Context and Aim: Disruption and PPPs

Disruption and PPPs: PPP Contracts in An Age of Disruption

Context and Aim

The objective of this section is to help governments of emerging economies to better understand the increasing impact of disruptive technologies on PPP infrastructure projects, and to provide guidance on how to manage existing and design future PPP contracts.

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Watch this space. *This section is based on the Report "PPP Contracts in An Age of Disruption" and will be reviewed at regular intervals. Visit the Content Outline, or Download the Full Report to find out more. Let us know what you think by taking a Quick Survey.*

Context

Building modern, sustainable, affordable, and resilient infrastructure is critical for meeting the rising demands of billions of people around the globe, while addressing global threats such as climate change. Both technological innovation and PPPs can be essential drivers to close the infrastructure gap and get more quality infrastructure services to more people: They can maximize the positive impact of infrastructure by enhancing sustainability, resilience, and economic efficiencies, and they have the potential to accelerate economic growth and private sector development in emerging markets. At the same time, insufficient public budgets (exacerbated by the COVID-19 pandemic) and the quest for greener, more resilient and inclusive infrastructure projects[1] continue to generate interest in public-private-partnerships (PPPs) globally.

The increasing number of global disruptions—in particular the growing frequency and intensity of climate-related and other natural disasters worldwide, economic and financial crises, and the pandemic—have, however, demonstrated some of the vulnerabilities and risks associated with unforeseen disruptive events on long-term infrastructure PPP contracts and the related importance of making PPPs more resilient. In this context, fast-paced technological and scientific advances can also be viewed as a threat. The advent of the Fourth Industrial Revolution has the potential to disrupt PPP infrastructure models if certain equipment, delivery models, and development tools become outdated or inadequate before public or private investors can fully recover the costs of the infrastructure. Similarly, deepening understanding of climate science and subsequent global collective action are rapidly pushing governments and companies away from carbon-intensive assets and industries and towards “clean” ones, raising the question of how to retire existing “dirty” assets. These impacts are already being felt in countries around the world, including in public services sectors such as transport and energy.

How can private sector adoption of emerging technologies be supported within existing and future PPP projects? How can new technologies be harnessed to strengthen PPP projects going forward? Which parties should bear the burden of the risk of obsolete and stranded assets? And how can governments “future-proof” their pipeline PPPs?

The PPP Contracts in An Age of Disruption section addresses these questions systematically by

(i) defining disruptive technologies and their potential impacts on infrastructure projects and PPP contracts;

(ii) outlining different policy options during the project development phase that encourage private sector adoption of innovative technology while improving resilience towards technological disruption; and

(iii) discussing considerations for PPP contract management as well as future contracts to embed flexibility that allows for the integration of new technologies and accounts for technology disruptions that will inevitably occur.

Aim of PPP Contracts in An Age of Disruption

The objective of PPP Contracts in An Age of Disruption is to help governments of emerging economies to better understand the increasing impact of disruptive technologies on PPP infrastructure projects, and to provide guidance on how to manage existing and design future PPP contracts. This comes at a time when emerging technologies are creating opportunities for innovation and enabling new business models that can be essential for economic growth and private sector expansion, and also have the potential to disrupt the way

we plan, develop, deliver, operate and use infrastructure.

The PPP Contracts in An Age of Disruption section looks specifically at infrastructure projects that are financed through the PPP model because disruptive innovation affects them differently than traditionally procured infrastructure contracts in terms of challenges and opportunities. In projects that are entirely publicly funded, governments can unilaterally decide how to deal with changing economic assumptions, technological advancements, and standards. Projects that are financed through PPP arrangements are less flexible because of the long-term commitments made between the parties, including lenders. These long-term partnerships are based on key commercial assumptions, performance requirements, and an allocation of risks and related costs, all of which make it more difficult to respond to unexpected disruptions.

The PPP Contracts in An Age of Disruption section presents emerging practices related to PPP projects in developed and developing countries that were impacted by disruption over the past few decades. These examples as well as case studies[2] provide an understanding of the scope and type of pressures that PPP contracts are faced with when disruptions occur. They reveal trends related to the effectiveness of PPP contractual and legal mechanisms in responding to disruption in different sectors, and scenarios that can inform PPP contracts—both the management of existing contracts and the design of future ones. Recognizing that new trends are emerging continuously while disruptive technology is spreading rapidly, this report also intends to encourage further debate among all stakeholders involved in PPP projects—about potential technological disruptions and their impact on infrastructure PPPs, as well as approaches they have encountered that facilitate the adoption of innovative technology and the management of the risk of obsolescence.

Disruptive Technology Versus Disruptive Event

For the purpose of this report, two distinct types of disruption are distinguished:

- The term **disruptive technology (or disruptive innovation)** refers to technological advancements that
  - Enhance infrastructure development, delivery, and operation, and/or
  - Make PPP projects less attractive, either because the new technological opportunity requires high upfront cost or makes PPP projects obsolete.
- The term **disruptive events** refers to natural and man-made disasters, including those caused by climate change or cyber attacks, and economic and financial crises. A recent example is the COVID-19 global pandemic that has disrupted the world economy and has had a disastrous impact on certain sectors.

Footnote 1: The report Green, Resilient, and Inclusive Development (World Bank Group 2021) charts out the Green, Resilient, and Inclusive Development (GRID) approach, which departs from previous development strategies by promoting economic growth that goes hand in hand with environmental goals and social inclusion.

Footnote 2: Included is five case studies that illustrate how different categories of technology disruption and disruptive events were dealt with in various PPP projects and what good practices might entail. These practical examples are drawn from different sectors and from both developed and developing countries globally.

Abbreviations for Disruption and PPPs

Research and Publications in PPPRC

BROWSE BY REGION

- East Asia and Pacific (EAP)
- Europe and Central Asia (ECA)
- Latin America and Caribbean (LAC)
- Middle East and North Africa (MENA)
- North America (NA)
- South Asia (SA)
- Sub-Saharan Africa (SSA)

BROWSE BY SECTOR

- Power & Renewable Energy
- Urban & Cities
- Water & Sanitation
- Transport
- Telecom & ICT
- Solid Waste Management

BROWSE BY Topic

- Asset Recycling
- Climate
- Disruption
- Emission Reduction Credit
- Fragile and Conflict-Affected States (FCS)
- Gender
- Innovative Revenues for Infrastructure