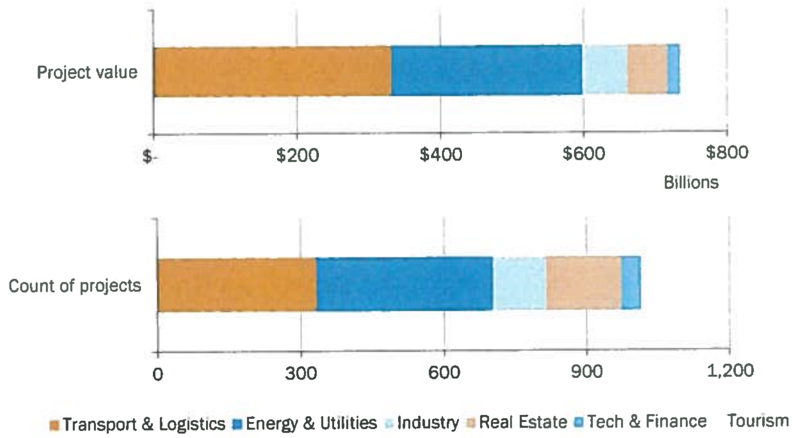
The on-the-ground impact of the B&R initiative is vast and continues to expand at a rapid rate. More investment projects are becoming shovel-ready while the list of countries involved is expanding, as detailed in the previous section. Alongside the extended geographic scope of B&R, sectoral coverage has also evolved beyond transport and energy infrastructure projects, and now covers industries such as real estate, tourism and finance.

Despite the sprawling size of the B&R initiative, no publicly-available official data source keeps tally of all these investments. As a result, much available information is qualitative, with few concrete facts and figures that encompass the full scope of the programme.

To provide an objective, quantitative assessment that illustrates the full impact of the initiative, we have synthesised existing datasets to assess progress since 2013.

Based on this, we estimate that there have been over 1,100 investment projects announced or underway, worth more than a total of $750 billion, that can be considered to fall inside the extended B&R banner since launch (Fig.5). These include infrastructure construction projects in B&R countries with Chinese involvement in some funding, construction or operating capacity, or Chinese investment directly into companies along the B&R. More information on the sources of this information is given in the Appendix.

Fig. 5. B&R projects announced, in progress or completed since 2013, total value and project count by sector



Source: Oxford Economics

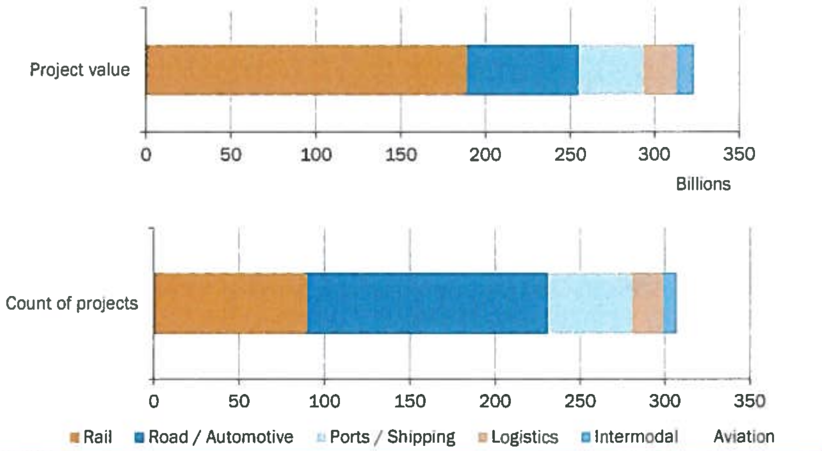
This chapter sets out where B&R investment has taken place across the world and across the sectors of the economy, and discusses how the financing of these projects has evolved since the start of the initiative.

3.1 B&R investment by sector

The transport and logistics sector has by far the highest concentration of B&R investments, with roughly $330 billion of tracked projects completed, in progress or announced since 2013 (Fig.6). This is consistent with China's stated aims of the B&R initiative to enhance the flow of goods, services and people across borders.

The energy and utilities sector has attracted the second-most investment since 2013, at $266 billion. These two sectors together represent more than three quarters of the tracked total and are what are typically considered as the mainstay of the B&R initiative.

Fig.6. Transport projects announced, in progress or completed since 2013, by sub-sector



Source: Oxford Economics

The remainder of the investments in our database are spread across sectors less directly associated with public infrastructure projects, including heavy industry, technology and finance, real estate and tourism.

Within technology and finance, the largest investments come from Chinese entities into businesses in developed markets such as Australia, Singapore and South Korea. Notable examples include a consortium of Chinese investors purchasing a Singaporean semi-conductor manufacturer and CEFC China Energy acquiring a 10 percent stake in Czech firm J&T Finance Group, with the ambition to increase that to 50 percent.

In heavier industry, significant investments include the Chinese Minmetals Corporation investing in a Glencore Xstrata-owned copper mine in Peru, and Chinese firm Zhongrun Resources investing in the Mongolian iron ore sector.

In the real estate construction and tourism sectors, notable B&R examples come from Sri Lanka's Port City central business district development, being built by the China Communications Construction Company, and Chinese firm Sinoma signing a deal to expand a cement manufacturing facility in Egypt.

Within transport and logistics, railways have attracted the highest value of investment at just under $190 billion in our database of tracked projects. Road and automotive projects is the next largest sector with a total investment of $66 billion, followed by ports & shipping category at $39 billion, the majority of which is investment in new or expanded harbours and port facilities. Intermodal investments cover only a handful of individual projects, while aviation is a relatively lightly-covered area of connectivity in the B&R initiative.

3.2 B&R investment by country

Investments to date have achieved a considerable geographic footprint – in our dataset we have tracked projects in 78 out of the 88 B&R countries identified within our newly expanded country list.

These projects split into two areas: construction projects breaking ground in B&R countries with Chinese involvement in their financing, building or operation, and M&A-type projects with Chinese entities investing in foreign companies and infrastructure assets.

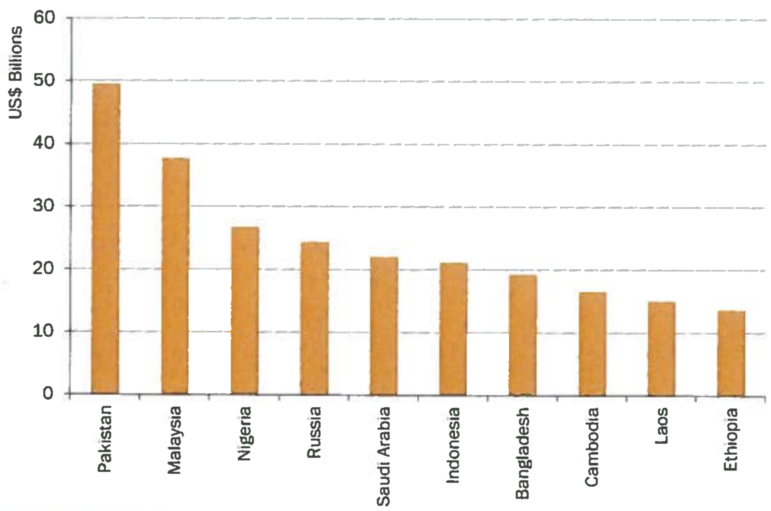
Countries with the largest concentration of construction projects tend to be in countries either geographically close to China, with significant natural resource reserves, or with the finances available to contract Chinese engineering companies to build their domestic infrastructure. The most significant of these countries include Pakistan, Malaysia and Nigeria (Fig.7).

Construction projects in Pakistan include significant investment in transport and energy infrastructure, including rail, roads and seaports as well as coal, gas, and hydroelectric power plants. Malaysia and Nigeria's B&R projects have a similar major focus on transport improvements, but also feature more investment in the mining and oil sectors.

The countries with the next highest investment in Greenfield construction B&R projects are Russia, Saudi Arabia and Indonesia. Russia's largest project is the planned Moscow to Kazan high speed railway, a project that would significantly reduce travel times across the 800km stretch of the country and in turn, could act to reduce land travel times between China and Europe. Construction in Saudi Arabia also includes an internal high-speed rail link, as well as several oil and gas sector investments, while Indonesia features many natural resource sector projects across metals and coal.

These projects address some of China's strategic aims, helping to link China with new routes to market and improving connections with key economies, as well as creating additional natural resource extraction capacity.

Fig.7. Construction projects announced, in progress or completed since 2013, 10 largest country totals



Source: Oxford Economics

Aside from construction B&R projects, there are M&A-type projects where China is involved by purchasing shares in foreign companies and buying rights to operate key transport and energy infrastructure assets. These projects tend to be either in markets at the more developed end of the spectrum or in resource-rich countries.

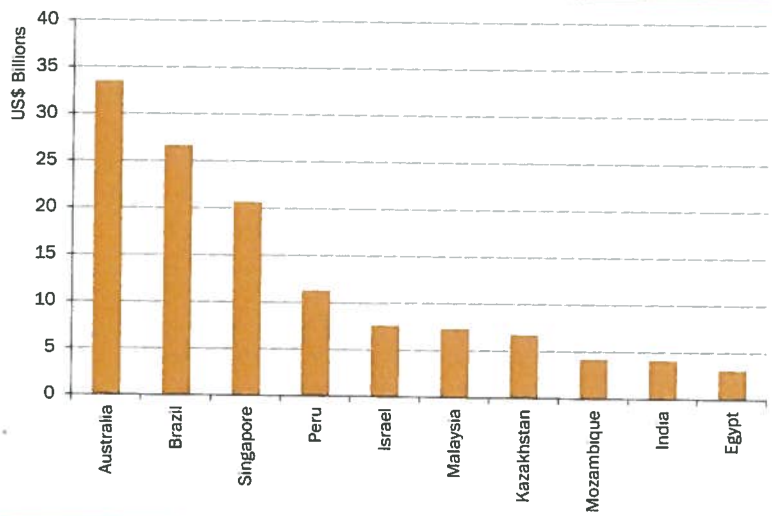
Australia, Brazil, and Singapore have attracted the most of this type of B&R project (Fig.8). In Australia, large projects include the State Grid Corporation of China purchasing a shareholding in an Australian energy infrastructure company owned by Singapore Power; Chinese subsidiary Yancoal Australia purchasing coal assets from Rio Tinto and the Chinese Investment Corporation buying a share in the Port of Melbourne.

In Brazil, significant projects include the China Three Gorges Corporation paying for concessions to operate several hydroelectric power sites; China Investment Corporation acquiring from Petrobras the majority shareholding of a natural gas pipeline, and Chinese company HNA Infrastructure buying the controlling stake in Rio de Janeiro's largest airport.

Singapore's M&A-type projects involve Chinese entities buying shares in companies across a broader range of industries, including e-retailer Alibaba purchasing stakes in Singapore Post; Chinese ride-sharing technology firm Didi Chuxing providing venture capital for Singapore-based Grab Taxi and airport equipment manufacturer Pteris being bought by China International Marine Containers.

Further down the list of most significant countries for M&A projects, Peru has had Chinese interest in resource and energy assets, with Chinese entities buying Petrobras's Peruvian oil and gas facilities, Brazilian company Odebrecht's Peruvian hydroelectric plant and Glencore Xstrata's Peruvian copper mine. Israel meanwhile has seen Chinese investment in the medical technology and agricultural sectors.

Fig.8. M&A-type projects announced, in progress or completed since 2013, 10 largest country totals



Source: Oxford Economics

Investments such as these act to address other aspects of China's strategic objectives. In mature markets, investing in new energy and resource extraction infrastructure may not be possible: buying into existing sites in these countries helps China to spread its risk of supply disruption. Investing into transport infrastructure in developed nations secures China's ability to use these key logistics facilities, and acquiring shares in businesses in developed economies helps develop closer ties with target markets.

3.3 China's challenge: attracting third-party finance for B&R investments

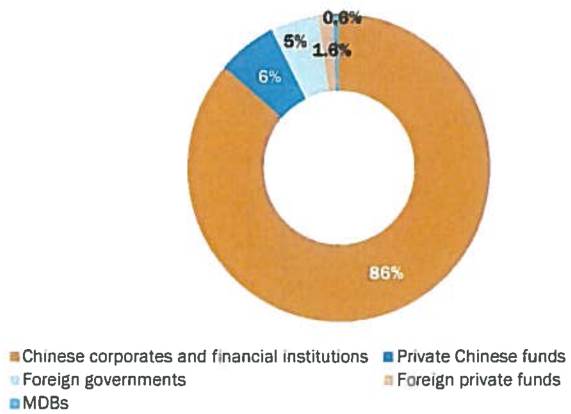
Despite their large scale, it is expected that the investments to date detailed in this chapter will represent a small drop in the ocean. The ultimate scope of the programme is uncertain but estimates of total funding required range from $4 trillion according to some Beijing sources and up to $8 trillion if the initiative is implemented fully, according to the State Council.[4]

It will be difficult for China's policy and state commercial banks to provide this scale of financing on their own, so the aim is to enter into partnerships wherever possible, attracting additional financing from third-party public sources as well as Chinese and foreign private funds.

In recent years, the share of all infrastructure financing in emerging markets coming from private sources was estimated at between 20 and 25 percent, with governments and development banks providing the rest.[5]

This contrasts with the B&R to date, where the share of tracked financing coming from private sources is much lower, at less than 10 percent. In addition, it is large Chinese government-backed entities providing the majority of funding: other governments and multilateral development banks (MDBs) are estimated to have provided less than 10 percent of the total (Fig.9). As such, generating interest from non-Chinese and private sources remains a work in progress as the initiative is still in its infancy, though there are examples starting to emerge.

Fig.9. Share of total identified funding for B&R projects, split by source



Source: Oxford Economics

Chinese government investment is directed through a multitude of entities. By the end of 2016, the Chinese Banking Association indicates that two of China's policy banks (the Export-Import Bank of China and China Development Bank) had provided financing for $200 billion of B&R projects. In addition, the big four state-owned commercial banks (ICBC, China Construction Bank, Agricultural Bank of China and Bank of China) extended a further $225 billion of loans for the initiative.

[4] https://www.bloomberg.com/view/articles/2017-05-17/can-china-afford-its-belt-and-road

[5] https://www.ifc.org/wps/wcm/connect/99019f804c66cfb19e63bfd4c83f5107/EMCompass_note05.pdf?MOD=AJPERES

Aside from the banking sector, China's other state-owned enterprises are a key source of funding B&R projects, with examples including insurer Sinosure financing the development of Abadan Oil Refinery in Iran and the China National Nuclear Corporation providing loans for building a nuclear power plant in Pakistan.

Foreign public and private financing can come in several forms. The first is private sector banks and government funding agencies promoting their willingness to lend to private companies wishing to invest along the B&R.

Japan announced its aim to do just this at the end of 2017, as the government announced its intention to co-operate with China in the funding of private sector partnerships along the B&R. Japanese government finances will aim to be directed towards the environmental and energy-conservation sector, industrial modernisation and logistics, with the financial assistance taking the form of loans from government-backed institutions to Japanese and Chinese firms in third-party countries.

A second channel for third-party financing to involve itself in the B&R is for other governments to invest in projects along the economic corridors in ways that are mutually beneficial for both their own country and the host nation. An example of this comes from Germany, with details set out in Box A below.

Box A: German investment in Xinjiang International Logistics Park

The German city of Duisburg straddles the Rhine near the Netherlands and is host to what is known as the world's largest inland seaport. Each year, 20,000 ocean-going ships, 25,000 trains and 130m tonnes of freight pass through the port.

The port has a long history of shipping, and since the railway arrived, has acted as a key intermodal location between land and sea. From 2011, the port has been the terminus of an ultra-long-distance train service running from Chongqing in central-south-east China, through Kazakhstan, Belarus and Poland before arriving in Duisburg in as little as 13 days after departure. This compares to 36 days for a similar trip by sea, highlighting Duisburg's importance as a node for connecting the markets of Europe and China.

In 2014, the Duisburg port authority looked to deepen its connection with the Belt & Road initiative, breaking ground on a new international logistics park in Urumqi, Xinjiang, China's most north-westerly province. The project, in which the government-owned Port of Duisburg has a 20 percent stake, is expected to cover up to 120 square kilometres, and is situated close to Xinjiang's railway station, which sits on the Chongqing to Duisburg route.

A third route for foreign capital to invest in the B&R is for third-party governments in geographically-strategic locations to invest in their own infrastructure, enabling traffic passing along nearby economic corridors to make use of these new facilities. An example of this comes from Israel (Box B), which has been investing in its shipping industry.

Box B: Israel invests in its ports, hires Chinese firms to build and operate

Israel's two key port locations on the Mediterranean Sea, in Haifa Bay and in the city of Ashdod, have had significant Chinese involvement in their recent expansions.

Haifa Bay hosts one of the largest port complexes in the Eastern Mediterranean, adjacent to an industrial zone with oil refineries, power plants and factories. The complex comprises the long-standing Port of Haifa and the new Bay Port. Work on the latter began following the Israel Port Authority awarding an $1.1 billion tender in 2014 to a consortium formed by Israeli companies Ashtrom and Shapir Civil & Marine Engineering. Chinese involvement comes in the running of the new facility: a separate tender was put out for operation of the new port, which was awarded for 25 years to Shanghai International Ports Group, who intends to invest several hundred million dollars further in port equipment.

Ashdod, further down the coast than Haifa Bay, is likewise seeing a new port constructed, named the South Port. Chinese involvement here began in 2014 as the $1 billion contract for building the new facility was awarded by the Israel Port Authority to the China Harbour Engineering Company. The new port is hoped by Israel to become an important link in east-west trading.

A final route for non-Chinese capital to invest in the Belt and Road is through MDBs. These may be associated with a particular geographic area and look to invest solely in this region (Box C), or may be wider-reaching and providing financing or support for projects elsewhere along the B&R.

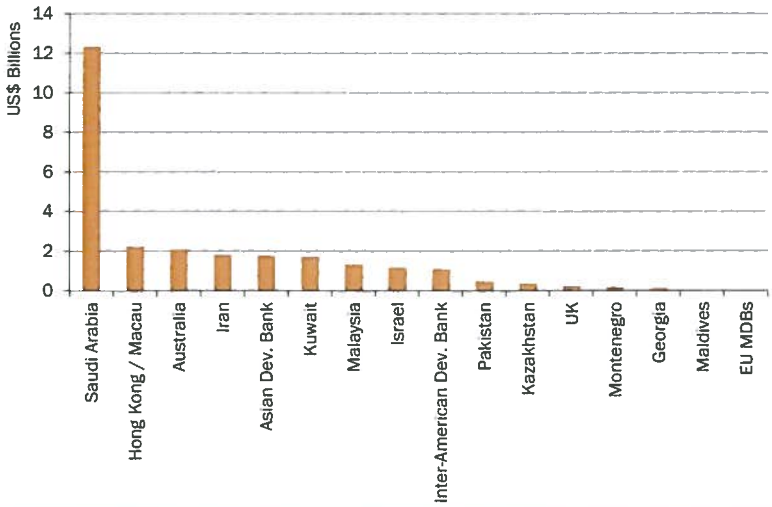
Box C: European MDB investment in transport infrastructure

Ensuring that high quality cross-border transport networks exist between European countries is a key concern of the European Union, with many schemes proposed and built during recent decades. Much of this work was financed by regional multilateral development banks such as the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB).

These programmes continue to build new and improved infrastructure: for instance, tendering processes are underway in 2018 for construction of roads in Ukraine with EBRD funding. One recent example of Chinese involvement in these European MDB-funded programmes comes from Montenegro, where a contract for upgrading a section of railway between the cities of Kolašin and Kos was awarded to the China Civil Engineering Construction Company in 2015.

Beyond these specific examples, several other governments are identified in our database as providing funding for B&R projects (Fig.10). Typically, these are for investments in their own country: investing in third-party nations remains largely the realm of the Chinese government for now.

Fig.10. B&R national governments and MDBs investing in B&R projects since 2013, by size of investment in nominal US dollars



Source: Oxford Economics

The government outside China providing the highest funding for B&R projects is Saudi Arabia, which is investing over $12 billion in a high speed rail link between the major cities of Medina and Mecca. This project is partly being constructed by China Railway Engineering Group and is part of a wider planned scheme to expand the rail network of Saudi Arabia, linking Gulf Co-operation Council (GCC) economies and providing an overland rail link between the Red Sea and the Persian Gulf.

While Saudi Arabia provides the most financing in our database, other governments have been identified as each funding at least $1 billion for B&R projects.

The governments of Hong Kong and Macau have invested significant funds into series of bridge and tunnels connecting the special administrative regions, with the aim of increasing the ease of access between these key business and tourist locations.

One of Australia's states is providing funding within its annual budget for the West Gate Tunnel Project. This is a road infrastructure investment designed to alleviate congestion in Melbourne City and Port, constructed in part by a subsidiary of the China Communications Construction Corporation.

Gulf state Kuwait has financed a new oil refinery within its borders, awarding a contract to Chinese state-owned company Sinopec for engineering, procurement, construction and commissioning. Neighbouring Oman meanwhile entered into a joint port venture in Turkey with a consortium of Chinese firms: the Omani State General Reserve Fund bought a 35% share in Kumport container terminal in 2011, while the remainder was bought in 2015 by a group led by Chinese shipping firm COSCO Pacific. This marks a significant B&R milestone for global collaboration, with Chinese and Arabic entities working together in a third-party country.

The UK's Department for International Development is involved with B&R projects in Pakistan, providing financing in the form of grants to the construction of the Burhan – Havelian Expressway and the Gojra – Shorkot section of the national M4 motorway.

Other examples of non-Chinese public money investing in B&R projects comes from multilateral development banks, including the Asian Development Bank (ADB), the Inter-American Development Bank (IADB) and European MDBs. The IADB provided a loan to Venezuelan state-run power utility company Corpoelec to modernise turbine generators in a hydroelectric dam, while the ADB has financed multiple road projects in Pakistan.

The countries highlighted above provide examples of nations with either mature financial markets or sovereign wealth funds that can finance infrastructure projects within their borders. These countries may also find ways to attract inward B&R investment, but importantly are more likely than other nations to have the capacity to explore B&R opportunities in third-party economies.

4. Understanding B&R opportunities through country characteristics

The expansion of the B&R means that to date it encompasses a set of countries that together make up more than half of global GDP in Purchasing Power Parity (PPP) terms. The sprawling scope of the programme makes it challenging to maintain an overarching view of the potential opportunities being opened.

In the previous chapter, we highlighted countries that had attracted the largest concentrations of B&R investments, for different reasons depending on the nature of the investment.

To better understand the opportunities from which each country can benefit, we have developed a framework that seeks to identify the likely opportunity set for each country based on an objective view of characteristics that we think will be important in B&R participation. Our aim is to help readers understand how a country may be able to benefit from B&R, both at home and abroad. In this chapter, we introduce and present the framework where each country may find opportunities most relevant to them.

4.1 Framework for understanding B&R opportunities

To understand how the 87 B&R countries outside China can participate in the initiative most effectively, we have assessed each against four themes that illustrate the potential for involvement. These are designed not to constrain the scope of B&R participation, but to help countries navigate their potential in the B&R.

More detail on the data and methods used for each theme is provided in the Appendix.

4.1.1 Infrastructure investment requirement

The quality of transport, electricity and telecommunications infrastructure in each country is compared against the overall B&R peer group. Countries with a large infrastructure investment shortfall on this measure may be key targets for infrastructure financing and construction. Therefore, they stand to gain disproportionately from B&R related financing.

4.1.2 Financing and construction capability

Building large infrastructure projects requires capacity in both financing and construction expertise. This depends on several factors, including the availability of fiscal resources, the depth of local financial markets, the volume of outbound foreign direct investment, and the quality of construction service exports.

Those with a comprehensive set of capabilities are likely to benefit substantially from directing investment and expertise to projects along the B&R.

4.1.3 Economic importance to China

The economic importance of each partner country to China is assessed against the size of its GDP in purchasing power parity terms and its level of raw material production in which China operates a trade deficit. This aims to capture each country's ability to act as both a source of demand and a source of key inputs.

Countries towards the top of this category are likely to see interest from China in the form of direct investment in facilities on the ground, investment in stakes in local businesses and in closer business relationships.

4.1.4 Strategic importance as a logistic node

Some countries are geographically well-placed to act as a node in China's global logistics networks and supply chains. To capture this, we assess each country for its maritime and rail connectivity.

The most strategically important countries are expected to attract investment in improving transport facilities and interest in closer business links.

4.2 Mapping opportunities across the B&R

We have assessed each country against each of these themes using the approaches described. The results are presented in the heat table in Fig.11, which lists the countries in descending order of likely opportunities suggested by the framework. This classification looks at the total opportunities across all themes and, thus, represents those with the most varied opportunities of involvement in the B&R initiative.

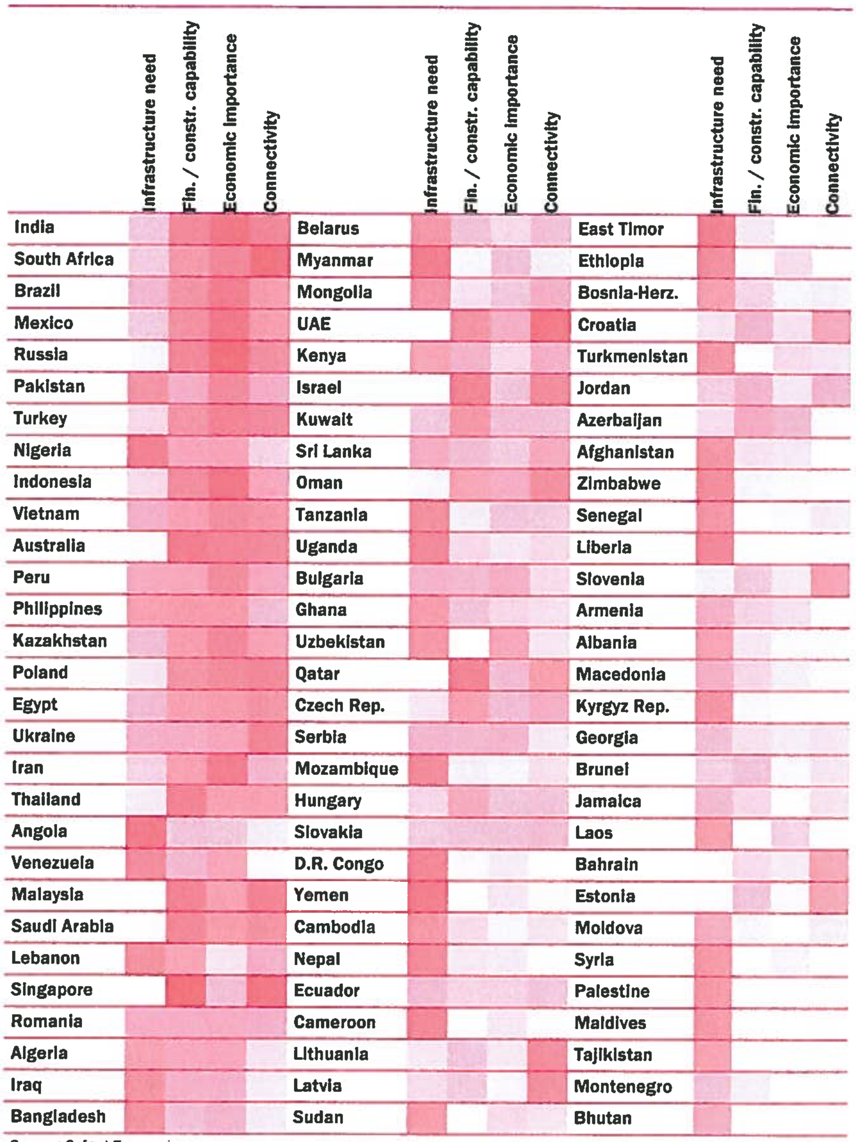
Overall, India, South Africa, Brazil, Mexico and Russia appear to have the greatest potential to benefit from the B&R initiative. They each measure favourably for economic importance, connectivity, finance and construction capability, but requires relatively less internal infrastructure investment than other nations.

Indonesia, Nigeria and Turkey have all been noted as key sources of global growth in the 2010 decade, and all perform highly across our measures. These countries are economically important to China as well as being reasonably well connected and having a degree of financing and construction capability.

Other countries that feature strongly across the four themes are Pakistan, Australia and Vietnam. These are all economically important to China, while Australia has a high financing and expertise capability; Pakistan has a relatively higher need for infrastructure investment.

Towards the other end of the table are countries that have less widespread opportunities to exploit along the Belt and Road. These include nations that generally have low strategic connectivity, are small economies without an abundance of the natural resources that China needs to import, and are without a strong financing or construction capability. However, these countries stand to benefit from involvement with the B&R initiative by using it as a focus to attract foreign direct investment: these countries typically have a higher requirement for infrastructure development.

Fig..11. Country B&R involvement potential under four characteristics, ordered by average score across all four



Source: Oxford Economics

4.3 Identifying future flows

This study provides a structured framework to understanding country-specific opportunities under the B&R initiative. It aims to help investors, corporates and policymakers to assess the relative scale and type of opportunities that even third-party countries might enjoy as a result of the programme.

Notwithstanding the ever-changing nature of B&R, this approach sheds light on where capital is likely to flow as the B&R initiative expands.

For developing markets with a high need for infrastructure improvements, the likelihood of attracting investment from B&R partners depends on their economic importance to China in terms of natural resource abundance and strategic location. As we've seen, relatively under-developed but resource rich countries such as Indonesia may have unexploited minerals that can be invested in as greenfield sites by B&R partners - with investments in transport and power to ensure the continued movement of extracted commodities.

Other countries, including Pakistan and some of the ASEAN nations, are strategically important to China as a channel through which to move goods to reach other markets. While China has focussed on those geographically closest for this sort of development to date, other areas remain ripe for development, including Eastern Europe and West Asia where the B&R has had a smaller impact to date.

Large economies such as Australia that act as an existing or potential source of demand for China can attract interest in the form of investment in the local business community, with Chinese entities forming joint ventures or opening new premises in business hubs. This may be a particularly attractive option for China with countries that have high import taxes, as direct investment into a country acts to some extent as a substitute for exporting there.

For developed nations with abundant natural resources such as the Gulf states, forming joint ventures and partnerships with existing resource asset-owners may be the chief option for Chinese entities to enter the market, as fewer unexploited sites are likely to exist.

Lastly, although the flow of capital from countries with significant financial resources and developed financial markets to third-party nations remains elusive for now, there are signs of this beginning to gain momentum. Countries without deep reserves can also look to gain from B&R opportunities if they are able to provide the construction and engineering or project management expertise required to enhance the movement of goods and services, capital, and people along the B&R.

5. Conclusion

This report contributes some important analysis to the quantitative literature on the Chinese government's sprawling B&R initiative. As we've detailed, China's flagship policy has already had a transformative effect on partner countries, with hundreds of billions spent on constructing new or upgraded transport and energy infrastructure.

As the B&R enters its second half-decade, the scope and reach has expanded to include many more of China's important trading partners. As a result, the 22 new countries we've included in this report on top of the original 65 nations now span all the world's inhabited continents, reflecting the initiative's global nature.

We acknowledge that this list of countries is by no means complete. The dynamic nature of China's B&R initiative means continuous follow-up research is necessary to capture latest trends. New countries will be added to our analysis once material data or qualitative information becomes available.

Opportunities abound on the B&R, as the initiative provides the framework and momentum to match countries that have available capital or engineering capability with those seeking inward investment to boost their infrastructure quality. Our analysis in this report sheds light on where these differing opportunities exist, identifying countries from which financing and expertise is likely to flow and identifying where investment in transport, natural resources and business operations is most likely to be targeted.

As the initiative continues to evolve, encompassing more geographies and industries, continued research and analysis will be required to maintain an up-to-date understanding.

To this end, ICBC Standard Bank will launch later in 2018 the annual updates to our B&R thought leadership reports: the Economic Health Index and the China Connectivity Index. These bespoke analyses are designed to give a snapshot of the macroeconomic performance and risk outlook for B&R partner countries and a measure of how integrated each partner country is with China through the movement of products, capital and people. This refreshed look at the status of B&R countries will provide the opportunity to examine at a macro level how the initiative has impacted partner countries over the 12 months since last year's study.

6. Appendix: data and methods

6.1 Sources used to compile our database of B&R projects

No official database tracks B&R investment projects, and no unofficial source tracks the full scope of all projects announced. To capture as comprehensive a view of B&R investment as possible, we have compiled several existing sources and supplemented these with additional desk research.

The existing sources we have used include:

- The Centre for Strategic and International Studies' Reconnecting Asia database, which focusses on transport infrastructure connected to the B&R initiative.
- The American Enterprise Institute China Global Investment Tracker database, which tracks Chinese investment and construction projects around the world since 2005, though is not specifically linked to the B&R initiative. We have restricted this dataset to include only our 88 countries and looked at only the projects listed from 2013 onwards, when the initiative began.

Both data sources are relatively limited in how much additional information they have on aspects such as financing, so we have used desk research to supplement the databases as far as possible – although specific available information on many projects is relatively scarce.

6.2 Methodology for understanding country opportunities

To characterise each country using a quantitative approach, we have used the data sources and approach set out below.

To get an overall score for each aspect, each country's value for each metric is normalised using a 'Z score'. This is where the average value for all the 88 B&R countries is subtracted from the individual country's value, and then the resulting figure is divided by the standard deviation across all 88 B&R countries. The Z score for each country within each aspect is then averaged to get an overall score.

Outward perspective: Economic importance
This score aims to capture each country's economic importance to China in terms of its market size and raw material supply potential, and is calculated using:

- Its level of GDP in purchasing power parity (PPP) terms.
- Its level of production of the raw materials in which China has the largest trade deficits: petroleum, iron ore, copper, copper ore, natural gas and coking coal. Minerals production sourced from the US Geological Survey, energy products production sourced from the US' Energy Information's International Energy Statistics.

Outward perspective: Connectivity
This aspect is focussed on calculating an overall connectivity score related to maritime and rail transport and the overall ease of running logistics operations, and is calculated using:

- Its entry on the World Bank's Logistics Performance Index, based on a worldwide survey of on-the-ground logistics operators on the ease of doing business.

- Its entry on the UN's Liner Shipping Connectivity Index, which compiles data on the number of ships visiting a country's ports, the total capacity of those ships, the maximum vessel size, the number of services and the number of visiting container ship companies.
- Data from the World Bank's World Development Indicators on the total volume of goods freight being transported by rail in ton-kilometres (one ton carried for one kilometre), divided by GDP in PPP terms to represent the importance of rail connectivity relative to the size of the economy.

Inward perspective: Investment need

This measure is used to capture the extent to which investment is needed to bring the country's infrastructure quality up to at least the average in the B&R country group.

This is calculated using from the World Economic Forum's *Global Competitiveness Index* ratings on infrastructure. This contains data on the quality of road, rail, seaport, air, electricity and telecommunications infrastructure in each location.

Inward perspective: Financing and expertise depth

This score aims to capture each country's ability to providing financing and construction and engineering expertise to build large infrastructure projects.

- Level of total outbound foreign direct investment (FDI) in US dollars, sourced from the UN's World Investment Report 2017.
- Level of total monetary reserves, sourced from the World Bank's *World Development Indicators*. This includes total holdings of monetary gold, foreign exchange and special drawing rights under control of the sovereign monetary authority. The total assets of any sovereign wealth funds owned by the country are then added to these monetary reserves to get a broader measure of the country's financing capability.
- Entry in the World Economic Forum's Global Competitiveness Index on the ability for companies to raise money by issuing shares and/or bonds on the local financial markets.
- Total level of exports in US dollars of construction services, sourced from the IMF's balance of payments database.

The rank of each country within each metric is then averaged to give an overall rating related to its ability to provide financing and construction and engineering expertise to large infrastructure projects.

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20180411-9006-HH-ICBC