

THE BELT AND ROAD INITIATIVE AND THE SDGs: TOWARDS EQUITABLE, SUSTAINABLE DEVELOPMENT



IDS Bulletin

Transforming Development Knowledge

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Cover photo Shipping port in Bangkok, Thailand. China has been promoting economic and trade cooperation with Thailand in recent years to advance its One Belt, One Road initiative. Some applaud the initiative's potential to progress global sustainability; others argue that it poses considerable social, economic, environmental, political, and security risks.

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The Belt and Road Initiative and the SDGs: Towards Equitable, Sustainable Development

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Introduction: The Belt and Road Initiative and the Sustainable Development Goals: Opportunities and Challenges*

Jing Gu,¹ Hannah Corbett² and Melissa Leach³

Abstract This introductory article explains the rationale behind this issue of the *IDS Bulletin* and identifies the key issues and research questions addressed by the contributors. The Belt and Road Initiative (BRI) is the source of significant academic and policy debate, in terms of how it is defined and how far it can contribute to the achievement of the Sustainable Development Goals (SDGs) by 2030. This article seeks to explore these debates in more depth, looking at the opportunities and challenges that are associated with aligning the BRI and the SDGs frameworks at local, national, and international levels to achieve sustainable development. It highlights new evidence, analyses, and insights from across a range of experts from China and BRI countries, and points both to the potential for the BRI to help achieve sustainable development outcomes and the challenges, implications, and impacts for the countries and communities involved.

Keywords: Belt and Road Initiative, sustainable development, SDGs, China, developing country, infrastructure, trade and investment, international standards, risk and opportunity.

1 Introduction

The Belt and Road Initiative (BRI), proposed in 2013 by China's president, Xi Jinping, has significant potential to contribute to the 2030 Agenda for Sustainable Development (2030 Agenda). Re-enacting and extending key aspects of the ancient Silk Road's ethos and geography for the twenty-first century, the BRI is an enormously ambitious agenda which could reach up to 70 per cent of the world's population or more (Xi 2019; Frankopan 2019). It involves diplomacy; trade and investment and financial cooperation; infrastructure and connectivity; regional governance; and people-to-people bonds. It draws on both China's domestic development experience and China's international experience in South-South cooperation. It is the prime means through which the

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country is taking forward its economic and foreign policy aspirations on the global stage, and represents an outward-facing stance and agenda, at a time when older industrial powers in the US and Europe show at least temporary retreat into nationalism. Nevertheless, the BRI is broad, open, and evolving, without a single or shared understanding; indeed, it has become a label under which initiatives and aims of many kinds are being pursued. This ambiguity is itself a source of both opportunity and challenge.

Recent high-level statements, including at the latest Belt and Road Forum held in Beijing in April 2019, emphasise the incorporation of international perspectives and mainstream global agendas such as the Sustainable Development Goals (SDGs). The BRI could, in this view, offer opportunities to address global economic social and environmental goals through its projects, and contribute to resolving such issues as the chronic shortage of funds, inadequate institutional development, and weak partnerships. However, questions remain around how far the BRI, and the actors involved in it, from national governments to private sector investors, align with achieving sustainable development outcomes – especially as this was not the original intention of the initiative. Moreover, despite a growing body of evidence, more work needs to be done to understand the political, economic, financial, environmental, and social risks, implications, and impacts for involved countries and communities.

In this context, this issue of the *IDS Bulletin* focuses in on the relevance of the BRI for the SDGs and how the two agendas might be better aligned locally, nationally, and globally. Amidst often polarised debate, it provides vitally needed case study evidence to support a realistic analysis of opportunities and challenges, and to inform the design and implementation of the BRI in ways that support the SDGs in practice.

Despite high-level claims about the BRI's value to the SDGs, there is remarkably little work examining this interrelationship in significant depth. This *IDS Bulletin* explicitly addresses this gap from a range of aspects. Case studies from the perspective of both China and the BRI countries, at both country and project level, are used to contribute more nuanced assessments to current discussion and debate on China's international development policies and practices. The *IDS Bulletin* combines evidence and analysis from development communities (researchers, donors, practitioners) as well as representatives from business, investment, and financial communities who are rarely brought together for a study such as this. It also draws on the rich discussions that took place at 'China's Belt and Road Initiative: Supporting Sustainable Development through High Quality Infrastructure', 11–13 March 2019, Wilton Park, UK supported by the UK Department for International Development and IDS, that brought these different groups together to discuss the potential and limitations of the BRI to contribute to a more sustainable world. The event highlighted four key areas for future action:

- A strengthened evidence base on what works in terms of aligning financial and sustainable development outcomes and managing risks;
- Improved knowledge exchange and mutual learning across sectors, actors, and countries on what works;
- Investment in consultation and capacity building amongst BRI countries so they can more effectively manage and prioritise investments to align with their own national sustainable development goals; and
- Global cooperation and leadership around creating international standards and regulation for infrastructure investment, including social and environmental standards.

The diversity of this experienced and knowledgeable epistemic community of scholars, policymakers, practitioners, and financial and private sector representatives reflects the multidimensional and interdependent character of the components of the BRI itself, and of the debate over its aims and objectives, implementation, operational practices, and impact. Such diversity also provides for a range of viewpoints to be considered in relation to the evidence brought forward in the case studies and critical reviews at the core of this *IDS Bulletin*, and also in regard to the wider international debate over the BRI. This is important given the varying understandings, myths, and misconceptions across different groups around the BRI's role and effects. The *IDS Bulletin* brings together country case studies of the BRI and sustainable development in Myanmar, Kenya, Pakistan, and Greece. It also explores a range of cross-cutting topics including: the BRI as a *Digital Silk Road*; environmental and social standards; and the BRI as a *critical link* to delivering the 2030 Agenda.

1.1 The BRI and the SDGs

1.1.1 The BRI, connectivity, and sustainable development

The main intention of the BRI, as stated in official Chinese discourse, is to act as the major catalyst for promoting and facilitating infrastructure investment in order to build closer connectivity between the Chinese economy and economies across the world. As China's former Foreign Affairs Vice-Minister, He Yafei has explained:

The core idea of the Belt and Road Initiative is to achieve greater connectivity, closer ties, infrastructure links, people-to-people links and policy consultation. Through developing new economic corridors and cooperation, whether that be through physical infrastructure or digital, China is adding new ideas to regional governance (Belt and Road Advisory 2018).

The stated reasons for pursuing the BRI focus on realising a number of economic opportunities, both for China and partner countries, with the logic based on China's 'own experience that investment in infrastructure promotes economic growth and reduces poverty' (Miller 2017: 43).

This positive relationship between infrastructure and economic development is far from unique to China, being echoed in experience in Europe, the US, Latin America, and beyond. Nevertheless, China's new infrastructure vision goes far beyond earlier efforts in its scope and ambition (Renwick, Gu and Gong 2018). The official conception of the BRI is for a route 'connecting the vibrant East Asia economic circle at one end and the developed European economic circle at the other, and encompassing countries with huge potential for economic development' (National Development and Reform Commission 2015: III). The Chinese government has explicitly stated that the initiative has four principal aims: (1) bringing prosperity to underdeveloped parts of China, particularly in the west of the country; (2) increased connectivity and economic development along both routes through the movement of goods, services, information, and people and the exchange of culture; (3) greater integration between China and its neighbours; and (4) energy security through diversification of import sources.

To meet these aims, reported estimates suggest that the BRI will require funding in the order of US\$4–8tn (Ho 2017). Drawing partly on statistics from the People's Bank of China, China's Central Bank, *China Daily* reports that financial institutions in China have already committed over US\$440bn for BRI infrastructure projects (Jia 2019). It notes that Renminbi-denominated overseas investment funds amounted to over 320bn yuan (US\$47.49bn) and the report argues that the Chinese capital market has helped companies raise 500bn yuan through equity funding. As an example, it states that BRI countries and companies have issued more than 65bn yuan in Panda bonds in the Chinese onshore market, according to the central bank (*ibid.*).

Natalie Blythe, head of global trade and receivables finance at HSBC, reports that 90 per cent of the funding for the BRI infrastructure projects comes from the public sector (HSBC 2018). The key funding sources are the Asia Infrastructure Investment Bank and the New Development Bank; the US\$40bn Silk Road Fund; China's two big policy banks – the China Development Bank and the Export–Import Bank of China; and China's big four non-commercial banks have put up tens of billions of dollars. However, as Yi Gang, Governor of the People's Bank of China has recognised, there is a need, and Chinese willingness, to leverage more private funds for infrastructure construction under the BRI (*ibid.*). There are obvious challenges in facilitating such private sector investment, notably sector reservations over investment in projects in high debt economies and the need to enhance debt and risk management.

Responding to this concern, China and its BRI partners have elaborated a debt-sustainability analysis framework at the 2019 Belt and Road Forum. China's financial institutions and the other BRI economies are encouraged to use this *non-mandatory* policy tool for rating debt risk before making lending decisions. The framework is also designed to meet the further private sector concern over financial

‘safeguarding’, with the analysis method set by China’s Ministry of Finance based on international standards provided by the International Monetary Fund and the World Bank. In addition to this stated intention to engage with the private sector for investment, the Chinese government has established a multilateral development financing cooperation centre in collaboration with eight multilateral development institutions, including the World Bank, the Asian Development Bank, and the Asian Infrastructure Investment Bank, intended to prepare for ‘high-quality’ projects and promote international standards for BRI financing (*ibid.*).

Within the stated aims, there are a number of more specific economic drivers for the BRI. There is a general consensus that a significant potential *win* for China in the BRI lies in the opportunities it offers the country to address its increasingly important issue of industrial overcapacity; that is, a condition experienced whereby certain sectors including iron and steel, glass, cement, aluminium, solar panels, and power generation equipment, generate more products than the market can absorb (Yu 2017; Casarini 2016). This industrial overcapacity may prove to be a relatively short-term problem, as the Chinese economy transitions from export-oriented growth to a new model grounded in domestic consumption and outward investment (Yu 2017; Casarini 2016). The BRI has the potential to address this by generating infrastructure demand to catch up with the supply. In addition, by building infrastructure in China and beyond, the BRI can form a key component and foundation for the long-term transition (Gu and Carey 2019). As Yu acknowledges, the BRI will help China ‘to deal with the domestic problem of industrial overcapacity and speed up industrial restructuring and technological upgrading at home’ (Yu 2017: 367).

Another economic driver of the BRI for China is that international infrastructure investment presents opportunities for China to utilise its large foreign exchange reserves more effectively and gain benefits from diversification, rather than focusing on investing in US Treasury Bonds. This shifts at least the potential to realise infrastructure gains through the BRI. There is a strategic benefit too in this strategy. In channelling China’s investment away from the US, it can help lower China’s political and economic risk exposure against the background of a ‘trade war’ with the US. According to the Chinese government, by the end of March 2019, it had signed 173 cooperation agreements with 125 countries and 29 international organisations (Xinhua News 2019). The focus is on transport, energy, and communications infrastructure but the BRI’s activities are now much broader and embrace aspects of collaboration ranging from agriculture, the environment, taxation, security, global health, and humanitarian response to cultural exchanges.

The BRI comprises two main routes: one continental land-based and one maritime route named as the *Silk Road Economic Belt* and the *21st Century Maritime Silk Road*. In addition, there is a newly promulgated *Arctic Silk Road* as part of China’s new Arctic Policy

(Government of China 2018), whilst projects in Latin America, the Caribbean, and across Africa are, at times, packaged within the BRI. In practice, however, operational project development is focused along *corridors*. In the continental *Belt*, there are six major corridors for international economic cooperation – the New Eurasian Land Bridge, and the China–Mongolia–Russia, China–Central Asia–West Asia, China–Indochina Peninsula, China–Pakistan, and Bangladesh–China–India–Myanmar economic corridors. The officially stated objective is that, by 2050, the Belt and Road region comprising these corridors will contribute 80 per cent of global gross domestic product growth, and contribute to the movement of three billion people into middle-class status (Hillman 2018).

The capacity for the BRI to act as an important partner in the implementation of the SDGs and the 2030 Agenda has been considered widely (Renwick *et al.* 2018; Shah 2016; UNDP 2017). The potential symbiosis of the BRI and the SDGs was recognised by United Nations Secretary-General António Guterres in his address to the May 2017 Belt and Road Forum held in Beijing, drawing comparisons between China's (then termed) 'One Belt, One Road' initiative and the SDGs. The Secretary-General argued that both major initiatives are rooted in a shared vision for global development: 'Both strive to create opportunities, global public goods and win-win cooperation. And both aim to deepen "connectivity" across countries and regions: connectivity in infrastructure, trade, finance, policies and, perhaps most important of all, among peoples' (Guterres 2017). This viewpoint has been reiterated by other senior figures. UN Under-Secretary-General, Tegegnework Gettu, at the 2018 High-Level Policy Forum on Global Governance: The 'Belt and Road' Finance and Investment Forum, held in Guangzhou, said: 'The Belt and Road Initiative, given its massive investments and financing flows, can potentially unlock the resources needed to achieve the 2030 Agenda for Sustainable Development' (Gettu 2018).

While the successful implementation of the 2030 Agenda and the achievement of the SDGs is primarily a matter for local and national commitments and actions, strengthened international cooperation and understanding are important in providing funds and investment; supportive regulatory and governance frameworks; and sharing knowledge, lessons, and examples of good practice (Gu and Kitano 2018). It is also important that actions and investments undertaken under the banner of BRI support do not contradict national and local action towards the SDGs. SDG 17 talks of 'partnerships for the goals' and it is now clear this must include the mass of actors involved with the BRI. These include international development banks, multilateral agencies, national governments, Chinese state-owned enterprises, private sector organisations, and professional services.

Almost all of the major global and regional intergovernmental organisations, such as the International Monetary Fund (IMF) and the United Nations Development Programme (UNDP) for example, have

signed up to work with China on the BRI. UNDP is working with the Chinese government, to cooperate with China and BRI partners to meet their development aims, promote greater consensus, and identify practical projects allied with investment to promote shared economic growth with inclusive social and environmental benefits (CCIEE and UNDP 2017). The Global Governance Forum brings together Belt and Road countries, UN officials, development practitioners, civil society organisations, and the private sector to explore a collective plan for concrete actions. In addition, the United Nations Economic Commission for Europe (UNECE) and China's National Development and Reform Commission (NDRC) signed a Memorandum of Understanding in January 2016 to facilitate the efficient use of public-private partnerships (PPPs) in support of the initiative (UNECE 2016).

One of the facets of the evolution of some emerging economies from primarily 'recipients' of international development assistance to becoming simultaneously 'recipients' and 'providers' has been increased attention to how these new providers understand and approach development as a basis for their evolving policies and practices. In the case of China, the dominant discourse is that sustainable development should be understood as holistic or comprehensive. Such development needs to be founded on overall economic growth, and the principal engine and facilitator for this growth is infrastructure and technical capacity building. Primarily, as President Xi's own statements underline, this approach comes from the preeminent official Chinese reading of China's own historical development and reform experience (Xi 2017), its models for poverty reduction and human development based on urbanisation and Special Economic Zones, as well as its experience of solidarity with (aspects of) the independence movements of the 1960s and 1970s in Africa and Asia. Notably, these overwhelmingly positive accounts of China's development experience are contested, whether in drawing attention to the (rural) poor, the elderly, and children *left behind* by dominant poverty reduction strategies, or to the more complex geopolitics underlying China's socialist governments in the independence period.

In dominant Chinese perspectives, sustainable development emphasises the need for a holistic, integrated approach to policy and practice (Gu 2015; Gu *et al.* 2016). Broadly, it embraces the idea of *ecological civilisation* as the final goal of change within a given society, involving a synthesis of economic, educational, political, agricultural, and other societal reforms toward *sustainability* (Zhu 2016). The term ecological civilisation was first coined in the 1980s, but came into widespread use in 2007 when it became an explicit goal of the Communist Party following Hu Jintao's report to the Party Congress. It has gained additional weight since Xi Jinping's report to the 2017 Party Congress and inclusion of Xi Jinping's thought into the Party Constitution (Xi 2017). It has figured prominently in Xi Jinping's recent speeches, with reference both to domestic policies and international cooperation (CGTN 2019). The easy compatibility between economic reform

and ecological principles implied by the high-level rhetoric around ecological modernisation nevertheless overlies intellectual and political debate about the concept and its application, with some strands associated strongly with organic Marxism (Wang, He and Fan 2014).

Attempts to integrate environmental concerns and ecological principles are evident in China's own domestic processes of economic reform and restructuring, the rebalancing of its energy sourcing, and climate change mitigation. In 2008, an important analysis by the China Council for International Cooperation on Environment and Development (CCICED) stated that 'China faces a grave overall environmental situation' in its overall sustainable development (CCICED 2008: 43), the Council publishing its final report in 2015 (CCIDEC 2015).

Indeed, the environmental fallout of China's rapid growth is all too evident in high levels of air and water pollution, waste, and land degradation (Albert and Xu 2016). To overcome this situation, the CCICED argued that four major fundamental transformations were needed to sustain China's economic development and establish itself as an environmentally friendly society: (1) growth should be transformed from mostly investment and export-driven to more consumption and domestic demands-driven; (2) manufacturing should have a reduced share of the industrial structure with greater weight given to services and agriculture; (3) the basis for development should be shifted from capital and natural resources to human resources and technical progress; and (4) the unidirectional linear process of resources-products-waste should be replaced by the feedback cyclic process of resources-products-waste-resource recycling. The response to this should centre upon creating a national innovation system (CCICED 2008: 12).

1.1.2 China's approach to sustainable development

A key component of the proposed system is highly relevant to China's current involvement with global sustainable development and the globalised approach to achieving substantial change. This was to establish an open innovation system whereby both China and other developed nations could collaborate together in joint efforts to promote innovation. In this cooperation process, the CCICED envisaged that technological innovation forms the source, whilst institutional innovation provides the guarantee, social innovation serves as the basis, and the promotion of development and application of energy-saving and environment-friendly technologies would then constitute the core (*ibid.*: 5). Indeed, in recent years, China domestically has become a world leader in the innovation and application of low-carbon energy systems involving solar and wind power, for instance, through a unique combination of state and private sector action. The extent to which this domestic experience of environmental and *green* innovation is replicated in China's international investment along the BRI is more debatable, as we explore below.

China's approach to sustainable development has also been shaped by two important policy frameworks on development, the first formulated

through the Chinese state, the second through the Communist Party of China (CPC). Firstly, the 13th Five-Year Plan, adopted by the Fourth Session of the 12th National People's Congress in March 2016, defined a concept of innovative, coordinated, green, open, and shared development. These central principles underpinning China's approach to implementation coalesce with those of the 2030 Agenda:

Peaceful Development, Win–Win Cooperation, Integration and Coordination, Inclusiveness and Openness, Sovereignty and Voluntary Action, as well as 'Common but Differentiated Responsibilities', should be followed in building a new type of international relations featuring win–win cooperation, establishing all-round partnership, and achieving economic, social and environmental development in a balanced manner (UN 2016: 2).

In 2016, the Chinese government published China's Position Paper on the Implementation of the 2030 Agenda for Sustainable Development (Ministry of Foreign Affairs of the People's Republic of China 2016). This sets out the principles, priorities, and policies and sought to explain the progress made in the implementation of the 2030 Agenda. The paper set out a number of specific elements to be pursued as priority aims:

- Eradicating poverty and hunger through targeted measures to alleviate and eliminate poverty, and enhancing agricultural production capacities and food security;
- Implementing innovation-driven development strategies and generating momentum for sustainable, healthy, and stable economic growth;
- Advancing industrialisation to inject impetus to coordinated development between urban and rural areas and among the three dimensions of sustainable development;
- Improving social security and social services to ensure equal access to basic public services;
- Safeguarding equity and social justice to improve people's wellbeing and promoting all-round human development;
- Protecting the environment and building protective barriers for eco-security;
- Addressing climate change actively and integrating climate change response into national development strategies;
- Promoting efficient utilisation of resources and sustainable energy; and
- Improving national governance and ensuring economic and social development in line with the rule of law.

China further emphasises the need for global partnership and collective action in implementing the 2030 Agenda, stating that the global community needs to provide sound support in five principal ways (UN 2016). These include:

- Strengthening capacity building of countries so as to improve institution building, increase public resources, and generate internal growth momentum;
- Creating an enabling international environment for development, building a balanced, win-win, and inclusive multilateral trading system and improving global economic governance;
- Engaging with all stakeholders and working towards a more equitable and balanced global partnership for development;
- Promoting coordination mechanisms and incorporating development policy into global macroeconomic policy coordination; and
- Improving follow-up and review by conducting regular reviews of global implementation progress while a review of national implementation would be done according to respective national conditions and the principle of voluntary action.

The second key policy framework is China's 'new development philosophy' initiated and explained by Xi Jinping in his Secretary-General's Report to the CPC Congress in October 2017. China's development of 'Socialism with Chinese characteristics for a new era' under President Xi Jinping has at its core a 'people-centered philosophy of development' (Xi 2017: 1, 16); a philosophy reflecting and reinforcing the SDGs and 2030 Agenda commitment to leave no one behind in the journey to 2030.

1.2 Challenges and risks

These high-level international and Chinese policy statements around the BRI, ecological civilisation, sustainable development, and development in general all emphasise alignment between the BRI and the SDGs. At the same time, the BRI has also generated a wide range of concerns and reservations, which raise questions about the extent of such alignment in real politics and practice. Internationally, there has been geopolitical backlash as some countries have pushed back against Beijing's growing influence and power, hard and soft (Balding 2018). Governments such as India, the US, France, the UK, and Japan have held back from joining the BRI. Beyond these macro- and geopolitical dynamics, the BRI project has generated a wider range of concerns and reservations related more to challenges over its functionality, implementation, and risks. The agenda of concerns is extensive and includes question marks about the financial strength and durability of the BRI, given its now global reach and the need to diversify and broaden the sources of reliable large-scale funding. Issues of opaque tendering and contracting have also been raised, alongside issues of

corruption and asymmetrical development gains; for example, in terms of knowledge-sharing, employment opportunities, technical know-how, and capacity building.

Moreover, a range of specific risks – financial, social, political, and environmental – has been highlighted in relation to the impact of BRI projects on recipient countries. In terms of financial risk, there have been documented cases of *pushback* by some governments (such as Sri Lanka, Malaysia, and also Pakistan), faced by what was presented to be BRI-project-related debt. This issue was highlighted at the Wilton Park event. For example, Kyrgyzstan currently has 12 loan agreements with China, which has committed around US\$2.2bn to road and energy projects (Santander 2019). The dramatic improvements in infrastructure have been coupled with a significant increase in national debt (Hurley, Morris and Portelance 2018; Kong *et al.* 2019; Dollar 2019). Examples such as these have fuelled accusations that China is engaging in so-called ‘*debt trap diplomacy*’ through the BRI, lending excessively to developing countries, knowing full well that these countries will not have the means to repay the loans, and will then be forced to default on the loans and hand over key strategic assets to China, or otherwise submit their sovereignty to Beijing, as a political strategy (Hurley *et al.* 2018).

The term ‘*debt trap diplomacy*’ was first coined around the example of Hambantota Port in Sri Lanka, when in 2017 the country turned over its operational control to a Chinese-dominated joint venture in return for US\$1.1bn in investment from China Merchant Port Holdings (CMPort). Yet, others have, in turn, critiqued this narrative. Brautigam (2019), for instance, discusses the more complex interests around Hambantota Port, showing that this was a long-standing national project, yet a rather inefficiently managed, loss-making one, in which debts were owed to many international investors, not just China. Brautigam argues that proceeds from the sale of a stake to CMPort went to the Sri Lankan treasury, which used them to make payments on the Chinese loans and other debt service obligations, and to look forward to turning the port around into a profit-making operation. Brautigam (2019) also suggests that more generally, the political aims and risks of China’s infrastructure investments have been overblown; the BRI strategy, at heart, remains economic. It should also be noted that the Malaysian government and that of Pakistan have both drawn back from their initial positions on the BRI following intensive negotiations with the Chinese government and the loan provider agencies (CNA 2019; Dunya News 2019).

Environmental risks, and evidence of environmental damage and negative ecological impacts from BRI projects, are also emerging (Teo *et al.* 2019). These were also underscored at the Wilton Park event. There is evidence of contradictions between China’s environmental policies at home and in BRI countries, where, for instance, investment in coal-fired power plants continues across Central Asia (Tan 2018; Shearer *et al.* 2018), albeit in a region where renewable energy was

described by the 2015 UNECE Renewable Energy Status Report as 'still facing challenges' (UNECE 2015).

There is a growing body of evidence emerging from African countries, such as Cameroon, the Democratic Republic of Congo (DRC), and Uganda, that highlights the environmental and social risks experienced by local communities as a result of investment projects. For instance, projects such as the Kribi Port Project in Cameroon have resulted in loss of habitats and forests, and the social risks to communities include loss of livelihoods and homes through land acquisition which has not been properly compensated (Schenkel 2018). Although tenure data are improving, the problem of land acquisition and compensation continues to pose a challenge, compounded by the issue of poor legal documentation. Direct Chinese investments in natural resource extraction and management, such as in forests, might therefore bring damage to community rights and livelihoods (Zhen 2016).

However, there is also some evidence of positive environmental and livelihood benefits from Chinese projects. The International Institute for Environment and Development (IIED) Forest Governance project (Mayers 2018) has shown that experiences are highly varied, and much depends on the local context and specifics of the scheme, and the extent to which good community consultation and transparent approaches to project governance and benefit-sharing are built in. Similarly, the assumption that Chinese projects involving agriculture, land, and water invariably lead to *grabs* and dispossession has been carefully critiqued (Brautigam 2015). In this latest episode of *China in Africa*, there has been great variation on the ground, with both positive and negative experiences shaped by embedded social, economic, political, and historical factors.

In the context of all these forms of risk, at an international level, for some European governments such as France, Germany, and the UK, there is an issue of *safeguarding*, that is, the degree to which BRI processes are aligned with established international standards and norms. In her address to the Second Belt and Road Forum held in Beijing in April 2019, IMF Managing Director Christine Lagarde argued that, what she termed 'BRI 2.0' could,

benefit from increased transparency, open procurement with competitive bidding, and better risk assessment in project selection. The launch of the green investment principle at this conference is a further important step forward for the BRI – and a step forward for green, low-carbon and climate-resilient investment. Debt sustainability and green sustainability will strengthen BRI sustainability (Lagarde 2019).

1.3 Case studies

The contributions to this *IDS Bulletin* provide a rich diversity of further contributions to this important and ongoing debate. They supply much-needed detail of what is happening in practice on the ground,

adding to existing evidence and further illuminating the issues being debated internationally about the relationship of the BRI to the SDGs. Though wide-ranging in their coverage, these studies are aligned around the central theme of this *IDS Bulletin*, namely, the opportunities and challenges involved in drawing these two global development initiatives together in a constructive, effective, practical relationship that can help to deliver, substantively, the SDGs by 2030. Taking this central theme, the respective studies focus on the question of how far the BRI is actually realising the potential to strengthen SDG delivery in practice. Specifically, the studies address the question as to what opportunities the BRI is offering to achieving the SDGs, and in what ways are opportunities counter-balanced by challenges and risks that limit the fulfilment of such opportunities.

As we have indicated above, at the core of the BRI is connectivity, building strong transport, communications, and energy connections between countries through policy cooperation, infrastructural investment, project implementation, and operational management to promote inclusive, equitable, and mutual economic growth through collaborative sustainable development. The contributing studies in this issue focus, thematically, on just what this overarching ambition means in practice. In the first of the studies, Gong Sen and Li Bingqin (this *IDS Bulletin*) move beyond the attention and investment concentration on energy and transport infrastructure to explain the opportunities presented by promoting greater information and communications technology (ICT) infrastructure investment and the BRI as a Digital Silk Road. Whilst evidence indicates that some of China's own cities have had some economic gains by grasping digital connectivity and engaging robustly with the emerging digital economy, the transferability of the Chinese experience to other BRI economies to promote sustainable development has been unclear.

Utilising a wide range of sources for the first time, the authors show that a multiplicity of digital investments is underway. Yet, potential benefits to SDG agendas are limited by their predominantly business, rather than poverty or environment focus; the lack of coherence between Chinese investments and national plans, and the fact that most are imposed top-down, missing (digital) opportunities for local consultation, and the enhancement of voice; and raising concerns about the imposition of surveillance. Thus, they conclude that the benefits of ICT investment in the BRI should not be overestimated, and themselves carry risks. The authors argue that, crucially, enhancing activities in the virtual world need to be matched with those in the real world to deliver sustainable outcomes.

In the second study, by Jiang Xiheng (this *IDS Bulletin*), analysis centres on the growing debate over BRI infrastructure investments and their relationship to international standards. In this study, the author looks at the critical question of whether the BRI will contribute to environmental aspects of the SDGs, asking whether Chinese

infrastructure investors will follow high environmental and social standards for greening BRI. They argue that it is critical to understand whether 'greening the BRI' will be translated into action, especially by Chinese investors. Analysing the environmental, social, and fiscal impacts and risks brought by large-scale infrastructure projects, the authors detail the pressures and incentives Chinese investors face, as well as their capacity to green BRI projects. Their analysis illustrates the way these pressures play out in practice and the impact and implications for standards. They argue that, while the frameworks are in place, significant gaps remain in operationalising these. Regarding management and communication capacities (more than technical capacities), the challenge is to implement standards in the fragile social and ecological settings of many BRI countries. Thus, risks to local environments and communities still prevail, despite good intentions.

Against the background and context provided by the present introduction and the two initial chapters, the following four articles provide country-focused studies. Zhou Taidong (this *IDS Bulletin*) examines the extent to which the BRI and Myanmar's national sustainable development plan and the SDGs are aligned. Zhou argues that, in principle at least, these are in alignment and the BRI presents an important opportunity to help Myanmar realise its development ambitions and achieve the SDGs. But in order to fully realise this opportunity, both countries still face huge challenges in security, social, environmental, and financial dimensions. Infrastructure and economic investments struggle amidst, and are sometimes fuelling, political conflict, community distrust, dispossession of land and resources, and ecological problems, in Myanmar's fragile setting. It is concomitant upon both governments to make strong efforts, including in consultation and community engagement, to ensure that the challenges are overcome and opportunities realised in practice.

In their article, Jing Gu and Shen Qiu (this *IDS Bulletin*) examine the BRI and Africa's sustainable development through a study of Kenya. They argue that many African countries are already realising the opportunities of the BRI and gaining practical results, particularly through infrastructural investment. However, their study also highlights continuing reservations in African countries about the challenges associated with the BRI. The authors illustrate the balance between opportunities and challenges in Kenya, illustrating Kenya's developmental needs, the BRI, and China's ability to meet these needs, the challenges of continued financing, debt management, project implementation and completion and, from China's own perspective, considerations of risk exposure, project monitoring, and outcomes assessment.

The study of Sino-Greek economic cooperation through the case of COSCO's investment in the Port of Piraeus by Liu Qianqian and Polyxeni Davarinou (this *IDS Bulletin*) argues that the port investment is mutually beneficial, grounded in opportunities for stimulating infrastructure investment, enhances the competitiveness of the port,

and boosts the local economy and job creation. However, the authors' assessment of this high-profile major project also identifies difficulties; in this particular case, concerns of some European countries to hold onto a common EU position on the BRI, and inflexibility in corporate overseas companies. The Port of Piraeus has a broader role in enhancing Sino-Greek economic cooperation (and by extension, Sino-European cooperation), but for this to unfold effectively, it will be necessary for Chinese and European actors to reconcile interests and goals with internal and international politics.

The next article, by Mustafa Hyder Sayed (this *IDS Bulletin*), takes us to South Asia as it explores the China–Pakistan Economic Corridor (CPEC). The study explains the background and development of the CPEC, identifying the factors that offer opportunities to Pakistan, China, and other regional BRI partner economies. The study notes key projects such as non-renewable and renewable power generation projects, strategic motorway construction, as well as the high-profile Gwadar Port, Gwadar Free Trade Zone, and Gwadar International Airport projects. However, Sayed argues that there are substantial challenges, including an important lack of a communication strategy and a need to engage non-governmental stakeholders.

The final article by Namsuk Kim (this *IDS Bulletin*) broadens the perspective once again to consider the relationship between the BRI and the SDGs as the crucial bridge to *leave no least developed country behind*. The article critically reviews the financing and cooperation needs for least developed countries as they work towards the SDGs, identifying a serious financing gap. It suggests that the BRI could contribute to this, but only if some critical enabling conditions are met – including aligning the BRI and the SDGs.

2 Conclusion

Collectively, these studies contribute a more diversified analysis and understanding of China's international development policies and practices, especially concerning the BRI and the SDGs. The evidence assembled through these reviews and detailed case studies offers insights into interlinkages between the BRI and the SDGs. A number of cross-cutting lessons emerge, including the diversity of these interlinkages. Both BRI and SDG investments and practices are immensely varied, and whether or not alignments or contradictions emerge depends very much on the set of issues in question. Context also matters; the social, economic, and political settings of the countries and places where BRI investments are taking place shape their impacts and outcomes, and their effects in relation to the SDGs. How BRI investment benefits are distributed between different social groups also has a profound impact on whether they contribute to the SDGs around poverty, inequality, gender equality, and the cross-cutting principle of *leave no one behind*. China has a long historical presence in most of the countries now part of the BRI, and the implications of this latest, largest episode in China's presence cannot be understood outside these embedded historical experiences.

The examples in this *IDS Bulletin* expand the context-specific evidence base but they are only a few. Another lesson concerns the gap between rhetoric and practice around the BRI and the SDGs. Much is claimed, and at the level of official discourse – whether of national governments, Chinese companies, or supportive international agencies – the right vision, commitments, frameworks, standards, and technical expertise are now in place to ensure that BRI investments align with national sustainable development priorities, and avoid risks. Yet evidence on the ground, whatever the country or issue, reveals a more complex and mixed picture, in which implementation, practice, and capacity struggle to meet these claims. Meanwhile, the image of the BRI providing neat technical and financial solutions to countries' development problems is often contradicted by more complex entanglements with social and political issues and interests.

Looking ahead, more evidence of the synergies and tensions between the BRI and the SDGs is clearly needed. A bank of case studies which captures these relationships, and that highlight best practice and examples of maximising the synergies and reducing the tensions in different contexts, needs to be developed and made globally available and accessible.

We also need a strengthened evidence base around what works in terms of aligning financial and sustainable development outcomes, understanding and managing risk, implementing and applying standards, and building the capacity of national governments, local communities, and private contractors to work together successfully to manage projects.

There also needs to be investment in consultation and capacity building. Donors, including development and multilateral agencies and development banks, should consider how they could invest in building the necessary capacities within BRI countries to more effectively manage and prioritise investment, in alignment with their own national sustainable development goals. They should also identify ways in which they can facilitate and support consultation and engagement between BRI national governments, civil society, local communities, and project investors, so that those directly affected have a greater say.

Thus, the potential exists to align the ambitions of the BRI around policy coordination, connectivity, trade, financial integration, and cultural exchange with the SDG framework and its focus on people, the planet, and power. Given the scope and scale of the BRI, it has the potential to contribute to global public goods. However, partners across national governments in developed and developing countries, investors and private sector organisations, multilateral agencies, and regional banks need to work together to conceptualise how this might be achieved, as in essence this was not the original intention or ambition of the BRI. There is sometimes a mismatch between the BRI recipient countries and Chinese companies around how far investments and

their outcomes can or should be aligned with the SDGs. National governments in countries have a role to play in articulating their own development strategies in relation to BRI investments.

Finally, to discuss these issues properly requires also that we embrace the reality of the power relations at stake in BRI investments, and discussion about them – both material power and resources, and the power to narrate what is going on through political statements and the media. We need to attend more closely to whose voices are being heard and whose are excluded – and to how this might need to change. Analysing power and politics, and supporting developmental alternatives to be surfaced and articulated, is a key task ahead in this dynamic context.

Notes

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The Digital Silk Road and the Sustainable Development Goals^{*†}

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Abstract The information and communications technology (ICT) sector has attracted growing interest among stakeholders in countries involved in the Belt and Road Initiative (BRI) and Chinese investors. A Digital Silk Road initiative within the BRI is growing, as countries are encouraged to work together on production and trade enabled by digital technologies. Digital connectivity and the emerging digital economy can have positive impacts on development, as has been demonstrated in some Chinese cities. However, it is difficult to tell whether the Chinese experience will be transferable. This article reviews what China has done in relation to the Digital Silk Road and the possible contributions made towards delivering the Sustainable Development Goals (SDGs) in investee countries. We conclude that while ICT investment has the transformative power to benefit the world's poorest, its benefits should not be overestimated. Enhancing activities in the virtual world need to be matched with those in the real world to deliver sustainable outcomes.

Keywords: Digital Silk Road, Sustainable Development Goals, ICT infrastructure, digital, technology, Belt and Road Initiative, barriers to development, China, multilateral relations, digital information.

1 Introduction

The Belt and Road Initiative (BRI) was proposed to develop economic cooperation between countries along the Silk Road. As the countries involved are often poor countries which are not very active in industrial production and international trade, building economic infrastructure, such as Special Economic Zones and transportation infrastructure, has become essential for enhancing economic connectivity and facilitating trade. Between 2013 and 2018, the largest proportion of investment was in physical infrastructure such as ports and railway lines. The total investment by China in BRI countries has reached US\$90bn, with an average growth of 5.2 per cent annually, while BRI countries in kind have invested over US\$40bn in China (Renwick forthcoming, 2019).

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The content of the BRI is evolving. As information and communications technology (ICT) allows the digital economy to thrive in the digital age, China has started to harvest the benefits of the fast-growing and innovative digital economy domestically. The ground-breaking force lies in the ability of the digital economy to empower disadvantaged regions and the population, in a way which would have been impossible in the past. Digital trading platforms or social networks such as Taobao, JD.com, and WeChat have transformed the way enterprises operate and have brought new opportunities and innovations. This has had a notable positive impact on some of the most impoverished communities, which had previously been trapped in poverty through geographic isolation (Li *et al.* 2018), and the disabled (Goggin *et al.* 2019; Zhong 2018).

The digital economy and the businesses that operate within it have become a powerful driving force behind China's rural poverty reduction (He 2019). At the 2015 Hangzhou G20 Summit, following a speech by China's president, Xi Jinping, the G20 members agreed that the digital economy could have great potential in delivering development outcomes. The aspiration was that there could be synergies among the BRI countries, particularly between the digitalisation of the Silk Road and the Sustainable Development Goals (SDGs) (Cyberspace Administration of China 2016). During the 2016 World Internet Summit, nine countries put in motion an initiative to develop cooperation in the field of the digital economy amongst countries along the Digital Silk Road. In May 2017, Xi Jinping spoke at the opening ceremony of the Belt and Road International Cooperation Forum:

We will continue to drive innovation, strengthen cooperation in cutting-edge areas such as the digital economy, artificial intelligence, nanotechnology, and quantum computing, and promote the construction of big data, cloud computing, and smart cities to connect to the 21st century Digital Silk Road (Xinhua News 2017).

To this day, ICT-enabled economic cooperation and the application of other new technologies in the BRI countries has been called the Digital Silk Road.

The BRI has now been integrated into the United Nations (UN) 2030 Agenda for Sustainable Development (2030 Agenda) to achieve the SDGs (Renwick, Gu and Gong 2018). Further to this, UN agencies have urged China to bring the BRI in line with the 2030 Agenda. As the Secretary-General António Guterres stated at the opening of the Belt and Road Forum for International Cooperation:

While the Belt and Road Initiative and the 2030 Agenda are different in their nature and scope, both have sustainable development as the overarching objective. Both strive to create opportunities, global public goods and win-win cooperation. Both aim to deepen 'connectivity' across countries and regions: connectivity in

infrastructure, trade, finance, policies and, perhaps most important of all, among peoples (Guterres 2017).

The World Bank also engages actively with the BRI through (1) convening, (2) analytical and advisory services, (3) project origination and preparation, (4) project financing, and (5) implementation support (World Bank 2018). As argued by some Chinese authors (see, for example, Cao 2016; Jin 2018), alignment between these two development agendas could serve as an external push, for Chinese enterprises that wish to operate internationally, to adopt better social standards and at the same time to contribute to the SDGs. Xue and Weng (2018) also showed how incorporating individual BRI projects into a host country's framework for SDG implementation could benefit the implementation of BRI projects within host countries.

In principle, as a new component of the BRI, the Digital Silk Road should also work in line with the 2030 Agenda. However, little research has been done to examine whether the Digital Silk Road is able to contribute to the 2030 Agenda and what the advantages and limitations of e-commerce are as an instrument for delivering the SDGs. This article is an attempt to fill in this identified gap in the literature. There are multiple types of technologies included in the Digital Silk Road initiatives. This article focuses on digital technology.

2 Barriers to sustainable development and digital solutions

2.1 Barriers to sustainable development

An important strand of the development studies literature focuses upon the barriers to development. As this is the era of sustainable development, it is also important to identify the barriers towards achieving the SDGs. As countries are in the middle of implementing the SDGs, barriers to their achievement may yet be exposed. The focus of recent literature on the barriers to realising the SDGs tends to be on various environmental factors. However, from the perspective of policy and implementation, the accumulated research outputs on the barriers to economic and human development and the most recent findings on environmental sustainability should all be taken into account to develop a balanced and comprehensive picture.

Earlier researchers identified multiple interlinked development traps: conflict; reliance on natural resources; being landlocked with bad neighbours; and bad governance (Collier 2007). Over time, the concept of human development replaced the focus on overall economic growth, with the former arguing for focusing on how people fare as the economy grows. For a human being to thrive and be part of society, they need multiple capitals (physical, financial, social, political, human) and infrastructure to support them to develop the capability to achieve what they want to achieve (Sen 2004). The most significant barriers to universal human development, as pointed out by Bonini (2017) are income, and social and political inequalities. He argues that the solutions are not limited to technology and funding.

The SDGs are a combination of goals for human development and environmental sustainability. Under this newer framework, development is expected to be people-centred and planet-sensitive. The barriers to implementing the SDGs include multiple sources: (1) economic and financial barriers (Adhikari 2018); (2) barriers to innovations (Filho *et al.* 2017); (3) social barriers (population growth, paired with unsustainable consumption and production patterns among the wealthy); (4) political barriers (including political will and governing capacities) (Urmee and Md 2016); (5) poor monitoring and evaluation systems (Olsen *et al.* 2014); (6) institutional barriers (Shiel, Smith and Cantarello 2018); and (7) trade barriers (de Melo and Solleder 2018).

The authors agree that technology cannot be the only solution to achieving sustainable development. However, as the world economy has entered the digital age and digital technology has been transforming people's lives as well as redefining market boundaries and changing the ways businesses and people work so profoundly, it is important to examine what digital technology can achieve and what barriers exist that may prevent it from reaching its potential.

2.2 Digital solutions and the barriers to development

There is a growing body of literature on the potential of digital technologies (ICTs). ICT investment may have the potential to contribute to all perspectives of development and help to remove any barriers, one way or another.

- 1 ICT as a form of information infrastructure has offered connectivity like other physical infrastructure inasmuch as it can link landlocked countries or poverty-ridden regions to the outside world (Ng and Tan 2018; Alexopoulos 2018).
- 2 Economic and political activity based on the ICT infrastructures have boosted trade and financial resources across borders (Mbise *et al.* 2018 on financial aid for trade) and have the potential to channel agency for the population whose voices may be less heard or whose needs are considered to be less of a priority than those of the established institutions (Maurer, Nelms and Rea 2018). Not having access to digital technology thus has the potential to directly affect the opportunities of some of the most impoverished populations in the world (Yu *et al.* 2018).
- 3 Digital platforms and business transactions may also generate social network effects (Murendo *et al.* 2018) and facilitate risk-sharing (Riley 2018), and thus generate unexpected social capital (Ahmed 2018).
- 4 Access to digital technology may help to improve access to social services such as education and health care (Hong *et al.* 2017; Thapa and Sein 2018).
- 5 Enhancing ICT may also serve to improve environmental sustainability by monitoring environmental threats and through

the assessment of environmental protection programmes (Asongu, Le Roux and Biekpe 2018; McDonald *et al.* 2002).

In this sense, digital infrastructure and the economic and social ecology based on this infrastructure would have the potential to overcome some of the barriers that had turned out to be challenging to get around or even considered to be developmental traps. However, like all technologies, digital technology can be a double-edged sword. There is a growing concern over how digital technology has been used to misinform rather than to inform (Mills 2016; Ciampaglia 2017), and to isolate rather than bridge understanding between people with differing opinions (Agarwal, Animesh and Prasad 2009). Despite the capability of digital technology to empower the less powerful, it can also empower those in power disproportionately, and enlarge rather than narrow the gaps between the developed and less developed world (Ahlfeldt, Koutroumpis and Valletti 2014; Fang *et al.* 2018).

3 What may the Digital Silk Road offer to the delivery of the SDGs?

It is well established that access to physical infrastructure may help to initiate trade and open doors for people from the most impoverished regions to the outside world, even if it cannot solve all the problems associated with poverty. As part of the BRI, the Digital Silk Road is an add-on to the conventional physical infrastructure. By linking countries with fibre-optic cables, mobile structures, and e-commerce links, and introducing common technical standards in participating nations, the Digital Silk Road can function to complement or supplement physical infrastructure. As discussed earlier, digital networks may help businesses in poor countries to be better prepared; for example, gathering information about global events, especially in relation to target markets and creating efficient business links, and also through calls for charity donations. However, some countries involved in the BRI do not even have the basic ICT infrastructure to allow them to tap into the world market (James 2009) and ICT access can be disproportionate, with cities and the more affluent population having better access (Onitsuka *et al.* 2018).

Despite theoretical claims, there is little practical evidence that can give Chinese policymakers the needed support for the Digital Silk Road. This is due to the newness and rapid evolution of the Digital Silk Road initiative, along with the Chinese government's different approach to governance, i.e. domestic policy inspiration is often drawn from the international experiences of the elites (Houlihan, Tan and Green 2010) and introduced top down; sometimes it is first experimented with using pilots at the local level (Ngar-Yin Mah and Hills 2014).

Yet, what has given the Chinese government the confidence to go about promoting digital infrastructure abroad is its own domestic experience with recent inland regional development; for example, in the Chongqing–Sichuan–Guizhou and Ningxia–Qinghai–Gansu regions, which were some of the poorest provinces in China. These provinces found it hard to compete with coastal cities such as Shanghai and

Guangzhou. They were geographically isolated, and investors found it hard to move their businesses to these regions. Despite these barriers, they represented abundant labour resources and much cheaper labour costs than the coastal regions. Still, it was not economical for exporters to operate in these cities because of the difficulties and cost to export the goods produced. As the coastal regions thrived with sustained growth, for years these southwest regions remained suppliers of cheap migrant labourers to the more prosperous regions.

Overall, it took them several steps to move out of the poverty trap:

- 1 At the turn of the century, with the help of the Developing the Western Regions initiative, these regions invested heavily in improving infrastructure. Thanks to a more convenient connection to the main railway network, road and aviation networks, and new economic development zones, as well as the early adoption of some of the best internet networks in China, these regions managed to attract investors from coastal regions and became the fastest growing regions in terms of gross domestic product (GDP) growth in China in the early 2010s (Katz and Jones 2015). The gap in GDP per capita at provincial level during 2009 and 2016 between the western provinces and the richest provinces had been narrowed, reversing a 30-year widening trend (Li 2017).
- 2 Since 2007, with the support of some of the most advanced digital infrastructure in China, these inland cities have been able to compete with the richest regions in China on high-tech and high-end financial services in a way that they would not have dreamt of in the past (Liu and Hu 2010; McNally 2004). Guizhou, which hosts some of the poorest counties in China, started to sell premium farm produce or horticultural products through e-commerce to the wealthiest cities in the country. The much cheaper and accessible internet financial services allowed smaller businesses to gain competitiveness in the market (Turvey and Xiong 2017). More recently, connectivity within these provinces has also given them the power to take advantage of their own large markets and let their customers enjoy the benefits of more accessible services and products (Tan *et al.* 2011; Leong *et al.* 2016). These new opportunities resulted in a surge of returning migrants and talents who became entrepreneurs or who were employed by the large companies that had settled in these regions, despite the benefits of large-city living (Mohabir, Jiang and Ma 2017; Bai, Wang and Zhang 2018).

Aside from the business sector, increasingly, digital infrastructure has also changed the way Chinese governance works. Community-based digital governance platforms and government digital complaint systems were set up to generate and channel people's voices upwards to help local governments to improve their performance (Chu, Yeh and Chuang 2008). The ability to respond to public complaints promptly has been built into the key performance indicators of the local officials concerned

(Gao 2015; Almén 2018). It has been used widely in monitoring service and infrastructure accessibility and quality, and public and environmental health, as well as environmental governance (Zhang, Mol and He 2016; Li 2018).

Despite international criticism of a surveillance state potentially emerging, the broader use of digital networks has benefited the impoverished regions to deliver results in all perspectives of human development as well as sustainable development (Giroux 2014; Trojanow *et al.* 2015). Using online teaching or teacher training and remote health-care provision or remote health-care professional support, some of the most isolated regions are able to receive some basic services that were not available to people in the past. Despite these results, livelihoods are still far from ideal (Yang, Zhu and MacLeod 2018; Hwang *et al.* 2018) and emerging solutions to overcome some of the most challenging barriers to development come predominantly from continual innovation (Tu, Wang and Wu 2018).

The Chinese government's aspiration to use digital connectivity to support development internationally via the BRI is, to a great extent, a result of having seen what it has and can achieve in China. As Xiang (2017) suggests, ICT is meant to help open the possibilities for economic development, narrow the digital divides in terms of accessibility and unequal quality among BRI countries, and at the same time provide good-value-for-money products and services for people. The data collection, transmission, and sharing among the BRI countries, or spatial information passageways, may provide supplementary information to monitor and evaluate the progress of participating countries along the Belt and Road (B&R) on sustainable development (Gong, Gu and Teng 2019). The ability to do so, with the aid of China's experience, will be crucial for overcoming some of the barriers mentioned in Section 2.2; that is, to generate reliable monitoring, evaluation, and targets for delivering outcomes for the SDGs.

This is itself empowering or a form of capacity building for developing countries that do not necessarily have the same capacities as developed countries. The Chinese Academy of Sciences (2017) published the *Report on Remote Sensing Monitoring of China Sustainable Development 2016*, which argued that Chinese assistance in the development of a Digital Silk Road would lead to more open and just public administration. Li (2017) finds that enhanced internet coverage could make positive contributions to per capita GDP. The effect would be that ten more percentage points of coverage would increase GDP by 0.9 percentage points. Such findings are quite similar to those of Choi and Yi (2009) and Czernich *et al.* (2009) in different contexts.

4 The Digital Silk Road: policy framework and associated cross-country collaboration

In this section, we first outline the policy framework for the Digital Silk Road and the cross-country collaboration it has generated so far.

4.1 Intergovernmental collaboration

By April 2019, China had signed collaborative agreements with 16 BRI partner countries to build up the Digital Silk Road together and has jointly signed a collaborative initiative for a B&R Digital Economy with seven BRI countries. Some examples of these agreements signed by the Chinese Ministry of Industry and Information Technology within the BRI framework include:

- A letter of intent with the International Telecommunication Union to strengthen cooperation within the ICT sector;
- Bilateral Memoranda of Understanding (MoUs) with the government departments of Cambodia, Iran, Bangladesh, and Afghanistan;
- Agreements with the five member states of the East African Community, Ethiopia, and the International Telecommunication Union to jointly build information highways in East Africa;
- An action plan to strengthen a partnership for the joint development of ICTs between China and the Association of Southeast Asian Nations (ASEAN); and there has been significant progress in the construction of China–Myanmar, China–Pakistan, China–Kyrgyzstan, and China–Russia cross-border fibre-optic cables for information transmission (Office of the Leading Group for the BRI 2019).

4.2 Multilateral relations

By the end of 2017, China had 17 international terrestrial cable border stations with 12 neighbouring countries, and ten submarine optical cables had been laid to connect 12 countries (CAICT 2018). The Chinese government has been assisting three telecom enterprises to participate in the construction of a China–ASEAN Information Harbor (CAEXPO Secretariat 2018). Chinese industries have also been actively promoting the development of BeiDou-2, a Chinese global satellite navigation system, aiming to have 35 satellites by 2020. Several Asian countries, including Pakistan, Laos, Brunei, and Thailand, have adopted the system (Hao 2019).

4.3 Chinese businesses and foreign governments

Within the BRI framework, many private enterprises reached out to the national or local governments of the BRI countries to sign up collaboration agreements or to contract public infrastructure building. These activities have taken multiple forms:

- Alibaba signed MoUs with the Pakistan Trade Development Bureau in May 2017 to promote the development of small- and medium-sized enterprises (SMEs) in Pakistan, and with the Thai government in April 2018. The latter would help to set up an intelligent data centre in the Eastern Economic Corridor (EEC) to help SMEs in the EEC to build a digital platform for tourism in Thailand and to enhance the capacity of local e-commerce workers.

- Chinese companies have also been involved in the construction of smart cities in other countries. Both Huawei and Alibaba, for example, have engaged in the construction of Smart Dubai (Stewart 2019). Besides this, Alibaba Cloud Computing has been involved in the data analysis of the EZ-Link Card in Singapore (*Asian Scientist Newsroom* 2017) and the digital transformation plan of Saudi Arabia (Viney, Pan and Fang 2017).
- The Thai government has tried to attract Alibaba and Huawei to invest in the EEC. According to Rookie Network Technology Co. Ltd (Fu 2018), the critical Chinese network for smart logistics controlled by Alibaba has established a fast track for fresh agricultural products including *Durio zibethinus* murr. from Thailand to many major cities in China. Huawei established an open lab in Bangkok in June 2017, a collaborative and innovative platform for local customers and entrepreneurs. The total investment of the lab was US\$15m (Xinhua News 2017).
- Some countries, such as Argentina, have embraced Alibaba's initiative of the Electronic World Trade Platform (eWTP) (Chu and Li 2018). In May 2017, the President of Argentina stated that the government had reached a strategic agreement with Alibaba regarding the eWTP.

4.4 Direct investments and sales by Chinese businesses to BRI markets

Chinese companies also increasingly invest or operate in foreign markets. For example, in 2016, the China Mobile Communications Corporation, China Unicom, and China Telecom invested about US\$800m in overseas markets and started business operations in many countries and regions including Pakistan, Thailand, and Singapore. These days, more app companies are becoming interested in international markets. As early as 2013, Huawei started to invest in Myanmar and donated equipment equivalent to US\$5m for various purposes, including to the Southeast Asian Games Organisation and for mobile technology systems (China News Agency 2017). Since 2018, the country's Ministry of Transport and Communications has been working with Huawei to develop 5G broadband services across Myanmar within the next five years. A further push was given to its 5G plans in February 2019 when Huawei pledged to increase digital literacy and the usage of the Internet of Things in Myanmar.

Chinese companies increasingly operate internationally in e-commerce, online to offline (O2O), social networking, utilities, content, and games. Apart from developed countries, Chinese apps are gaining users in BRI countries in Southeast Asia, South Asia, the Middle East, Latin America, and Africa. By the end of 2017, more than 700 companies had international businesses (iResearch 2018).

4.5 Chinese and foreign business partnerships

Increasingly, international companies have started to join Chinese companies to work on BRI-related projects. For example, the Inspur Group initiated a B&R Digital Economy Strategic Alliance in November 2017 together with Cisco, IBM, Diebold, and Ericsson (Inspur Group 2017). These companies developed a partnership with the Export–Import Bank of China, the China Development Bank, the China Export and Credit Insurance Corporation, and the China–Africa Development Fund. The partnership was the first cooperative mechanism introduced by enterprises which would provide world-class data centres, as well as deliver cloud services and solutions to enable smart cities and smart enterprises.

The activities within the Digital Silk Road have shown that it is a gradually evolving field. The Chinese government has played a pivotal role in forming these initiatives; reaching agreements or mutual understandings with other countries' governments. It has also been actively encouraging Chinese enterprises that were not initially interested in developing business relationships abroad, particularly with developing countries. After the initial set-up and the availability of basic infrastructure, businesses from around the world started to engage, and an ecosystem started to develop around the initiatives.

5 The Digital Silk Road and the Sustainable Development Goals

Geopolitical debates and even confrontations have been taking place as the system continues to evolve. It is gaining importance in the BRI framework, and a lively ecosystem has emerged regardless. From the perspective of development, can this system deliver some of the desired outcomes relating to the SDGs?

5.1 Leveraging digital connectivity to stimulate growth and reduce poverty and inequality

As discussed in Section 2, for countries that have been trapped in poverty, digital connectivity provides new opportunities to accumulate human capital, tap into the international market, and improve social participation. However, access to digital infrastructure is only the starting point. The outcomes of digital enablement depend on the quality of connectivity, the supporting environment, and user capability. Therefore, it is not always realistic to expect digital connectivity to deliver development outcomes single-handedly. However, what can be expected is that improved digital connectivity (including improvement in accessibility and quality) can at least open up new opportunities. With growing investment and collaboration, the Digital Silk Road projects are developing fast in different directions in multiple developing countries (Gu and Carey 2019).

This article uses examples or cases published by Chinese official websites, academic research in Chinese and in English, as well as in media coverage of the BRI countries to put together the pieces of the jigsaw.

5.2 Enhancing connectivity

Connectivity relating to the Digital Silk Road can be viewed from multiple perspectives. It can be through access to digital networks with devices. Oreglia (2019) reports that until 2014 or 2015, many small-town and rural business people did not have a phone and had to rely on travel agents, or go to wholesale markets, typically by bus on dangerous roads or by train on slow railway lines. Even in 2010, there were only 594,000 mobile phone subscribers in the country – 1.14 subscriptions per 100 inhabitants – and 493,314 landline subscribers – 0.98 per 100 inhabitants. The cost of a SIM card was around US\$2,000 in the late 2000s, and still in the hundreds of dollars in the early 2010s. Private landlines were rare, especially outside major cities, so people used public phones, which were expensive and unreliable. Norwegian company Telenor and Qatari company Ooredoo helped to lower the price of SIM cards in cities instantly to US\$1.50, and mobile phone services became accessible to 89.8 per cent of the population in 2017, with 75.1 mobile broadband subscriptions per 100 inhabitants in 2017. In rural areas, Chinese budget models of Huawei, Honor and Oppo, for example, were more popular than the more expensive versions. Other ‘local’ brands also use phones made in China, and Chinese entrepreneurs manage the commercial distribution, marketing, and sales of the products. Other Chinese brands such as Coolpad, Gionee, Vivo, Meizu, and Zopo, typically unknown in the West, have been gaining significant market shares in emerging economies.

Connectivity can also mean the link between the Chinese market and BRI countries. Alibaba has been thriving by bringing companies into the digital world and trade. It has also helped foreign companies, particularly small and medium enterprises to tap into the vast Chinese domestic market (AliResearch 2019). On 31 October 2018, the first eWTP in Africa was launched in Kigali (Mugisha 2018), which has increased the sales of Rwandan coffee on Tmall (Gahigi 2019). The Taobao Village model was also introduced to Thailand to help tackle poverty and raise community income via e-commerce and digital technology (Arunmas 2018). In February 2019, the Eastern Economic Corridor Office of Thailand (EECO) established agreements with Alibaba to use e-commerce and digital technology to promote Thai products to Chinese customers (Eastern Economic Corridor 2019).

Connectivity may also mean access to business services. After successful innovation in China, Alipay has taken some share of financial technology (fintech) markets through mergers and acquisitions (M&A) in India, Singapore, Korea, Russia, and Thailand. Such a cross-border exchange and accounting system were crucial for Alibaba’s cross-border e-commerce cooperation. Paytm was the largest mobile payment and commerce platform in India but one year after being taken over by Ant Financial, it became the fourth biggest electronic wallet globally. By the end of 2017, Paytm had 215 million users, of which nearly 200 million were new users following the takeover (Sriram 2019).

Additionally, e-commerce benefited poor people and small- and medium-sized businesses. Cloud Computing for EZ-Link provided timely information to more than 50,000 SMEs in Singapore. Lazada, Southeast Asia's number one online shopping destination created in 2012, now with Alibaba (its largest shareholder since 2016), provides services for more than 400,000 SMEs in Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. Its business more than doubled in 2018 (Cadell and Aravindan 2018).

5.3 Narrowing the digital gap and inequalities in countries in Africa and elsewhere

Han (2018) estimates that levels of digitalisation of participating countries along the Belt and Road route increased by 2.78 per cent in 2016 compared to the previous year, while the average global growth rate was 2.1 per cent. Arguably, the better performance of the Belt and Road countries was attributed to the rapid construction of ICT network infrastructure and technical cooperation between China and the participating countries. As well as the previously mentioned case of Rwandan coffee farmers, Tanzania represents another example. China Telecom helped the country to install a fibre-optic transmission network. Huawei also signed a US\$182m deal for constructing landline and mobile ICT networks. Tanzania was upgraded from 'no internet application' to 'world-class' access, which has also resulted in the development of local ICTs and internet industries (TanzaniaInvest 2015).

Connectivity between business stakeholders and members of society by BRI member state users has also become more active. WeChat, including the payment system, was being adopted and adapted in other countries even before Tencent reached some of them. They are widespread for both business and personal use. They are used by small businesses and larger traders to settle transactions, including internationally. Their use has helped to establish relationships with suppliers and buyers and turned out to be particularly popular with people who trade agricultural products and natural resources (Oreglia 2019).

5.4 Local capacity building

As well as providing digital infrastructure, Chinese companies offered talent training to empower entrepreneurs and other users of digital technology. Alibaba offers training courses to future entrepreneurs from Africa and Southeast Asia and helps aspiring young entrepreneurs to develop businesses and innovations (Hsu 2018). Huawei established an overseas training centre in 2012 for global talents. By the end of March 2018, more than 40,000 technicians and experts had participated in the future seed programme at the centre. It also sets up research and development centres in Africa (Fu 2018).

5.5 Protecting the environment

The development of physical as well as digital infrastructure through the BRI has started to proceed economically in developing countries. However, China's own experience shows that economic prosperity can

have negative environmental impact if there is little consideration for the environment. It is well known that many regions in China have suffered from serious environmental degradation, pollution, and urban heat island effects (Li 2013).

The BRI aspires to balance environmental and economic goals. The Digital Belt and Road (DBAR) programme was initiated in 2016 by Chinese scientists in cooperation with experts from 19 countries and seven international organisations. The aim was to improve environmental monitoring and data sharing, and to support policymaking. The Chinese Academy of Sciences (CAS) is investing more than 200m yuan (US\$32m) in the next five years to support the DBAR programme. According to the Chair of the programme:

Environmental and socio-economic information will be shared through a platform for big Earth data, scheduled for roll-out between 2016 and 2026. This open-access gateway will allow researchers, policymakers and the public to track changes, development and trends. The programme will investigate indices and indicators to feed into the UN's 2030 Sustainable Development Goals (Guo 2018).

5.6 Institutional development

According to Xu (2017), the Inspur Group has helped the digitalisation of the taxation administration of Zimbabwe. The engineers from the Inspur Group provided hands-on tutorials to the local technicians and engineers for four years. It did not charge the customers on a daily or even hourly rate. The success of the Inspur Group's work in Zimbabwe has attracted taxation bureaus from more than ten other African countries. In response, the Inspur Group has organised more than 500 overseas events about cloud computing and big data and has trained over 10,000 digitalisation professionals for Egypt, South Africa, and Vietnam.

6 Discussion and conclusion

A Chinese idiom may help to capture the role of the Digital Silk Road for the BRI: 'adding wings to a tiger' (*ru hu tian yi*), which means to add more capacity to a strong force. As discussed, the Digital Silk Road has generated some benefits in the BRI countries, which contributes towards some of the SDGs. Its primary contribution would be to enhance connectivity and complement physical infrastructure. It helps to link some of the most disadvantaged or isolated countries or communities to the outside world and allow them to benefit directly from one of the world's markets through trade and entrepreneurship. It also empowers people and small businesses with information that they would not otherwise have had access to.

A growing number of developing countries in Africa, Southeast Asia, and the Middle East have become engaged with the Chinese government and Chinese companies on digital initiatives. The acceptance of this approach illustrates its potential value to these BRI countries. There are several advantages of the Digital Silk Road initiative, other than

building large-scale physical infrastructure. For the companies and hosting governments, the costs of constructing digital infrastructure is much lower than for physical infrastructure projects. Although Chinese digital solutions and technologies may not be the most advanced, they meet the needs of developing countries and lower-income groups (Zhang 2017). Therefore, they have been particularly welcomed by lower-income countries and beneficial to the more impoverished populations, allowing them to benefit from international development.

Our review shows that the Digital Silk Road has not been able to offer direct solutions to environmental problems, despite efforts to collect the data. Data monitoring would help to generate future policies on evaluation and targeted environmental protection. However, data collection is not the same as delivering actual solutions. It will take a lot more commitment and supportive efforts to really deliver the goal to protect the environment. What digital data collection *can* achieve is that the increased availability of the digital network, information, and skills, the need for better environmental protection, and lower energy consumption can be better communicated to people around the world. This may play an essential role in pressing enterprises and consumers to change their behaviour in the future.

Another frequently raised issue is the need for bottom-up decision-making, voice channelling, and co-production. Despite the increased availability of these activities in the Chinese context, i.e. digital platforms, social media, and apps being more and more used for public consultation at the policy formation stage, these goals are not built into the BRI system (Seele, Jia and Helbing 2019). A more co-productive approach that involves not only the governments of the hosting countries of Chinese technologies, but also other stakeholders such as businesses, non-governmental organisations, and communities in these countries, may help to prevent some of the negative opinions or even resistance in the future, and thus enlist greater support for the sustainability of the BRI itself.

Digital technologies can be used for bad causes as well as good. Internationally, China has been portrayed negatively for trying to empower a surveillance state using technology. However, even if China refrains from using digital technologies to impose state control on its people, it cannot guarantee that other countries would do the same once they gain that same technological access. Therefore, as ICT networks increasingly operate across national boundaries and into some uncharted territories, there needs to be international cooperation to develop a legal framework to prevent ICT networks from being misused to cause problems at a more rapid pace.

A threat and possibly more of a reality than ever for the Digital Silk Road to contribute to the delivery of the SDGs, is the heated geopolitical contest between China and the US. Through punitive tariffs or business constraints, the new trading system built for poorer countries

to boost international trade may be adversely affected. To what extent the improvement of development outcomes can be eroded as a result of this is still too early to tell, and more research should be done to develop a better understanding of the possible consequences. After all, delivering the SDGs and benefiting the poorest global populations would require world leaders to learn to take advantage of, rather than block, the new opportunities of digitally enabled development for the vast number of poor people.

Notes

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Green Belt and Road Initiative Environmental and Social Standards: Will Chinese Companies Conform?*

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Abstract The Belt and Road Initiative (BRI) proposed by China in 2013 has been seen as one of the most ambitious initiatives to enhance infrastructure connectivity within and across countries. However, the initiative has attracted some controversy over the last five years. On the one hand, it is commended for responding to the urgent needs of many developing countries in building up basic energy and transportation infrastructures; on the other hand, it is questioned for the environmental, social, and fiscal impacts brought by large-scale infrastructure projects. The Chinese government proposed a green BRI in 2016. It is critical to understand whether *greening the BRI* will be translated into action, especially by the Chinese companies who fund and construct BRI projects. This article examines the pressures and incentives Chinese companies face alongside their capacity to green BRI projects. Gaps are identified in these three aspects and policy recommendations proposed to the key stakeholders.

Keywords: Belt and Road Initiative, greening, environmental and social standards, Chinese companies.

1 Introduction

China's initiative to build the Silk Road Economic Belt and the twenty-first century Maritime Silk Road, in abbreviation the Belt and Road Initiative (BRI), aims at common development through enhanced connectivity in policies, facilities, trade, investment, and people-to-people bonds (Xinhua News 2015). China believes that infrastructure is the foundation of economic growth and enjoys competitive funding, capacity, and technology advantages in the building of infrastructure. According to some recent estimates, the global infrastructure investment needed to support the currently expected rates of economic growth is above US\$3.3tn annually (McKinsey Global Institute 2016), while Asia alone needs US\$1.7tn (ADB 2017: vii). While the infrastructure

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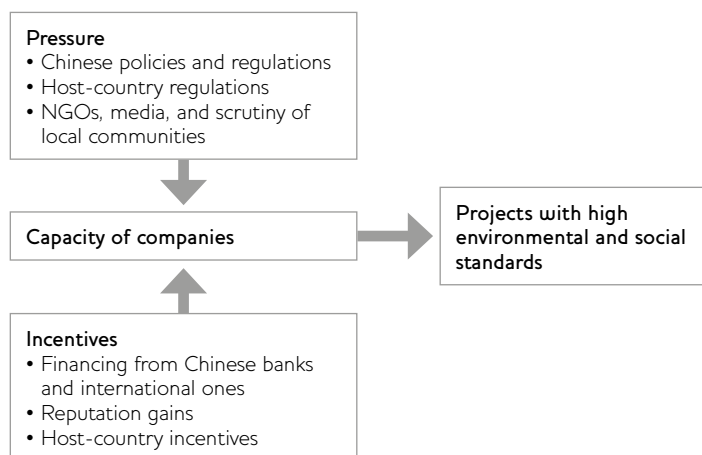
need is increasing, there are fewer infrastructure projects with private participation in emerging markets and developing countries. The 242 projects recorded in 2016 is 27 per cent less than the 334 projects registered in 2015, and a little more than half the average number of projects during the years 2011–15 (World Bank 2017).

Many countries face significant infrastructure investment gaps and are therefore keen to participate in the BRI (WWF 2018). According to the World Bank report published in April 2019, countries that lie along the Belt and Road corridors are ill-served by existing infrastructure and by a variety of policy gaps, and as such they under-trade by 30 per cent and fall short of their potential foreign direct investment (FDI) by 70 per cent (World Bank Group 2019). Since its launch, BRI investments have largely focused on infrastructure. While different estimates for BRI projects can be found, the Chinese Ministry of Commerce records that from 2014 to 2017, the number of BRI projects and the size of the investments are growing at a rate of 18 per cent and BRI investments reached US\$143bn in 2017, which is around one third of the total global infrastructure investments (*ibid.*). Among the newly contracted projects in 2017, three quarters of them are in the power and transport sectors, but the BRI portfolio is expected to shift towards manufacturing and urban infrastructure development in the near future (*ibid.*).

Given such scale and structure, BRI investment inevitably faces high environmental and social risks. Many BRI countries in Central Asia and Southeast Asia have vulnerable ecological and social systems, which further magnify risks. In addition, meeting global climate change targets requires rapid progress toward decarbonisation, creating a risk of stranded assets to fossil-fuel infrastructure. Negative environmental and social impacts have the potential to delay or stall projects, which can lead to major financial losses. As Chinese companies have increased their footprints abroad, they are being held accountable for environmental and social outcomes, just like multinational companies from other countries.

Over the past decades, China has paid increasing attention to ecological preservation and environmental protection, both in domestic development and overseas investment. China's president, Xi Jinping, has repeatedly stressed the importance of building an *ecological civilisation* both in China and globally. In 2016, he called for a Green Silk Road (State Council Information Office of the People's Republic of China 2016), and in 2017 he proposed an international coalition for a green BRI and a big data service platform on ecological and environmental protection (Xinhua News 2017). Both the coalition and the big data platform were launched in April 2019. The coalition convened Chinese and international stakeholders for dialogue, knowledge-sharing, and technology transfer, structured under ten thematic partnership groups (International Cooperation and Exchange Center of the Ministry of Ecology and Environment 2019). The data platform provided data on the ecological conditions; environmental laws and regulations; business

Figure 1 Analytical framework of companies engaged in BRI investment and construction



Source Author's own.

opportunities in BRI countries with the help of the internet; big data; and satellite remote sensing (*ibid.*).

Will Chinese companies follow the higher environmental and social standards in the context of a greening BRI, as advocated by the Chinese government? How can all stakeholders including the Chinese government, host countries, and international institutions make green investment happen at a faster speed? Finding answers to these questions is needed in order to achieve the Sustainable Development Goals, as well as for the success of the BRI as a contribution to global development. This study situates these questions in an analytical framework in order to examine the key determinants, the status quo, and the gaps, and to give policy recommendations for the key stakeholders.

2 Analytical framework

The analytical framework in Figure 1 focuses on companies that are the key actors in direct infrastructure investment and construction activities, towards higher or lower environmental and social standards. These include large Chinese state-owned enterprises (SOEs) and private companies that invest in or construct infrastructure projects abroad. To encourage companies to adopt and build up capacity for higher environmental and social standards, the right pressure and incentives must be put in place, as shown in the framework.

There are various sources of pressure on Chinese companies to green investments and construction activities. These include the evolving green BRI policy and regulatory framework articulated by the Chinese government, more stringent regulations, and higher environmental and social safeguard standards in host countries, as well as increasing scrutiny from non-governmental organisations (NGOs) and local communities.

The overriding incentive for investors is to find projects that provide a return on investment. They are thus sensitive to financing opportunities around the BRI, as well as more indirect factors such as reputation gains and host-country policy incentives. Among which, the role of financing incentives is the key one and thus is the focus of analysis.

Chinese companies vary significantly with respect to their capacity for higher environmental and social standards. Some major ones are the most competitive contractors on the global infrastructure market while some minor ones are short of capacity.

3 Pressure for Chinese companies to follow high environmental and social standards

3.1 The evolving green BRI policy and regulatory framework

Since 2015, official BRI documents have increasingly stressed the importance of greening infrastructure investments. This framework provides a set of guiding principles, although it puts the onus of operationalising them onto investors and project implementers. However, over time, there is a trend towards more precise rules that could provide a baseline to more specific and binding regulations in the future.

The first official document illustrating what the BRI is and how it is expected to be carried out is the *Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, published jointly in March 2015 by the National Development and Reform Commission (NDRC), the Ministry of Foreign Affairs (MFA), and the Ministry of Commerce (MOFCOM) (Xinhua News 2015). This document asserts that the BRI will follow the principles of consultation, joint efforts, and shared benefits, as well as market rules and international norms. It also states that the BRI will 'strengthen the green and low-carbon construction and operation management of infrastructure, taking full account of the impact of climate change during construction' (*ibid.*).

In order to mainstream ecological civilisation in the BRI and imbed sustainability into the efforts of policy coordination, infrastructure connection, trade, and investment, the *Guidance on Promoting Green Belt and Road* was issued by the Ministry of Environmental Protection which became the Ministry of Ecology and Environment (MEE) in March 2018, jointly with the MFA, the NDRC, and the MOFCOM in 2016. This policy paper promotes the adoption of green concepts in all BRI activities and notes the importance of international collaboration and government–enterprise coordination to ensure implementation results (Belt and Road Portal 2017b).

This framework received further specification in 2017. In order to further strengthen cooperation on eco-environmental protection and enable eco-environmental protection to serve, support, and guarantee the Belt and Road construction towards environment-friendly routes, the *Belt and Road Ecological and Environmental Cooperation Plan* was enacted in May 2017 (Belt and Road Portal 2017c). It translates the guidance

of green BRI into more detailed policies. It emphasises commitments to enhanced guidance to further green corporate behaviour by implementing the *Guidance on Promoting Green Belt and Road*, and the *Guidelines for Environmental Protection in Foreign Investment and Cooperation* jointly released by the MOFCOM and the MEE (*ibid.*). It also stresses the implementation of the *Initiative on Corporate Environmental Responsibility Fulfilment for Building the Green 'Belt and Road'* announced by 19 key state enterprises (*ibid.*).

Green concepts and environmental protection requirements have also been integrated into other BRI policies. In the *Vision and Actions on Energy Cooperation in Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, commitment is made 'to attach great importance to the issue of environmental protection in the process of energy development, and strive to encourage the efficient development and utilisation of clean energy and technology transfer as well' (Belt and Road Portal 2017d).

In December 2017, the *Code of Conduct for Chinese Private Investors* was jointly published by the NDRC, the MOFCOM, the People's Bank of China (PBOC), the MOF, and the All-China Federation of Industry and Commerce as a BRI policy (Belt and Road Portal 2017a). It includes one chapter on environmental protection and resource conservation. In particular, there is one notable excerpt: 'In countries where there is no environmental laws and standards, the environmental standards of international organisations and multi-lateral organisations could be adopted' (*ibid.*). With increasing specifications to fill the gaps of regulation, this shows evident progress in terms of policy guidance. Past policies requested investors to observe the laws and standards of host countries and use Chinese standards in such cases where no local laws exist. In addition, in the *Action Plan on Standardization Connectivity 2018–2020* (Belt and Road Portal 2018), one of the key actions is designated to enhance international collaboration on standardisation in energy saving and environmental protection to serve the green BRI.

The Second Belt and Road Forum for International Cooperation held in April 2019 set clear directions for BRI development after its first five years. With high quality as the theme of the Forum, the event emphasised the principle of 'extensive consultation, joint contribution and shared benefits', and made clear the approaches of 'open, green and clean cooperation' for the goals of high standards, a people-centred approach, and sustainability (Ministry of Foreign Affairs of the People's Republic of China 2019a). Consensus was achieved that support for the United Nations (UN) 2030 Agenda for Sustainable Development (2030 Agenda) should be made an integral part of Belt and Road cooperation, and that economic growth, social progress, and environmental protection should be pursued in a balanced way (Ministry of Foreign Affairs of the People's Republic of China 2019b).

Xi Jinping made commitments on transparency and clean governance in pursuing Belt and Road cooperation and zero tolerance for

corruption. He said that 'everything should be done in a transparent way' and that '[China] will adopt widely accepted rules and standards while the laws and regulations of participating countries should also be respected' (Ministry of Foreign Affairs of the People's Republic of China 2019a). *Green* finance was repeatedly mentioned, including in the context of enhancing collaboration on the Paris Agreement. In the joint communiqué, commitments are made to 'build high-quality, reliable, resilient and sustainable infrastructure' and it is emphasised that 'high-quality infrastructure should be viable, affordable, accessible, inclusive and broadly beneficial over its entire life-cycle, contributing to sustainable development of participating countries and the industrialisation of developing countries' (Belt and Road Portal 2019a). To achieve the goal, parties will work together in line with China's national legislation, regulatory frameworks, international obligations, applicable international norms and standards (*ibid.*).

In addition to this framing, a few key concrete measures launched by China and participating countries and organisations continued the trend towards greater specificity in rules and processes around greening the BRI. The BRI International Green Development Coalition was launched with ten thematic groups and over 120 participating international organisations, government ministries, and NGOs, thinktanks and businesses. This group serves as an important forum for future discussions on greening the BRI. In addition, major financial institutions from China, the UK, France, Singapore, Pakistan, the UAE, Hong Kong SAR, and other countries and regions signed up to the *Green Investment Principles for Belt and Road Development* (Green Finance 2019). To improve cooperation in project preparation and implementation and to promote projects that are investable, bankable, economically viable, and environmentally friendly (*ibid.*), the Ministry of Finance of China in collaboration with the Asian Infrastructure Investment Bank (AIIB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the World Bank Group, the Inter-American Development Bank (IDB), and a few other financial institutions jointly established the Multilateral Cooperation Center for Development Finance (Ministry of Foreign Affairs of the People's Republic of China 2019c).

3.2 The increasingly stringent regulations and growing capacities of host countries

Alongside a growing emphasis on sustainability in the framework of the BRI, policies of host countries can serve as a powerful driver for greening infrastructure investments. The Chinese government requires overseas investors to abide by the laws and regulations of the host countries, although monitoring and enforcing this requirement is a difficult challenge. BRI countries in Central and Eastern Europe are generally EU members and apply high environmental and social standards to investments. A number of African countries such as Nigeria, Kenya, and others are setting up an environmental safeguard reporting system for foreign investors. Many BRI countries are

enhancing their legal requirements for labour protection, technology transfer, and local share of benefits. Chinese investors will face increasingly complex due diligence and compliance management challenges (UNDP 2017).

In addition, policy coordination and capacity building under the BRI framework can help some BRI countries with weak legislative and executive capacities build up their capacities to manage environmental risks. China signed Memoranda of Understanding (MoUs) with the United Nations Environment Programme (UNEP) and over 30 countries for environmental protection under the green BRI and launched the Green BRI Envoy Plan, which provided training courses for over 2,000 officials engaged in environmental protection (MEE n.d.). The Green Finance Leader Programme was launched in 2018 and provided knowledge-sharing seminars for 120 regulators from 35 BRI countries (IFC 2018b). With the BRI International Green Development Coalition and the ecological big data platform becoming operational, regulatory coordination, capacity building, and technology transfer can further improve the regulatory environment in BRI countries.

3.3 Growing pressure from NGOs, the media, and local communities

International and local NGOs, the media, as well as local communities in host countries can have a strong influence on the operations of infrastructure projects. In addition to a fragile ecology and sensitive environment, many countries along the Belt and Road are confronted with complex geopolitical and social challenges. The majority of BRI projects are large construction projects with significant environmental and social impacts. Investors must pay careful attention to local concerns and priorities if those investors should wish to acquire a *social licence to operate* over the lifespan of a project. For example, a recent poll of public opinion in six BRI countries showed that the public prefer renewable power investments to fossil-fuel investments by a ratio of two to one, and are much more likely to support foreign investment for renewable projects over traditional power infrastructure (Littlecott and Hawkins 2019). While it is the host-country government that ultimately decides on its preferred power infrastructure, with Chinese companies acting as contractors winning bids and implementing projects within the contracted budget, there is some scope for greater accountability of Chinese companies within this process.

Many international and local media, and environment and human rights organisations are also closely watching these projects. Any negative environmental impact, land dispute, or labour issue can be immediately exposed to reach a large domestic and international audience. A number of projects in Southeast Asian and African countries have been stalled or cancelled due to these factors. A well-known case is the Myitsone Dam in Myanmar which was stalled in 2011 after two years of construction, impacting the Chinese company that won the project through bidding, and with significant losses. This case helped Chinese companies understand that environmental

regulation, social impact, information disclosure, political uncertainty, public opinion, and the capacity of Chinese investors are all factors for risk management in overseas infrastructure investment.

Furthermore, some negative cases have been turned into bloated and anecdotal stories in the media and believed by the local people. An often-told story is that Chinese companies predominantly employ Chinese workers, depriving locals of potential jobs, and where locals are employed, they are paid low salaries and offered little training. In a recent study coordinated by the School of Oriental and African Studies and the London School of Economics, researchers compared Chinese and non-Chinese manufacturing and construction companies in Angola and Ethiopia, two of the top African destinations for Chinese direct investment. Fieldworkers studied 76 companies over a four-year period, 31 of them Chinese, which included interviewing 1,500 Angolan and Ethiopian workers (Pilling 2019). The study found that the negative stories about Chinese companies are mostly untrue. It showed that Chinese companies generally employ just as many local workers as non-Chinese companies, pay them more or less the same, and train them to similar standards, though usually less formally (*ibid.*). In light of the existing bias, and in order to change this grim portrayal of Chinese companies, more evidence-based study is needed. At present, compared with their US and European peers, Chinese companies have to outperform in order to get similar recognition.

4 Financing incentives that promote environmental and social safeguards

The financial sector can play a key role in delivering sustainable infrastructure by requiring best practices in infrastructure planning, design, construction, and operation (WWF 2018). Over the past decade, Chinese financial regulators have adopted a variety of standards regarding green finance. This growing regulatory framework refers to and borrows from international standards. More research is needed to understand how investors are operationalising this framework in practice. Going forward, greening the BRI will require this system to continue strengthening in financial institutions, both on paper and in practice.

4.1 China's green financing policies

In 2007, the PBOC, the Chinese Banking Regulatory Commission (CBRC), and the Ministry of Environmental Protection (MEP – now the MEE) jointly issued the *Green Credit Policy* and called on banks to take environmental impact and energy efficiency into consideration when making lending decisions. In order to play the role of financial institutions in implementing state council policies enacted in 2011 on promoting energy efficiency, emission reduction, and environmental protection, the CBRC issued the *Green Credit Guidelines* in 2012 (Fa 2012). It provided the operational guidance on how to implement green banking in three aspects which: support a green, low-carbon, and low-waste economy; manage environmental and social (E&S)

risks; and improve the environmental and social performance of financial institutions themselves. In this document, E&S risks were defined as ‘potential impact and risks brought to the environment and communities by banks’ clients and their primary supply chains through construction, production and operational activities’ (IFC 2018b: 7). The development of E&S risk ratings and the identification of high E&S risk clients was also explicitly required (*ibid.*). Three years later, the policy guidance was developed into detailed indicators. The CBRC began to impose Green Credit Key Performance Indicators and E&S risk reporting obligations on banks in 2015.

With regard to its convergence with international good practices, the *Green Credit Guidelines* encourage banks to adopt good practices and international standards or act up to the standards in essence. This document has greatly enhanced the awareness of Chinese financial institutions regarding green finance and the corresponding internal management systems have been building up in all financial institutions, though they might vary in progress. To date, three banks are signatories to the Equator Principles (Equator Principles Association 2019), three banks are signatories to the UN Global Compact (UNGCC), and five investment managers have signed the UN Principles for Responsible Investment (UNPRI) (IFC 2018b).

This green finance regulatory framework also covers overseas investment. It requests that banks should strengthen E&S risk management for proposed overseas projects, and ensure that project sponsors are compliant with local environmental, land, and health and safety laws and regulations in the project country or region. Banks are also required to publicly commit to adopting relevant international best practices or standards for the proposed overseas project or ensure that the proposed project is consistent with international best practices in essence (China Banking and Insurance Regulatory Commission 2019).

4.2 International green financing policies compared to Chinese ones

The Performance Standards on Environmental and Social Sustainability of the International Financial Corporation, World Bank Group (IFCPS) is a widely recognised international standard for advanced economies. It has been adopted by, or has influenced the development of, all multilateral development banks (MDBs) and Organisation for Economic Co-operation and Development (OECD) countries. Comparing China’s Green Credit Guidance (GCG) and the IFCPS shows convergence in many areas but also variation in emphasis on information disclosure and compliance (Table 1).² The GCG policies are, more or less, *guidelines* that are soft in enforcement provisions and information disclosure to the public, although IFCPS standards are encouraged by the policies.

To improve regulatory mechanisms for enhanced implementation, in August 2016, the PBOC and six other ministries jointly issued the *Guidelines on Building a Green Finance System* (Xueqing 2016) to enhance

Table 1 Comparison between IFCPS and China's GCG policies

IFCPS standards	GCG policies
1 Assessment and management of environmental and social risks and impacts	• More stringent standards of accountability of financial institutions in reporting to regulators but less requirements for information disclosure.
2 Labour and working conditions	• Energy consumption, pollution prevention, health, safety, land acquisition and resettlement, ecological protection, and climate change are covered.
3 Resource efficiency and pollution prevention	
4 Community health, safety, and security	• Implementation requirements are not made in detail.
5 Land acquisition and involuntary resettlement	
6 Biodiversity conservation and sustainable management of living natural resources	• Self-reporting is requested.
7 Indigenous peoples	• Compliance to both local laws and regulations as well as Chinese laws and regulations are requested.
8 Cultural heritage	• IFCPS standards are encouraged.

Source Author's own.

institutional innovation in the administration of environmental and social factors in outbound Chinese investment. It also calls for enhanced environmental information disclosure; for instance, to incorporate the environmental information of enterprises, including environmental violations, into the financial credit information database. It seeks to:

- establish a mechanism to share enterprise environmental information, which should provide a basis for loan and investment decisions of the financial institutions;
- to clarify the requirements of information disclosure and other regulatory arrangements for green bond issuance;
- to encourage rating agencies to evaluate the green performance of the issuers and the *greenness* of the projects, as well as the impact of environmental costs on creditworthiness, and to disclose such information separately in credit rating reports;
- to gradually establish and improve the mandatory environmental information disclosure system for listed enterprises and bond issuers;
- to encourage third-party professional organisations to participate in the collection, research and release of corporate environmental information and analytical reports (PBOC 2016).

The guidelines also explore more stringent regulatory and market instruments such as environment pollution liability insurance to manage environmental risks, in implementing the BRI and other overseas investment projects (*ibid.*).

4.3 The implementation of the Green Credit Policy by major Chinese banks

According to the IFC, the 21 largest Chinese banks have adopted E&S risk management practices, and green financing projects now make up approximately 10 per cent of the portfolios of these banks (IFC 2018b). There are no data on the portfolio of BRI green financing, but it is useful to examine the performance of the key funders of BRI projects, that is, the China Development Bank (CDB) and the Export–Import Bank of China (China Exim Bank), in order to understand how these policies are implemented in BRI countries.

The CDB is the largest development bank in the world in terms of capital. At the end of 2017, the CDB continued to maintain the leading position in supporting China’s overseas financing and investment efforts, with a balance of foreign currency loans equivalent to US\$261.7bn and a balance of cross-border RMB loans of RMB83.4bn (CDB 2018). With US\$17.6bn BRI loans in 2017, the CDB provided funding to support infrastructure connectivity, production capacity, and equipment manufacturing cooperation, financial cooperation, and overseas industrial parks (*ibid.*). It has developed collaboration with over 100 overseas central banks, development banks, and commercial banks. The CDB has adopted the GCG and joined some related international initiatives, such as the UNEP Finance Initiative. The CDB’s environmental and social policy requests that borrowers abide by the laws and regulations of the host country, and that loan applications must be accompanied by an environmental impact assessment by an independent third party. Environmental standards and costs must be included in the loan agreement and the environmental impact assessment should be conducted when the project is completed (Greenovation Hub 2016).

The China Exim Bank is a policy bank with the mandate to promote steady growth, structural adjustment, and international economic cooperation. As early as 2007, it issued the *Guidance on Environmental and Social Assessment of Lending Projects* and in 2012, the bank set the strategic goal to become a *pioneer in green finance* in its 12th Five-Year Plan (Development Research Center of the State Council and the Export–Import Bank of China 2019). In 2015, the bank issued *Guidance on Green Credit* in accordance with the Key Performance Indicators of Green Credit Implementation requested by the CBRC. In 2017, the bank released the Rules on Advisory Business for Carbon Assets, Operational Procedures on Due Diligence, and Operational Rules on Loan Risk Monitoring and Management, aiming at enhanced environmental and social risk management (*ibid.*). In 2018, the bank adopted new lending policies for coal, chemicals, non-ferrous metals, and thermal power to restrict lending to industries with major environment and social risks. To date, the BRI loans of the China Exim Bank reached RMB 1tn with around RMB 250bn rated as green credit (*ibid.*).

Table 2 Policies of development banks

	China Development Bank	China Exim Bank	World Bank	Asian Development Bank	African Development Bank
Environmental and social assessment (ESA)	Yes	Yes	Yes	Yes	Yes
Social and environmental standards by industry	Effective restraints in some industries	Effective restraints in some industries	Yes	Standards for such industries as agriculture and energy	Requirements for agriculture, education, energy infrastructure, etc.
Consistent with the environment, society, and laws of the host country	Yes	Yes	Yes	Yes	Yes
Consistent with international environmental and social standards	Encourage, require to deliver the results that reach the standards in essence	Encourage, require to deliver the results that reach the standards in essence	Yes	Yes	Yes
Information disclosure	Annual reports and sustainable development reports	Annual reports and sustainable development reports	Information access policy	Public communication policy	Information disclosure and open policy
Appeals system	Not available	Not available	Yes	Yes	Yes
Third-party audit	Not available	Not available	Yes	Yes	Yes
Audit, supervision, and management in project construction and operation	Requirement for self-reporting	Requirement for self-reporting	Planning	Included in the ESA	Included in the ESA
Negative/exclusion list	Planning	New policy enacted in 2018	Yes	Yes	Yes

Source Adapted and partially translated from Greenovation Hub (2016).

5 Capacities for Chinese companies to follow high environmental and social standards

5.1 The general picture

According to a United Nations Development Programme (UNDP) study based on 543 responses from Chinese enterprises invested in BRI countries, and the feedback from 38 stakeholders from host countries, sustainable development concepts are acknowledged and practised by most Chinese enterprises, but the capacity, implementation, and results can still be improved (UNDP 2017).

With regard to social performance, over half of the surveyed companies had conducted social impact assessments before implementing their projects. Companies have also tended to attach importance to philanthropic activities. Complying with local laws and regulations on employment is the standard for establishing labour relations and some opt for more proactive communication-based solutions to deal with labour disputes. However, some enterprises have not conducted independent social impact assessments. Some enterprises also have problems with the limited effectiveness of their charitable giving. Cultural differences and unfamiliarity with local customs have been major barriers for establishing good labour relations (*ibid.*). Chinese companies' corporate social responsibility (CSR) activities in Myanmar, for instance, show that companies are extremely short of people who understand local communities.

According to the UNDP study, in regard to environmental issues, the majority of Chinese enterprises have conducted environmental impact assessments according to the requirements of the host countries, and generally by third-party organisations. The stringency of these assessments and their impacts on project design varies across firms and countries. Most companies have adopted measures to reduce emissions, pollutants, and intentionally control the environmental impact throughout the whole product life cycle. Nevertheless, Chinese enterprises must control their environmental impact more systematically and scientifically, and track and document relevant data and information within their business operations (*ibid.*).

5.2 Capacity-building efforts

The awareness and will of Chinese companies to build up the capacity to respond to government policy guidance and better manage overseas risks has been increasing rapidly. Contractors are a group of important players in BRI infrastructure projects. From 2013 to 2018, the turnover of contracted projects conducted by Chinese firms reached US\$400bn (Belt and Road Portal 2019b). The China International Contractors Association (CHINCA) is the national organisation formed in 1988 by Chinese international project investors, contractors, labour service companies, and related service providers, with over 1,500 members operating in 190 countries (CHINCA n.d.). Over the last few years, CHINCA has been actively strengthening industry self-discipline and capacity building, issuing industry reports and compliance guidance, and holding training courses. For instance, in order to enhance the awareness and capacity of companies to engage and communicate with local communities, CHINCA released the *Handbook on Community Engagement for Chinese Contractors* in May 2018 and it has been holding training programmes on this topic (CHINCA 2019a). CHINCA has also been actively collaborating with MDBs to host seminars since early 2018 and has been promoting joint funding between its members and the MDBs.

It is also important to observe the transition of Chinese contractors in their business models for BRI projects. CHINCA has also been promoting the transition of contractors to investors and developers, changing from the EPC (Engineering Procurement Construction) model to BOT (Build–Operate–Transfer) models (CHINCA 2019b). In general, for the BOT model, the host-country government will specify the quality and quantity of utility services such as electricity and ensure the return of the company with an agreed pricing mechanism. For the EPC model, the contractor will deliver the design, procurement, and construction of the project within a fixed budget on the standards agreed with the owner. The key difference between the two is that with the BOT model, companies could pursue higher standards and internalise the increased costs, but with the EPC model, standards are limited within the fixed budget. This difference plays a key role in the capacity-building efforts of Chinese companies to pursue higher standards.³

Some Chinese companies have taken the lead in aligning themselves with high international standards in order to attract international funding and promote the image of international business operations. China Three Gorges South Asia Investment Ltd (CSAIL) is a company incorporated by a major Chinese state-owned enterprise, the Three Gorges Corporation, the International Finance Corporation of the World Bank Group (IFC), and the Silk Road Fund. With leading technical and engineering capacity in hydro- and wind power projects, the company is also committed to high international environmental and social standards for power projects under the China–Pakistan Economic Corridor (CPEC) umbrella. In 2017, CSAIL issued its Health Safety Social and Environmental Management System (internal document) which combined the E&S systems of the IFC, China, and the host country, Pakistan. With 20 frameworks and eight standard operating procedures, the system covers a wide range of safeguards on safety, environment, society, and health. To date, all CSAIL power projects, with the BOT model, have adopted these standards. With the continued efforts of CSAIL in securing compliance by all contractors, the projects received high consideration from the IFC and local communities.⁴

Smaller Chinese companies could also be encouraged to adopt higher standards with funding incentives from international financial institutions. In 2017, the EBRD gave a loan to a Chinese private company for the first time, sending positive signals to Chinese companies willing to pursue higher standards. The EBRD gave a US\$52m loan to Angel Yeast Egypt, which is fully owned by the Chinese firm Angel Yeast, to finance the construction of new production facilities and a modern wastewater treatment plant in an area of Istanbul that has a high level of poverty and unemployment. Over 200 jobs will be created, while 300 new and current workers will receive in-depth technical training (Zgherib 2018). For the EBRD, Angel Yeast met its E&S policy and performance requirements and it is willing to give loans to other Chinese investors that can meet these high standards.⁵

6 Main findings

As China is shifting to green development, it is paying increasing attention to a green BRI. Chinese companies are the key players to deliver infrastructure projects for the BRI. Their awareness and capacity are building up with increasing domestic and overseas pressure and incentives. The progress is evident but there are still gaps to cover.

6.1 Continuous progress in Chinese policy guidance and regulatory pressure is expected in the face of complex environmental and social risks

Chinese ministries have been actively making policies and regulations to guide companies to improve environmental and social safeguard measures. The real challenge now is to ensure that high-level guidelines from regulators can be translated into substantive investor and contractor operational improvements. Current policies request investors to abide by local laws and regulations and encourage the adoption of international standards. In the case where host-country regulations and standards are very low or unestablished, Chinese companies could use Chinese standards which may be higher, but not as high as international ones. However, international NGOs and local communities would judge the projects according to the high standards practised by other international investors, and would not compromise their requirements just because the total budget of the project might be too low for the contractor to practise the higher standards. In many cases, opposition from international NGOs and local communities pose major risks to the projects.

6.2 Strategic planning and regulation capacity in the host country is also critical

Host-country development strategies and regulations play a key role in determining not only project standards but also the employed business model of the project, thus fundamentally influencing the environmental and social impacts throughout its life cycle. For instance, it is the host country that makes decisions on building coal-fired plants or clean energy plants in its energy strategy, and therefore their awareness and capacity to make an energy development strategy that aligns with their CO₂ emission commitment under the Paris Agreement is of significance.

6.3 Continued efforts are expected from the banks to play a more engaging role in the monitoring of E&S policy implementation

China's major banks are leading in green finance in emerging economies, and are converging with MDBs in E&S safeguards. The enhanced regulatory details in the E&S safeguards and information disclosure represent an important opportunity to improve on these standards across BRI projects. However, the normal practice of Chinese banks, which rely more on self-reporting, in contrast to the on-site monitoring and inspection practised by MDBs, might not be a measure strong enough to help companies manage social and environmental risks successfully.

6.4 Chinese companies face more challenges in management and communication capacity than in technical capacity

Chinese companies have been used to relying on local governments to deal with local communities, and many have not realised the need to

acquire a *social contract* from local people. Therefore, companies have tended to overemphasise building a relationship with local governments but neglected consulting with local communities, NGOs, and the media, who have ever-increasing demands for environmental protection and labour benefits. IFC officials have pointed out that a lot of the conflicts between companies and the local people have been caused by *small things* in the eyes of Chinese managers. The companies have been realising these concerns but they face a shortage of qualified staff trained in the local language and cross-cultural communication. This demands greater effort to build up this capacity.

6.5 The right business climate is a key factor to ensure that pressures and incentives are aligned

Joint financing with international financial institutions and private investors will help prevent environmental and social hazards. However, the key challenge for investing in the infrastructure in developing countries is that very limited projects are considered bankable for MDBs and private investors, as the low private participation rate shows. In many countries, connecting capital available for green investment with investment opportunities is hampered by investment barriers, market failures, and policy misalignments. To overcome them, governments have a key role to play to strengthen domestic frameworks for economic, investment, and climate policies, to ensure that they are mutually supportive, and ultimately to improve the risk–return profile of green investment projects (OECD 2017). It is important for Chinese and international investors to work out the right business models with the host country for BRI projects.

7 Recommendations

Now a clearer picture has been established of the three key aspects centred around the decision-making of Chinese companies in adopting higher standards and good international practices: progress and gaps in pressure, incentives, and capacity. The key stakeholders including the Chinese government, Chinese companies, host countries, and international institutions could work in a more coordinated way to achieve the goal of a greening BRI.

7.1 Making the pressure more effective

Based on the momentum of policy guidance, Chinese ministries need to make continued efforts to promulgate more detailed regulations and performance indicators to give companies clearer signals. For instance, to require information disclosure and open consultations with local communities at an early stage of the project.

International organisations should give more technical assistance on economic analysis and strategic planning to the developing countries along the Belt and Road. Objective economic analysis will help participating countries choose the kinds of investments and reforms that will best meet their development needs.

The newly launched BRI International Green Development Coalition and the big data platform could play constructive roles in promoting cooperation among governments and key stakeholders. These frameworks could provide a way for investors (public and private), recipients (both governments and domestic stakeholders), and other partners to share information on what standards they use and how they operationalise them. This could create a process to promote upward convergence of standards across the BRI over time. These will need to be multilateral and transnational in nature and *co-owned* by different countries and stakeholder groups, although there would obviously be a critical convening role for China. Such an outcome would be in line with the interests of all stakeholders and China now has the technical capacity to provide this public good.

7.2 Enhance joint financial and reputational incentives

To enhance financial incentives to companies, clear and transparent BRI financing rules will be a key solution to both insufficient financing incentives for investors and the low rate of financing participation from MDBs. Some conditions are already there for the joint development of a set of rules and standards. In May 2017, China's Ministry of Finance, the World Bank, and five other MDBs jointly signed an MoU on strengthening cooperation on the BRI to support the 2030 Agenda and the Paris Agreement. At the April 2019 Belt and Road Forum, a number of MDBs, alongside the Chinese Ministry of Finance, announced the creation of the Multilateral Cooperation Center for Development Finance, with the AIIB serving as secretariat. These and other platforms provide an important opportunity for fomenting further collaboration.

Governments and international institutions could also harmonise efforts to promote the investment climate of developing countries and to reduce the risks for potential investors, particularly private investors. Reforms include improving the legal protection of investment and the consistency of the regulations. Developing countries participating in the BRI need the ambition to substantially improve their environment for sustained investment.

International organisations could provide more public goods to help the regulators of participating countries and incentivise investors. The IFC's member-led Sustainable Banking Network, with 34 members including China, provides strategic and technical *how-to* guidance to help institutions to systematically integrate sustainability considerations into business strategy and operations (IFC 2018a). The World Wildlife Fund for Nature (WWF) suggested the development of a Sustainable Infrastructure Opportunity Index, to provide a guiding framework to prioritise BRI countries with sustainable infrastructure investment opportunities based on both infrastructure drivers and the environmental governance performance of various BRI countries (WWF 2018).

Both the Chinese government and international organisations could jointly enhance demonstrations of high standards and good practices.

For investors, it is hard to understand the abstract concepts but easy to follow practices that could bring them higher benefits. They need confidence in business cases that could satisfy high standards, business sustainability, and public interests. While the Chinese government is trying to highlight the good practices of the BRI over the past six years, international organisations could help this process with their knowledge, experience, and comparative perspectives. For example, experience of cases such as that of CSAIL, the largest clean energy investor in Pakistan, and the IFC, the largest private investment institution in the world, joining hands to conduct an investment that could provide huge support to economic growth and the improvement of livelihoods in Pakistan. Similarly, the EBRD could demonstrate how an MDB could support medium and small investors to reach high E&S standards.

7.3 Multiple measures need to be taken for the capacity building of companies

Awareness of environmental and social hazards and the willingness to make efforts to meet standards is crucial. In addition, measures need to be taken to target the key challenges. Companies need to optimise internal management including decision-making, monitoring, performance evaluation, and the employment of more professionals on compliance and E&S management. In response to the shortage of talent for effective communication with local communities, more effective measures should be adopted to promote domestic education that equips a greater number of graduates with language skills and cross-cultural understanding. Hiring more local employees would also aid better local engagement. For SOEs, a more flexible employment mechanism could be explored in overseas corporations. The market for consulting services on international rules should be further developed. Chinese business associations and environmental NGOs should be promoted and encouraged to operate overseas and play supporting and monitoring roles.

In conclusion, the BRI is a great development opportunity for those countries short of infrastructure and funding. However, BRI investment could bring about mixed environmental and social impacts. Investor guidance, regulation, and support will be critical in meeting the high environmental and social standards necessary to achieve the sustainable development of BRI countries and the world. The Chinese government, host-country governments, as well as international organisations and financial institutions all have important roles to play.

Notes

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- 2 The content of this part is based on the study of relevant documents and the author's interviews with IFC and EBRD officials.
- 3 Concluded from the interviews with a dozen Chinese companies.
- 4 Based on the field study and interviews with staff from the IFC and CSAIL.
- 5 Based on interviews with EBRD officials.

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Aligning the Belt and Road Initiative with Myanmar's Sustainable Development Plan: Opportunities and Challenges*

Zhou Taidong¹

Abstract The ambitious Belt and Road Initiative (BRI) by the Chinese government provides an important opportunity to promote the global implementation of the 2030 Agenda for Sustainable Development. This article, using Myanmar as a country case study as it is strongly committed to both the BRI and the 2030 Agenda, aims to paint a nuanced picture of how the BRI could benefit Myanmar's sustainable development. After providing an overview of Myanmar's recent development context, the Myanmar Sustainable Development Plan (MSDP), and the progress of China–Myanmar cooperation under the BRI, it argues that there are both big opportunities and huge challenges in tapping the potential of the BRI's development dividends for Myanmar. The article proposes that China and Myanmar should make joint efforts in terms of mainstreaming conflict-sensitive approaches, increasing the confidence of Myanmar's public in Chinese investment, encouraging responsible investment, and diversifying financing options.

Keywords: 2030 Agenda for Sustainable Development; Belt and Road Initiative; Myanmar Sustainable Development Plan; China–Myanmar Economic Corridor; Myanmar.

1 Introduction

The Belt and Road Initiative (BRI), formerly known as One Belt, One Road (OBOR) proposed by China's president, Xi Jinping, and then arduously advocated and pushed forward by the Chinese government, offers an important opportunity to accelerate efforts to achieve the Sustainable Development Goals (SDGs) globally. Though different in scope, the BRI and the 2030 Agenda for Sustainable Development (2030 Agenda) share overlapping goals and objectives with big potential to drive mutual synergy (BRF Advisory Council 2019). The five pillars of the BRI – policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and people-to-people bond

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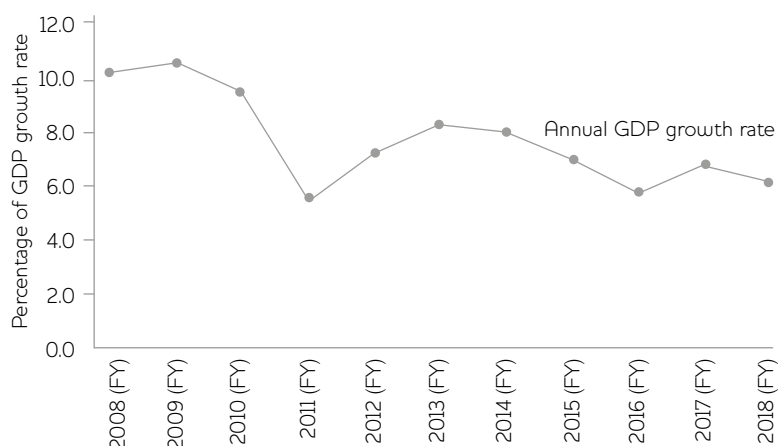
– are intrinsically linked to the 17 SDGs (Guterres 2019). By closing financing gaps and providing new sources of economic growth through improved connectivity, the BRI could help reduce poverty and improve a range of social needs including employment, education, and health.

Myanmar, the largest country in mainland Southeast Asia with a population of 53 million and located strategically at the junction of Southeast Asia and South Asia, has witnessed rapid growth in recent years and become one of the world's fastest growing economies (IMF 2016). In August 2018, the Myanmar government formulated the Myanmar Sustainable Development Plan (MSDP) to ensure coherence among different policies and institutions, reinvigorate reform, and promote action to achieve the SDGs. In the meantime, the new government, led by the National League for Democracy (NLD) and State Counsellor Daw Aung San Suu Kyi, has embraced the BRI and economic cooperation with China despite some setbacks during Myanmar's post-2011 reforms. While the BRI presents huge opportunities for Myanmar to fulfil its MSDP and development ambitions as well as the 2030 Agenda, challenges remain.

This article aims to analyse the opportunities and challenges brought by the BRI to the implementation of the MSDP in the context of a globally unanimous 2030 Agenda. It is structured in five parts. Following this introduction, Section 2 briefly outlines Myanmar's recent development context and the MSDP. Section 3 provides an overview and progress of China–Myanmar cooperation under the BRI based on the five pillars. Section 4 discusses opportunities and challenges in synergising the BRI and the MSDP and, more importantly, in tapping the potential of the BRI to contribute to Myanmar's sustainable development. Section 5 concludes and puts forward recommendations to align the BRI and the MSDP to optimise its use as an investment tool for maximum sustainable development dividends.

2 Myanmar's development context and the MSDP

Myanmar, isolated for much of the past six decades, is undergoing a critical process of political, economic, and social transition. Since opening up in 2012, the country has experienced rapid growth. Though the country's gross domestic product (GDP) growth slowed down from 6.8 per cent in fiscal year (FY) 2017 (1 April 2017–31 March 2018) to 6.2 per cent in the transitional FY2018 (see Figure 1) according to the Asian Development Bank (ADB), the growth is still robust by regional and global standards (ADB 2019). To promote economic recovery in a turbulent global context, the Myanmar government has undertaken a series of policies in recent years including opening up to foreign direct investment (FDI) of retail and wholesale trade and the insurance business; implementation of the Companies Act; and large investments in infrastructure projects including those related to the BRI. As a result, growth is forecast at 6.6 per cent in FY2019 and 6.8 per cent in FY2020 (ADB 2019).

Figure 1 Myanmar annual gross domestic product (GDP) growth rate (2008–18)

Source Author's own, based on data from the Myanmar Statistical Information Service (2019).

Nevertheless, the country is still facing tremendous development challenges. Subnational conflicts are still widespread, affecting up to one quarter of the population, and impeding the entire country's political trajectory, economic growth, and human development (Burke *et al.* 2017). The military still plays a massive role in economic governance and senior military officers own shares in some of the most profitable extractive businesses (Stokke, Vakulchuk and Øverland 2018). While FDI flows increased in 2017/18 compared to the previous fiscal year, FDI commitments declined by 14 per cent in 2017/18 compared to 2016/17, reflecting uncertainty in the investment climate related to the Rakhine crisis and weak reform momentum (World Bank 2018).

Major sources of investment largely rely on Singapore, China, and Thailand, and are limited in diversification. Myanmar's ranking in the 2019 World Bank *Doing Business* report remained unchanged at 171st out of 185 countries, despite some key improvements in reducing the cost of registering a company and increasing the reliability of electricity supply, and the transparency of tariff information (World Bank 2018). The country also ranks the lowest in the Southeast Asia region in other assessments; 148 out of the 189 countries and territories in the Human Development Index (HDI) (UNDP 2018) and 131 out of the 140 economies in competitiveness according to the World Economic Forum (Schwab 2015).

Persistent low-quality infrastructure remains a major impediment to the country's economic growth and competitiveness (Verbiest and Naing 2017). Myanmar is one of the most underdeveloped countries in Asia in terms of infrastructure. Only 38.9 per cent of the road network is paved and only 37 per cent of the population has access to electricity. The country has the lowest road density and greatest power-sector

Box 1 Myanmar Sustainable Development Plan (MSDP) (2018–30)

Pillar 1: Peace and stability

Goal 1: Peace, national reconciliation, security, and good governance

Goal 2: Economic stability and strengthened macroeconomic management

Pillar 2: Prosperity and partnership

Goal 3: Job creation and private sector-led growth

Pillar 3: People and planet

Goal 4: Human resources and social development for a twenty-first century society

Goal 5: National resources and the environment for national prosperity

Source Myanmar Union MOPF (2018: 5).

investment needs in the region (Vakulchuk *et al.* 2017). According to the ADB (2014), investment gaps in Myanmar could total as much as US\$80bn by 2030 or US\$4.7bn per year.

In August 2018, the Myanmar government issued the MSDP as the single national strategy (2018–30) to provide an overarching plan for longer-term sustainable development and strengthen coordination and coherence among the myriad sectoral, ministerial, and subnational plans. The 66-page-long document not only builds upon multiple existing strategy documents and sectoral plans, but also mediates between local developmental needs and the global sustainable development agenda. It sets out three pillars, five goals, 28 strategies, and 251 action plans (see Box 1). The three pillars include peace and stability (pillar 1), prosperity and partnership (pillar 2), and people and planet (pillar 3), which are the same as the *five Ps* that broadly capture the scope of the 2030 Agenda.

For each of the five goals, the MSDP has developed clear strategies and multidimensional action plans, to be supported by multiple programmes and projects, and a broad range of stakeholders. Key strategies consist of, among others, fostering union-wide peace, promoting equitable and conflict-sensitive socioeconomic development, improving rule of law and good governance, strengthening civil engagement and public participation, enhancing macroeconomic management, supporting job creation, creating a secure and conducive investment, as well as building a priority infrastructure base (Myanmar Union MOPF 2018). Priority sectors include trade, financial services, infrastructure, education

and health, environment, sustainable energy, natural resources, and sustainable cities. Though goals and action plans in the MSDP are country-specific, relevant SDG targets were identified to ensure consistency and alignment between the MSDP and the SDGs.

The Myanmar Union Ministry of Planning and Finance (MOPF) is the focal entity for the implementation of the MSDP and houses the MSDP Implementation Unit (MSDP-IU). The MSDP-IU, consisting of the National Economic Coordination Committee (NECC), the Development Assistance Coordination Unit (DACU), and the Planning Department, and Policy Appraisal and Progress Reporting Department of the MOPF, is responsible for providing guidance, approving strategic decisions, and resolving strategic issues regarding the implementation of the MSDP. With help from the World Bank and other agencies, the MOPF also established a project bank to facilitate implementation of the MSDP in a predictable, coordinated, and transparent manner. The project bank is a rolling databank consisting of major and transformative projects that have been screened, appraised, and prioritised, and that are ready for implementation with the most appropriate source of financing.

Projects included in the database will not only go through the screening process which is based on their relevance with strategic planning and prioritisation, but also the categorisation process in terms of source of financing, such as public–private partnership (PPP) projects, development assistance projects, and government budget projects. Projects will then be dealt with in different ways. For example, budgets will be transferred to projects that should be funded by the government; development assistance projects are transferred to the DACU and some of the PPP projects will be transferred to the PPP Centre (Aung 2019). As of the end of June 2019, the project bank has yet to be formally launched and no detailed information at project level has been revealed.

It is worth noting that the MSDP greatly emphasises environmental sustainability, including tackling deforestation, mangrove loss, the illegal wildlife trade, unregulated mineral extraction, air and water pollution, increases in waste, and climate change. It makes clear that environmental and social impact studies for all the proposed projects must comply with regulations made by the Myanmar Ministry of Natural Resources and Environmental Conservation, and the government will be responsible for compensating and resettling those who are impacted. The MSDP reflects that the Myanmar government is trying to ensure balance between development in economic, social, and environmental dimensions. This will have important implications for BRI cooperation, to be illustrated in Section 4.

3 China–Myanmar cooperation under the BRI: current status

Despite government change and some setbacks during Myanmar's post-2011 reform, China's economic engagement with Myanmar has deepened. Myanmar is also involved in two of the six economic

corridors identified under the BRI.² This section outlines the progress of China–Myanmar BRI cooperation in terms of the five pillars – policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and people-to-people bond.

3.1 Policy coordination

Improving policy coordination is an important guarantee for implementing the BRI. The major indicators include: the building of an intergovernmental macro policy exchange and communication mechanism, the number of visits by leaders from both sides, and mutual political trust and alignment in development strategies and policies (China National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce 2015). Since 2013, when the BRI was proposed, China and Myanmar have made great achievements in terms of policy coordination, reflected by the frequency of visits by Myanmar leaders to China, their positive comments on the BRI, as well as progress in BRI cooperation. For example, in November 2014, Myanmar President U Thein Sein pointed out at the Dialogue of Strengthening Connectivity Partnership in Beijing that the BRI would bring peace, stability, and prosperity to the world. He then further remarked that the Myanmar side would deepen cooperation with China in infrastructure connectivity in September 2015 (*China News* 2015).

State Counsellor Daw Aung San Suu Kyi also paid her first international visit to China after winning the election, and was present in the first and second Belt and Road International Cooperation Forum in 2017 and 2019 respectively. The Memorandum of Understanding (MoU) on the BRI signed between the two countries in May 2017 represented a milestone for policy coordination between the two sides (Ying 2018).

Cooperation between the two countries under the BRI made another great stride when Chinese State Counsellor and Foreign Minister Wang Yi proposed the establishment of the China–Myanmar Economic Corridor (CMEC) during his meeting with his counterpart Aung San Suu Kyi in November 2017. The CMEC, taking the shape of a 'reverse-Y', will connect China's southwestern province of Yunnan to Mandalay in Central Myanmar, and then east to Yangon and West to Kyaukpyu, Rakhine State. The CMEC is the second bilateral economic corridor after the China–Pakistan Economic Corridor (CPEC) and constitutes an important part of the BRI. It aims to promote economic integration by linking three important economic centres in Myanmar; namely, Mandalay, Yangon New City, and the Kyaukpyu Special Economic Zone (SEZ) (Ying 2018).

In February 2018, the two sides finalised a 15-point MoU at the working group level and agreed to collaborate on many sectors including basic infrastructure, construction, manufacturing, agriculture, transport, finance, human resource development, telecommunications, and research and technology in order to develop the CMEC. Following that, the two governments formally signed the MoU to build the CMEC

in September 2018 (Thiha 2019). During the second BRI Summit at the end of April 2019, China and Myanmar reached further agreements on trade, economic development, and technical assistance.

Myanmar's positive gesture was further reflected in the establishment of the OBOR Implementation Steering Committee in November 2018, which is chaired by the State Counsellor and includes chief ministers from subnational governments as well as representatives from various departments. The functions of the Steering Committee include improving coordination among different organisations, giving policy-related guidance, formulating management plans, and organising experts to conduct research on BRI-related projects. The Myanmar government also formed the CMEC Joint Committee chaired by the Union Minister for the MOPF and the CMEC Committee chaired by the Union Minister for Commerce in late 2018. Such committees not only signal the importance Myanmar attaches to the BRI, but also demonstrate that the CMEC is an important part of the comprehensive strategic cooperation between China and Myanmar. That said, the Myanmar government has emphasised that the chosen projects under the CMEC must align with the country's national priorities as outlined in the MSDP. It has been reported that only nine of the 30 projects proposed by China were approved by the Myanmar side (Lwin 2019).

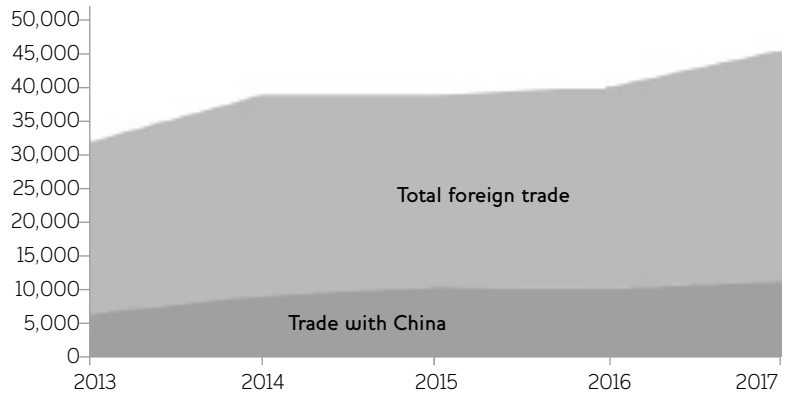
3.2 Infrastructure connectivity

Infrastructure connectivity is a priority area for implementing the initiative, covering transport, port infrastructure, oil and gas pipelines, the power grid, civil aviation cooperation, as well as cables and other communication networks (China National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce 2015). The projects along the CMEC are largely related to infrastructure construction, including the China–Myanmar oil and gas pipelines, the Kyaukpyu deep-sea port with two berths in its initial phase, the Kunming–Kyaukpyu railway line, the Mandalay–Tigyaing–Muse expressway, and the Kyaukpyu–Nay Pyi Taw highway projects.

Among them, the China–Myanmar oil and gas pipelines, the first oil and gas pipelines running through the south to the north of Myanmar, predate the BRI and are in operation. The crude oil pipeline is jointly invested in by the Southeast Asia Pipeline Company Ltd (50.9 per cent), a subsidiary company of the China National Petroleum Corporation (CNPC), and the Myanmar Oil and Gas Enterprise (MOGE) (49.1 per cent). The gas pipeline is jointly invested in by the CNPC Southeast Asia Pipeline Company Ltd (50.9 per cent), the MOGE (7.37 per cent), the POSCO DAEWOO Corporation (25.04 per cent), the ONGC CASPIAN E&P B.V. (8.35 per cent), the Gas Authority of India Ltd (4.17 per cent), and the Korea Gas Corporation (4.17 per cent), bringing together six parties from four countries (CNPC 2017).

The China–Myanmar oil and gas pipeline project, through supplying energy to China, has not only diversified the oil and gas imports and

Figure 2 Trade value between China and Myanmar (US\$ million)

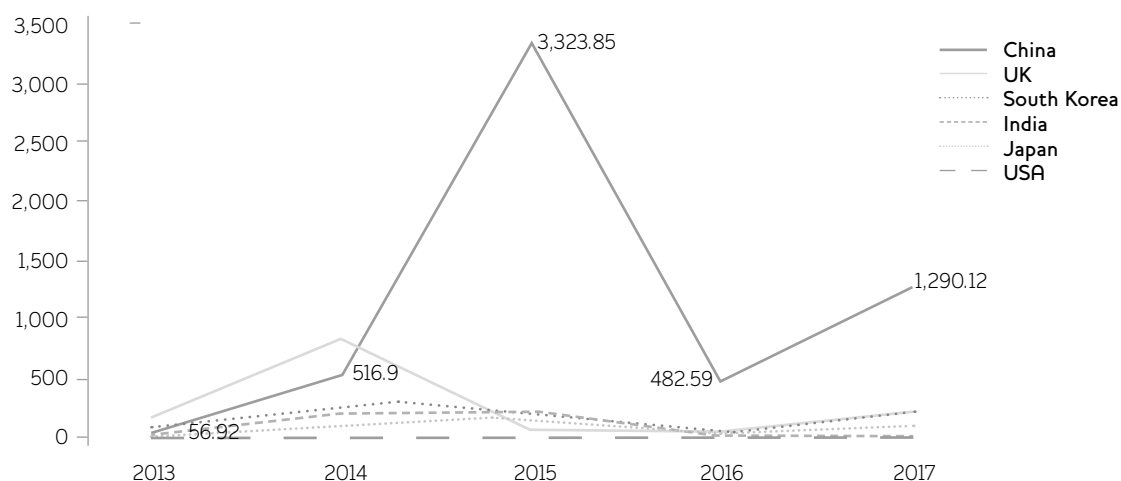


Source Author's own, based on data from the Myanmar Statistical Information Service (2019).

exports of Myanmar and spurred growth in the oil and gas industry, but also played an important role in providing energy to central and northern Myanmar through the different offtake points. For example, in Kyaukpyu, due to the project, residents now enjoy 24-hour access to electricity at a cheaper cost. The project also contributes substantial economic benefits to Myanmar including tax revenue, investment dividends, right-of-way fees, cross-border fees, training funds, and others.

Progress has also been made in the Kyaukpyu deep-sea port project. China and Myanmar signed a framework agreement on 8 November 2018, three years after the bid was awarded to the China-based CITIC Group. The framework now foresees a US\$1.3bn joint investment for implementation of the first phase of the Kyaukpyu deep-sea port. The total cost of the project, which is now planned in four phases, is estimated at about US\$7bn. The first phase will include two deep-water berths. The China-based CITIC Group will hold 70 per cent stake while the remaining 30 per cent will be invested by the Myanmar government and local public firms.

The two countries also signed an MoU in October 2018 for preparation of a feasibility study for the Muse–Mandalay railway line. In June 2019, the China Railway Eryuan Engineering Company (CREEC) submitted a technical report as part of the feasibility study. The report is based on a ground survey along the Muse–Mandalay highway road and includes soil analysis results as well as suggested routes. Officials of the CREEC and Myanmar Railways conducted inspections on the ground and also held public meetings with the authorities, residents, and elders of the townships of Kyaukme, Lashio, and Muse, where the railway might pass through. The railway is expected to span over 430km with five train stations. The designed speed for the train is 160km per hour.

Figure 3 China's foreign direct investment in Myanmar in comparison (US\$ million)

Source Author's own, based on data from the Myanmar Statistical Information Service (2019).

3.3 Unimpeded trade

Investment and trade cooperation are a major task in building the BRI, including investment and trade facilitation, the reduction and removal of investment and trade barriers, and the optimisation of trade structure. During the BRI period 2013–17, Myanmar's trade with China (excluding Hong Kong and Macau) steadily increased (see Figure 2) and by 2017, the total trade between the two countries exceeded US\$11.79bn, an average increase of 13.8 per cent over the five years (Myanmar Statistical Information Service 2019). China has remained Myanmar's largest trading partner two years in a row. The outward direct investment from China (excluding Hong Kong and Macau) in Myanmar, once affected by the suspension of the Mystone Dam project, recovered back to US\$12.9bn in 2017 (see Figure 3), with 344 projects in sectors such as oil and gas, electricity, manufacturing, transport, and communications far exceeding those from other major countries in the region (*ibid.*). The investment is likely to further increase when the projects planned under the CMEC are implemented, including the New Yangon City project (US\$1.5bn),³ the Kyaukpyu SEZ (US\$2bn), the Mandalay Yida Economic and Trade Cooperation Zone (US\$4bn), and the Myanmar–China border economic cooperation zones.

3.4 Financial integration

Financial cooperation is an important element of implementing the BRI. Myanmar is one of the founding members of the Asian Infrastructure Investment Bank (AIIB). In 2016, the AIIB, together with the World Bank's International Finance Corporation (IFC), and the ADB approved its first loan for a Myanmar project: a US\$20m loan to the 225MW (megawatt) Myingyan gas-fired power plant (*Frontier Myanmar* 2016). Myanmar is also one of the 28 countries that had approved the Guiding

Principles on Financing the Development of the BRI, which includes fostering a transparent, friendly, non-discriminatory, and predator financing environment, underscoring the importance of conducting social and environmental impact assessments and risk management, as well as sustainable and inclusive development (China Ministry of Finance 2017). China and Myanmar cooperated in a bilateral currency swap and settlement. The China and Myanmar Currency Exchange Center was established in Ruili City, Yunnan Province in 2015, making Ruili the first city to trade kyat in China. The centre intended to build an effective platform to promote the Sino–Myanmar currency exchange's standardisation and legalisation, increase China–Myanmar trade, and facilitate cross-investment (Yurun and Yingqing 2015).

3.5 People-to-people bond

The people-to-people bond provides public support for implementing the BRI reflecting in, among others, education, training, tourism, public diplomacy, as well as corporate social responsibility. In 2017, the Chinese government awarded 103 Myanmar student scholarships and arranged more than 168 short-term training projects with 637 trainees (Ying 2018). China and Myanmar have also agreed to establish cultural centres in the two countries, with the launching of the China Cultural Center in Yangon in 2017. Cooperation and exchanges among thinktanks have witnessed a huge increase in the two countries since 2013 (*ibid.*). In addition, China has increased and reoriented its aid to people's livelihood projects in Myanmar, including offering humanitarian aid to help displaced people in Rakhine State, performing eye operations for Myanmar patients, and implementing a series of agricultural technology transfer projects under the Lancang–Mekong Cooperation Mechanism. One of China's civil society organisations, the China Foundation for Poverty Alleviation, also established its first overseas country office in Yangon, providing scholarships for Myanmar students.

4 Discussion

The MSDP has more or less internalised the 2030 Agenda based on Myanmar's context. As Myanmar's largest neighbour, trading partner, major investor, and development partner, China could definitely play an important role in fostering sustainable development in Myanmar. The BRI, more specifically the CMEC, can be an overarching framework for the two sides to upgrade cooperation for shared benefits. Nevertheless, there are still daunting challenges ahead to translate such ideas and policies into actions.

4.1 Opportunities

The CMEC, as part of the BRI, represents big opportunities for Myanmar to implement its MSDP and the 2030 Agenda in different ways. First, the CMEC shares synergies with the MSDP in design and represents the convergence of common interests between the two countries. For example, the MSDP considered adequately addressing the infrastructure gap and upgrading international transport corridors as the key to achieving Myanmar's development ambitions. In fact, one

could argue that the idea of the CMEC comes from Myanmar's own development plan. The Industrial Policy formulated by Myanmar's Ministry of Industry in 2016, which later constitutes an important part of the MSDP, identified four economic corridors for global integration, including the North–South Economic Corridor, the East–West Economic Corridor, the Northeast–Southwest Economic Corridor, and the economic corridor from Yangon to Myawaddy. The CMEC greatly overlaps two of them; namely, the North–South Economic Corridor (Yangon to Mandalay) and the Northeast–Southwest Economic Corridor (Kyaukpyu–Mandalay–Muse).

The Industry Policy also made it clear that Myanmar would construct international deep-sea ports and place industries close to them, including Kyaukpyu deep-sea port where 'cargo ships from Europe, Africa and West-Asia may dock' (Myanmar Union MOI 2016: 17). The Kyaukpyu SEZ was also long planned as a commercial centre of port cities to help address the economic imbalances between developed Yangon and underdeveloped Rakhine State. Thus, it could be said that the CMEC fully aligns with the MSDP or even originates from Myanmar's own development plans, catering to Myanmar's development needs.

Second, the CMEC could be a catalyst for infrastructure development and economic growth in Myanmar. A modern and well-functioning infrastructure is fundamental to Myanmar to develop into a developed market economy. There have been many assessments globally regarding the positive impacts of infrastructure on economic growth, including enhancing competitiveness and productivity, improving accessibility of public services, facilitating trade and mobility, as well as generating jobs (McKinsey and Company 2016; Straub and Terada-Hagiwara 2010). Evidence from other countries also suggests that BRI road projects and associated investments offer considerable opportunities in increased productivity, reduction of trade costs and barriers, agglomeration effects, and flow on effects for production, employment, and incomes (Berg *et al.* 2015).

Road and railway construction under the CMEC would connect major urban centres and communities across the country and with major cities and markets in neighbouring countries, notably Bangladesh, China, and India. For example, with Muse being the largest trade portal between the two nations and Mandalay being central Myanmar's commercial centre, the Muse–Mandalay railway line has the potential to play an important role in enhancing connectivity between Myanmar and China as well as with other regions of Southeast Asia. Port development could also enable Myanmar to become a regional hub, thanks to its strategic location. As such, the CMEC could offer Myanmar an important opportunity to modernise and industrialise, especially the underdeveloped western regions. Improved infrastructure connectivity, delivered to a high quality with a focus on viability, resilience, and sustainability would catalyse the development of new industrial chains, value chains, and supply chains, nurture human capital, and support long-term growth.

Thirdly, the BRI could also provide an impetus to address the significant financing gap in Myanmar. Given the limited public budget, the Myanmar government would need to explore different funding mechanisms, including the PPP model, loans from multilateral development banks, as well as aid from development partners. The different funding mechanisms and channels under the BRI, such as the Silk Road Fund, the China Development Bank, the Import and Export Bank, Chinese commercial banks, and state-owned enterprises, could partially satisfy funding needs.

Meanwhile, the CMEC would also have huge implications for the Myanmar peace process as its projects extend across many of Myanmar's conflict areas and affect the livelihoods of local people. The CMEC provides impetus for China to contribute to the peace process in Myanmar. To secure the success of the economic corridor, China will need to work with the Myanmar government to address subnational conflicts in Northern and Western Myanmar. In fact, the Chinese authorities have brokered informal talks to end immediate hostilities and pressured ethnic armed organisations to participate in formal peace dialogues (International Crisis Group 2017). Arguably, the CMEC could complement the Myanmar government's efforts in promoting *peace and stability* through development.

4.2 Challenges

While there is strong political will and passion from the Myanmar government for the BRI, few projects have been implemented and there are daunting obstacles ahead to put the CMEC on the ground.

Firstly, the CMEC currently lacks concrete and effective tools to address the security risks led by the domestic crisis in Myanmar. Subnational conflict in Myanmar is not a peripheral issue and the reasons are extremely complex, driven by competing demands concerning control over resources, authority, and territory (Burke *et al.* 2017). Conflicts between the Myanmar government and ethnic armed groups not only jeopardised border security and regional connectivity but also brought security risks to Chinese investors in Myanmar. The Rohingya issue in Rakhine and ethnic armed rebels in northern Myanmar constitute the major hurdles for the CMEC. For example, Kyaukpyu is located in the restive Rakhine State, and although the Kyaukpyu deep-sea port and SEZ are not in the Rohingya conflict zone, the potential threat that Rohingya militants pose to the Kyaukpyu infrastructure cannot be easily dismissed. Highways and railways under the CMEC will also pass through other conflict zones. In addition, conflicts in northern Myanmar have resulted in the occasional closure of some border posts and the deaths and injuries of Chinese civilians. While there might be strong concerns about debt sustainability on the Myanmar side, it is threats to the security of Chinese works and Chinese-built infrastructure projects that worry the Chinese side most and could potentially hamper cooperation. The *non-intervention* foreign policy principle further constrains China's policy options in dealing with such complex issues at Myanmar's subnational level.

Secondly, while the CMEC receives a widespread positive attitude from government officials and business communities, Myanmar's public seem to have little knowledge of the CMEC and remain suspicious of China's investment. The CMEC faces challenges in both information and trust deficit. China's growing footprints in Myanmar aroused popular resentment and social unrest in the past and such memories have not withered away. With the adoption of opening up policy in Myanmar, its civil society groups are becoming more active and vocal as well as more cautious towards China's investment.

However, the author's field visits revealed that a large proportion of civil society and the public rely on social media regarding CMEC information. Very few thinktanks are doing research and exchanges on the CMEC or even China's cooperation with Myanmar due to a shortage of funding and expertise. In the meantime, the Myanmar public also has territorial concerns regarding further integration with China. For example, in early 2019, a piece of news regarding a Chinese company's establishment of the Yongbang Digital Economic Zone in Mongla, Shan State, which will encourage use of digital currency, has provoked wide complaints on the violation of the country's sovereignty (Wansai 2019).

Thirdly, as many of the CMEC projects are large infrastructure projects, they will face huge challenges in terms of land acquisition and compensation, environmental protection, and stakeholder engagement in Myanmar. The SDGs and the MSDP both recognise that Myanmar's development depends fundamentally on sustainable management of the natural environment. Studies have shown that Myanmar's natural environment functions greatly as a capital asset, providing goods and services to the country's citizens (Mandle *et al.* 2016; Emerton and Aung 2013). As such, the Myanmar government has repeatedly made it clear that there would be no exception to the rigorous and stringent assessment process of identifying and reviewing projects under the CMEC, taken from their strategic alignment with the MSDP.

Though the MSDP sets out that the Myanmar government will be responsible for land acquisition and resettlement, history has shown that the issue is more complex on the ground. Land disputes often emerge for different reasons, including unclear or overlapping ownership, the theft of compensation funds by corrupt local governments, or concerns about losing livelihoods resulting from loss of land. The China–Myanmar oil and gas pipelines project, completed in 2015, still has disputes regarding land compensation.

According to a report from the World Wide Fund for Nature (WWF) in Myanmar (Helsing *et al.* 2017), the BRI road infrastructure, if not properly planned or constructed, could have many negative impacts including increased risks of natural disasters such as landslides and flooding, water pollution, wildlife mortality, and ecosystem degradation. The significance of these risks is underscored by the fact

that the CMEC cuts through areas that are home to about 24 million people and they could be impacted by increased sedimentation due to upstream infrastructure development, deforestation, and other land use change (*ibid.*).

Underlining all of the challenges regarding land acquisition, environmental protection, and community engagement are a lack of proper systems, institutions, instruments, and capacities on both sides to monitor, assess, and make changes accordingly during project implementation. For example, despite improving its domestic environmental policies, China still does not promulgate regulations concerning environmental protection of its foreign direct investment. Guidelines for foreign investment and the promotion of corporate social responsibility largely rely on the initiative of the investing company. Environmental criteria and their impacts in decision-making are still unclear for major Chinese funders such as the Import and Export Bank and the China Development Bank.

Another important issue lies in how to deal with the relationship among different interest groups and how to establish a broader community of common interests. Rapid changes that accompany accelerated development generate both winners and losers and can create instability. Field studies also revealed that local residents would only support development initiatives if they experience direct benefits. Community members often supported improvements to local roads which ease direct access to markets, schools, and hospitals. However, some have expressed concerns that new and large roads would enable more military engagement, attract armed disputes over taxation, land confiscation, or forced displacement, as well as flows of migrants from other regions (Burke *et al.* 2017: 34).

Fourthly, there are also financial sustainability concerns on the Myanmar side. The railway and highways across the northern mountain ranges could be very expensive. An earlier feasibility study for the railway priced the project at US\$20bn, and China had offered to pay for 90 per cent. However, even then, Myanmar could not afford its share. China and Myanmar also face several other financial challenges. Myanmar's financial system fails to meet international standards. The country's stock market is still underdeveloped, and it is hard for enterprises to obtain financing in Myanmar. In addition, as a currency swap agreement has yet to be signed between China and Myanmar, it is inconvenient for Chinese enterprises to invest in Myanmar.

5 Conclusion and recommendations

The Myanmar NLD government has adopted various policies to reinvigorate and maintain its economic growth, including issuing the MSDP and embracing the BRI. In essence, the MSDP and the BRI are fully aligned and the BRI could be an important vehicle for Myanmar to realise its development ambitions and achieve the SDGs. This is probably why China–Myanmar BRI cooperation has steadily

progressed, unanticipated by many observers. Nevertheless, to fully tap the potential of the BRI's contribution to the MSDP, both countries still face huge challenges in security, social, environmental, and financial dimensions, and will need to make strong efforts to bring the initiative to the ground.

First and foremost, China and Myanmar should mainstream conflict-sensitive approaches into all aspects of CMEC implementation. A sustained peace is integral to both the CMEC and Myanmar's sustainable development. The MSDP attributes domestic conflicts to 'mistrust between groups, the lack of transparent and accountable public institutions, the exclusion and marginalisation of people from decision-making processes as well as a persuasive sense of injustice generated by inequitable distribution of resources, acute macroeconomic instability and vulnerability to economic shocks' (Myanmar Union MOPF 2018: 8).

As such, while continuing to provide necessary assistance to the Union Peace Conference – 21st Century Panglong, China should work with Myanmar partners to make sure programmes and projects under the CMEC are designed, implemented, and managed with the participation of all stakeholders. Great efforts should be made in terms of disclosing information and decentralising management of development activities, especially when the CMEC passes through many of the conflict-affected areas. While the CMEC could strengthen social, economic, and physical connectivity between lagging regions such as Kyaukpyu with growth hubs such as Mandalay and Yangon, special attention should be paid to improve benefits at the subnational level, including fiscal income and job opportunities. China could also prioritise flows of its development assistance into the areas along the economic corridor.

Secondly, more efforts will be needed to increase the public's confidence in the CMEC in Myanmar. Detailed information regarding MoUs and agreements signed by both governments should be disclosed in a timely manner. Bidding for and the tendering of CMEC projects should be open to local, regional, and global actors. Joint research and dialogues with and among think tanks and civil society groups should be encouraged. With the support of joint governments, 1.5-track or 2-track mechanisms could be established. Both sides could also enhance the multilateral dimension of the CMEC to improve credibility, including working together with different multilateral and bilateral parties such as the World Bank, the ADB, Japan, Thailand, and Singapore.

Thirdly, responsible investment, including active engagement with community and civil society organisations should be encouraged. After a series of high-profile controversies such as the Myitsone Dam and the Letpadaung copper mine project, Chinese companies need to attend to local people's concerns over environmental and social impacts to restore the Myanmar public's trust in Chinese investments. Both sides should encourage community-based development initiatives and adopt consultative methods such as establishing village committees and giving

residents a say in deciding and monitoring the spending of funds. Environmental and social impact assessments should be made available to the public in a manner that is accessible to all sectors of society, encouraging diverse participation and collaboration.

Both governments should also consider taking mandatory measures to enhance environmental accountability in pushing forward the CMEC. Chinese parties should put into use the sustainability criteria stipulated in the *Guidance on the Building of the Green Belt and Road* released by China's Ministry of Environmental Protection (2017), and refer to global sustainability standards for infrastructure development in Myanmar. Thorough infrastructure planning should be encouraged to avoid critical areas, including areas important for biodiversity and providing ecosystem services. The participation of Myanmar civil society at all levels and stages of project planning should be facilitated to avoid negative social and environmental impacts. Patience, transparency, and public participation in the decision-making process are the key to ensure success for the BRI and the CMEC.

Fourthly, given the fiscal constraints faced by the Myanmar government, both sides should make efforts to diversify its financing options, including the promotion of the PPP model and better design and use of China's grants. In principle, infrastructure projects that are deemed commercially viable and bankable should be pursued through PPP and other innovative financing models. Given the relatively quick development of PPP in China, China can strengthen its knowledge-sharing with Myanmar in improving PPP mechanisms, including those relating to procurement and other relevant areas. China and Myanmar can also agree to strategically make use of China's grants to support the advancement of the CMEC, including supporting feasibility studies, carrying out environmental and social assessment, improving vocational education and providing livelihood projects for people to be affected by different projects. In addition, the Chinese Ministry of Finance has issued a Debt Sustainability Framework for Participating Countries of the Belt and Road Initiative (China Ministry of Finance 2019).⁴ China and Myanmar could jointly conduct debt sustainability analysis (DSA) to provide references for lending decisions and manage debt risks.

During the second BRI Summit, China has placed high quality at the centre of the BRI agenda and commits the BRI to peace, prosperity, inclusiveness, openness, innovation, greenness, and cleanness. Perhaps no country more than Myanmar would welcome the BRI if these commitments are translated into actions.

Notes

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1 Zhou Taidong, Director, Global Development Research Division, Center for International Knowledge on Development (CIKD),

- Development Research Center of the State Council (DRC) and PhD candidate at the China Agricultural University, China.
- 2 Namely, the New Eurasian Land Bridge, the China–Mongolia–Russia Economic Corridor, the China–Central Asia–West Asia Economic Corridor, the China–Mainland Southeast Asia Economic Corridor, the China–Pakistan Economic Corridor, and the Bangladesh–China–India–Myanmar Economic Corridor.
 - 3 The New Yangon City Project is a commercial project but part of the CMEC plan. A framework agreement was signed between the New Yangon Development Company and the China Communications Construction Company (CCCC), which envisions a complex of new towns, industrial parks, and urban development projects.
 - 4 The Debt Sustainability Framework for Participating Countries of the BRI was issued by the Chinese Ministry of Finance in April 2019. It is a non-mandatory policy tool which sets out procedures of debt sustainability analysis, including debt coverage, macroeconomic projections, realism tools, country classification, and debt-carrying capacity, stress tests, risk signals, the use of judgement, the final risk ratings, and the DSA write-up.

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The Belt and Road Initiative and Africa's Sustainable Development: A Case Study of Kenya*

Jing Gu¹ and Shen Qiu²

Abstract There is extensive international debate over the contribution of the Belt and Road Initiative (BRI) to achieving the global Sustainable Development Goals (SDGs). The potential for the BRI to make a substantial contribution to realising the SDGs has been acknowledged by leading global, regional, and national representatives. The BRI as a developmental project with global reach is heavily backed financially by China, and reflects the need for stronger instruments to implement and deliver on the 2030 Agenda for Sustainable Development and the SDGs. Yet, there are practical challenges in the BRI–SDG relationship set against an international debate centred on concerns, criticisms, and ‘pushback’. This article assesses this relationship and provides a comprehensive examination of China–Kenya cooperation under the BRI and its implications for Kenyan implementation of the SDGs. Its arguments are based on both official documents and data, and primary research. Its findings contribute to the discussion on the potential of the BRI for Africa’s sustainable development.

Keywords: China, Belt and Road Initiative, Kenya, Sustainable Development Goals, Africa, investment, Mombasa–Nairobi Standard Gauge Railway, health, sustainable development.

1 Introduction

The Belt and Road Initiative (BRI), proposed in 2013 by China’s president, Xi Jinping, and officially launched in 2015, is justified as a global development project that aims:

[T]o promote the connectivity of Asian, European and African continents and their adjacent seas, establish and strengthen partnerships among the countries along the Belt and Road, set up all-dimensional, multitiered and composite connectivity networks, and realise diversified, independent, balanced and sustainable development in these countries (China National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce).

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In recent years, the BRI has evolved into a worldwide project (Zou 2018). The BRI is now a multidimensional, multilayered project. However, at its core, it concentrates on building greater capacity, principally through infrastructure with a focus on transport, communications, and energy. The BRI involves China underwriting hundreds of billions (and perhaps trillions, eventually) of US dollars of infrastructure investment across the world. The key agencies primarily responsible for disbursing BRI funding include the Silk Road Fund, the China Development Bank, and the Export–Import Bank of China (China Exim Bank). The multilateral Asian Infrastructure Investment Bank (AIIB) is also a major financier of the BRI.

The BRI is moving into a new phase, undergoing what is being described as a shift from painting the broad strokes to refining the details (The Second Belt and Road Forum for International Cooperation 2019a, 2019b). The second Belt and Road Forum reached an extensive consensus on promoting 'high-quality cooperation' under the BRI, stressing open, green, and clean approaches, as well as goals of high-standard, livelihood-improving, and sustainable development (Xinhua News 2019). Up to 30 April 2019, China had signed 187 BRI cooperation documents with 131 countries and 30 international organisations, including 39 African countries and the African Union (Belt and Road Portal 2019). However, this article examines the following question: what does the BRI contribute to Africa's sustainable development? The article indicates aspects of China's development cooperation with Africa, particularly as this cooperation intersects with the evolving BRI, and considers the case of Kenya – an important BRI strategic partner.

The objective of this article is to explain and evaluate how African states engage with the BRI. It provides an examination of China–Kenya cooperation under the BRI and its implications for the Kenyan economy and sustainable development. The study is spurred by a continuing debate over the impact on African development as the BRI moves into a new evolutionary phase. The article's arguments are based on both official documents and data, and primary research, and its findings contribute to the wider debate by exemplifying the Kenya case, which is valuable for observing the potential of the BRI for Africa's sustainable development. The article is also grounded in, and takes its point of departure from, the wider development literature on aid and sustainable development, and works that seek to relate the BRI to this broader context with the breadth of perspectives embodied within them.

2 The BRI's engagement in Africa

2.1 The basis of China–Africa cooperation

China has a long history of providing fraternal support and solidarity with African independence movements and post-independence states. The advent of the Forum on China–Africa Cooperation (FOCAC), the publication of China's Africa Policy in 2006, and the implementation of China's 'Going Out' policy for the internationalisation of Chinese

enterprises provided the context, within which the past two decades have seen China's engagement with Africa transition from primarily political relations to one grounded substantively in economic and development relations. Adding to the FOCAC process are initiatives of the BRICS (Brazil, Russia, India, China, and South Africa) (Gu *et al.* 2016; Cabestan 2019), through trilateral cooperation arrangements such as the Africa–Britain–China (ABC) initiative (Gu 2017).

Despite the impetus towards stronger Sino-African cooperation, there is far from a consensus over China's role and impact in Africa with differing perspectives and interpretations at play in the debate. Juxtaposed to the view that China's involvement in Africa is not altruistic, but based on a realistic and practical partnership of reciprocal needs and mutual gains, are detailed data analyses assessing aspects such as China's economic impact on Africa (Oqubay and Lin 2019; Jayaram, Kassiri and Sun 2017); China's role in mitigating poverty and inequality in Africa (Huu and Schwiebert 2019); 'responsible engagement' (Xu 2017: 1), including China's changing approach to global corporate social responsibility (Agbebi 2018; Ho 2017; Liu 2015); and China's environmental footprint in Africa (Shinn 2015; Compagnon and Alejandro 2013; China House 2018).

The academic and policy-oriented literature on Sino-African relations is substantial (Gu and Carey 2019; Mbaidjol 2018; Zhao 2017; Xu 2017; United States House of Representatives 2018; United States Senate, Committee on Foreign Relations 2017; Gu and McCluskey 2015; Alden and Alves 2015; Okolo and Akwu 2015; Gadzala 2015; van Dijk 2011; Raine 2009; Alden 2007; Alden and Davies 2006). This literature provides a broad spectrum of perspectives. Indicative of the critical perspective is the argument that China is simply replicating the so-called 'resources curse' of many of its developing partners, which in effect locks these economies into structural underdevelopment and undermines Africa's own efforts to undertake effective sustainable development and to strengthen the quality of African governance. This perspective is clearly expressed by Lawson-Remer and Greenstein: 'Instead of creating prosperity, resources have too often fostered corruption, undermined inclusive economic growth, incited armed conflict and damaged the environment' (2012: 21). The literature includes perspectives that portray China as a *spectre* haunting Africa (Lee 2018), as invading Africa (Dok and Thayer 2019), and as the latest in a long line of neo-colonial powers intent on exploiting Africa's natural and human resources (Su 2017; Insaïdoo 2016; Junbo and Frasherri 2014; Rich and Recker 2013).

2.2 The changing position of Africa in the development process of the BRI

During the BRI's initial stages, the Vision and Actions on Jointly Building Silk Road and Economic Belt and 21st Century Maritime Silk Road³ implied that the BRI should mainly focus on the connectivity along Asia and Europe. Its roadmap did not explicitly cover Africa. On 4 December 2015, the Chinese government issued the second China–Africa Policy, which is the guiding policy document. The African component of the

BRI has taken time to establish. Nonetheless, by April 2019, 39 out of 53 African countries, and the African Union, had signed BRI-related Memoranda of Understanding (MoUs) with China. Despite a relatively slow early beginning, the BRI is now at the core of China–Africa development cooperation, trade, and investment, and is a central component of China’s working relationship with the African Union (AU).

In 2018, China’s total import and export volume with Africa was US\$204.19bn, a year-on-year increase of 19.7 per cent. China’s exports to Africa were US\$104.91bn, up 10.8 per cent and China’s imports from Africa were US\$99.28bn, up 30.8 per cent; the surplus was US\$5.63bn, down 70 per cent year-on-year (MOFCOM 2019). The BRI’s concentration on infrastructure capacity building is variously portrayed as a means of politically stabilising Africa (Korybko 2019), or the key to unlocking Africa’s need for infrastructure. African states have an imperative need for high-quality infrastructure. Africa’s transport, electrification, and communications capacity is among the lowest in the world. The African Development Bank suggests that the continent’s infrastructure needs amount to US\$130–170bn a year, with a financing gap in the range of US\$68–108bn (ADB 2019: 18). The September 2018 FOCAC saw China sign MoUs with 37 African countries and the AU on jointly developing the Belt and Road.

China’s BRI project has established a significant network of cooperation links with African countries. For example, the 756km Ethiopia–Djibouti electrified railway connecting Addis Ababa to Djibouti Port; the US\$3.5bn Doraleh Multi-Purpose Port and international free trade zone; a new standard gauge railway in Tanzania; the Maputo–Katembe bridge in Mozambique – opened in November 2018, with a main span of 680 metres, the bridge is the longest of its kind in Africa; and in August 2017, the China Gezhouba Group announced a US\$4.5bn contract to build a 2,172MW hydropower plant in Angola, which, when completed, will supply up to half the country’s total electricity.⁴

3 China–Kenya cooperation under the BRI: progress and challenges

3.1 Overview

According to Kenyan President Uhuru Kenyatta:

The Belt and Road Initiative gives our continent the opportunity to make a paradigm shift. Post-colonial Africa has been stuck in a rut... It will be a win-win situation when our people have the skills, assets and financing necessary to participate in the development of the infrastructure corridors that will enhance connectivity, support trade and reduce the cost of doing business between our countries... We will all win when the economic corridors we develop hasten industrialisation; and when they hasten the development of domestic private-sector capabilities (Xinhua News 2017a).

Kenya has been one of the fastest growing economies in sub-Saharan Africa: the country’s gross domestic product (GDP) annual growth

rate averaged 5.45 per cent from 2004 to 2018 (Trading Economics 2019). Nevertheless, despite the sustained economic growth and clear improvements across the range of human development indices, the development challenges facing Kenya remain substantial. The 2017 Human Capital Index's (HCI) key finding was that a child born in Kenya today is 52 per cent of who s/he could be with complete education and full health (UNDP 2018a). Almost 40 per cent of Kenyans live in poverty with 14.5 per cent in extreme poverty. The country's unemployment rate stood at 11.5 per cent in 2017, above the average of 10.8 per cent for the period 1991–2017. The population is also vulnerable to natural disaster. In 2017, the Kenyan government declared a severe drought to be a national emergency, with 23 of 47 counties affected. It was reported that 5.6 million people were in need of humanitarian assistance with 3.4 million people food-insecure (UNDP 2018b: 9).

Kenya's 2017 Human Development Index (HDI) value was calculated at 0.590, placing the country in the medium human development category with a ranking of 142 out of 189 countries and territories (UNDP 2018a). In addition, in the assessment of the UN's Human Capital project, Kenya's HCI for 2017 was 'higher than what would be predicted for its income level' with Kenya's HCI ranking 94 out of 157 (World Bank 2018a: 2). The aim of the HCI project is to raise awareness and increase demand for interventions to build human capital.

In response to this aim for interventions to build human capital and to accelerate progress in raising human capital outcomes, the Kenyan government is pursuing its long-term national development *Vision 2030*. The aim of this strategy is to turn the country into a newly industrialising, 'middle-income country providing a high-quality life to all its citizens by 2030' (Kenya Vision 2030, 2018). The strategy sets out the so-called *Big Four* development priorities: manufacturing, universal health care, affordable housing, and food security. This is promoting national economic development by increasing infrastructure, promoting sustainable development and accelerating poverty eradication (World Bank 2018b). The Kenyan government identifies investment in infrastructure capacity building as the critical means by which to achieve its sustainable development objectives. Kenya's industrial transformation programme is intended to increase the country's manufacturing base and exports. A key factor is the need for transport, communications, energy, and water infrastructure capacity building. This requires large-scale funding and implementation expertise, a value-added and comparative advantage possible through engagement with the BRI.

As a 2017 Chatham House assessment of the Standard Gauge Railway (SGR) project reflected, 'whether the partnership with China can deliver sustainable development will be much harder to determine, and is a question that will shape Kenyan politics for many years to come' (Chatham House 2017). What then is the alignment between the BRI, the SDGs, and Kenya's *Vision 2030* with consideration to implementing

the SDGs? There are three aspects to this. Firstly, the BRI provides an existing, functioning framework of finance, organisation, and project experience with which to potentially help Kenya deliver on its national economic programme, SDG strategy, and HCI interventions.

Secondly, the approach to development and the aims of the BRI embodied in its *2015 Vision* (2015) are held by leading officials of the major global and regional intergovernmental organisations to coalesce with the 17 SDGs. Reflecting this, the second Belt and Road Forum's (BRF) List of Deliverables indicates that the BRI's work programme actively engages with the SDGs, explicitly mainstreaming the SDGs into its industrialisation, health, education, energy, and environmental policies and implementation strategies (The Second Belt and Road Forum for International Cooperation 2019c; UN Environment 2018).

Thirdly, the SDGs were formally launched in Kenya in September 2016 and implementation began. This process has mainstreamed both the SDGs and the AU Agenda 2063 into the preparation of the third Medium-Term Programme (2018–22) and the second County Integrated Development Plans (CIDPs), providing the policy framework through which to engage the BRI. The following discussion considers these issues with respect to trade, investment, and health.

3.2 Trade

China became Kenya's largest trading partner in 2014 (Etyang 2015) and Kenya established itself as China's sixth largest trading partner in Africa (White and Case 2018). In 2017, Kenya's imports from China reached US\$3,778bn, accounting for approximately 23 per cent of Kenya's total imports. However, Kenya's exports to China in 2017 were worth only US\$96.7m, representing 1.68 per cent of Kenya's total exports (World Bank 2017).

Over 90 per cent of China's main exports to Kenya are made up by higher-value finished products, machinery and transportation equipment, and miscellaneous products. In return, Kenya's exports to China are low-value agricultural and natural resources. Oil and, increasingly, titanium exports offer Kenya the potential for future higher-value exports to China, and recent agreement on the export of additional agricultural products such as avocados and floriculture are also raising the prospect for increased exports to China and revenue generation. China is an important export market for Kenya's titanium. In the first nine months of 2017, Kenya's titanium exports totalled US\$93.81m (Yunch Titanium 2018).

A number of long-standing concerns have been raised in Kenya about its trade relationship with China, with Kenya portrayed as getting a raw deal in its China trade. These concerns begin with the sheer size of the deficit and the minimal volume, value, low value-added of Kenyan exports, and the heavy dependency on titanium. In 2017, Kenya's export value to China was 2 per cent of China's total, and

imports from China represented 23 per cent of the total. Whilst imports of equipment and materials were needed to construct Phase I of the flagship Sino-Kenyan cooperation project, the US\$3.6bn SGR between Mombasa and Nairobi may have temporarily inflated Kenyan imports from China and the further development of the rail network may have prolonged this effect. If the SGR is taken out of the equation, then the underlying economic structural problem for Kenya remains. Further concerns focus on the undercutting of local manufacturers, either by the alleged dumping of Chinese goods or by import growth from China driven by the preference of Kenyan traders for cheaper and speedier stock, including goods made in Kenya. There are also civil society claims of Chinese neo-colonialism; for instance, the Pan-African Alliance's assertion that, 'slowly but surely China's neocolonial hegemony is being achieved. And it seems like Africans are powerless to stop it' (Junbo and Frasher 2014; Malik 2018; Addis and Zuping 2018).

China's expanding trade relationship with Kenya is having a knock-on effect for Kenya's domestic banks. On the one hand there is, *prima facie*, a positive impact with Kenyan banks reporting a rise in the number of Chinese clients and increased commercial business with Chinese companies – some Kenyan banks are now issuing performance bonds and guarantees for Chinese companies with dedicated desks with Chinese-speaking staff, opening up new business opportunities and trade finance products. However, at the same time, Kenyan banks are experiencing major challenges and there are concerns that, despite their efforts to adapt in order to realise these new opportunities, local banks are not benefiting from the growth in Chinese commercial business as they had anticipated, being sidelined by new Chinese entrants to the Kenyan banking sector and by different banking practices (Wass 2018).

But the majority of the debate over what to do about the trade deficit centres on how the respective governments can work together to address the underlying structural asymmetries to reduce the deficit. For China, this has meant recognising the concerns of the Kenyan government and signing new agreements to allow preferential market access for Kenyan agricultural goods such as avocados. China and Kenya have signed a protocol opening up frozen avocado exports to China, but (as at June 2019) exports of fresh avocados were still blocked due to Chinese bio-safety concerns. However, whilst China's approach and level of responsiveness are important factors, there are Kenyan perspectives that focus on what the Kenyan government can do to help adjust the imbalance. For example, there are arguments proposing that Kenya adopt a more protectionist stance. Indicative of this perspective, the University of Nairobi's Dr Iraki argues that with a stricter regulatory tariff approach, Kenya 'can become more efficient, reduce labour costs, create local demand by improving on the quality and in the spirit of "Trumponomics", become more patriotic' (*Daily Nation* 2017).

In terms of the Kenyan government's own negotiating position, Kenya has refused to sign the 2018 China–EAC Free Trade Agreement.

Kenya's Trade Ministry Principal Secretary Chris Kiptoo is reported as stating that:

China already accounts for 25 per cent of Kenya's import bill under the current common external tariff structure of zero per cent, 10 per cent and 25 per cent for raw materials, intermediate goods and final goods respectively. This means that China is likely to get even a larger share of Kenya's market once we enter into a free trade arrangement (Otieno 2018).

According to Secretary Kiptoo, the Kenyan government is,

seeking a preferential, non-reciprocal trade deal, giving Kenyan exports duty free access to China. Such a scheme could be modelled on the Africa Growth and Opportunity Act (AGOA), which allows African exports like apparel and textiles duty free access to the US market (Miriri 2019).

The sticking point for the Chinese government is the *non-reciprocal* element as this runs counter to its generic development philosophy and to its East African Community (EAC) free trade agreement. For the Kenyan government, the *non-reciprocal* provision is vital to protect its economy from what it believes would be a flood of cheap imports that would undercut its manufacturers and continue to widen the trade gap.

3.3 Investment

China is an increasingly important investor and financier to Kenya. According to the then incoming Chinese Ambassador to Kenya, Wu Peng, China's non-financial direct investment in Kenya in 2018 had doubled over that of the previous year to about US\$520m (Peng 2019). This foreign direct investment (FDI) is primarily channelled into a range of sectors, most notably, construction, industrial engineering, the creative industries, transportation equipment, food and beverages, tobacco and alcohol, information and communications technology, electronic products, financial services, and consumer goods. Among them, the construction industry has the largest scale of investment and the largest number of projects.

Kenya's infrastructure needs are extensive, as the following examples illustrate. The first example is the high profile US\$3.8bn Mombasa–Nairobi SGR, described in April 2019 by Wu Peng as 'one of the benchmarks of BRI' (Peng 2019). The SGR has cut the transit times for travellers dramatically and taken vehicles off the overburdened road system, but issues and controversy surround it including the quadrupling of the construction cost; Kenyan government debt and its servicing; the longer-term need to see a return on the investment made because of the escalated cost; China's unwillingness to underwrite the next stage of the railway's development; and the environmental implications and operational costs incurred by the choice of diesel to power the engines.

The project has two scheduled phases, Mombasa–Nairobi and Nairobi–Malaba. The 472km Mombasa–Nairobi phase is complete and has been opened. The Nairobi–Malaba phase has three segments: Phase 2A stretches a further 120km from Nairobi to Naivasha; Phase 2B adds 270km, from Naivasha to Kisumu; and Phase 2C is a 107km extension from Kisumu to Malaba. This is an important project for the Kenyan government’s economic, developmental, and cleaner energy strategy; for its aim to position Kenya as a regional transport and economic hub; and to integrate into the BRI’s connectivity networks. This project has been 90 per cent funded by the China Exim Bank and post-completion has been managed and operated by a Chinese company. In 2014, China agreed to loan Kenya US\$3.233bn through the China Exim Bank to build the railway. The loan was made up of a US\$1.633bn commercial loan and US\$1.6bn concessional loan and the agreement provided for a five-year repayment grace period.

Completion of the first phase led to Chinese government claims being made as to the benefits to Kenya of this cooperation, including the anticipated contribution to Kenya’s GDP growth of around 1.5 per cent, creation of 46,000 jobs and a multiplier effect through the local economy through extensive subcontracting to Kenyan firms, technology transfers, and mentoring through a new rail engineering academy, and new study and training opportunities (Xinhua News 2017b). For the Kenyan government, this is a flagship project and, for both governments, is presented as a successful symbolic example of cooperation and a step forward in meeting Kenya’s priorities. The Chinese government presents a positive record for the railway: ‘Over 2.71 million passengers have travelled with SGR, with an average attendance rate of 99 per cent. Around 4.04m tonnes of goods have been transported through the railway, with economic indicators surpassing expectations’ (Peng 2019).

However, a Kenyan ministerial statement to Parliament indicated that the rail link has run at a loss for both commuter and freight services (*The Citizen* 2019). Kenyan government ministers cited low freight business as the main cause, but claimed the railway would have a better future performance, achieving profitability by June 2019. However, media reportage of the rail company and Kenyan national data shows that this expectation has not been realised. The Kenyan National Bureau of Statistics (KNBS) calculated that, in the first full year of operating, the SGR earnings were 44 per cent below original expectations with freight earnings adjusted downwards by almost 50 per cent. Repayments on the principal loan from the China Exim Bank would begin in July 2019, increasing the cost of payments substantially by a factor of six to Ksh34.3bn (US\$332m) in the 2019/20 financial year (*ibid.*).

Adding to this situation, China has not agreed to the Kenyan government’s repeated requests for funding for the Naivasha–Malaba section. This leaves the originally planned project in question. The Kenyan government did gain agreement for funding at the BRF

through concessional financing and public-private partnerships (PPP) for projects including a Konza Data Centre and Smart Cities Project to be undertaken by Huawei construction of the Nairobi Jomo Kenyatta International Airport to James Gichuru expressway on a PPP arrangement with the China Road and Bridge Corporation. In addition to the deep concerns raised over the Kenyan government's burgeoning debt servicing responsibility arising from the SGR, is a debate over the management practices of the Chinese operating company (Onjala 2018). Such accusations have appeared in a number of Kenyan news reports, but none more damning than a recent online *exposé* news report, unsubstantiated and contested by the Chinese rail franchisee, which reports that employees are subject to racism, segregation, harsh disciplinary practices, and do not get to drive the engines they were trained to operate (Wafula 2018).

3.4 Health

This section takes health as an example of the way that the BRI can contribute to Kenya's delivery on the Medium-Term Plan (MTP), the HCI, the SDGs, the AU Vision 2063, and the FOCAC agenda. As is the case with the BRI as a whole, there are opportunities and potential risks associated with the dimension of health, and concerns about its impact on health policy and practice. Whilst the BRI has sought to develop a new hub for health cooperation, labelled the *Healthy Silk Road*, the rationale to widen and increase global connectivity will generate a significant increase in the movement of people and thereby a heightened risk of the spread of infectious diseases (Murphy 2018; Gostin 2018; Tang *et al.* 2017). Further issues include the potential possible disaster risk implications of infrastructure *mega-projects* as well as dangers arising from the increased transboundary movement of hazardous materials.

Moreover, the BRI also raises the critical issue of health safeguarding, i.e. the way in which the BRI in practice synchronises and conforms to the existing international regulation of occupational health and environmental standards. The Chinese government organised the first biennial 'Belt and Road High Level Meeting on Health Cooperation towards a Healthy Silk Road' in August 2017. At this meeting, over 30 health ministers and leaders of multilateral agencies signed the Beijing Communiqué, which emphasised a joint commitment by the signatories to protect public health and strengthen people-to-people exchanges among BRI countries. Specific commitments included the creation of new cooperation hubs (the Belt and Road Health Policy Research Network, the Belt and Road Hospital Alliance, and the Belt and Road Health Industry Sustainable Development Alliance); a collaboration intended to contribute to delivering the SDG *monitoring, prevention, and control*, and response to major infectious diseases.

China committed to continuing to dispatch foreign aid medical teams to BRI partner states and to carry out appropriate hospital cooperation through the *Brightness Journey of Free Cataract Surgeries* and *Journey of*

Smile-Free Cleft-Palate Surgeries, and, significantly for the SDGs and for strengthening HCI outcomes, China will implement maternal, child, and reproductive health projects in the Belt and Road nations, promote appropriate technology in paediatrics, obstetrics, and gynaecology, and enhance the national maternal and child health-care and treatment service capabilities to improve the national health level of women and children (*China Daily* 2017). However, the Beijing Communiqué has weaknesses. As an editorial in *The Lancet* medical journal noted, non-communicable diseases were not referred to, and appeared dated compared to China's own 2015 *Healthy China 2030* strategy, and the editorial hoped that the BRI's emphasis on infrastructure development in Africa and elsewhere would not conflict with the aims embodied in China's own *Healthy China* (*The Lancet Global Health* 2017).

To help the Kenyan government's *Big Four* agenda aim of providing universal health care, the government-to-government agreement on health provides the framework for practical cooperation on the construction of hospitals and other medical infrastructure, equipment provision, training of medical staff, and commercial pharmaceutical collaboration. In 2016, China donated four modular container clinics to the Kenyan Ministry of Health to boost the response to killer diseases in underserved and disadvantaged communities. In 2018, the Chinese government supplied and installed computerised tomography (CT) scanners to 37 Kenyan hospitals located primarily along Kenya's major highways to provide enhanced emergency diagnosis for road accident victims and improve survival rates. The scanners can also be used to detect cancer. The project involves a partnership between a Chinese and a Kenyan medical enterprise contracted by the Kenyan government. It also involves knowledge and skills sharing with 37 Kenyan radiographers and radiologists receiving training in China (MT 2018).

4 Analysis: the early impact of the BRI on Kenya's sustainable development

The BRI has raised criticisms that it is fuelling a debt crisis in African countries (Onjala 2018; Were 2018). China is accused of conducting a 'debt trap diplomacy' (Chellaney 2017; Mendis and Wang 2019). Kenya's public debt has been increasing rapidly in recent years, rising to around 57 per cent of GDP in the 2017/18 fiscal year,⁵ and China's share of Kenya's bilateral debt rose to 72 per cent (*Business Daily* 2018), making it Kenya's largest bilateral creditor. The experience of the SGR project has raised questions over Kenya's indebtedness to China; over China's actual commitment to the intended development outcome rather than to the commercial and non-commercial loan provisions; and over the corporate cultures and working practices of Chinese firms. Kenya's debt level is said to have risen as a result of the increased cost of the rail project.

As noted elsewhere in this article, the five-year grace period given by the China Exim Bank expired in June 2019. Kenyan tax-payers were

scheduled to begin paying 0.7 per cent of the economy to the Chinese financing agencies for funding the Nairobi–Mombasa stage of the SGR. Against this background and an increased risk management culture including tighter auditing and anti-corruption measures in China, funding for the scheduled extension of the SGR would have been considered in the light of the provisions of the *Guiding Principles on Financing the Development of the Belt and Road*. These Principles advocate a transparent, friendly, non-discriminatory, and predictable financing environment that ensures sustainable economic and social development. Kenya is among the 26 countries that jointly formulated the Principles.

Further concerns have been raised regarding the BRI's contribution to Kenya's employment, skills, and technology transfer. Estimates of the number of Chinese enterprises operating in African economies have varied over the years. A credible evaluation was undertaken by McKinsey and Company based on its field survey of eight African countries between November 2016 and March 2017. The survey concluded that there were 396 Chinese firms operating in Kenya, more than three times the Chinese government's official number of 131 firms (Sun, Jayaram and Kassiri 2017). Contrary to conventional wisdom, in recent years, Chinese enterprises have increased the employment of local labourers in Africa. Across Africa, the McKinsey survey found that Chinese firms display a willingness to invest in hiring African workers and maintaining apprenticeship programmes, and that Chinese enterprises overwhelmingly employ and train local workers (*ibid.*). In the case of Kenya, a report by the Kenya China Economic and Trade Association (KCETA) concluded that Chinese firms operating in Kenya have created over 50,000 local jobs with the proportion of local employees reaching 96 per cent in 2018. The report also noted that Chinese firms in Kenya provided around 67,000 local employees with professional training in 2018. Commenting on this, Isaac Mbeche, Deputy Vice-Chancellor of the University of Nairobi argued that 'Chinese firms have been devoted to cultivating talents and creating jobs in Kenya, enhancing the exchanges and cooperation between the two countries under the Belt and Road Initiative' (Xinhua News 2018).

However, employment issues remain. According to the Federation of Kenyan Employers (FKE) Executive Director Jacqueline Mugo, 'Due to the lack of knowledge of local labour laws and the understanding of the local staff, disputes between Chinese employers and local employees occur a lot'. In particular, 'the most common types of labour dispute cases are salaries below the minimum-wage standards and unfair termination' (Murathe 2018). In the view of the FKE's Director, the level of disputes results from an unfamiliarity with Kenya's labour law on behalf of the firms, leading them 'to violate the law without knowing it' (*ibid.*).

5 Conclusion

The BRI can, and already is, providing infrastructure, such as for transport. The new industry parks are under development – some offering specific knowledge, skills, science and technology sharing, and

employment. There is also collaboration in vocational training, science and technology research, postgraduate collaboration, and cooperation around the environment and health. Nonetheless, Kenya's experience illustrates the dual pressures on governments engaged in the BRI. In one respect, the Kenyan government is able to elaborate its national and regional development priorities, but needs critical funding and implementation capacity to achieve its aims. Kenya's experience also demonstrates the complexities and challenges involved with issues of debt servicing, project management, and employment practices.

The BRI is a work in progress. It is relatively new to the global arena and, as the second BRF's List of Deliverables indicates, it is still finding its way and seeking to address the substantive issues and questions through gatherings such as the BRF. With respect to policy lessons, then, for China it is that the BRI process needs to address systematically the issue of partner debt serviceability and ensure that the BRI's new Debt Sustainability Framework works effectively and equitably; that Green Silk Road principles and aims are followed and are synchronised with SDGs 13, 14, and 15 to mitigate climate change, and protect life on land and below water; and that the tendering and contract processes are transparent, fair, and equitable.

The management and employment culture, and the practices of Chinese and other BRI project enterprises, need to be based on principles of inclusivity, equality, and strong corporate social responsibility, thereby fulfilling the aims of decent work and economic growth in SDG 8. For China's BRI partners, their approach to the BRI needs to be firmly embedded in financial prudence and provisions for tendering transparency and open procurement. The Chinese government has moved into a more sober stance regarding the BRI, with a closer attention to risk exposure, project monitoring, and outcomes assessment, and the BRI's members too are seeking to maximise their benefits from the BRI whilst minimising their risks.

Notes

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- 1 Jing Gu, Research Fellow, Institute of Development Studies, UK.
- 2 Shen Qiu, Head of Consulting Services Division and Assistant Research Fellow, Center for International Knowledge on Development (CIKD), China.
- 3 The One Belt, One Road Initiative was officially launched in 2013, with the stated aim to connect major Eurasian economies through infrastructure, trade, and investment. The Chinese government drafted and published the Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road in 2015 to promote the implementation of the Initiative.
- 4 Information gathered from the Belt and Road Portal: https://eng.yidaiyilu.gov.cn/info/iList.jsp?cat_id=10076.

5 Information gathered from Trading Economics:
<https://tradingeconomics.com/kenya/indicators>.

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Sino-Greek Economic Cooperation: COSCO's Investment in the Port of Piraeus*

Liu Qianqian¹ and Polyxeni Davarinou²

Abstract This article examines COSCO's investment in the Port of Piraeus in Greece, which provides a good example of economic cooperation between China and Greece against the backdrop of the Belt and Road Initiative. It argues that investment in the Port of Piraeus has had a positive impact on the development of Greece by stimulating infrastructure investment, enhancing the competitiveness of the port, boosting the local economy, and helping to attract more foreign investment. However, the article also identifies potential challenges for Sino-Greek economic cooperation in the long run. Structural obstacles and concerns from European countries could affect China's investment in Greece as well as Sino-Greek economic cooperation in the future.

Keywords: sustainable development, investment, economic cooperation, Belt and Road Initiative, Piraeus, Greece, COSCO, mutual benefit.

1 Introduction

In just the last ten years, China's impressive expansion regarding its economic presence in Greece has attracted worldwide attention. In 2008, the China COSCO Shipping Group (hereinafter referred to as COSCO), a state-owned ocean shipping giant in China, started to invest in the Port of Piraeus in Greece. Eight years later, the company acquired the majority stake (51 per cent) of the Piraeus Port Authority (PPA) for €280.5m and, after the completion of mandatory investments by 2021, will increase its stake by 16 per cent (HRADF 2016).

COSCO's involvement in Piraeus is the flagship project of Chinese investment in Greece and an important part of the Belt and Road Initiative (BRI) in the Mediterranean. Despite the initial reactions about a *sell-out of national assets*, positive perspectives from Greece on China and Chinese investment in Greece can be found after COSCO's investment in Piraeus, as indicated by a recent study by the Institute of

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International Economic Relations of Greece (Tonchev 2018). However, China's investment in Piraeus has not been without criticism, with Nasos Mihalakas (2011) labelling COSCO's investment in Piraeus a Chinese Trojan Horse. Against this backdrop, this article aims to evaluate the impacts of COSCO's investment in Piraeus on Greece.

2 Overview of COSCO's investment in the Port of Piraeus

China and Greece established diplomatic relations in 1972. However, it was not until 2008 when COSCO invested in the Port of Piraeus that the bilateral economic relations between the two countries increased rapidly (Huliaras and Petropoulos 2014). The Port of Piraeus is located at the southern tip of the Balkan Peninsula and on the southwest coast of Athens, Greece. It connects Europe, Asia, and Africa. With a land area of 2.725m square metres and a coastline of about 24km, Piraeus is the largest port in Greece and an important container port in the Mediterranean region.

3 The privatisation of the Port of Piraeus and its significance to China

In October 2008, COSCO obtained through bidding a 35-year concession for the operation of Piers II and III of the container terminals of Port of Piraeus (*China Daily* 2016).

In April 2016, COSCO signed an agreement with the Hellenic Republic Asset Development Fund (HRADF) to acquire 67 per cent of the stake of the PPA for €368.5m and became the operator of the port (*ibid.*). According to a senior executive of COSCO in an interview with us,³ this was the first time that a Chinese company has taken over the operation of a port overseas. According to the concession agreement expiring in 2052, the majority stake of 67 per cent would be acquired in two stages; the first, a €280.5m payment by HRADF for a 51 per cent stake. After a period of five years, COSCO can acquire the other 16 per cent for €88m, provided that a mandatory investment threshold of €300m has been met or exceeded (HRADF 2016). The PPA has submitted its investment *master plan* worth approximately €600m which includes a new logistics centre, an additional cruise-ship terminal, four hotels, and a shopping mall – awaiting approval by the Greek authorities (Stamouli 2019).

China's strong interest in the Port of Piraeus is related to its unique position in the region (Davarinou, Mylona and Skoura 2016: 10; van der Putten 2014: 19; Bastian 2017). Piraeus is located at an important junction of Europe and Asia. The Port of Piraeus is considered to be a gateway for Chinese products entering Southeastern, Eastern and Central Europe. Zou Xiaoli (2016), the former Chinese ambassador in Greece, described it as the 'dragon's head'; a leading example for China's efforts to promote cooperation with European countries under the framework of the BRI. COSCO's investment has driven more and more Chinese enterprises to come to Greece, including but not limited to, the China Energy Investment Corporation, Air China, and the State Grid Corporation of China (Zou 2016). As China's president, Xi Jinping, told

Alexis Tsipras, the Greek prime minister, during the first Belt and Road Forum on International Cooperation in 2017, the Chinese government was willing to work together with Greece to build the Port of Piraeus as an important focal point for the BRI (Xinhua News 2019).

In addition, Piraeus also serves as the hub for the China–Europe Land–Sea Express Route under the framework of the BRI. The Express Route runs from Greece’s Port of Piraeus in the south, via Skopje in Macedonia and Belgrade in Serbia, and Hungary’s Budapest in the north. Compared with the previous routes that go through the Suez Canal, it arrives at the ports of Hamburg and Rotterdam before entering Central and Eastern Europe. The China–Europe Land–Sea Express Route will reduce total shipping time by 7–11 days, according to a COSCO executive in Greece.⁴ The Express Route, once completed, will further enhance connectivity between China and the Central and Eastern European countries (CEECs) and deepen China’s trade and economic links with the CEECs. According to Zou Xiaoli, this Express Route will:

link the new Maritime Silk Road with the Silk Road on land and strongly boost economic and trade cooperation among China, Russia, Central Asia, Central and Eastern Europe, Southeast Europe, West Asia and North Africa, and Southeast Asia (Zou 2016).

Due to the great strategic importance of the Port of Piraeus to China, attempts have been made to maintain both good relations with Greece and a good public perception. In other words, the investment should have benefits for both countries. The following section illustrates the impact of COSCO’s investment in Piraeus on Greece.

4 The impact of COSCO’s investment in the Port of Piraeus on Greece

COSCO’s investment has significantly improved the competitiveness of the Port of Piraeus. COSCO has introduced the most advanced equipment and upgraded the infrastructure of the port. The Port of Piraeus has become the fastest growing container port in the world (*GTP Headlines* 2019), the second largest port in the Mediterranean and the seventh largest in Europe. In terms of the total container volume of the port, the ranking of the Port of Piraeus had increased significantly from 93rd in 2008 to 37th in 2018 in the world. This means that the total traffic of containers at the Port of Piraeus grew from 680,000 Twenty Foot Equivalent Units (TEUs)⁵ in 2008 to 4.9m TEUs in 2018 (*ibid.*). In 2019, the capacity of the port is expected to reach 5m TEUs, making Piraeus the largest port in the Mediterranean (*Stone News* 2018). So far, COSCO has built 55 routes with the Port of Piraeus as a hub. These routes reach as far as the Mediterranean, the Black Sea, the Middle East, North West Europe, North America, and Asia Pacific.

The investment has also contributed to the economic development of Greece and created thousands of local jobs (Xie 2017; PPA 2019a). Former Ambassador Zou Xiaoli made the following address at a seminar

on the BRI: 'the real significance of the COSCO project is highlighted by the opportunity it offers to Greece to return to the international capital market, which is vitally important for Greece to walk out of the crisis and realise revitalisation' (Zou 2016). Recently, the PPA released its *Financial Report 2018* to the Greek government. According to the PPA, the port achieved a profit (before tax) of €42.3m in 2018, representing a near twofold increase from €21.2m in 2017 (PPA 2019b). The net profit reached €27.9m in 2018, showing a 147 per cent increase from its €11.3m profit in 2017. COSCO paid the concession fee of €4.8m to the Greek government, an increase of €700,000 in 2017 (*ibid.*). In addition, COSCO's investment in Piraeus also created 3,000 direct local, and more than 10,000 indirect jobs in Greece (*People's Daily* and *China Daily* 2019).

Many Greeks feel optimistic about the impact of COSCO's investment on the Greek economy in the long run (Le Corre 2018: 18–21). According to the Foundation for Economic and Industrial Research (IOBE in Greek), a Greek thinktank, the Port of Piraeus project will contribute to Greece's gross domestic product (GDP) growth by about 0.8 per cent in 2025, and create 31,000 new jobs between 2016 and 2025, driving public debt down by 2.3 percentage points of GDP (IOBE 2016: 3–4). While these numbers are probably way too optimistic due to Greece's investment deficit, they are indicative of the expectations placed upon COSCO's projects (Tonchev and Davarinou 2017).

COSCO's investment in Piraeus has attracted new Chinese investors to Greece, which has the potential to help boost the Greek economy. Encouraged by COSCO's success, many competitive Chinese enterprises are investing or seeking investment opportunities in Greece. As Tonchev and Davarinou (2017: 24) put it, the Port of Piraeus project serves as an 'anchor investment' for attracting Chinese investment. Numerous examples of this anchorage are detailed below. For instance, in October 2016, the China State Grid Corporation successfully acquired a 24 per cent stake in the Greek public independent transmission company, working with Greek authorities to provide better electrical interconnection between the Greek islands and the mainland. In another case, the China Energy Investment Corporation, one of the world's largest power companies, registered its new energy European headquarters in Greece, later signing a cooperation deal with the Copelouzos Group of Greece in renewable energy and conventional electricity supply (Jovanović 2018). Air China, the Chinese flagship airline, launched Beijing–Athens direct flights in September 2017 (Xinhua News 2017a). Due to Air China being optimistic about the air cargo market in Greece, from April 2018 it increased weekly flights from two to three. In addition, Shenhua, China's largest coal producer, signed an agreement with the Copelouzos Group, one of the largest investment groups in Greece, for the acquisition of 75 per cent of the shares of four wind parks developed by the Greek company (*China Daily* 2017). So far, more than ten competitive Chinese enterprises have invested in Greece (Embassy of China in Greece 2015). The major Chinese enterprises in Greece are listed in Table 1.

Table 1 The major Chinese enterprises in Greece

Name of the company	Scope of business
COSCO Shipping	Transportation
ZTE Corporation	Information technology and service
Huawei Technologies Co. Ltd	Information technology and service
China Energy Investment Corporation	Electric power
China Three Gorges International Corporation	Electric power
China New Era Group Corporation	Electric power
State Grid Corporation of China	Electric power
Air China	Transportation

Source Authors' own, based on information from Ministry of Commerce, People's Republic of China (2018).

While it is not clear to what extent COSCO's investment in Piraeus and other Chinese investment have influenced the volume of Sino-Greek trade and investment, a closer economic cooperation between the two countries has been seen.

In order to deepen bilateral economic cooperation, the Chinese and Greek governments made the *2017–2019 Greece–China Action Plan* (*China Daily* 2017). Recently, another new *2020–2022 Greece–China Action Plan* was made (*China Daily* 2019). Stergios Pitsiorlas, Greece's Deputy Economy and Development Minister, said: '[T]he basis of this cooperation is that Greece's growth strategy meets China's Belt and Road Initiative and the benefits are mutual' (Xinhua News 2017b). Alexis Tsipras, the Greek prime minister, was invited twice as a distinguished guest to Beijing to attend the first and second Belt and Road Forum on International Development in 2017 and 2019 respectively. More significantly, in April 2019, Greece became the 17th member of the cooperation between China and the Central and Eastern European countries (CEEC), which had been known previously as the 16+1 Initiative. It largely reflects the significance of Greece in China's regional strategy in Southeast Europe. China considers Greece a gateway for Chinese products to enter this region, as discussed in Section 2.2.

5 Integrating into the local environment

This section discusses several issues that have happened with COSCO operating the port. These issues are selected because, to some extent, they reflect COSCO's interaction and integration with the local environment.

5.1 Addressing the employees' concerns

When COSCO came to Piraeus to operate Piers II and III in 2008, the employees and the local people were very dissatisfied and concerned about the Greek government's privatisation policy and the handover of

the terminals to a foreign company. Strikes took place and protestors displayed a banner along the waterfront reading 'COSCO Go Home' (Granitsas and Paris 2014). There were even standoffs with the COSCO Group management team.

At that time, the unemployment rate in the Athens suburb was extremely high at around 70 per cent (Granitsas and Paris 2014). Dockworkers were worried about job losses, redundancies, and a deterioration of working conditions. After the first concession of the port in 2008, there were criticisms over the use of subcontractors that employed unskilled, nonunion workers and that did not maintain proper security standards (Alderman 2012).

In 2016, the acquisition of the Port of Piraeus project was completed in accordance with the regulations and procedures of the administrative, judicial, and regulatory agencies in Greece. In the words of Stergios Pitsiorlas: 'It seems that COSCO managed to make peace with the dockworkers'.⁶ COSCO executives held dialogues with employees, and then carried out personnel restructuring that resulted in a collective agreement. In addition, there were no wage cuts or redundancies of local personnel. Out of a total workforce of more than 3,000 people, just ten are Chinese.⁷

5.2 Localisation

COSCO paid attention to the localisation of the company and promoted an inclusive multicultural environment. In order to promote Sino-Greek cultural exchanges within the company, COSCO invited family members of the employees to celebrate both Western and Chinese festivals together and introduced work lunches (a common practice in Chinese enterprises). It also organised regular workshops for employees to learn Chinese, elected the model workers, and organised tours to China for free. These practices have greatly enhanced the Greek employees' sense of collective identity and belonging to the company, according to a COSCO executive in Piraeus.⁸

5.3 The balance of pursuing profits and addressing the development needs of the local industries

COSCO tried to fully consider the development appeal of the local industries and the city while pursuing profit. For instance, before the global financial crisis, Greece was a shipping giant in the world and the ship repair industry was an important pillar of the Greek maritime sector. After the crisis, the Greek government wanted to revitalise its ship repair industry. Considering the development needs of ship repairing in Greece, COSCO invested €30m to renovate the local ship repair zone and upgrade the infrastructure and electromechanical networks (*Hellenic Shipping News* 2018a). In 2018, a new floating repair dock was launched – 240m long, 45m wide, and with a 22,000-tonne lifting capacity with full crane equipment (Glass 2018). The total investment for the ship repair zone stands at more than €55m (*Hellenic Shipping News* 2018b). According to the official data provided by the

Table 2 Investment according to the COSCO master plan**Mandatory investments in euros (to be completed by 2021)**

Passenger cruise port expansion (South Zone, Phase A)	136,283,800
Pier I repair (PPA Station)	8,000,000
Central port dredging	8,000,000
Construction of a new petroleum pier	15,000,000
Improvement of shipbuilding infrastructure	55,000,000
Conversion of the Pentagon warehouse into a passenger cruise station	1,500,000
Underground road car terminal (90 acres)	5,000,000
Improvement and maintenance of port infrastructure	15,000,000
Supply of equipment	25,000,000
Studies/research	5,000,000
Car terminal extension	20,000,000
Total amount of mandatory investments	293,783,800

Additional investments in euros

New warehouse in the area of ODDY, 80,000 sq. m (90 acres)*	60,000,000
Construction of two parking spaces of 75,000 sq. m each, in the G2 region	27,000,000
Eco buses	5,000,000
Construction of cruise passenger station	80,000,000
Reconstruction of the Pagoda building into a 5* hotel and conference centre	60,000,000
Remodelling of two large old warehouses into 4* and 5* hotels	48,000,000
Shipbuilding construction for mega yachts in Area G1	18,000,000
Construction of 5* hotel in Porto Leone	20,000,000
Total amount of additional investments	318,000,000

Other investments in euros

Construction of repair pier in Drapetsona	1,000,000
Construction of a five-storey car park in the commercial port area	5,000,000
Construction of logistics centre in ODDY area	30,000,000
Total amount of other investments	36,000,000
Grand total of investments	647,783,000

* Conversion as it appears in the original text.
Source Foteinos (2019).

PPA, by the end of 2018, ship repair activity had increased by 53 per cent compared to 2017 (PPA 2019b).

An evaluation of COSCO's impact on the Greek economy can be difficult due to the fact that the company's investment in Piraeus is still in progress. As seen in Table 2, further investment focuses on the improvement of port infrastructure to support its business activities, while expanding on cruise shipping and tourism, as the company aims to reach a capacity of 10m TEUs per year. The Port Planning and Development Committee (ESAL) has approved the majority of the mandatory investments but has expressed its objections regarding additional ones (Foteinos 2019). The goals of COSCO's master plan are to double the company's revenue (currently at €133m), disseminate growth in the wider area, and create 2,500 new permanent jobs (Tsimplakis 2019).

5.4 Environmental and social responsibility

As for environmental protection, COSCO manages, monitors, and evaluates the marine environment by using a high-standard environmental management system, PERS (Port Environmental Review System) of the European Sea Ports Organization (PPA 2017: 21–23). It also meets minimum European environmental standards and Greek regulations in relation to waste management, implementing the Ship Waste Management Plan in accordance with the relevant European regulation. Furthermore, COSCO focuses on energy conservation, and uses photovoltaic power generation to reduce carbon emissions, according to the *Annual Financial Report 2017* of the PPA (*ibid.*: 21–23).

In the area of social responsibility, COSCO has cooperated with the Holy Metropolis of Piraeus to provide food for the poor and has helped the local community through the construction of schools and roads, and aiding orphanages of the Piraeus Region (PPA 2017).

6 Challenges for future Chinese investment in Greece

While Sino-Greek economic cooperation appears to have entered its honeymoon period, the sustainability of the economic relationship remains uncertain. On the one hand, the political uncertainty of the Greek government and the policy change resulting from power shifts will continue to pose a significant political risk to China's long-term investment in Greece. The Port of Piraeus project was not without setbacks – from the strikes at the port to the initial suspension of the privatisation plan by the Syriza-led administration on the day it took office in January 2015 (*Ifeng News* 2015). COSCO's further investment plan in Piraeus has been no different; in February 2019, the Chinese delegation in Athens held a meeting with Greek officials and COSCO executives in order to overcome the Greek bureaucracy posed by ESAL and the Central Archaeological Council of Greece. The structural obstacles posed are related to a conflict between local interests and several elements of COSCO's master plan. For example, the construction of a mall inside the cruise terminal is seen as the final blow

to the shopping stores of Piraeus and the development of a logistics centre in Keratsini as directly competitive to the Thriasio Freight Centre (Mpellos 2019).

Again, in April 2019, the Central Archaeological Council of Greece blocked on issues related to the protection of ancient monuments, archaeological sites, and sites of exceptional historical or legendary importance up to 1830 (*PortSEurope* 2019). This means that, as the local news reported, ‘there will now be stricter terms and conditions for land use, and more bureaucratic intervention in new plans’ (*ibid.*). COSCO is reportedly revising its new investment plan. This kind of risk no doubt shadows Chinese investment in Greece in the long run.

On the other hand, European Union (EU) countries, especially Germany and France, have growing concerns over China’s investment in Greece. The authors agree with the comments of Stergios Pitsiorlas:⁹ ‘Greece has been a place for power struggle in history. Many things in Europe have been changed by the investment of COSCO Shipping, which is uneasy for European competitors.’ There are concerns regarding China’s growing economic engagement through BRI-related investments in Europe and the impact on China’s growing power base in this region expressed by Germany, France, and other EU members. This may have implications for Chinese regional investment expansion. Sigmar Gabriel, German foreign minister, blamed Greece for not supporting the EU’s proposal to bring the freedom of navigation in the South China Sea to the International Tribunal for the Law of the Sea (ITLOS) but tilted towards China politically for fear that Chinese investment might be affected (Qingmu 2017).

More importantly, against the backdrop of China’s growing economic and political influence in Europe, the European Commission and the High Representative reviewed EU–China relations, passed the new *EU–China Strategic Outlook*, and set out ten concrete actions to deal with challenges with China (European Commission 2019). In April 2019, the EU also approved new rules for its member states for the screening of foreign investment. It is widely believed that this change is related to their concerns about Chinese investment in Europe, such as Piraeus in Greece, and Trieste in Italy (Taylor 2019; Meunier 2019). Even though China’s investment in EU countries is very small,¹⁰ any pressure from the EU is likely to impact Chinese investment in Greece. European countries’ concerns, together with the newly established regulations, will undoubtedly increase the complexity and difficulty of doing business, and thus reduce the enthusiasm of Chinese enterprises to invest.

As Chinese investment increases, it draws increased attention from various parties in Greece, on issues of insufficient interactions and communication with the public and local community, and the lack of open and transparent information on Chinese investment policy and data. Each of these holds the potential to raise concerns or suspicions due to misunderstanding.

7 Conclusion

With China's growing economic engagement in Europe, concerns from EU countries over China's motivations and potential influence will rise. At the Munich Security Conference in 2018, Sigmar Gabriel (2018), German foreign minister, claimed that China used the BRI to create a comprehensive system different from the Western values of freedom, democracy, and human rights. Europe is in danger of being divided by China. China uses these investments, like 'sticks and carrots', to test individual European countries and undermine the unity of the EU (*ibid.*). To address these concerns, China should respond positively. As benefit-sharing and co-development are the golden rules of the BRI, it would be wise for China to move towards involving Germany, France, Italy, and other key EU countries closer in the process of cooperation, better accommodating their interests. For instance, China's investment in Port of Piraeus may reduce the existing interests of some big European ports in this region, such as the Port of Rotterdam in the Netherlands and the Port of Hamburg in Germany. Therefore, when China invests in Piraeus or other European ports, it would be better for China to consider how these investments could reduce the losses of these European countries, or whether it is possible to promote trilateral cooperation or multi-party cooperation with these European countries. In this way, interests and risks can be shared.

This article has examined the effects of COSCO's investment in the Port of Piraeus on Sino-Greek cooperation within the context of the Belt and Road Initiative. It argues that investment in the Port of Piraeus does have a positive impact on the Greek economy by ameliorating infrastructure investment, enhancing the competitiveness of the port, and posing as a successful example that can attract more foreign investment. The role of Piraeus in enhancing Sino-Greek economic cooperation cannot be overlooked. Nevertheless, it will be necessary for both actors to reconcile interests and goals with internal and international politics.

Notes

- * This *IDS Bulletin* is supported by the Center for International Knowledge on Development's (CIKD) China–UK Partnership Programme on Knowledge for Development.
- 1 Liu Qianqian, Deputy Director-General, Finance Center for South–South Cooperation (FCSSC), Hong Kong.
- 2 Polyxeni Davarinou, Researcher, Institute of International Economic Relations (IIER), Greece.
- 3 Fieldwork interview, Greece, October 2017.
- 4 Fieldwork interview, Greece, October 2017.
- 5 According to Logistics Glossary Online (2019), the Twenty Foot Equivalent Unit (TEU) is 'the unit of the capacity of a container ship, a container terminal and the statistics of the container transit in a port'. See www.logisticsglossary.com/term/teu/.
- 6 Stergios Pitsiorlas, fieldwork interview, Athens, November 2017.
- 7 Fieldwork interviews with COSCO local staff and executives, Greece, October 2017.

- 8 Fieldwork interviews with COSCO local staff, Piraeus, October 2017.
- 9 Stergios Pitsiorlas, fieldwork interview, Athens, November 2017.
- 10 Take China's investment in Greece, for instance. The countries that invest in Greece are mainly concentrated in Europe. According to Bank of Greece data, in 2017, foreign direct investment from European countries to Greece was €3.22bn, accounting for 89.7 per cent of the total investment in Greece. Major countries investing in Greece include the United Kingdom, Switzerland, Germany, the Netherlands, and Cyprus (Bank of Greece 2018).

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The China–Pakistan Economic Corridor: A Case Study^{*†}

Mustafa Hyder Sayed¹

Abstract The China–Pakistan Economic Corridor (CPEC) is a multifaceted project which was formally announced during a visit by China’s president, Xi Jinping, to Pakistan in April 2015. It is an infusion of infrastructure, energy, ports, railway networks, and people-centric projects, which enhance Pakistan’s trade connectivity, export potential, and geopolitical relevance. Pakistan and China believe that the CPEC will not only complement the economic development of the two countries but will also bring peace and prosperity in less developed regions of Pakistan. The article focuses on the impact of CPEC projects comprising early harvest projects, middle- and long-term plans, and social sector development initiatives including: poverty alleviation, clean water, health, education, vocational training, and agriculture. It also gauges the prospects and challenges faced by the CPEC and policy recommendations to make this project sustainable and inclusive.

Keywords: CPEC, China, Pakistan, Gwadar, energy, social, early harvest projects, corridor, connectivity, Balochistan.

1 Background

The China–Pakistan Economic Corridor (CPEC) was launched in 2015 as the flagship and leading project of China’s Belt and Road Initiative (BRI) (*Global Times* 2019). The CPEC was given priority and precedence over the five other corridors of the BRI due to:

- 1 The strategic geographic location of Pakistan and its Gwadar Port (the latter is the converging point of the Silk Road Economic Belt and the twenty-first century Maritime Silk Road). Gwadar’s significance had been highlighted long before the launch of the CPEC by Robert Kaplan, who summarised Gwadar’s strategic potential as ‘the hub of a new Silk Road, both land and maritime; a gateway to landlocked, hydrocarbon rich Central Asia’ (Khan 2016); and
- 2 The *time-tested* and *all-weather* strategic partnership, signifying the unique state-to-state and also the close people-to-people connectivity and goodwill, that is above political partisanship (Weidong 2017).

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2 Introduction

The CPEC is a mammoth US\$46bn investment from China, which was later extended to US\$62bn (Shaikh 2018) for the completion of all its projects, set to culminate in 2030 (Ministry of Planning, Development and Reform 2017). The CPEC was a strategic decision by China to choose Pakistan as the pilot project of the BRI, the lessons and experience of which would determine the learning curve of how to execute Belt and Road projects in other BRI host countries and corridors (Rehman 2018). In order to experiment with a large, economic, and cultural footprint that had not been seen in any other host country in the past (only in continents, i.e. Africa), the prerequisites of a solid foundation that consisted of goodwill in the populace and across the political spectrum in Pakistan, and an existing strategic and defence relationship, made the CPEC more predisposed towards success.

2.1 Dimensions of the CPEC

The CPEC is about infrastructure, energy, and maritime and cultural connectivity, under one umbrella and brand. However, the CPEC is not monolithic. Every project in the CPEC has different terms and conditions as each is executed by a different Chinese state-owned enterprise (SOE) and is independent from other CPEC projects. To illustrate, the PowerChina-invested coal-fired power plant is jointly invested with a Qatar-based consortium undertaking the project on a build–operate–transfer (BOT) basis (*Pakistan Observer* 2019), whereas the coal-fired power plant located in Thar Block II, which has less than a 10 per cent Chinese shareholding,² is a public–private partnership between the Sindh provincial government, the China Machinery Engineering Company (CMEC), and Engro (a Pakistani company). The Gwadar International Airport, on the other hand, is financed by a grant (CPEC 2019a).

The common denominator in CPEC projects is the National Development Reform Commission (NDRC), which nominates the Chinese SOE for each project and is responsible for the supervision of CPEC projects, whilst the Ministry of Planning, Development and Reform is its counterpart in Pakistan (Ministry of Planning, Development and Reform 2018).

2.2 The division of the CPEC into three phases (early, medium-, and long-term projects)

Being a long-term project that goes beyond 2030 (Ministry of Planning, Development and Reform 2017), the CPEC is divided into three phases: early harvest projects (EHPs) (priority projects for the first five years), medium-term, and long-term (China International Development Cooperation Agency 2019). Eleven out of the 22 EHPs have been completed, whilst 11 are under construction. The EHPs have addressed Pakistan's energy shortfall of 5,000 megawatts (MW) (Kugelman 2014), and the rest have rehabilitated the existing and constructed new infrastructure of roads and highways, which would create an enabling environment to boost trade and mobility.

Table 1 Eleven early harvest projects completed (with total contract amount of around US\$19bn)

50MW Dawood wind power project	China–Pakistan Friendship School, Faqeer colony
100MW Pakistan Jhampir UEP wind power project phase 1	Gwadar Port operation and development of free zone
Sachal 50MW wind power project	Laying of optical fibre from Rawalpindi to Khunjerab
Zonergy 900MW solar project in Punjab	Preliminary design phase 1 for upgradation of ML1 and Havelian dry port of Pakistan Railways
Port Qasim 2x660MW coal-fired power project	
Sahiwal 1,320MW coal-fired power plant	
Three Gorges second wind power project (100MW)	

Source Embassy of the People's Republic of China in the Islamic Republic of Pakistan (2018b).

Table 2 Eleven early harvest projects under construction

KKH-Phase-II (Havelian–Thakot)	Suki Kinari hydropower project
Karachi–Lahore motorway Sukkur–Multan section	Gwadar Smart Port City Master Plan section
Metro Rail transit system on the Orange Line in Lahore	DTMB demonstration project
Expressway on Eastbay of Gwadar	2x330MW Mine mouth coal-fired power plant at Thar Block I, Sindh
720MW Karot hydropower project	3.8m tonnes per annum open case lignite mine at Thar Block II, Sindh
CPHGC 1,320MW coal-fired power plant, Hub, Balochistan	

Source Embassy of the People's Republic of China in the Islamic Republic of Pakistan (2018b).

3 Impact evaluation of the CPEC

3.1 The CPEC's contribution to Pakistan's energy mix

CPEC power projects at present have added 3,240MW to Pakistan's national grid (Associated Press of Pakistan 2019), which makes up 11 per cent of the 29,573MW installed power capacity (Mustafa 2018). These power projects include a 1,320MW coal-fired power plant in Karachi's Port Qasim, Sindh; a 1,320MW coal-fired power plant in Sahiwal, Punjab, 300MW from phase 1 of the Zonergy solar park; the

50MW Dawood wind farm; the 100MW Jhimpir UEP wind power project; the 50MW Sachal wind farm; and the 100MW Three Gorges second wind power project (Embassy of the People's Republic of China in the Islamic Republic of Pakistan 2019). Also, a 660MW coal power project in Thar and another 1,320MW coal-fired power plant in Hub, Balochistan are under construction.

3.2 Social sector development

Gwadar Port has seen the establishment of the China–Pakistan Friendship School (Embassy of the People's Republic of China in the Islamic Republic of Pakistan 2018a), built with a grant of US\$400,000, and the development of the Gwadar Free Zone, which is an industrial zone built by the China Overseas Ports Holding Company (COPHC) that represents an inward investment of US\$250m (COPHC 2015). The school was built under the social sector platform, details of which are described later in the article.

3.3 Infrastructure development

An ambitious motorway project that connects Pakistan's northwestern city of Peshawar with Karachi, capital of Sindh Province, is a work-in-progress with more than a quarter complete, and the remaining due to be completed by August 2019 (CPEC 2019b). Also, a US\$44m, 820km cross-border fibre-optic cable project from Khunjerab to Rawalpindi has been completed (Taneja 2019).

4 Recommendations to counter challenges facing the CPEC

The CPEC is a megaproject and like all megaprojects has been confronted by challenges and implementation barriers. There are five key problems with realising the CPEC, which the author outlines here, alongside recommended steps to increase the effectiveness of project implementation: (1) a communication strategy to ensure the proactive dissemination of information; (2) building the capacity of host country implementing institutions; (3) extensive due diligence and preparation for informed decision-making; (4) improved coordination between federal government departments, the federal government, and provincial governments; and (5) inclusive decision-making via engaging civil society, local communities, the private sector, and both national and regional political parties across the political spectrum.

The EHPs under the CPEC to date have mostly been delivered with success, despite a host of challenges. These successes include a coal mine and coal-fired power plant in Thar Block II, which according to Deputy Chief of Mission (DCM) Lijian Zhao³ will be completed by the end of July 2019 and will serve Pakistan's local coal needs. A further coal power station under the China Power Hub Generation Company (CPHGC) is due to enter commercial operation in August 2019, delivering 1,320MW, according to Ambreen Shah, the CPHGC Vice President.⁴ Two additional megaprojects under the CPEC include the Multan–Sukkur motorway, which was due to be completed by August 2019, and the Thakot–Havelian Highway, part of the Karakoram

Highway (KKH), which is under construction and expected to be finalised by March 2020 (*ibid.*).

5 Discussion

In the second phase of the CPEC, the focus will move onto the social sector, particularly in areas such as: poverty alleviation, clean water, health, education, vocational training, and agriculture. Moreover, most of these social sector projects are in far-flung areas of Khyber Pakhtunkhwa (KPK) Province, Southern Punjab, and Balochistan which have a low Human Development Index (HDI) and demand greater attention. However, failures in communicating these prospective benefits to stakeholders and the wider population has led to misperceptions (Marwat 2017) and misplaced speculation (Embassy of the People's Republic of China in the Islamic Republic of Pakistan 2019), casting aspersions on the project as a whole and the dissemination of inaccurate information – all because of a lack of a proactive and well-articulated media and communication campaign. Instead, government spokespersons have been fire-fighting; often adopting a defensive position that ultimately compounds the criticism and trust deficit, rather than addressing it.

For example, some sections of the Pakistani press and social media insisted that there had been loss of employment of Pakistani labourers on CPEC projects to Chinese labourers, despite the fact that the already comparatively cheap Pakistani labour would make such an enterprise commercially cost-ineffective. According to Balochistan budget figures for 2017–18, the minimum wage in Balochistan, since October 2018, was set at 15,000 rupees per month (Government of Sindh Labour and Human Resources Department 2018), whereas in Xinjiang, as per the China Briefing August 2018 report, the minimum wage for a month is 1,540 RMB (equivalent to 35,439 rupees) (Koty and Zhou 2019).

At an event in Faisalabad (14 February 2018), a major industrial hub, the members of the Chamber of Commerce were oblivious to an important CPEC Special Economic Zone (SEZ), that had been planned for the city. A common refrain is that the CPEC is a road going from China to Gwadar, and the land through which this road shall pass will transform into lucrative real estate, and the rest of the country will remain unchanged.

5.1 One corridor, multiple passages

The CPEC can be described as 'one corridor, multiple passages' (Xinhua News 2016), envisioned as a long-term project that would go up until 2030. It is an infusion of connectivity projects consisting of infrastructure, energy, ports, railways, and people-to-people projects, which enhance Pakistan's trade connectivity, export potential, and geopolitical relevance significantly (World Bank 2018). The CPEC is representative of the whole of Pakistan. It has three major routes: the central, eastern, and western routes, which connect Gwadar to Kashgar, and which include all of the provinces of Pakistan. Examples of CPEC projects across the country include the Karot hydropower

project in Azad Jammu and Kashmir (AJK), the Rashakai SEZ in KPK, the Jhimpir UEP wind power project phase 1 in Sindh, the 1,320MW CPHGC coal-fired power plant in Hub, Balochistan, and the Sahiwal coal power project in Punjab. Hence, the corridor is not confined to any specific route or province but meets geographical inclusivity.

5.2 Opportunities for Pakistan

The CPEC too has the potential to transform Pakistan into a hub of regional economic cooperation, as it seeks to connect South, Central, and East Asia, along with the Gulf countries. Plans for this inter-regional hub role are already underway with the 9th Joint Cooperation Committee (JCC) meeting taking place in November 2019, and the Gwadar International Airport project entering the initial stages of development, with the latter being financed by a grant of US\$230m provided by the Chinese government.⁵ In February 2019, during the visit of Saudi Arabia's Crown Prince, Mohammad Bin Salman, he announced a new US\$8–9bn oil refinery investment in Gwadar (Kiani 2018). Iran has also shown interest in participating in the CPEC and connecting its Chabahar Port with Gwadar Port.

To further the regional connectivity potential emanating from the CPEC and institutionalising a mechanism for third-party participation, a meeting was held of the Joint Working Group on International Cooperation during the eighth JCC, held in November 2018 in Beijing, which featured the participation of the Foreign Secretary of Pakistan and the Vice Foreign Minister of China (Radio Pakistan 2018; Rehman 2019). In addition to rapid development via the CPEC, Pakistan is being re-branded as a country which is an investment-friendly destination, and a market that international companies must factor in when they explore opportunities for out-bound investment.

5.3 The need for capacity enhancement

The aforementioned challenge of an absent communication strategy speaks to two larger, structural issues: (1) the capacity of the government and its bureaucracy, and (2) feasibility studies and its preparedness. The Planning Commission, which was recently upgraded to the Ministry of Planning, Development and Reform (MPDR), the focal ministry responsible for coordinating the CPEC in Pakistan, has ten projects listed on its website (Ministry of Planning, Development and Reform 2019). Each project is supervised by a project director who is responsible for overseeing that particular project. The CPEC is one of these ten projects, and others include the Young Development Fellows (a programme to provide opportunities to talented youth), the Peace and Development Unit, and the Centre for Rural Economy. Considering that the CPEC's EHPs' investment alone is equal in value to Pakistan's exports for fiscal year July–April 2018/19 at US\$19bn (Ministry of Finance 2019), not accounting for the other nine projects of the MPDR, conventional wisdom would expect it to be a daunting task to successfully meet the time-sensitive deadlines of the large-scale CPEC EHPs.

Both capacity and due diligence are intertwined, as capacity enables due diligence to be conducted, and without due diligence, it is difficult to anticipate and ascertain the extent and nature of the capacity development required. Both the above points are crucial as it is tempting for host governments, particularly in lesser developed countries, to forego capacity building and due diligence to achieve short-term political gains, cognisant of their limited political tenures rather than the long-term project cycle.

5.4 CPEC project implementation and feasibility assessment

When it comes to project implementation, the NDRC undergoes a process of evaluation and feasibility analysis, after which the project is rejected or approved. To ease the process for foreign investors, the NDRC is considering the removal of the 'first approval' stage (Donovan 2019) to increase investments and create an enabling environment to enhance trade, a practice which the Ministry of Planning, Development and Reform and Board of Investment (BOI) Pakistan, could also incorporate. For example, two EHPs, the upgradation of the ML-1 railway from Karachi to Peshawar and the Havelian dry port project, faced delay as there was little fastidious, expert-led, internal brainstorming, due diligence, and feasibility assessment on the Pakistani side to assess and determine why the particular project should be initiated, or one project be given precedence over another.

The discussions that did take place on the identification of projects were led by political leaders and cabinet members, who are predisposed to giving primacy to political considerations and are unable to make the same informed decisions that could be made by an economist or an industrial zone specialist. For example, the Balochistan government did not issue until recently the No Objection Certificate (NOC), a prerequisite for the project to begin, stalling the project and pushing its deadlines forward. The project now awaits a tariff to be determined by the National Electric Power Regulatory Authority (NEPRA), the pace of which has also been on a par with that of the Balochistan government.

5.5 The need for a one-window solution

The absence of a *one-window* solution where Chinese companies, and any foreign investor for that matter, both new and existing, can go for assistance and help, was and remains all the more necessary. For example, the Port Qasim power plant invested in by PowerChina, was one of the highest priority power projects of the CPEC. However, because it was in Sindh Province, which had a different ruling party from that in the centre, it led to poor coordination between the federal government and the provincial government, making the efficiency of the project suffer. For example, the provision of security, land, and so forth were provincial subjects whilst the power project was supervised by the federal government. Because of this, the government focused on a *person-centric* approach, where an official with an efficient and accomplished reputation would be placed to oversee key CPEC projects, as opposed to institutionally strengthening the organisation that the

official may be heading. The establishment of a 'CPEC Secretariat' (Rana 2019) has finally been announced which would likely serve as the *go-to* organisation for all CPEC related matters.

Incumbent governments are predisposed to taking and claiming political ownership of the projects undertaken during their tenure. However, BRI and CPEC projects are long term and for their success need political ownership from across the political spectrum from the start, since they outlast typical tenures of three to five years of elected governments, and those under the CPEC have a particularly long life of 20 years and more. In the first two years after the launch of the CPEC in 2013, resentment and a sense of disenfranchisement was witnessed from the provincial lawmakers in Balochistan (Shahid 2018) and Khyber Pakhtunkhwa, who claimed that they had not been consulted and included in the decision-making process with regard to the CPEC. Later, the government established a Parliamentary Committee on CPEC (Parliamentary Committee on China–Pakistan Economic Corridor 2016) comprising both the houses of the parliament, and consisting of all political parties including the opposition, to garner consensus and right any wrongs that may have been committed in the nascent stages of decision-making by the government (*The Routine* 2018).

Critical stakeholders for large projects are the local communities that reside in the area or vicinity of the project site, and whose ecosystem, way of life, and even source of income, may be impacted, often adversely. Under the CPEC, local communities have been made beneficiaries and their needs have been addressed. In Gwadar, the China Overseas Ports Holding Company (Embassy of the People's Republic of China in the Islamic Republic of Pakistan 2018a) has established a primary school for girls and is in the process of establishing a vocational training institute and a 500-bed hospital, all with grants from the Chinese government. In Thar, a desert, where a mega coal project has been established, the Sindh Engro Coal Mining Company has trained local women to drive dumper trucks for transporting coal, leading to both their empowerment, and inclusive growth and development (*The Express Tribune* 2017). However, an institutional approach to making local communities more involved is required, where they are made privy to the decision-making process, and a channel of communication where their demands and views are able to reach decision makers.

5.6 The CPEC and people-to-people connectivity

The CPEC is as much about access to basic necessities for the ordinary Pakistani as it is about major investments and projects in energy, infrastructure, and industrial zones. After the successful completion of the EHPs, the CPEC now consists of people-focused projects (Hussain 2019). A new Joint Working Group on Socioeconomic Development was established under the Joint Coordination Committee of the CPEC in 2018, which is aligned with the Sustainable Development Goals (SDGs) of the United Nations (Sheikh 2016). During the second Belt and Road Forum in May 2019, China allocated US\$1bn for 27 projects under this

new working group, including in education, health, agriculture, water and irrigation, poverty alleviation, and human resource development (Hussain 2019). The areas of these projects are: (1) establishing technical and vocational training institutes, which is in line with SDG 8 – decent work and economic growth; (2) establishing health-care facilities and thereby making health care accessible (SDG 3 – good health and wellbeing), and the provision of educational facilities in disenfranchised areas (SDG 4 – quality education); (3) clean drinking water projects such as the Gwadar desalination plant (SDG 6 – clean water and sanitation); and (4) agriculture and poverty alleviation projects (SDG 1 and 2 – no poverty and zero hunger). Furthermore, Gwadar City’s development is being envisioned as creating a *clean, green, and environment-friendly city* (SDGs 7 and 13 – affordable and clean energy and climate action), whilst the SEZs under the CPEC will create an enabling environment for investment, generating jobs and enhancing industrial development, leading to economic growth (SDGs 8, 9, and 10 – decent work and economic growth; industry, innovation and infrastructure; and reduced inequality) (Ali 2018).

Thus far, 70,000 Pakistanis have gained employment in CPEC projects (Achakzai 2018). Moreover, for enhancement of people-to-people connectivity and youth-based training, 20,000 scholarships will be given to Pakistani students over the next three years. Phase II includes social projects such as the Pak China Friendship Hospital (CPEC 2017), and the Pak–China Technical and Vocational Institute (Ministry of Planning, Development and Reform 2017) at Gwadar, as well as the 300,000 gallon desalination plant in Gwadar, which will boost sustainable development.

6 Conclusion

There is much that can be learnt from the first five years of the BRI projects and corridors, including CPEC, in terms of both what to do and what not to do. Firstly, the programme would benefit from a more inclusive, institutionalised (not ad hoc), and scientific approach to examining (1) the feasibility of the project, (2) the project’s alignment with the host country’s national development strategy, and (3) the project’s intended and unintended consequences and long-term impact on the environment and economy. One way to address the aforementioned issues would be by creating an organisation which is government-led, but which includes representation from national and regional political parties, local communities, the private sector, and civil society, in addition to experts of the project(s)-related fields, which would pre-empt prospective community or civil society blowback.

By engaging these stakeholders that are ultimately power centres who matter, potential concerns or insecurities (often present in developing countries that have limited experience in dealing with an influx of foreign personnel or companies) would be deflected and/or addressed in a timely manner. This, coupled with a well-conceived, facts-based, and sustained communication campaign is necessary to apprise stakeholders

of the benefits of particular projects to them and the economy, and to make them part of the solution. All this would help to build a truly win-win partnership.

Notes

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- 1 Mustafa Hyder Sayed, Executive Director, Pakistan–China Institute, Pakistan.
- 2 Interview by Mustafa Hyder Sayed with Lijian Zhao, Deputy Chief of Mission, Chinese Embassy, 5 March 2019.
- 3 Interview by Hamna Husain with Lijian Zhao, Deputy Chief of Mission, Chinese Embassy, 1 June 2019.
- 4 Interview by Hamna Husain with Ambreen Shah, Vice President of China Power Hub Generation Company (Pvt.) Ltd (CPHGC), 9 July 2019.
- 5 Interview by Hamna Husain with Lijian Zhao, Deputy Chief of Mission, Chinese Embassy, 1 June 2019.

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Will the Belt and Road Initiative Boost Least Developed Countries Towards Sustainable Development?*

Namsuk Kim¹

Abstract This article reviews the progress of least developed countries (LDCs) towards LDC graduation and to achieving the Sustainable Development Goals (SDGs). It shows that the Belt and Road Initiative (BRI) could contribute to filling the financing gap and speed up progress. LDCs are defined as low-income countries with structural handicaps to achieving sustainable development. The comparison between SDG monitoring indicators and LDC identification indicators shows that progress towards the SDGs and towards the graduation from the LDC category are in general heading in the same direction. Estimates show that, under the business-as-usual scenario, only about half of LDCs could become eligible for graduation by 2030, while at the same time remaining a long way from the SDGs. There remains a significant financing gap which calls for additional cooperation initiatives, and the BRI to provide critical and necessary enabling conditions in this area.

Keywords: Belt and Road Initiative, least developed countries, Sustainable Development Goals, financing for development, United Nations, graduation.

1 Introduction

Least developed countries (LDCs) are a group of countries that are identified by the United Nations (UN) as having severe challenges in achieving sustainable development. The category was created in 1971, allowing these countries access to special support measures from the international community, such as trade preferences, technical assistance, and aid. The list of countries to be included in the category is reviewed against a set of criteria every three years (UN 2015).

While remarkable socioeconomic progress has occurred around the world throughout the past decades, the majority of LDCs, which constitute the poorest and most vulnerable group of countries, by and large did not share in this global progress. The principle of

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universality written into the 2030 Agenda for Sustainable Development (2030 Agenda) and represented by the phrase 'leave no one behind', would only be accomplished when those countries that start furthest behind – LDCs – are able to catch up and achieve the SDGs and the 2030 Agenda's other identified targets. The upcoming decadal programme of action for LDCs is expected to formulate the action agenda for 2021–30, which has the same end point as the 2030 Agenda. The 2030 Agenda's universal and integrated set of goals and targets address the root causes of poverty and the need for development that works for everyone, a priority for the LDCs (UN 2015).

To support LDCs to be on track towards the SDGs, it is critical to identify where the challenges are and how they will evolve up to 2030. But it is a difficult task to forecast and estimate progress towards the SDGs because the 2030 Agenda covers a wide spectrum of economic, social, and environmental aspects, with 17 goals, 169 targets, and 232 official indicators to measure progress. In this context, this article reviews the connection between achievement of the SDGs and LDC graduation (which uses just a few indicators); the current trajectory and required acceleration for LDC graduation; and the role of the Belt and Road Initiative (BRI) in financing for development in LDCs.

The progress made for enabling LDCs to move towards graduation has not been successful enough. Since the establishment of the category, the number of LDCs has increased from 25 in 1971 to 47 in 2018. During this period, only five countries have been able to make sufficient progress to graduate from the LDC category, and only 14 countries have met the criteria for graduation during the past decade, 2011–20 (UNDESA 2018a).

Recognising the development challenges that LDCs face, the international community has provided support measures to those countries, some of which are exclusive to LDCs.² However, as seen above, the support measures for LDCs have not been sufficient at enabling LDCs to make progress against the SDGs and graduate from the LDC category. This is the reason why alternative and additional cooperation platforms, such as the Belt and Road Initiative (BRI), should be explored.

The Government of the People's Republic of China launched the initiative of jointly building the Silk Road Economic Belt and the twenty-first century Maritime Silk Road in October 2013. The Belt and Road is envisioned to become a road of peace, prosperity, opening up, green development, innovation, connected civilisations, and clean government. It maps out a grand vision for international development cooperation, covering five key areas – policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and people-to-people bond – which are extensively and intrinsically linked to the SDGs. By the end of March 2019, 173 cooperation agreements with 125 countries and 29 international organisations had been signed

with China (Office of the Leading Group for Promoting the Belt and Road Initiative 2019). The majority of these countries are developing countries, including LDCs, land-locked developing countries (LLDCs), and small island developing states (SIDS).

Section 2 presents an overview of the connection between the SDGs and LDC graduation, based on the indicator and target-level comparison. Section 3 reports the results from the statistical exercises on the prospects of LDC graduation by 2030. Section 4 presents the financing needs for LDCs and role of the BRI. Section 5 concludes.

2 Graduating from the LDC category and achieving the SDGs

The LDC classification criteria aims to fully reflect the international development context that continues to change over time, and thus these criteria are periodically reviewed and adjusted. Since the 2030 Agenda was adopted, it has become clear that the opportunities and challenges of LDCs in the implementation of international agreements, and especially the SDGs, needs to be explored in order to ensure coherence and synergies between different international agendas.

LDCs are defined as low-income developing countries suffering from severe structural impediments to sustainable development (UNDESA 2018b). The three criteria used to identify LDCs are gross national income (GNI) per capita, the Human Assets Index (HAI), and the Economic Vulnerability Index (EVI).

GNI per capita provides information on the overall level of resources available to a country. The threshold for inclusion is set at the three-year average of the level of GNI per capita, which the World Bank defines for identifying low-income countries. For instance, in the latest review in 2018, the threshold for inclusion in the LDC category was US\$1,025. The threshold for graduation was US\$1,230, which is set at 20 per cent above the inclusion threshold (UNDESA 2018b).

The HAI is a measure of the level of human capital. Good health is a critical part of human wellbeing and improving the health status of the population leads to productivity increase, educational attainment, and poverty reduction. Education is another major element of human wellbeing in itself, and a low level of education implies lower productivity and a limited capacity to absorb technological advances. The HAI consists of five indicators on health and education: (1) the number of the population undernourished; (2) the child mortality rate; (3) the maternal mortality rate; (4) the gross secondary enrolment rate; and (5) the adult literacy rate. The HAI threshold for inclusion into the LDC is set at 60. The graduation threshold is set at 10 per cent above the inclusion threshold at 66 (UNDESA 2018b).

The EVI measures the structural vulnerability of countries to economic and environmental shocks. High vulnerability is a major impediment to sustainable development in view of heightened exposure to shocks

Table 1 Linkages between LDC indicators and SDG indicators

LDC indicators			
SDG indicators			
Group A	Group B	Group C	Group D
Constraint	Outcome and constraint*	Reviewed as potential LDC indicators**	Other indicators
Population remoteness	GNI per capita (8.1.1)	1. Poverty rate (1997, 2008)	About 200 indicators mostly related to policy
	Under-five mortality rate (3.2.1)	2. Stunting (2015)	
	Undernourished (2.1.1)	3. Births attended by skilled personnel (2014)	
	Secondary school enrolment (4.1.1)	3. HIV infections (2008)	
	Literacy rate (4.6.1)	3. Mortality attributed to cardiovascular disease, etc. (2015)	
	Maternal mortality rate (3.1.1)	4. Participation in education and training (1997, 2011)	
	Export concentration (8.2.1; 9.b.1; 10.a.1; 17.10.1; 17.11.1; 17.12.1)	4. Information and technology skills (2005)	
	Share of agriculture (2.4.1; 8.9.1; 9.2.1; 14.7.1; 15.1.1)	5. Legal framework (2011)	
	Population in low coastal zones (11.5.1; 11.b.1; 11.b.2)	6. Drinking water (2011)	
	Instability of exports (10.a.1; 17.10.1; 17.11.1; 17.12.1)	8. Jobs in tourism (2008, 2011)	
	Victims of natural disasters (1.5.1; 11.5.1; 11.b.1; 11.b.2; 13.1.2)	9. Access to road (1991, 1997)	
	Instability of agricultural production (2.a.1; 2.b.1; 2.b.2; 2.c.1)	9. Mobile network (2005)	
	Access to electricity*** (7.1.1)	10. Income of bottom 40% (1999, 2008, 2011)	
	10. Population below 50% of median income (1999, 2008, 2011)		
	10. Resource flows for development (2010)		
	10. Remittances cost (2008, 2011)		
	11. Disaster economic loss (2002)		
	12. Material consumption (1991)		
	16. Homicide (2008, 2011)		
	16. Conflict deaths (2008, 2011)		

Notes * Directly or indirectly related SDG indicators are in parentheses.

** Number represents corresponding SDG, and the years in which the CDP considered the indicator are in parentheses.

*** Used as an LDC indicator during 1991–99.

Source Author's tabulation from the UN Committee for Development Policy (1971–2018).

and their long-lasting negative impacts. Vulnerability depends mainly on the magnitude and frequency of such shocks, and on the structural characteristics of the country concerned. The EVI is composed of eight indicators, grouped into two main components: an exposure index and a shock index. The exposure index includes: (1) population; (2) remoteness; (3) merchandise export concentration; (4) the share of agriculture, hunting, forestry, and fishing; and (5) the share of population in low elevated coastal zones. The shock index includes: (6) the instability of exports of goods and services; (7) victims of natural disasters; and (8) the instability of agricultural production. The EVI threshold for inclusion into the LDC category is set at 36. The graduation threshold is set at 10 per cent below the inclusion threshold at 32 (UNDESA 2018b).

The indicators used as LDC criteria have been selected on the basis of their relevance to measuring structural impediments, their methodological soundness, and the availability of data; namely, their frequency and coverage. In order to ensure comparability across countries, all indicators are based on internationally available data.

There is a fundamental difference between the objectives of SDG monitoring indicators and the LDC classification indicators: while SDG monitoring indicators aim to measure *outcomes* of development progress, LDC indicators attempt to measure *structural factors* that hinder development. This difference in objectives results in the differences in the selection and interpretation of indicators.

Despite the difference, there is an overlap between the SDG review indicators and LDC indicators, because some of the indicators can have characteristics of both development outcomes and structural handicaps to varying extents. For example, low levels of human capital are major challenges for countries, not only because they are a manifestation of unsustainable development (an outcome), but also because they limit the possibilities for economic production and growth, prevent poverty eradication, exacerbate inequalities, and hamper resilience to external shocks (a structural handicap). For this reason, many indicators on health and education are used for LDC classification as well as SDG monitoring.

Table 1 illustrates the linkages between LDC indicators and SDG indicators, grouping the indicators into four groups. Group A is the LDC indicators that are regarded as structural impediments only, with little relation to action or policy, at least in the medium term. Group B represents indicators that are used both for LDC identification and SDG monitoring. Group C includes SDG indicators that have been reviewed in the past by the Committee for Development Policy (CDP) as possible LDC indicators but not adopted for various reasons. Indicators in Group D have not been considered for LDC indicators yet.

In sum, making progress towards LDC graduation is well in line with making progress towards the SDGs. Almost all the LDC indicators

currently or previously in use are closely linked with SDG monitoring indicators in various goals and targets. Only two LDC indicators are regarded as structural indicators and bear little relation to an action-oriented SDG monitoring framework. A significant number of SDG indicators and areas have been reviewed in the past for possible inclusion in the LDC criteria but rejected for various reasons. The reasons for discarding the indicators are: duplication, data deficiencies, no structural impediment, and country-specific issues.

3 LDC graduation prospects and SDGs specific to LDCs

The next question is, how fast are the LDCs making progress towards graduation? The official graduation eligibility process was formulated in 1991. In principle, at least two out of the three criteria must pass the graduation thresholds, in order to be eligible for graduation. When a country is identified as eligible for graduation for two consecutive triennial reviews, then an additional procedure is implemented for a possible graduation (UNDESA 2018b). As an exception, a country is eligible for graduation if its GNI increases to a sufficiently high level – defined as at least twice the graduation threshold level – even if that country has not satisfied the graduation thresholds for both the HAI and the EVI (UNDESA 2005). This is called an *income-only* graduation criterion, and the income-only graduation threshold was set at US\$2,460 in the 2018 review of the LDC category.

The projected number of LDCs that may meet the graduation threshold depends heavily on the estimation methods and assumptions. In its estimations, the United Nations Conference on Trade and Development (UNCTAD) (2016) applied the income trajectory based on the GDP forecast of the International Monetary Fund (IMF), and logarithmic trends of the HAI and EVI, and suggested 13 projected graduation cases between 2021 and 2024. Drabo and Guillaumont (2016) considered more closely the possible graduation cases based on the income-only criterion. Assuming the per capita income growth rate is sustained at the same rate as in 2001–14, 14 countries would be projected to meet the income-only criteria between 2018 and 2030. If the average growth rate is one percentage point higher, or increased to 7 per cent per year, 17–24 LDCs may meet the income-only criterion between 2018 and 2030. Similarly, Kawamura (2014) used average annual growth rates of three criteria observed during the period 2000–10 and suggested that 11 countries may become eligible for graduation by 2021.

While the aforementioned papers use the official Triennial Review data, released every three years, to forecast future graduation eligibility, this article uses annual data of the same composition, methodology, and data source to maintain consistency over time. The data are unbalanced panel data, covering all 47 current LDCs from 1993 to 2018.

The graduation threshold for income is set as 20 per cent higher than a three-year moving average of the low-income country (LIC) thresholds used by the World Bank. This article projects these income thresholds

Table 2 Projected number of LDCs meeting graduation criteria by 2030

Country	Scenario 1: Average annual growth rate	Scenario 2: Compound annual growth rate	Scenario 3: Linear time trend	Scenario 4: 7% minimum growth (SDG)
1 Afghanistan	G, H	G, H		G, H
2 Angola*	IO, H	IO, H	IO, H	IO, H
3 Bangladesh*	G, E, H	G, E, H	G, E, H	G, E, H
4 Benin	G, E, H	E, H	E, H	G, E, H
5 Bhutan*	G, H	G, H	G, H	G, H
6 Burkina Faso				
7 Burundi				
8 Cambodia	G, H	G, H	E, H	G, E, H
9 Central African Republic				
10 Chad				
11 Comoros				IO
12 DR Congo				
13 Djibouti	G, E, H	G, E, H	G, E, H	IO, E, H
14 Eritrea	IO	IO		IO
15 Ethiopia	G, E	G, E	E, H	G, E
16 Gambia				
17 Guinea				
18 Guinea-Bissau				
19 Haiti	G, E			G, E
20 Kiribati*	IO, H	IO, H	IO, H	IO, H
21 Lao PDR*	G, H	G, H	G, H	G, H
22 Lesotho	G, H		G, H	G, H
23 Liberia				
24 Madagascar				
25 Malawi				
26 Mali	G, H			G, H
27 Mauritania				
28 Mozambique				
29 Myanmar*	G, E, H	G, E, H	G, E, H	G, E, H
30 Nepal*	E, H	E, H	E, H	E, H
31 Niger				
32 Rwanda	E, H	E, H	E, H	E, H
33 Sao Tome and Principe*	G, H	G, H	G, H	G, H
34 Senegal			E, H	G, H
35 Sierra Leone				
36 Solomon Islands*	G, H	G, H	G, H	G, H
37 Somalia	E, H			E, H
38 South Sudan				
39 Sudan				IO
40 Timor-Leste*	IO, H	IO, H	IO, H	IO, H
41 Togo	E, H	E, H	E, H	E, H
42 Tuvalu*	IO, H	IO, H	IO, H	IO, H
43 Uganda				
44 United Rep. of Tanzania	E, H	G, E, H	E, H	E, H
45 Vanuatu*	G, H	G, H	G, H	G, H
46 Yemen			G, H	G, H
47 Zambia	IO, H	IO, H	G, H	IO
Number of countries meeting criteria	26	22	23	30

Notes Criteria met for graduation for the first time: G = GNI per capita; E = EVI; H = HAI; IO = income only. *Denotes countries already identified meeting criteria by 2018 review. Income graduation threshold is projected based on historical thresholds of low- and middle-income countries by the World Bank (2019a).

Source Author's own calculation based on projections using the annual data of LDC criteria.

based upon its historical trend assessment. The thresholds for the HAI and the EVI are fixed at 66 (or above) and 32 (or below), respectively, and therefore, there is no need to project their thresholds. It is notable that the EVI and HAI tend to change slowly over time, because they consist of many sub-indicators that do not change quickly. As the EVI and the HAI only change incrementally over the years, changes in many LDCs follow a straight line which can be approximated locally by a linear trend, or a simple average growth rate.

Scenario 1: Average annual growth rate

In this baseline scenario, countries make progress between 2019 and 2030 at the same average annual growth rates (AAGRs) as over the past ten years, 2009–18. This is a method commonly used in the above-mentioned existing research on prospects of LDC graduation. All three criteria – GNI per capita, EVI, and HAI – are estimated based on this method. Assuming that the progress made in the past ten years will continue until 2030 in all three criteria, the total of 26 LDCs may meet graduation thresholds (see Table 2). Sustained growth in GNI per capita until 2030 appears to be the deciding factor to achieve this result.

Scenario 2: Compound annual growth rate

The compound annual growth rates (CAGRs) for 2009–18 are used in this scenario to project the path. In this scenario, the total of 22 LDCs may meet graduation thresholds by 2030 (see Table 2). The income growth is almost the same, or lower for some LDCs when the CAGRs are used, compared to the cases where we use the AAGRs.

Scenario 3: Linear time trend

In this scenario, countries follow the long-term historical trend in all LDC criteria until 2030. A simple time variable, instead of the time dummies, is used for estimating the linear time trend, and for the parsimony of the model. Based on the linear trend, 23 LDCs may meet the graduation criteria at least once by 2030 (see Table 2).

Scenario 4: SDG target 8.1 on 7 per cent minimum growth rate

SDG target 8.1 is to sustain per capita economic growth in accordance with national circumstances, and in particular at least 7 per cent per annum GDP growth in the LDCs. Scenario 4 is to have a minimum of 7 per cent growth for GNI per capita for all LDCs, while the HAI and EVI follow the historical trend in Scenario 1. With this adjustment, compared to Scenario 1, four additional countries meet the criteria, with 30 LDCs meeting the graduation criteria by 2030. It is also notable that 17 LDCs still would not be able to meet the LDC graduation criteria, even with a 7 per cent annual growth rate, if their progress on improving human assets and reducing structural vulnerability is limited.

To summarise, the statistical exercise suggests two different prospects:

- 1 Business as usual: Scenarios 1, 2, and 3 (based on historical trend) predict that 22–26 LDCs, about 50 per cent of the current total, may meet the graduation criteria by 2030;

2 Optimistic result: Scenario 4 (SDG target of minimum growth of 7 per cent) suggests that 30 LDCs, about 64 per cent of the total, may meet the graduation criteria by 2030.

To achieve the optimistic result, therefore, an unprecedented pace of growth in many LDCs is required. The statistical analysis suggests that LDCs need to have a minimum of 7 per cent income growth (meeting the SDG target), for a substantive share of LDCs to be able to meet the graduation criteria by 2030. The result implies that the LDCs are not making progress fast enough to become eligible for graduation and to achieve the SDGs.

A total of 18 of the 169 SDG targets refer explicitly to the LDCs, and dozens more are of central importance to their development success (UNCTAD 2018a). But there are not many SDG targets for LDCs with specific numeric targets.

SDG target 8.1 is to ‘Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries’ (UN 2015: 19). According to the World Bank data, only five LDCs achieved over a 7 per cent growth rate in 2017. While the average growth rate is around 6.4 per cent for Asian LDCs, African and Pacific Island LDCs show only a 4 per cent growth rate on average in 2017 (World Bank 2019a).

SDG target 9.2 is to ‘Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries’ (UN 2015: 20). The average share of the industrial sector in LDCs remains at 25 per cent in 2016, which is the same as 2006 (World Bank 2019a). Not only is this well off-target overall, but also there exists a huge variance across LDCs. Resource-rich LDCs in general have a high proportion of GDP from the industrial sector; for example, Angola and DR Congo. Whereas LDCs with limited productive capacity have a relatively low share in industry; for example, Gambia and Kiribati. In order to achieve SDG target 9.2, it is critical for those LDCs with low productive capacity to make much faster progress in transforming their economic structure.

SDG target 17.11 is to ‘Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries’ share of global exports by 2020’ (UN 2015: 27). As of 2016, the share is estimated as 0.9 per cent, only a 0.1 percentage point increase from 2006 (UNCTAD 2018b). It is apparent that to achieve the SDG targets set for LDCs, there is a huge need for support to boost income growth, economic transformation, and global integration.

4 The Belt and Road Initiative as an accelerator for LDCs

Since its inception in 2013, the BRI has expanded from Asia to Europe, Africa, Latin America, and the South Pacific. The BRI evolved to cover five priorities for international development cooperation; namely, policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and people-to-people bond. Over 140 entities, countries, and international organisations have either signed Memoranda of Understanding (MoUs) or expressed interest to cooperate under the initiative (Office of the Leading Group for Promoting the Belt and Road Initiative 2019).

The BRI has substantial financial backing with estimates as high as US\$1tn, pledged by Chinese financial institutes, investment funds including the Silk Road Fund, the China–Africa Fund, state-owned commercial banks, and private investors (World Bank 2019b). Lending through multilateral development banks, such as the Asian Infrastructure Investment Bank, has contributed to overall BRI financing and elevated China's global developmental role.

From 2013 to 2018, the value of trade between China and the countries along the Belt and Road surpassed US\$6tn, accounting for about 27 per cent of China's total trade in goods. During the same period, China's direct investment in those countries surpassed US\$90bn (Baniya, Rocha and Ruta 2019). A total of 30 out of 47 LDCs signed cooperation agreements under the BRI with China on cooperating to improve infrastructure, direct investment, and export promotion.³

The BRI holds substantial potential to generate welfare benefits for participating countries and contribute to the implementation of the SDGs. The five priority areas of the BRI have many possible direct and indirect linkages with various SDGs (Hong 2017). Direct linkages are concentrated in SDG 1 (no poverty), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation, and infrastructure), SDG 10 (reduce inequality), and SDG 17 (global partnership).

The channels of the BRI affecting SDG progress at the country level remain to be seen, because the possible linkages are very complex. Many SDG targets are intertwined with synergies and potential trade-offs which lead to the necessity of prioritising some SDGs in many developing countries with limited financial resources. In this context, financing for the SDGs funded by the BRI could be a crucial element for many developing countries.

While supporting LDCs to make progress towards LDC graduation and to achieve the SDGs requires a major step-up in international cooperation, all sources of financing for LDCs have not displayed any significant increase in recent years and some of them have dropped in the past couple of years. It has become clear that the required need for financing for development in LDCs is not likely to be met at the current trend of financial flows to LDCs. Alternative and additional financial

sources need to be explored. In this context, it is notable that the BRI is starting to provide a significant amount of flow to LDCs (OECD 2018b).

To look into the details further, a few external income sources are of importance for LDCs: export revenue; foreign direct investment (FDI); remittances; and official development assistance (ODA).

4.1 Export

While exports, particularly commodity exports, are one of the major income sources for LDCs, recent trends in international markets have not been favourable. Global demand for commodities has been weak and has kept the price low in the past five years. LDCs' total export revenues fell from US\$255bn to US\$190bn between 2013 and 2016 (UNCTAD 2018b). The overall trade share of LDCs has been increasing very slowly over the past decade (World Bank 2019a).

BRI investment in improving transportation may contribute to lowering travel times and increasing trade. The magnitude of the impact varies across estimation methods. The World Bank estimates that travel times will decline by up to 12 per cent once major economic corridors, which cover many LDCs in Asia, are completed (World Bank 2019b). Travel times to the rest of the world are estimated to decrease by an average of 3 per cent, showing that non-BRI countries and regions, which include many LDCs in Africa, will benefit as well. Subsequently, trade may rise from between 2.8 and 9.7 per cent for corridor economies and between 1.7 and 6.2 per cent for the world. De Soyres *et al.* (2018) estimate that planned investments under the BRI can reduce shipment time by 3.6 to 4.5 per cent, and trade costs by 3.2 to 4.0 per cent. Reed and Trubetskoy (2019) find large potential benefits from increased market access in high-density cities with poor infrastructure. Zhai (2018) estimates that countries can export 5.6 to 10.9 per cent additionally, helped by BRI investment.

4.2 Foreign direct investment

FDI inflows to LDCs are estimated at only US\$25bn in 2017, showing a decline from US\$37bn in 2015 (UNCTAD 2018c). They are concentrated in a limited number of LDCs, including a few fast-growing Asian LDCs and resource-rich African LDCs. Nine out of the 47 LDCs, namely, Bangladesh (US\$2.2bn), Cambodia (US\$2.8bn), DR Congo (US\$1.3bn), Ethiopia (US\$3.6bn), Mozambique (US\$2.3bn), Myanmar (US\$4.3bn), Sudan (US\$1.1bn), Tanzania (US\$1.2bn), and Zambia (US\$1.1bn), account for 80 per cent of all FDI flows to LDCs in 2017 (*ibid.*).

Countries that lie along the Belt and Road corridors fall short of their potential FDI by 70 per cent. With the new transport links supported by the BRI, low-income countries are expected to see a significant 7.6 per cent increase in FDI (World Bank 2019b).

4.3 Remittances

Remittances to LDCs were around US\$37bn in 2017, slightly decreased from 2015–16 (World Bank 2019a). While this amounts to about

7 per cent of the world total, remittances are a significant source of external finance in a number of LDCs, and their resilience compared with other financing flows may contribute to easing the balance of payment pressure. But the largest recipients of remittances are heavily concentrated in just a few LDCs. Bangladesh (US\$14bn in 2016), Nepal (US\$7bn), Yemen (US\$3bn), Haiti (US\$2bn), Senegal (US\$2bn), and Uganda (US\$1bn) accounted for as much as three quarters of personal remittances flowing to LDCs (UNCTAD 2018b).

While people-to-people bond is one of the five priority areas of the BRI, data on the migration or remittances related to the BRI are currently very limited. This is an area for further research and policy coordination is required.

4.4 Official development assistance

If private flows cannot fill the financing gap, official flows need to rise to support LDCs. The ODA represents about 70 per cent of LDCs' total external finance (OECD 2018a). SDG target 17.2 calls for:

developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to LDCs. ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to LDCs (UN 2015: 26).

However, net ODA disbursement to LDCs remained at US\$26bn in 2017 and has not shown a significant increase since 2015 (OECD 2019). Only seven Development Assistance Committee (DAC) members provided ODA over 0.15 per cent of GNI in 2012–16 (UNCTAD 2018c). While data are limited, it is estimated that China provided official aid of US\$8bn in 2014 (AidData 2017). The figure rises to US\$37bn in 2014, with seven African countries in the top ten recipients (*ibid.*). More recent data would be able to indicate how much aid the BRI has added.

Given the current trend of external financial flows to LDCs to finance their development towards the SDGs, it is extremely challenging to achieve this and make progress towards LDC graduation, particularly in Africa, without the BRI and other additional support. Also, implementing the BRI should not assume automatic SDG benefits, as each country is contextually unique and operating at a range of development stages, with different economic structures and therefore priorities in development strategy. It will be critical to assess the extent of the positive impacts of the BRI and their impact on the development of LDCs in order to formulate optimal investment policies.

5 Conclusion

Member states of the UN reaffirmed their commitment to the full, effective, and timely implementation of the 2030 Agenda for Sustainable Development, as well as the support for mainstreaming it into the national development policies and programmes of LDCs.

To fulfil these commitments, it is critical for the governments of LDCs and their development partners to understand how these various agendas are interlinked, how to prioritise their development policies, and how to identify available resources to finance them.

A comparison of the two sets of indicators for LDC classification and SDG progress-monitoring reveals that there is a substantial overlap: 11 out of the 17 SDGs have targets explicitly linked to LDC criteria. Likewise, 12 out of the 14 LDC indicators are closely related to the SDG indicators. Therefore, making progress towards LDC graduation is in line with almost all development progress towards achieving the SDGs. Accelerating improvement in human assets and structural transformation would also contribute to achieve many SDG targets.

Forecasts of the progress towards the SDGs in LDCs are not favourable. Based on statistical analysis of historical trends, only 22–26 LDCs (47–55 per cent of the total) may meet graduation thresholds by 2030. An optimistic hypothetical scenario, which meets the SDG target of achieving 7 per cent annual growth for all LDCs, predicts that 30 LDCs (64 per cent of the total) may meet the graduation criteria by 2030. Even if all LDCs achieve high growth in income, about one third of LDCs will not be able to meet the graduation thresholds by 2030 unless fast progress is also seen in improving human assets and reducing structural vulnerability.

To boost the speed for LDCs to achieve the SDGs, another engine is needed – the BRI. Within a short period of time since its inception, the BRI has been able to prove its significant potential to accelerate SDG progress. In particular, the BRI can contribute by filling the gap in development financing for LDCs through various channels to its priority areas: unimpeded trade for LDCs to export; financial integration to raise FDI and ODA; and people-to-people bonds to increase remittances.

The SDGs and the BRI are two distinct agendas but share common objectives, which could be instrumental in supporting the development progress of LDCs. These interlinkages are potential synergies, not yet realised. One of the most important tasks to maximise the development impact of the BRI is to assess the country-specific factors that affect the channels between the BRI and the SDGs in LDCs, and to identify which channels the BRI can contribute to the most.

Notes

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- 1 Namsuk Kim, Economic Affairs Officer, Department of Economic and Social Affairs, United Nations, USA, kimmamsuk@un.org
- 2 The list of LDC-specific support measures can be found at www.un.org/ldcportal.
- 3 Yemen is currently not in the BRI list due to the Yemen Civil war, according to Yidaiyilu official website, www.yidaiyilu.gov.cn/gbjg/gbgk/77073.htm.

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Glossary

- AAGR** average annual growth rate
- ABC** Africa–Britain–China
- ACE** ASEAN Centre for Energy [Indonesia]
- ADB** Asian Development Bank [Philippines]
- AGOA** Africa Growth and Opportunity Act
- AIIB** Asian Infrastructure Investment Bank [China]
- AJK** Azad Jammu and Kashmir [Pakistan]
- ASEAN** Association of Southeast Asian Nations [Indonesia]
- AU** African Union [Ethiopia]
- B&R** Belt and Road
- BOI** Board of Investment [Pakistan]
- BOT** build–operate–transfer
- BRF** Belt and Road Forum [China]
- BRI** Belt and Road Initiative [China]
- BRICS** Brazil, Russia, India, China, South Africa
- CAGR** compound annual growth rate
- CAICT** China Academy of Information and Communications Technology
- CAS** Chinese Academy of Sciences
- CBD** China Development Bank
- CBRC** Chinese Banking Regulatory Commission
- CCCC** China Communications Construction Company
- CCICED** China Council for International Cooperation on Environment and Development
- CCIEE** China Center for International Economic Exchanges
- CDP** Committee for Development Policy
- CEEC** Central and Eastern European Countries
- CEIS** Centre for Economic and International Studies [Italy]
- CEPR** Centre for Economic Policy Research [UK]
- CGTN** China Global Television Network
- CHINCA** China International Contractors Association
- CIDCA** China International Development Cooperation Agency
- CIDP** County Integrated Development Plan [Kenya]
- CIKD** Center for International Knowledge on Development [China]
- CITIC** China International Trust Investment Corporation
- CMEC** China Machinery Engineering Company
- CMEC** China–Myanmar Economic Corridor
- CMPort** China Merchant Port Holdings
- CNPC** China National Petroleum Corporation
- COPHC** China Overseas Ports Holding Company [Pakistan]
- CPC** Communist Party of China
- CPEC** China–Pakistan Economic Corridor
- CPHGC** China Power Hub Generation Company
- CREEC** China Railway Eryuan Engineering Company
- CSAIL** China Three Gorges South Asia Investment Ltd

CSR corporate social responsibility
CT computerised tomography
DACU Development Assistance Coordination Unit [Myanmar]
DBAR Digital Belt and Road programme [China]
DCM Deputy Chief of Mission, Chinese Embassy
DRC Democratic Republic of Congo
DRC Development Research Center
DTMB digital terrestrial multimedia broadcast
E&S environmental and social
EAC East African Community
EBRD European Bank for Reconstruction and Development [UK]
EEC Eastern Economic Corridor
EECO Eastern Economic Corridor Office of Thailand
EHP early harvest project
EPC Engineering Procurement Construction
ESA environmental and social assessment
ESAL Port Planning and Development Committee [Greece]
EVI Economic Vulnerability Index
eWTP Electronic World Trade Platform
FCSSC Finance Center for South–South Cooperation [Hong Kong]
FDI foreign direct investment
FKE Federation of Kenyan Employers
FOCAC Forum on China–Africa Cooperation [China]
FY fiscal year
GCG Green Credit Guidance
GDP gross domestic product
GNI gross national income
HAI Human Assets Index
HCI Human Capital Index
HDI Human Development Index
HRADF Hellenic Republic Asset Development Fund [Greece]
ICAPP International Conference of Asian Political Parties [Korea]
ICT information and communications technology
IDB Inter-American Development Bank [USA]
IDS Institute of Development Studies [UK]
IFC International Finance Corporation, World Bank [USA]
IFCPS Performance Standards on Environmental and Social Sustainability of the International Financial Corporation, World Bank Group [USA]
IIED International Institute for Environment and Development [UK]
IIER Institute of International Economic Relations [Greece]
IMF International Monetary Fund [USA]
IOBE Foundation for Economic and Industrial Research [Greece]
ITLOS International Tribunal for the Law of the Sea
JCC Joint Cooperation Committee
JWC Joint Working Group
KCETA Kenya China Economic and Trade Association [Kenya]
KKH Karakoram Highway [Pakistan–China]
KNBS Kenyan National Bureau of Statistics

KPK Khyber Pakhtunkhwa [Pakistan]
LDC least developed country
LIC low-income country
LLDC land-locked developing country
M&A mergers and acquisitions
MDB multilateral development bank
MEE Ministry of Ecology and Environment [China]
MEP Ministry of Environmental Protection [China]
MFA Ministry of Foreign Affairs [China]
MOFCOM Ministry of Commerce [China]
MOGE Myanmar Oil and Gas Enterprise
MOI Means of Implementation
MOPF Ministry of Planning and Finance [Myanmar]
MoU Memorandum of Understanding
MPDR Ministry of Planning, Development and Reform [Pakistan]
MSDP Myanmar Sustainable Development Plan
MSDP-IU MSDP Implementation Unit
MTP Medium-Term Plan
MW megawatt
NDRC National Development and Reform Commission [China]
NECC National Economic Coordination Committee [Myanmar]
NEPRA National Electric Power Regulatory Authority [Pakistan]
NGO non-governmental organisation
NLD National League for Democracy [Myanmar]
NOC No Objection Certificate
O2O online to offline
OBOR One Belt, One Road [China]
ODA official development assistance
OECD Organisation for Economic Co-operation and Development [France]
OFDI outward foreign direct investment
PBOC People's Bank of China
PERS Port Environmental Review System
PPA Piraeus Port Authority [Greece]
PPP public-private partnership
RMB renminbi
SAIIA South African Institute of International Affairs
SAR Special Administrative Region
SBN Sustainable Banking Network [USA]
SDGs Sustainable Development Goals
SEZ Special Economic Zone
SGR Standard Gauge Railway
SHARP Strategic Hires and Retention Pathways
SIDS small island developing states
SIM subscriber identification module
SME small- and medium-sized enterprise
SOE state-owned enterprise
TEU Twenty Foot Equivalent Unit
UAE United Arab Emirates

UN United Nations
UNCTAD United Nations Conference on Trade and Development
UNDP United Nations Development Programme [USA]
UNECE United Nations Economic Commission for Europe
[Switzerland]
UNEP United Nations Environment Programme [Kenya]
UNEP FI United Nations Environment Programme Finance Initiative
UNGC United Nations Global Compact
UNPRI United Nations Principles for Responsible Investment
UNSW University of New South Wales [Australia]
WITS World Integrated Trade Solution
WWF World Wide Fund for Nature [Switzerland]

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Will the Belt and Road Initiative Boost Least Developed Countries Towards Sustainable Development?

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‘Drawing on evidence and analysis from researchers, donors, and practitioners as well as representatives from business, investment, and financial communities, this *IDS Bulletin* focuses in on the relevance of the Chinese Belt and Road Initiative for the Sustainable Development Goals and how the two agendas might be better aligned locally, nationally, and globally.’