

Disputes – Discussion Paper

Economic challenges in the estimation of damages in arbitration for Belt and Road projects

Abstract

China is currently financing many significant infrastructure projects around the world as part of a strategic infrastructure plan known as the Belt and Road Initiative (“BRI”). According to the New York Times, China has financed such projects in 112 countries since the plan’s inception in 2013. The projects generally have both public interest and cross-border features and can be high risk. Any dispute have to address a number of complex legal and economic issues.

This paper focuses on the economic issues at stake, although we provide some relevant legal context. Arbitration clauses in international contracts require, amongst others, two critical decisions: the rules and the seat of arbitration. Each choice brings its own challenges, in particular the choice between long established institutions such as the ICC, SIAC or LCIA versus those newly established in China in Shenzhen and Xi’an.

We first summarise the two most commonly used damages estimation methods (discounted cash flow and comparables) and describe the key challenges that BRI projects pose. These challenges include how best to estimate an appropriate discount rate that reflects a level of risk that incorporates commercial, political and strategic considerations. Another is how best to incorporate the large positive externalities associated with BRI projects (they generally connect local regions to far-reaching export routes). Also, many BRI projects involve a diverse ecosystem of contractors so that the failure of one may impact the ability of others to deliver, which is known as a cascade effect.

We consider a range of economic methods to address the issues posed by BRI projects, including: an approach which takes into account the political value of the projects for China by introducing options as part of the discounted cash flow; the “hedonic” approach to measure externalities; and the application of “multipliers” to capture the cascade effects in multi-contract arbitration.

Belt and Road projects and disputes

China is currently financing many significant infrastructure projects around the world. According to the New York Times, China has financed such projects in 112 countries. Most

of these projects are part of the infrastructure plan known as the Belt and Road Initiative (“BRI”), which was initiated in 2013. “Belt” refers to the overland routes and “road” refers to the sea routes, Figure 1 below shows the countries where China is financing projects (red dots) and the BRI countries (shaded red).

Figure 1 – Chinese investments, including Belt and Road Initiative projects



Source: *New York Times*.¹

The BRI covers more than 68 countries in sectors such as education, construction materials, roads and railways, automobiles, real estate, power grids, and iron and steel mining.²

While the corporate and financial structures of these projects vary, Chinese corporations (public or private) play a key role in their financing, planning and implementation. Finance is provided by Chinese banks in conjunction with financial institutions from other countries and international banks such as the Asian Development Bank (“ADB”) and the Asia Infrastructure Investment Bank (“AIIB”) (Chinese-initiated). Chinese construction companies perform much of the construction and Chinese corporations assist in managing the resulting transportation, energy (power and gas) and manufacturing facilities.³

Various governments are also involved in the BRI through formal agreements with China. Examples include Kenya, Ethiopia, Indonesia, Pakistan, Malaysia, Sri Lanka, Laos and Thailand. BRI projects tend to use local companies and labour, although the extent of the impact on local business and employment is subject to debate.⁴

Hong Kong and Singapore have had an active role in part-financing the BRI since its inception. In December 2017, Japanese Prime Minister Abe announced that the Japanese government would provide backing to Japanese banks for the financing of some BRI projects. In the same month, GE Financial Services announced that it was partnering with China’s Silk Road Fund to establish an energy infrastructure investment platform.⁵

Relationships between China, other countries and local suppliers amount to more than 600

¹ <https://www.nytimes.com/interactive/2018/11/18/world/asia/world-built-by-china.html?smtyp=cur&smid=tw-nytimes>

² <http://www.nortonrosefulbright.com/knowledge/publications/170534/belt-and-road-initiative-disputes-bumps-in-the-road>

³ <https://scholarship.law.upenn.edu/alr/vol13/iss2/3/>

⁴ http://www.xinhuanet.com/english/2018-06/01/c_137223294.htm/

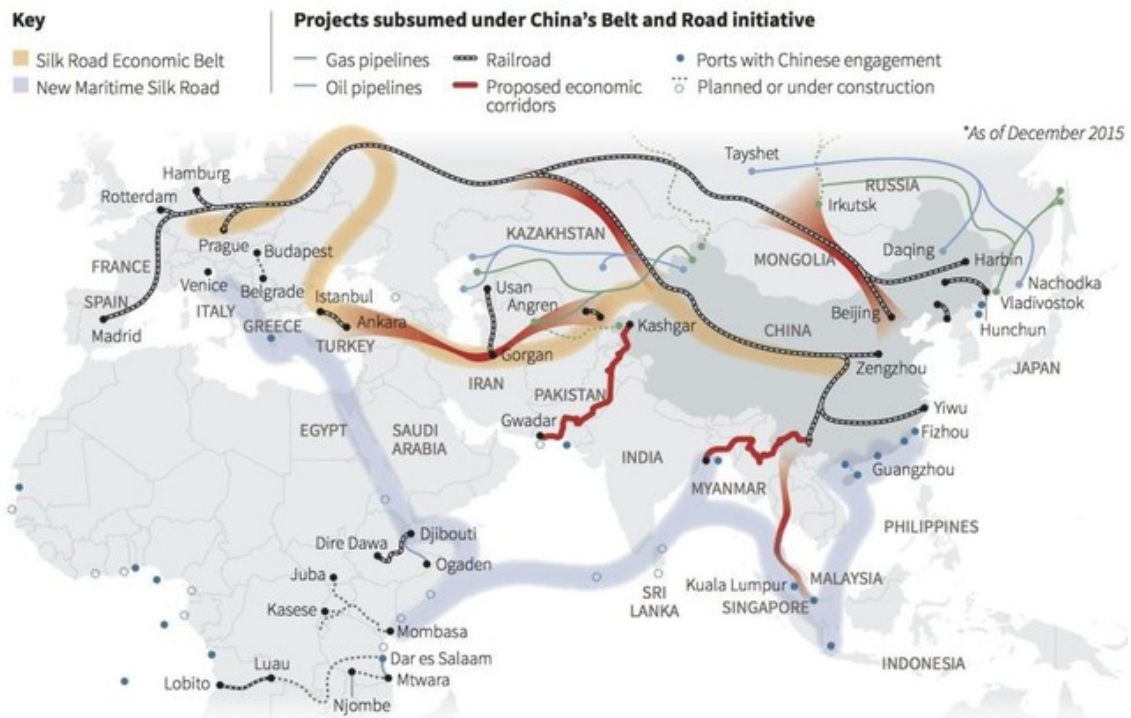
⁵ <https://scholarship.law.upenn.edu/alr/vol13/iss2/3/>

contracts.⁶ Available estimates of the cost of projects indicate that huge sums are at stake. Estimates suggest that investments in infrastructure projects between 2010 and

2020 in Asia alone will amount to US\$8 trillion.⁷

From Asia, the BRI extends to many other regions, as shown in Figure 2 below⁸.

Figure 2 - Belt and Road Initiative projects in Asia, Europe and Africa



Source: Mercator Institute for Chinese Studies.

Contractual issues are already apparent. Following increasing concerns regarding the fairness of the BRI projects, countries have started re-assessing existing deals.⁹ For example, in Malaysia, the prime minister, Mahathir Mohamad, has cancelled several projects.¹⁰ In Pakistan, the government has stated that it was minded to re-assess and renegotiate the costs of Chinese funded projects in the US\$62 billion China-Pakistan Economic Corridor. China’s reaction cannot be anticipated, but according to Pang Zhongying,

an international relations professor from Macau University of Science and Technology, “it’s the right thing to do for China to reassess its BRI projects and put more emphasis on risk control.”¹¹

The number of disputes is on the rise. According to the Hong Kong arbitration court (“HKIAC”), between 2016 and 2017, the number of arbitrations involving parties from countries participating in the BRI almost doubled, from 70 in 2016 to 124 in 2017.

⁶ <http://www.nortonrosefulbright.com/knowledge/publications/170534/belt-and-road-initiative-disputes-bumps-in-the-road>

⁷ <http://www.nortonrosefulbright.com/knowledge/publications/170534/belt-and-road-initiative-disputes-bumps-in-the-road>

⁸ <https://www.dailysabah.com/economy/2018/02/24/turkey-a-gateway-to-europe-for-modern-silk-road>

⁹ <https://www.bloombergquint.com/global-economics/how-asia-fell-out-of-love-with-china-s-belt-and-road-initiative>

¹⁰ <https://www.scmp.com/news/china/diplomacy/article/2164105/just-beginning-belt-and-road-disputes-between-china-and-its>

¹¹ <https://www.bloombergquint.com/global-economics/how-asia-fell-out-of-love-with-china-s-belt-and-road-initiative>

Those between Chinese companies and other parties in BRI projects more than tripled, from 12 in 2016 to 38 in 2017.¹²

Due to the specific nature of the investments – their high-risk level, public interest and cross-border features – disputes bring several challenging legal and economic issues.

Critical decisions on arbitration

While this paper focuses on the economic issues at stake, for context we describe below two of the critical legal decisions to be made with respect to arbitration. Arbitration clauses in international contracts require that the parties decide on the seat of arbitration and the rules. Each choice brings its own challenges.

Arbitration seat

When selecting the appropriate arbitration seat for an international arbitration, there are three key aspects that the parties should ensure:¹³

- (1) local laws support arbitration and that local courts will support, rather than intervene in, the conduct of the arbitration;
- (2) the host country is party to the New York Convention to ensure that the resulting award will be enforceable; and
- (3) the appropriate logistical support is available for the arbitration proceedings: international airline access; hearing facilities; and translation facilities.

¹² <https://www.scmp.com/news/china/diplomacy/article/2164105/just-beginning-belt-and-road-disputes-between-china-and-its>

¹³ <https://scholarship.law.upenn.edu/alr/vol13/iss2/3/>

Arbitral institutions

Although *ad hoc* arbitration remains an option, most international arbitrations are now administered by several independent arbitral institutions. Each has its own rules and procedures. The HKIAC and the Singapore International Arbitration Court (“SIAC”) are among the leading arbitral institutions worldwide.

However, in July 2018, China announced it would establish two international courts to administer BRI project disputes. One court, based in central Xi’an, will deal with overland (“Belt”) disputes, while the other, based in the southern Chinese city of Shenzhen, will handle maritime (“Road”) disputes. The extent to which these courts can handle BRI disputes effectively is uncertain. The HKIAC and SIAC are marketing themselves as established alternatives,^{14,15} and the LCIA in London has been promoting the merits of its legal system.¹⁶

Typical damage estimation methods

Arbitration procedures typically entail the estimation of the harm (damages) caused by one party to the other. We focus here on investment arbitration where damages are essentially a loss in value of an investment. A key step in the damage estimation is therefore the estimation of the value of that investment. This is typically conducted using one of the following two economic methods.

Discounted cash flow

The discounted cash flow method estimates the value of an asset by setting it equal to the sum of the future cash flows generated by the asset, scaled down according to a discount

¹⁴ <http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Case-study-Belt-and-Road-disputes-Choosing-Hong-Kong-as-the-seat-of-arbitration/obor/en/1/1X000000/1X0AAU5D.htm>

¹⁵ <https://www.scmp.com/news/china/diplomacy/article/2164105/just-beginning-belt-and-road-disputes-between-china-and-its>

¹⁶ <https://www.scmp.com/week-asia/opinion/article/2135329/why-english-law-could-rule-chinas-belt-and-road-disputes>

factor. This generally requires the estimation of the following parameters:

- Costs: these include initial investment costs (Capex) and on-going operational costs (Opex).
- Future revenue streams: these involve forecasts of volumes sold and transaction prices.
- Discount factor: this reflects the risk around future cost and revenue stream estimates. Analysts often use the weighted average cost of capital (“WACC”) of the project.

Damages are estimated by comparing the value the investment should have achieved “but-for” the breach in the agreement (the “counterfactual” scenario) and the actual value of the investment given the breach (the “factual” scenario).

Discounted cash flow is the most common method for estimating damages in arbitration proceedings.¹⁷

Comparables

Comparables is another method to estimate the value of an investment. This involves a comparison of the investment with other investments that present a similar level of profitability and risk. The source of differences in the profitability of these investments (such as the scale or duration of the project) are first identified. Adjustments are then made for these differences (e.g. scaling up or down as appropriate) to estimate the value of the investment.

The comparables method can be applied in a but-for analysis.

Economic challenges

In this section we describe some of the key economic challenges that may arise during BRI arbitrations together with the methods available to address them.

¹⁷ <https://globalarbitrationreview.com/chapter/1151372/income-approach-and-the-discounted-cash-flow-methodology>

Risk level

Chinese authorities have highlighted that BRI projects are based on “market principles”. However, many projects also have an important political interest for China. As a result, China has been investing in projects that are considered too risky by private investors such as western banks or funds. For example, many projects are in countries characterised by political instability, unreliable legal systems, and a reputation for weak corporate governance, including corruption.

Such factors would cause concern to commercial investors, and either discourage investment or require a high rate of return to accept such risks. The Chinese government, however, has geopolitical reasons for encouraging these projects. One report states that, “*Chinese officials anticipate losing up to 80% of their investment on projects in Pakistan and 50% in Myanmar but proceed nevertheless because of China’s perceived geopolitical interests*”.¹⁸

Such risks make the estimation of an appropriate discount rate particularly challenging. Analysts sometimes use country-risk premia to reflect the risk in a given country, measured for example as the difference in corporate bond yields with respect to a country deemed less risky (the United States or Germany for example). Here, the case is slightly different. Not only are these countries high-risk, but China is prepared to risk the financial value of its investments in exchange for political benefits. China therefore accepts lower expected returns for the same investment than other investors.

The cost of capital of a project is typically estimated as the cost of capital incurred by a diversified investor, i.e. the return required by an investor who holds a diversified portfolio of assets, including the project. Generally, the metric compiled is the WACC. The WACC is

¹⁸ <https://scholarship.law.upenn.edu/alr/vol13/iss2/3/>

estimated using market-based data such as the level of government bond spreads and equity risk premium (the premium asked over and above the risk-free rate) for similar companies.

However, a key issue is whether this is appropriate for BRI projects. Is it reasonable to assume that China has the same cost of capital as a private American investor? Or should the extrinsic (political) value of the investment be taken into account?

Possible options include setting:

- A “diversified investor WACC is a common approach and it yields a purely project-specific market-based discount rate. This omits any strategic value of the investments to China. This may be “high” for some projects, yielding low net present values. It would however be consistent with standard practice in the cost of capital estimation.
- A “diversified investor strategic WACC” that reflects the strategic value in the cash flows (such as options on other investments). For example, if China builds a road in Myanmar, it is in effect buying the option to build factories on that road at a later date. In theory, the cost of capital should reflect any uncertainty around the cash flows. This implies that the WACC should reflect both project-specific and “option value” risk, which would yield a higher discount rate than the “diversified investor WACC”.
- A “China WACC” that reflects the strategic value of the investments. This would yield a lower discount rate than the diversified investor WACC. It could take the form of a strategic discount in the WACC, based on discount rates for investments in similar, for example neighbouring, but slightly less politically risky areas.

Externalities

Many BRI projects have broader benefits than the private value of the investment. For example, new roads may facilitate local

exporting businesses to extend considerably the reach of their exports at potentially lower cost. This creates challenges for determining the scope of a claim as it could be argued that any damages should reflect the impact on the local economy.

In arbitration, the principle of causation is important. The damage claimed by one party from another should be clearly and causally linked to the latter’s actions. This has been a challenge in recent climate change litigations where third parties have claimed that oil and gas producers have caused climate change. The claimants have been unable, however, to show a clear causal link between the companies’ actions and the world temperature level.¹⁹

While the legal basis for the estimation of externalities is beyond the scope of this paper, the so-called “hedonic” method may be used to address this issue.

In the hedonic method, goods and services, including investments, are characterised as a set of attributes. For example, the value of a property may be based on its location, size, number of rooms and its proximity to local facilities such as a park, schools and public transport. The value of the park may be estimated via a comparison of the value of two properties that are similar in location, size and number of rooms but differ in their proximity to the park (e.g. one property overlooked the park while the other was one street away). The value of the park can be estimated as the difference in value between these two properties.

This method may be applied to value the public value of BRI projects. For example, the difference in value between two similar businesses located close to and far away from the BRI project could be assessed.

Cascade effects

As stated, many BRI projects may involve a diverse ecosystem of contractors so that the failure of one can impact the ability of others to deliver, which is known as a cascade effect.

¹⁹<https://www.theguardian.com/environment/2018/mar/20/can-climate-litigation-save-the-world>

This creates challenges for determining the scope of the damages. Should the damage caused by an issue in one contract be strictly limited to that specific contract value or should cascade effects be considered?

The question would be whether the loss of value caused by a failure in contract A on contract B and potentially C, D etc. should be included.

Here again the legal scope for recognising such effects is outside the scope of this paper. However, if one wanted to incorporate cascade effects, then the effect of a BRI contract could be assessed by reviewing

the proportion of costs and revenues in contract B that depends on contract C by applying multipliers in the discounted cash flow analysis.

For example, if delays on a road construction led to delays on a nearby power station construction, the proportion of the power station assets that require the road to be built could be estimated. In this example, the proportion may be 100%, or it may be the case that another road enables transport of materials to the power station, albeit at a higher cost. In that case, the multiplier would reflect the cost differential between the two routes.

Conclusion

It appears that many parts of the BRI are already under dispute. The current criticism of BRI projects by political leaders in Asia suggests that it is reasonable to envisage that more disputes will arise in the near future.

The estimation of damages arising from disputes will always raise a number of issues. Disputes related to BRI projects will require three additional specific issues to be addressed:

- How to incorporate political considerations in the estimation of the discount rate?
- How to reflect the presence of strong externalities?
- How to estimate cascade effects in contract value losses?

We propose three options, including the estimation of the strategic value of a given project, for example in the form of options as part of the discounted cash flows; the use of the “hedonic” approach to capture externalities; and the application of “multipliers” in contract valuation.

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