



EUROPEAN REGIONAL NETWORK

INFRASTRUCTURE GOVERNANCE

“Best of the Web” Serie — July 2020

Note 1. *Infrastructure Governance under Uncertainty*

Introduction

This note’s objective is to provide decision makers and project analysts with useful references for improving their work on Infrastructure Governance (IG). The note is prepared by IMF’s Fiscal Affairs Department and this first number is devoted to material useful for Infrastructure Governance (IG) during and in the aftermath of the Covid-19 pandemic.

Covid-19 Pandemic and Public Infrastructure

The COVID- 19 pandemic has affected public investment plans in almost every country. Cuts or postponements have been made to release resources for emergency spending. But when the pandemic subsides, scaling up of public investment will be needed to support the economic recovery. However, cuts in public investment must be done avoiding an excessively negative impact, and public investment for fiscal stimulus must be based on projects duly prepared and evaluated. For selecting projects to be cancelled or postponed, as well as for choosing those to be included in fiscal stimulus packages, the use of good indicators is key (in particular efficiency, effectiveness and equity indicators). And for taking into consideration the different indicators, multicriteria decision analysis (MCDA) methods may be required.

The following section includes references to general material useful for IG in times of Covid-19, for defining different types of indicators, and regarding MCDA, as well as a couple of references to country experiences with investments as part of fiscal stimulus packages.

References

A. Investment Governance and Covid-19 material from multilaterals

Across the world multilateral organizations have been working to support countries manage and react to the Covid-19 pandemic. Some material related specifically to IG is presented in this section.

1. Websites / Blog posts

- i. [IMF Special Series on COVID-19](#)
The notes presented in this Special Series are produced by IMF experts to help members address the economic effects of COVID-19. There are notes on Fiscal Issues, Legal Topics, Macro-critical Structural Issues, Monetary and Financial Policies, Statistical

Issues and Tax Law Design Issues. Three notes are of interest regarding IG, which are “Managing Public Investment in the Crisis”, “Greening the Recovery”, and “Enhancing Digital Solutions to Implement Emergency Responses” (see next section for details).

- ii. Richard Abadie, [COVID-19 and infrastructure: A very tricky opportunity](#), Published in the WB Blog on [Getting Infrastructure Finance Right](#), May 15, 2020.
The post highlights the dilemma facing governments whether to cut committed infrastructure spending to save and try to balance the books, or to increase spending to address pandemic related priorities, such as digital connectivity, health care, welfare, pandemic-proofing of public services, and transport infrastructure. It mentions that if stimulus programs are implemented, they should spread spending broadly across the country as well as deeply into construction supply chains. The post asserts Covid-19 offers opportunities for discussing risk allocation in PPPs, for furthering the sustainability and decarbonization agenda, and for accelerating technological adoption to enhance resilience.
- iii. Imad N. Fakhoury, [How the World Bank is looking at COVID-19 and public-private partnerships, right now and post-crisis](#), Published in the WB Blog on [Getting Infrastructure Finance Right](#), June 10, 2020.
This post discusses the challenges faced by PPP initiatives due to drastic drops in demand generated by the Covid-19 pandemic and presents how the WB is supporting countries in the short through long term as they put in place crisis management and recovery strategies to prevent, mitigate, and backstop distressed PPP projects.
- iv. [The territorial impact of COVID-19: Managing the crisis across levels of government](#), published in the OECD website under [OECD Policy Responses to Coronavirus](#), updated June 16, 2020 (also available in [français](#)).
“This paper takes an in-depth look at the health/social, economic, and fiscal impact related to the COVID-19 crisis. It provides good practice examples from all OECD countries and beyond, to help mitigate the territorial effects of the crisis, and offers ten takeaways on managing COVID-19’s territorial impact, its implications for multi-level governance, subnational finance and public investment, as well as points for policy-makers to consider as they build more resilient regions”¹. Of special interest for the IG community is the section “*Public investment can contribute to crisis exit and recovery*” (page 48 in the PDF version).
- v. [Stocktaking report on immediate public procurement and infrastructure responses to COVID-19](#), published in the OECD website under [OECD Policy Responses to Coronavirus](#), updated June 16, 2020.
The report documents the special measures taken by 30 OECD countries and partners. It provides evidence on institutional arrangements and monitoring rules that were introduced for emergency contracting of critical items needed for the current COVID-19 situation. Regarding infrastructure governance, the report presents the actions on identifying critical infrastructure, setting up new or temporary infrastructure and repurposing of already existing infrastructure.

¹ Part of Abstract

2. Articles / Papers

- i. Eivind Tandberg and Richard Allen, [Managing Public Investment in the Crisis](#), IMF-FAD Special Series on Covid-19, May 1, 2020 (available also [العربية](#) | [español](#) | [français](#) | [日本語](#) | [русский](#) | [中文](#))
This note discusses the role public investment management can play in the fiscal response to the COVID- 19 pandemic. It discusses two aspects: cuts or postponements in public investment spending to make room for emergency spending during the immediate crisis; and scaling up of public investment to support the economic recovery. The note highlights key challenges facing countries at different levels of development and capacity, and it proposes concrete measures to adopt. It emphasizes that, both during the immediate crisis and the recovery, there is a need for strong prioritization and project selection processes to the extent possible, as well as clear objectives, dedicated coordination mechanisms, and high transparency.
- ii. IMF Staff, [Greening the Recovery](#), IMF-FAD Special Series on Covid-19, April 20, 2020 (available also in [العربية](#) | [español](#) | [français](#) | [日本語](#) | [português](#) | [русский](#) | [中文](#)).
This note stresses the need for fiscal policymakers to “green” their response to the Covid-19 crisis because decisions taken now to address it may shape the climate, and human health, for decades. Among other policy measures to green the recovery it indicates that public investment projects should focus on: boosting climate-smart infrastructure, developing and adopting climate-smart technologies, supporting adaptation and avoiding carbon-intensive investments.
- iii. Gerardo Uña, Holger van Eden, Ashni Singh, Felipe Bardella, and Alok Verma, [Enhancing Digital Solutions to Implement Emergency Responses](#), IMF-FAD Special Series on Covid-19, June 8, 2020 (available also in [العربية](#) | [français](#) | [日本語](#) | [русский](#) | [中文](#)).
This note provides guidance on how public financial management (PFM) systems can leverage digital solutions to support the implementation of COVID-19 emergency responses. Even if the main focus is on enhancements to PFM systems and related procedures, some of the suggested measures could also impact public infrastructure investment by allowing faster procurement and implementation procedures. Also reporting and accountability of Covid-19 related expenditures and investments would be improved and transparency enhanced.
- vi. Katherine Davisson and Joseph Losavio, [How sustainable infrastructure can aid the post-COVID recovery](#), published in the [World Economic Forum website](#) under [Global Agenda](#), April 26, 2020.
The article asserts that the ongoing coronavirus crisis has amplified calls for resilient and adaptable infrastructure that can effectively operate during moments of crisis, and that given this opportunity, it is imperative that when the nations of the world look to embark on infrastructure investment programs, they strive to provide infrastructure that is sustainable, technologically advanced and resilient. It highlights benefits of utilizing technology to plan, build and operate sustainable infrastructure, mentioning that low and middle-income countries could see a net benefit of \$4.2 trillion from investing in infrastructure that prioritizes future-focused resiliency (based on a [WB report](#)).

B. Defining and using indicators

1. Websites / Blogs

- i. [Guidance: DfT value for money framework](#), Department for Transport (UK), July 2017. This site presents the framework for completing value for money assessments. Three documents are facilitated: [Value for money framework](#), [Value for money: supplementary guidance on landscape](#) and [Value for money: supplementary guidance on categories](#). Documentation provided is useful for decision making regarding initiating new projects and for deciding to postpone or suspend ongoing transportation projects.
- ii. [The 25 Most Important Project Management KPIs \(& How To Track Them\)](#), by Clear Point Strategy. The list of indicators presented in this post may be useful for selecting which indicators to use for deciding on postponing ongoing projects.

2. Papers / Articles

- i. Litman, Todd, [Evaluating Transportation Equity, Guidance For Incorporating Distributional Impacts in Transportation Planning](#), 5 June 2020, [Victoria Transport Policy Institute](#).
The report does a good and complete analysis of equity as related to transportation services for the population and provides guidance for evaluating it. Various types of equity impacts are described, and practical ways to incorporate equity objectives and evaluation in transport planning are presented. Indicators are suggested and practical application demonstrated.

3. Books / Manuals

- i. [TAG UNIT A1.1: Cost-Benefit Analysis](#), Department for Transport, [Transport Analysis Guidance \(TAG\)](#), May 2018.
This unit of the TAG manual sets out the general principles of CBA that should be applied to all costs and benefits that can be monetized, how indicator should be calculated and how results should be reported.
- ii. [Setting objectives and indicators](#), Module 2 of the [Equal Access Participatory Monitoring and Evaluation toolkit](#), published in the [Resource Library](#) of [Better Evaluation](#). This module of the manual presents the concept of indicators and highlights the steps to set project objectives and identify adequate indicators. Describes the difference between SMART and SPICED indicators and stresses the importance of working closely with stakeholders to set indicators and define what change means to them. This last aspect can be important when defining indicators for selecting projects to be canceled or project to be included in stimulus packages.
- iii. [Measuring and Improving Infrastructure Performance](#), [The National Academies Press](#), 1996.

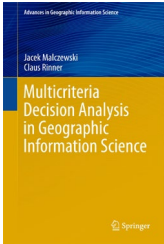
The book, which can be downloaded for free, presents the findings and conclusions of a committee of experts regarding measurement of infrastructure performance in the US, focused on four broad categories: transportation, water, wastewater and municipal waste. Even if the book was prepared more than 20 years ago, it can be useful for defining effectiveness indicators for existing infrastructure or for analyzing proposed projects.

C. Multicriteria Decision Analysis – MCDA

1. Papers / Articles

- i. Jaime Sanaú Carlos Gómez-Bahillo José María Moreno-Jiménez, [The economic valuation of social aspects: A multicriteria approach based on input–output models](#), January 2020. Published in Volume27, Issue1-2 of the [Journal of Multi-Criteria Decision Analysis](#).
This article shows how MCDA tools can be employed for valuing project impacts that are not valued in a traditional cost-benefit analysis. A note of caution: care should be taken when applying such an approach to avoid double counting benefits as well as to include all costs associated to each impact.
- ii. Ahti Salo and Raimo P. Hämäläinen, [Multicriteria Decision Analysis in Group Decision Processes](#), June 2010. This chapter of the book [“Handbook of Group Decision and Negotiation”](#) describes widely used MCDA methods and consider their uses in group decision making. It reviews selected case studies and offer guidelines for the design of MCDA-assisted group decision processes.

2. Books / Manuals

- i. Malczewski, Jacek, Rinner, Claus, [Multicriteria Decision Analysis in Geographic Information Science](#), Springer, 2015.
The main objective of the book is on integrating Geographic Information Systems (GIS) and Multicriteria Decision Analysis (MCDA). Material presented can be especially useful for selecting the best location for capital investment projects e.g. hospitals, schools, bus terminals, marketplaces, and roads. The book presents different methods of MCDA and how they can be applied to decisions using GIS data. The first part of the book presents general aspects of MCDA, GIS-MCDA, and its historical development. The second part of the book covers MCDA using GIS data, from basic methods (e.g. weighted linear combination) to elaborate outranking methods (e.g. Electre). It also presents multi-objective optimization and heuristics methods. The last part of the book is devoted to technologies for tackling spatial multicriteria problems.

- ii. Editors: Salvatore Greco, Matthias Ehrgott and José Figueira, [Multiple Criteria Decision Analysis: State of the Art Surveys](#), January 2016. Published in [ResearchGate](#), where

abstracts of the 19 chapters² written by different authors can be found. The book presents a complete review of MCDA, including history, foundations of MCDA, outranking methods, Multiattribute Utility and Value Theories, risk and uncertainty in MCDA, Multiobjective Optimization, Applications in different fields and MCDA software packages.

D. Country experiences

Experience with stimulus packages can inform the design of government responses to the negative impact of the Covid-19 pandemic. A couple of useful sites and studies are mentioned below.

1. Websites / Blogs

- i. IMF, [Policy Responses to Covid-19](#). This policy tracker summarizes the key economic responses governments are taking to limit the human and economic impact of the COVID-19 pandemic. The tracker includes information about measures adopted by 196 countries.
- ii. Wendling, C., [French Experience with Stimulus Packages](#), 2008-2009, IMF PFM Blog, March 26, 2020. This post on the PFM Blog briefly describes how France implemented in 2008 a stimulus package of around 1.5 percent of GDP, including € 4 billion in investment by State Owned Enterprises (SOEs) and € 2.5 billion to support investment by subnational governments. Focus is on institutional arrangements rather than specific measures for project selection and implementation.

2. Papers / Articles

- i. Fardoust, Shahrokh; Lin, Justin Yifu; Luo, Xubei, [Demystifying China's Fiscal Stimulus](#). World Bank, October 2012. Available from the [Open Knowledge Repository](#). This paper studies China's government economic stimulus package in 2008-09, which prevented a recession in China and played an important role in the overall recovery of emerging and developing economies. The paper also analyses China's subnational fiscal response in support of its overall policy response. Focuses on two key factors behind the success of the stimulus: investments in bottleneck-easing infrastructure projects and countercyclical nature of subnational spending based on the assumption that well-chosen infrastructure projects could improve business climate and thereby crowd in the private investment.
- ii. Anita Tuladhar ; Markus Bruckner, [Public Investment as a Fiscal Stimulus : Evidence from Japan's Regional Spending During the 1990s](#), IMF Working Papers, April 2010. This paper examines how effective was public investment in stimulating the Japanese economy during the economic stagnation of the 1990s. It finds that the effectiveness of

² Chapters can be requested from authors and one is downloadable.

economic infrastructure investment, implemented mainly by the central government, is lower than that of social investment mostly undertaken by local governments, suggesting that effectiveness depends upon its composition, the level of government implementation, and supply side factors. Investment multipliers were found to be higher than for public consumption, but relatively low and declining over time.

If you have some document, you think may be of interest for others members of the European Regional Investment Governance Network or know another good reference in the WEB please write to IRial@imf.org and it will be considered for a future number.