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Policy Brief

PROMOTING RESILIENT INFRASTRUCTURE AND PUBLIC-PRIVATE PARTNERSHIPS

Task Force 8

Inclusive, Resilient, and Greener Infrastructure Investment and Financing

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Abstract

The increasing threat of natural disasters and climate change effects demands resilient infrastructure. While damage from vulnerable infrastructure could have enormous economic and human costs, providing resilient infrastructure serves otherwise. First, resilient infrastructure offer social benefits, ranging from protecting human life against natural hazards and climate change, to achieving a better and more equitable quality of life. Second, resiliency can be used to attract more investment by signalling how standards are put in place. The advantages of resilient infrastructure are often overlooked by a misconception of the high costs. This misperception occurs because the estimation of a project's return does not include all the benefits of resiliency, and there is a lack of proper incentives for applying resiliency principles. Combined with adequate funds for infrastructure investment, resiliency standards can be the solution rather than the problem, assuming the main stakeholders are aware of and have proper support for the implementation through the use of public-private partnerships (PPPs). Yet private participation also suffers from a lack of investment, while being expected to fill the funding gaps of public funds. We identify that strengthening institutions, harmonising plans and understanding across public agencies and providing the right incentives are the most crucial factors in pushing PPP implementation, especially in developing economies. The proposals in this policy brief focus on these issues and call for active support from Group of 20 members and the international community.

Challenges

The sixth principle stipulated in the G20 Principles for Quality Infrastructure Investment (QII) is "Strengthening infrastructure governance", which mainly discusses infrastructure governance principles to ensure long-term cost-effectiveness, accountability, transparency and integrity of infrastructure investments. The function of infrastructure governance commonly faces a number of challenges in the PPP planning phase, especially for developing and emerging countries.

unsynchronised infrastructure planning across government agencies, as in Indonesia, where in one example, a local government requested additional exit gates for an ongoing toll road PPP project. The request implied additional costs and changes to the existing PPP agreement that had been made between the government contracting agency (GCA), from the central government and private parties. The lack of commitment and inconsistencies between government agencies as stakeholders also occur in other interregional infrastructure sectors such as water supply systems, electricity transmission and fiber-optic networks. Germany's Berlin Brandenburg Airport is another example of failed coordination in an advanced economy, where the airport project experienced delays and a massive cost overrun. The project owner was a consortium of local and federal governments. In correlation with the sixth QII principle, this challenge is a gap that is not fully discussed in the QII principle.

Apart from synchronisation challenges, issues also come from gaps in knowledge and resources, especially between national and local governments. A PPP scheme is a complex process and requires a certain level of skill, where local governments may have inadequate training and lack experience. Increasing complexities in PPP projects can weaken local governments' motivation to adopt this scheme, compared with the simplicity of traditional procurements.

Infrastructure investments face budget constraints, increasing expectations on the role of private participation. However, the contribution of PPP finance is still low. Typically, PPPs contribute less than 1 percent to gross domestic product, while public finance greatly varies from 2 to 10 percent of a country's gross domestic product (Zen, 2018). The use of PPPs offers an efficiency gain. Not only can governments save on resources by financing a huge upfront investment or providing public services without raising taxes, but they also leverage gain from the private sector's knowledge and experience in project management. Yet, private participation in infrastructure development is still lacking in many countries.

For example, out of the US$425 billion in infrastructure development projects in Indonesia, private participation only accounts for 21 percent, while many private entities are in fact state-owned enterprises (SOEs) (APEC Policy Support Unit, 2019).

While economies keep building new infrastructure projects, the challenges also come from nature. Various natural disasters have hit and destroyed infrastructure and human habitats, demanding more resilient and adaptive infrastructure. With the increasing effects of climate change, we need resilient infrastructure that can absorb this disturbance and retain its primary function and structural capacity. Without this, the expensive facilities will become suboptimal and unable to protect humans as users. The challenges of building resilient infrastructure come from the misperception that adding resiliency means additional costs, thus reducing a project's net-returns. This, in turn, makes resiliency projects less attractive to financiers. This misperception occurs because the estimation of a project's return does not include all the benefits of resiliency, and a lack of proper incentives for applying the resiliency principles. Nevertheless, in terms of resiliency, current infrastructure is still underfunded, with an investment deficit estimated to reach $3.7 trillion annually for developing countries only (Runde, 2019). This is a big challenge in infrastructure financing amid underfunded total infrastructure investments.

Proposals for G20

Our proposals are based on the challenges mentioned in the previous section:

1. **Enhancing the sustainability of PPP projects by synchronising the infrastructure planning of intergovernmental entities**

An infrastructure project may be under the ownership of central governments, local governments, or both levels of government. In many cases, even though the GCA of a project is a central body, the project can be located in the land under local government authority, which means requiring coordination between central and local agencies. Lacking coordination can result in potential disturbances during the project execution. To mitigate misunderstanding of the whole process, including the project scope and binding contract, all stakeholders should be actively involved from the beginning, or since the planning stage.

Many PPP initiatives have never reached the procurement stage or are commercially closed. For example, in Indonesia, as of 2018, out of the 57 PPP projects listed in the pipeline, only two projects have reached the operational stage. Haqq and Gultom (2021), based on a case of a 15 year-procurement delay in a waste-to-energy project in Indonesia, highlight that high transaction costs, both political and economic, have caused the lengthy delay of the project. Those high transaction costs are related to 1) the government's lack of knowledge about PPPs that leads to the delay in conducting the contract and misalignment of regulations, 2) the problem of coordination among stakeholders due to a complex governance structure that involves central and local governments and leadership changes; 3) inadequate government support and guarantees that limit private participation in the face of high financial, economic and political risks in the project and 4) the lack of public trust leading to public opposition due to the lack of transparency and alleged conspiracy during the bidding process.

In many cross-regional projects or central government projects, a project committee comprises only the central government's representatives. To improve coordination and synchronisation across the public-sector stakeholders, the project committee should have representatives from the relevant local governments, or a mechanism to request local governments' active participation. Public consultations, knowledge exchanges and partnerships are examples of various instruments to enhance local participation.

These efforts aim to close the knowledge gaps and harmonise the development objectives among stakeholders.

2. Strengthening the PPP-related institutions: capacity building

Among major factors supporting PPP implementation, the following features are critical: coherent policy, public sector capacity to manage PPP appropriately, public sector willingness to have mutual relations with private partners and leadership (Zen, 2018). Related to enhancing local government participation and contribution, some challenges also come from differences in understanding of PPPs among government agencies. In emerging economies where PPP is a relatively new concept, typically, there are differences among stakeholders in the understanding, knowledge, adaptability levels and capacity surrounding PPP. PPP contracts are complex. A person without adequate training in PPP-related knowledge may have a different understanding of the project, and hence influence the ability to participate and gain from the project. Even though capacity building is a well-known practice provided for public officials, the capacity enhancement may be still below expectation. This could be caused by an unsystematic and incomprehensive learning system, as well as rigid institutional operation. Many public officers attend the same courses provided by different institutions, taking incoherent or unnecessary courses resulting in ineffective knowledge improvement. On the other hand, some public officers cannot apply the knowledge they gain from the training because their institutions and existing regulations cannot accommodate the changes.

To reduce inefficiency, training can be facilitated by a national PPP agency or nationally certified trainers, supported by internationally recognised institutions. Having in-house training backed by international development partners also improves cost-efficiency. Aiming to have certified local trainers by enrolling them in trainer's certification is also a way to save costs and accumulate the knowledge faster.

3. Strengthening PPP-related institutions: providing the right incentives

If the PPP-related agencies have sufficient knowledge and resources to implement PPP projects, will it be enough to run successful PPP projects? Unfortunately, the answer is no. The said requirements are necessary but not sufficient. The country still needs to put a supportive legal system in place, an appropriate authority assigned to each agency, sufficient fiscal resources and the right incentives to push the stakeholders to materialise the PPP projects. The right incentives are crucial because, in general, people

respond to incentives. If there is not enough incentive to work on PPP projects, they might be delayed or cancelled. For private participants, the incentives are clear, namely net profits. However, the benefits for public stakeholders may be unclear because of the perceived preference of individual officers. A good PPP project generates net-positive economic returns that benefit public welfare but do not necessarily serve the public officials working on it. As mentioned previously, PPP schemes are complex and demanding, thus create disincentives for those who are not intrinsically driven by public output.

Tailored performance-related pay incentives have some evidence of success, such as the tax collection system in Brazil (Kahn, Silva and Ziliak, 2001) and the National Health Service (NHS) Plan in the United Kingdom (2000), but have remained inconclusive or unsuccessful in other cases. Some literature suggests that team-based performance, known preference in tasks, or a combination with recognition and autonomy can provide the right incentives in public organisations (Marx and MacDonald, 2001; Burgess and Ratto, 2003). Performance pay can reduce the performance of intrinsically motivated officers, thus applying incentives to public institutions must be carefully designed with a thorough consideration of all determinant factors. National recognition and incentive funds awarded to the regional budget of the best-performing regions can be valuable incentives for local governments because the awards can be utilised legally for political benefit and as a legacy for the officials and heads of local governments.

Based on an Asia-Pacific Economic Cooperation (APEC) study (2019) on toll road and clean water PPPs in Indonesia, five areas of improvement are needed to ensure increased private participation in infrastructure development. First is the need to improve efficiency in bureaucracy and regulation. The lack of PPP awareness in the government needs to be enhanced by promoting capacity building, particularly through the concept of value for money. The second is to accelerate further government support and facilities, for example, by implementing hybrid or blended finance. The third is to provide more efficient land acquisition support and mechanisms. Fourth is the need to strengthen PPP contracts to sustain themselves in the face of unpredictable risks due to political and regulatory changes.

Policy options for proposal #1 to #3:

a. Knowledge exchange from G20 members with more experienced cases in harmonising and inclusive intergovernmental coordination. This support can utilise the existing platforms and international institutions working on PPP capacity building.

b. The provision of technical and financial assistance to support PPP development preparation by G20 members for developing countries. Promoting a merit-based incentives mechanism

contributes to local economic development and incorporates incentives for PPP institutions to finalise PPP projects.

c. Framework and standardisation of PPP contracts developed by G20 members to ensure the completeness and quality of PPP contracts and governance.

4. Promoting resilient infrastructure for better human life

Resilient infrastructure is an evitable requirement to mitigate and be adaptive to the effects of climate change. It can save many lives, reduce damage and prolong the facilities' lifespan. The urgency of resilient infrastructure has been iterated in recent G20 communiques, and the awareness and actions pioneered by G20 members needs to be continuously promoted.

Establishing and enforcing standards for resilient and sustainable infrastructure requires the adequate authority of assigned agencies, the sufficient resources and good coordination across the different levels of government. Hence, this adds the importance of coordination and capacity building in planning and implementing resilient infrastructure development.

Empowering the resilience aspect of the infrastructure serves two purposes, at least. First, resilient infrastructure offer social benefits, ranging from protecting human life against natural hazards and climate change to achieving a better and more equitable life quality across regions. Second, having a resilience aspect to infrastructure serves as a signal to attract more investment by keeping to standards, as we included in proposal no. 5. Therefore, improving the resiliency of infrastructure is beneficial as it reduces the impact of natural hazards and climate change due to higher durability, which impacts the financial and economic performance of the infrastructure (Evans et al., 2019). In addition, this potentially improves the reliability of service provisions, increase the lifespan of assets and protects asset returns.

Policy options:

a. The G20 to prioritise and continue the development of better-designed infrastructure resilience metrics that considers differences in country's characteristics.

b. Encourage continuous multi-stakeholder coordination and participation involving governments, the private sector, communities and civil society to improve the resilience aspects of infrastructure that adapts to the change of dynamics in the population.

c. Strengthen the sharing and mobilisation of resources to improve the financial, technical and institutional capacity towards middle- and low-income countries.

5. Resilience measures as a determinant of investment

To promote resilience awareness, we need more showcases and methods to estimate the technological, fiscal and socioeconomic impacts of resilient infrastructure on the economy. This is important to change the misconception of resilience, especially in cost-benefit estimation. When resilient measures can be identified in a project, governments can use the measures to promote the advantages of the project. This needs support from international partners and developed economies with more experience and resources to calculate the estimation and incorporate the measure policy into infrastructure financing standards. In terms of economic benefits, investing in the resilience of infrastructures in developing countries is estimated to bring a net benefit of $4.2 trillion over the lifetime of new infrastructure or $4 for each $1 invested (Evans et al., 2020).

Policy options:

a. The G20 to develop a comprehensive, holistic framework for institutional capacity improvement beyond the current training and standardisation available, to ensure the institutional capacity support can be fully translated into the establishment of resilient infrastructure.

b. The G20 encourages institutional investors to adopt these resilience measures as standard assessments for financial mobilisation.

c. The G20 to coordinate with international development institutions to ensure infrastructure resilience aspects are integrated with existing standardisation and requirements for infrastructure development.

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