Case Study

China-Pakistan Economic Corridor: Where is the money going?

Muhammad Khudadad Chattha1* and Mustafa Hyder2

1 Blavatnik School of Government, University of Oxford, Oxford, OX2 6GG, United Kingdom, muhammad.chattha@bsg.ox.ac.uk

2 Pakistan-China Institute, Islamabad, 44000, Pakistan, mustafa@pakistan-china.com

ABSTRACT

The China-Pakistan Economic Corridor (CPEC) has been one of the most prominent components of the Belt and Road Initiative (BRI). Most of the discussion on CPEC has centered around the macroeconomic effects on the economy. However, research on the fine details of CPEC’s financing structure has not been conducted. This paper aims to fill the gap by providing a detailed description of the financing of CPEC and how the money maps on to different sectors of the Pakistani economy. We also discuss some macroeconomic concerns and ways to mitigate these risks.

Keywords: Belt and Road Initiative; China-Pakistan Economic Corridor; new silk road; finance; debt; Pakistan

1. Introduction

The China-Pakistan Economic Corridor (CPEC) is a $62 billion multi-sector collaboration between the two countries (Rafiq, 2017). It uses various financing tools to facilitate infrastructure and energy projects throughout Pakistan. This paper has two broad objectives. First, it aims to provide a detailed description of the financing tools and the amount of money being allocated to specific projects. This will be done by describing the nature of the financing tools, associated interest rates, payment schedules and details of partner companies. Second, the paper aims to discuss macroeconomic and other risks that could harm the project and provides recommendations for dealing with them.

The paper is divided into 6 sections. Section 2 provides an extensive description of the Belt and Road Initiative (BRI) and discusses the role of CPEC within the larger BRI scheme. Section 3 uses data provided by the Governments of Pakistan and China on $19 billion worth of ongoing and completed projects to describe the different financing tools. It also shows the impact of CPEC on Pakistan’s external financing needs.

Section 4 discusses the different macroeconomic risks imposed by CPEC, such as debt sustainability, upward exchange rate pressure and current account deficit. Section 5 suggests policy recommendations to address these risks and Section 6 concludes the paper by discussing the opportunities and challenges that lie ahead.
2. Background of the China-Pakistan Economic Corridor

2.1 The Belt and Road Initiative (BRI)

The Belt and Road Initiative (BRI) is one of the most ambitious development programs of the 21st century involving a mammoth $1 trillion worth of projects spread across 71 countries (Kuo and Kommenda, 2018). The sheer scale of the BRI can be seen from the fact that these countries in combination represent a quarter of the global GDP (World Bank, 2018a) and half of the global population (Kuo and Kommenda, 2018). This initiative was unveiled in 2013 (Government of Pakistan, 2019a) during President Xi Jinping’s visit to Kazakhstan.

Spearheaded by the Chinese government, the BRI involves infrastructure development and investment across the involved countries and consists of two distinct parts (EBRD, n.d.):

1. **Silk Road Economic Belt:** Commonly referred to as “Belt” within the BRI, this is the development of land trade routes from China to Central Asia, Europe, Middle East, South Asia, South East Asia and North Asia (Deloitte, 2018).

2. **21st Century Maritime Silk Road:** Commonly referred to as “Road” within the BRI, this is the development of a maritime route from Asia, through till Europe. The common reference to “Road” in the BRI is slightly misleading because this part of the BRI doesn’t involve any road (Deloitte, 2018).

A visual representation of these two components is given in Figure 1 below:

![Figure 1. The Belt and Road Routes](source: The Guardian (Kuo and Kommenda, 2018))

A majority of the BRI is being financed by Chinese state-owned banks and the China Development Bank. The newly developed Asian Infrastructure Investment Bank and Silk Road
China-Pakistan Economic Corridor: Where is the money going?

Fund are also financing partners.

![Diagram](image)

**Figure 2. BRI Financing by Source**

*Source: Deloitte Insights (Deloitte, 2018)*

### 2.2 The Envisioned Role of CPEC in BRI

With a total worth of $62 billion (Rafiq, 2017), CPEC is one of the most significant and strategically important components of the BRI (The Economist, 2017a). It aims to “enhance connectivity and integration of development strategies of China and Pakistan” (Pakistan-China Institute, 2019). Pakistan and China have had close economic relations for decades, and the idea of an economic corridor between the two countries had been under consideration for the last ten years (Ahmad and Mi, 2017). However, it was only in May 2013 that the project was officially launched during Premier Li Keqiang’s visit to Pakistan (Pakistan-China Institute, 2019). The Memorandum of Understanding (MoU) with the fine details of CPEC projects was eventually signed during President Xi Jinping’s visit to Pakistan in 2015 (Government of Pakistan, 2019a).

As per the official CPEC Mission Statement,

“(CPEC aims) to improve the lives of people of Pakistan and China by building an economic corridor promoting bilateral connectivity, construction, explore potential bilateral investment, economic and trade, logistics and people to people contact for regional connectivity.” (Government of Pakistan, 2019b)

Hence, CPEC involves multi-sector cooperation between China and Pakistan with the objective of connecting the less developed Western provinces of China with Pakistan. It also seeks to establish a trade route through Gwadar which would drastically reduce the transport costs for China. From the Pakistani perspective, CPEC offers investment in vital sectors such as infrastructure and energy, with the aim of boosting growth via local development and international trade.

### 2.3 A brief description of CPEC

Broadly speaking, CPEC involves financing and cooperation between the two countries in energy, infrastructure, trade and other sectors. The biggest chunk of CPEC related financing is in the energy sector, with projects worth more than $30 billion (Siddiqui, 2017). This is followed by cooperation on infrastructure that involves construction of highways, railways, mass transit systems and the development of Gwadar. While the infrastructure projects are aimed at integrating trade between the two countries, CPEC also aims to develop Special Economic Zones (SEZs) to increase cooperation on trade. It also includes other projects like the installation of a cross border
optical fiber and the establishment of Pakistan Academy of Social Sciences (Government of Pakistan, 2019c).

![Figure 3](image)

**Figure 3.** Where is the $62 billion going?  
*Source: Deloitte (Deloitte, n.d.)*

**Energy Projects:**

The CPEC energy projects, which represent the bulk of the financing, aim to produce 11,867 MW of energy (Government of Pakistan, 2019c). While more than 50% of this energy production will be coal-based, there are also plans for solar, wind and hydro power projects (Government of Pakistan, 2019c). A detailed overview of these projects is given below:

![Figure 4](image)

**Figure 4.** CPEC Energy Projects  
*Source: CPEC Official Website (Government of Pakistan, 2019c)*
Transport Infrastructure Projects:

This includes Road, Railway and Public Transport projects. The road projects aim to develop and upgrade three highway routes that run from north to south. These road networks, called the western, eastern and central alignments, will connect the western provinces of China to the Pakistani coast. A graphical representation of these projects is given below:

Figure 5. Highway Network of CPEC
Source: CPEC Official Website (Government of Pakistan, 2019c)
The second category of transportation projects involves upgradation of existing railway lines and construction of new ones. The flagship project in this subcategory is the upgradation of the ML-1 line, that runs all the way from Peshawar to Karachi. CPEC also plans to construct new railway lines that would link the western part of the country to China. A visual representation of these Railway projects is shown in the map below:

![Railway Network of CPEC](image)

*Figure 6. Railway Network of CPEC
Source: CPEC Official Website (Government of Pakistan, 2019c)*

Finally, there are plans for the construction of rail-based public transport systems in four main cities, including the Karachi Circular Railway, Greater Peshawar Region Mass Transit, Quetta Mass Transit and Orange Line Lahore.

3. Deconstructing CPEC Debts

The analysis in this section is based on data provided by the Governments of Pakistan and China.
3.1 Source of money

CPEC is financed via four main instruments, which are briefly described below:

**Investment:** The money under investment projects is borrowed by the Chinese firms that undertake the project. These commercial loans are given on interest rates between 4% and 5%.

**Concessional Loans:** These loans are given out to the Government of Pakistan at an interest rate of 2% with a repayment period of 20 years. The first payment for these loans must be made within 5 years from the start of the concession period.

**Interest-free loans:** Consisting of a very small proportion of the overall CPEC finances, these are zero interest loans with various payback periods.

**Grant:** CPEC also consists of a few grants provided by the Chinese government aimed at increasing state capacity and cooperation.

Of the total $62 billion within CPEC, projects worth $19 billion have either been completed or are under construction. A break-up of these projects according to the financing categories described above is given in the figure below:

![Figure 7. Source of CPEC Money for Completed and Ongoing Projects (worth $19bn)](source)

*Source: Data provided by the Governments of Pakistan and China*

3.2 Time-series of financing

CPEC projects began being financed on 30th March 2015 with the 50MW Dawood Wind Power Project which has already been completed. The cumulative amount financed gradually rose until 1st January 2017 and remained stable until the end of 2017. The increase in the cumulative amount financed was at first driven just by investment projects from March until September 2015. From September onwards, projects based on concessional loans slowly entered the mix and gradually rose alongside investment financing. Interest-free loans and grants constitute a small proportion of the overall amount financed and were mostly given out towards the end of 2017. The cumulative amount of financing in CPEC projects is expected to rise going forward up to the total amount of $63 billion. The trends in the cumulative amount of financing for ongoing and completed projects, disaggregated by financing type, is given in the figure below:

---

1 Some projects use a combination of financing instruments, with the effective interest rate on these projects being a combination of the different rates.
Out of the completed and ongoing projects, there are four that are mainly contributing towards debt namely: Sukkur-Multan Motorway Section ($2.9 billion), Orange Line ($1.6 billion), KKH Phase II ($1.3 billion), and Gwadar East Bay Expressway ($0.14 billion).

3.3 Financing via Chinese Company Partners

CPEC is structured in a way that project responsibilities across all four categories of financing are given out to Chinese firms. In investment projects, the money is directly routed to Chinese state-owned enterprises while in other forms of financing, the money is first given to the Pakistani government. The projects that have been completed or are under construction were given to 18 different Chinese companies. However, 9 companies out of these dominate the portfolio. The total size of the projects that these major companies are responsible for is summarized in the figure below:
China-Pakistan Economic Corridor: Where is the money going?

<table>
<thead>
<tr>
<th>Name of Company</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Communications Construction</td>
<td>2</td>
</tr>
<tr>
<td>China Gezhouba Group</td>
<td>1</td>
</tr>
<tr>
<td>China Machinery Engineering</td>
<td>2</td>
</tr>
<tr>
<td>China Power International Holding</td>
<td>1</td>
</tr>
<tr>
<td>China Railway-China North Industries Group</td>
<td>1</td>
</tr>
<tr>
<td>China State Construction Engineering</td>
<td>1</td>
</tr>
<tr>
<td>China Three Gorges South Asia Investment</td>
<td>2</td>
</tr>
<tr>
<td>Huaneng Shandong Ruyi</td>
<td>1</td>
</tr>
<tr>
<td>PowerChina Resources</td>
<td>1</td>
</tr>
</tbody>
</table>

**Figure 9.** Financing by Chinese Companies in completed and ongoing projects (worth $19bn, USD billion)

Source: Data Provided by the Governments of Pakistan and China

3.4 External Debt and Financing

The financing of projects through various instruments explained in the previous sub-sections would lead to a change in the existing external debt structure of Pakistan. Pakistan’s total external debt, which is composed of both private and public debt owed to entities outside the country, is initially projected to rise and eventually stabilize around 32% of GDP by 2020 (IMF, 2018). This represents a 4.7 percentage point increase in the external debt as a percentage of GDP from 2017.

Another measure to look at Pakistan’s external debt is to analyze the trend of the external financing need. This measure depicts the total payments per year that need to be made, including both the principal amount and the interest payments. The trend of external financing mirrors that of Pakistan’s external debt where it steadily rises after the commencement of CPEC payments and stabilizes close to 9.5% in 2020. It reaches a maximum value of 9.9% of GDP in the 2023 (IMF, 2018). It is important to note that in 2017, 10% of Pakistan’s external debt servicing went to China and that Chinese financing is not the only factor that explains Pakistan’s trend of external financing (Ahmed, 2018).

![External Debt and Financing](image)

**Figure 10.** External Debt and Financing (% of GDP)

Source: International Monetary Fund (IMF, 2018)

4. Mitigating Risks

From a macroeconomic standpoint, there are three major risks that are associated with CPEC.
4.1 Debt Sustainability

The most important risk which has received a lot of media attention lately is that of debt sustainability. As shown in Section 3.4, Pakistan’s external debt to GDP ratio and external financing need has increased since the beginning of CPEC and is projected to rise further until 2020. Pakistan’s external financing need will peak at 9.9% of GDP in 2023. The years 2020-2023 have the highest rates of external payments and hence need to be planned for.

![Figure 11. Chinese Debt of Different Countries](source)

*Source: Center for Global Development (Hurley et al., 2018)*

4.2 Upward Pressure on Exchange Rate

The inflow of payments through CPEC can put upward pressure on the exchange rate. This has the potential to undermine domestic exporters by making their products more expensive in the international market. This is especially important in Pakistan’s case because the export sector has shown abysmal performance and has contracted over the last few years, driven by the textiles industry. Product diversification within the export market also remains a serious concern that can be exacerbated by this upward pressure on the currency. Overall, CPEC represents the Dutch Disease phenomenon, and needs to be tackled accordingly.

4.3 Current Account Deficit

CPEC projects involve importing a significant amount of inputs from China. This can have adverse implications for Pakistan’s current account deficit which has widened substantially over the last few years. A recent report by the Asian Development Bank (ADB) showed that the current
account deficit increased to $18 billion, or 5.8% of GDP in 2018 (Asian Development Bank, 2018). This increase has been driven by a combination of rising imports and stagnating exports. The trend of Pakistan’s disaggregated current account deficit is shown in the figure below:

![Figure 12. Pakistan’s Disaggregated Current Account](source: Asian Development Bank (Asian Development Bank, 2018))

4.4 Recent Developments

Other countries involved in the BRI project have had faced similar macroeconomic risks mentioned above. This has made it important for the Chinese government to address them because the image of the BRI is vital for its success. In the second Belt and Road forum held from 25-27 April 2019, President Xi Jinping sought to address the macroeconomic risks by emphasizing the financial sustainability of the projects (Romann, 2019). Specifically, President Xi said that the BRI should aim to build "high-quality, sustainable, risk-resistant, reasonably priced, and inclusive infrastructure". This is a step in the right direction. However, the key challenge is to implement the promises made during the forum.

While recent work has shown that the BRI can bring sizeable benefits to the whole world, this work has also recognized that challenges need to be addressed (Zhai, 2018; Zhang, 2018). Specifically, China needs to keep matching its promises about the BRI with action so that partner countries do not become skeptical (Zhang, 2018).

Apart from macroeconomic risks, recent work has also highlighted the need to increase transparency (Cheung and Hong, 2019). Since lack of public information about projects can lead to inaccurate perceptions about the BRI and discourage public discourse, it is vital to aim towards more transparency. President Xi recognizes this risk and committed to increasing the transparency of BRI projects during the second BRI forum (Romann, 2019).

5. Policy Recommendations to Tackle Risks

5.1 Ensuring Debt Sustainability

Given that Pakistan anticipates the increase in the external payments, the following measures can mitigate debt sustainability concerns.

First, Pakistan could save money until 2020 for the high payment years (2020-2023) by d
developing a separate fund that allocates a revenue stream specifically for CPEC payments.

Second, Pakistan could introduce a new tax that will finance these CPEC payments. While this tax will be unable to cover 9.9% of GDP, it can certainly reduce burden on other revenue sources.

Third, the Chinese government could restructure the debts in a way that most of the burden does not accrue in any single year, and some of the payment is deferred to future years.

Fourth, the Government of Pakistan should ensure that payments for other debts do not coincide with the peak repayment period.

Last, the underlying assumption of CPEC’s debt sustainability is that the projects will lead to growth. While we know that the investments are being made in the right sectors, they need to be implemented in a transparent manner. By minimizing any waste in the form of corruption and other inefficiencies, the Government of Pakistan will ensure that the investments are being made in full.

5.2 Minimizing Exchange Rate Impact

In the recent past, the Government of Pakistan artificially inflated the exchange rate to maintain confidence in the economy, keeping it close to PKR 100 per USD. With CPEC putting additional pressure on the exchange rate, the State Bank reversed this unsustainable policy and the currency has recently depreciated.

To minimize the exchange rate impact, the Pakistani government can take two steps. First, they must ensure that the exchange rate is not artificially inflated above the market rate again. While this market rate will still be higher than the case without CPEC payments, the situation would still be better compared to an artificially inflated exchange rate. Second, the CPEC disbursements can be restructured so that the associated exchange rate fluctuations are within the managed float band. This will ensure that the impact on the domestic market is minimal.

5.3 Reducing Current Account Deficit

Managing CPEC’s impact on the current account requires a two-pronged approach. First, in the short-run, some of the inputs being imported from China could be replaced by local products. Since the quality of the inputs should not be compromised, the replaced inputs should only be of similar quality compared to the existing Chinese inputs. This will reduce the burden on imports and consequently reduce the current account deficit. Second, during the medium-term, the government needs to promote Pakistani exports. While CPEC will play a crucial role in helping diversify Pakistan’s export sector, the government needs to take other actions to facilitate exports.

Some concrete ways in which the current account can be improved are given as follows:

- Identifying and removing the binding constraints to the growth of export-oriented sectors.
- Facilitating technology and knowledge transfer to domestic sectors to help industrial diversification.
- Reducing the regulatory timelines for businesses by simplifying administrative procedures.
- Developing relevant infrastructure and providing logistical support to the export sectors.
- Expenditure switching policies such as shifting away from consuming imports to
6. Conclusion

In this paper, we describe the scale and importance of CPEC, and its role in the larger BRI project. Using data provided by the Governments of Pakistan and China, we disaggregate the different financing tools used so far and the allocations to various sectors. We also discuss the macroeconomic risks associated with CPEC and make policy recommendations to address them.

Pakistan has experienced consistent increase in growth over the last decade. This has led to a thriving middle class (Shah, 2017) and better standards of living. In order to ensure the sustainability of these gains, Pakistan needs to address binding constraints to its growth, including insufficient investment in energy and infrastructure. Over the last few years, CPEC has targeted these important sectors within the Pakistani economy. As Pakistan looks towards the future, CPEC will play an important role in its economic progress. At the same time, the macroeconomic concerns raised by CPEC need to be addressed by China and Pakistan. Since the success of the BRI hinges on CPEC, it is even more important to address these risks.

References


Cheung FM, Hong Y (2019). Regional connection under the Belt and Road Initiative: The prospects for economic and financial cooperation [electronic resource], Routledge studies on Asia in the world. Routledge, Abingdon, Oxon ; New York, NY.


