Executive Summary

Infrastructure matters. Mostly taken for granted, infrastructure tends to be noticed when it is absent, declining, or decrepit—or when cost overruns, ‘white elephants’, or citizen protest make the headlines. At the same time, it is an essential component of everyday quality of life and business environments. Indeed, infrastructure is seen as the engine for productivity growth and competitiveness, and as a safeguard investment for future economic well-being.

Yet, much of the conventional wisdom about infrastructure can be questioned. The evidence base remains surprisingly weak and partially inconclusive: estimates of future infrastructure needs differ strikingly, and the essential link between infrastructure spending and productivity growth, while moderately positive, is less clear cut. The same can be said about the financial investments required, the shares of public and private funding needed, or the influence citizen participation has on the planning process and, ultimately, the quality of infrastructure.

The Governance Report 2016 argues that the governance of infrastructure is not only key to individual project success but ultimately essential for macroeconomic performance and competitiveness. Bringing in the lens of governance readiness—especially the analytical, regulatory, coordination, and delivery capacities in place—allows us to address the weak elements of infrastructure planning and delivery: allocation of responsibilities and task coordination, the need for institutional reform, the role of citizen trust, and the challenge of future-proofing infrastructure. Rather than considering the mobilisation of resources as the sole or primary bottleneck for infrastructure investment, the governance perspective suggests that heightened attention be paid to the decision-making and administrative processes involved, and that this be done in the context of macroeconomic conditions that vary across countries and may involve different trade-offs.

Government Decision-making

Infrastructure governance rests on a complex, tension-ridden premise. On the one hand, it is no longer only about the role of the state in planning, financing, and delivering infrastructure since these tasks have increasingly been delegated to private actors, often public-private partnerships of some form or another. On the other hand, state action, be it finance, regulation, or coordination, is a necessary precondition for any effective private engagement. Hence the way governments decide about infrastructure remains crucial.
Are governments doing a good job in making decisions about infrastructure governance? Gerhard Hamerschmid and Kai Wegrich argue that any attempt to improve governmental capacity for good decision-making requires a thorough understanding of the nature of infrastructure governance itself, in particular its high degree of complexity and uncertainty. This obliges governments to commit significant resources for periods of time spanning electoral cycles and to do so under conditions of limited, even conflicting, evidence concerning current as well as future needs and their financial, environmental, and other implications. Indeed, the higher the complexity of a field, the more actors involved, and the more contested the evidence base, the more difficult decision-making strategies can become. Ultimately, decisions under these conditions require choices based on political priorities rather than planning needs alone.

Findings from the Global Expert Survey on Public Infrastructure, jointly conducted by the Hertie School of Governance and the OECD in 2015, confirm this assessment. Experts considered political priorities to be the most important criterion for sound infrastructure decision-making by far, followed by affordability, economic benefits, value for money, and environmental impact. In short, decision-making about infrastructure is mainly about realising political preferences within given budget constraints. However, political priority-setting addressing longer-term needs is often affected by shorter-term electoral cycles, even political opportunism at times. This discrepancy creates significant tensions for sustainable infrastructure planning, and the more so when planning cuts across central, regional, and local administrative units and involves private actors and citizen groups as well.

Subnational Infrastructure Investment

Indeed, investment in public infrastructure is a shared responsibility across levels of government and administrations. Whereas national governments are primarily concerned with macroeconomic conditions and select large-scale projects, subnational governments (SNGs) including administrative regions, states/provinces, counties, and municipalities are responsible for a large proportion of public investment: on average, some 60 per cent in OECD member states, although there is considerable variation.

Though infrastructure investments were stimulated in the wake of the 2008–9 global economic downturn, fiscal tightening thereafter led many countries to cut transfers from national governments, resulting in sharp declines of subnational investments. While some SNGs have taken on more debt, most postponed planned measures. What is more, the use of diversification of financing beyond the traditional sources or new risk allocation models remained very limited. SNGs perceive a gap in overall public investment spending relative to pent-up demand as well as future needs.

Drawing on the results of the 2015 OECD–Committee of the Regions survey covering 255 SNGs from the European Union, Dorothee Allain-Dupre, Claudia Hulbert, and Margaux Vincent note the inherent fragmentation of planning and coordination processes at the SNG level, leading to a significant dispersion of management capacities and resources. Along with frequently excessive regulatory procedures and co-financing requirements that strain administrative and financial capacities, subnational governments consider coordination to be among the greatest practical challenges in infrastructure investment. Difficulties related to designing, planning, and evaluating projects and long-term strategies also rank among the top challenges. Furthermore, even when capacity to conduct appraisals, assessments, and evaluations exists, their results all too rarely inform future decision-making and remain isolated attempts with no cross-learning.

While the challenges are numerous, the survey results show that many SNGs are using various strategies to improve governance such as enlisting external support services for designing and planning projects, seeking better cooperation with neighbouring SNGs, and engaging in horizontal as well as vertical
coordination more generally. Smaller municipalities considered the availability of external support for designing infrastructure strategies and the simplification of procurement the most important practices, while larger municipalities viewed improved coordination among diverse stakeholders as the most promising solutions. Regional governments emphasised increased external support for designing infrastructure strategies and more rigorous selection criteria for investment projects.

Project Delivery and Implementation: The Life Cycle Approach

Good governance is crucial for within-budget, on-time, and sustainable delivery of large infrastructure projects, honouring the fiscal responsibility for the significant public funds locked in such investments. To this end, Genia Kostka proposes a state-of-the-art approach to risk management that is adaptable to changing circumstances and intended to evolve throughout the four main phases of the project life cycle: planning, procurement, construction, and operation and maintenance.

Drawing on diverse case studies, Kostka finds that three factors in particular enable successful project delivery. First, comprehensive, front-end planning across all four phases is necessary for determining appropriate strategies and effective risk management. Early planning deficiencies will continue to hamper progress throughout the life cycle. Second, a flexible and transparent governance regime is a good choice to mitigate market risks, allow for efficient stakeholder coordination, and reduce social and environmental risks. Third, risk management techniques including performance measurement, contractor monitoring, and supervision of the planners need to be incorporated in all major phases.

The planning and contracting phases are most important for setting up appropriate governance regimes. The cases of the Elbe Philharmonic Hall in Hamburg, Germany, and the Berlin Brandenburg Airport, for example, show how insufficient planning and inappropriate contracting led to parallel processes with immense risks of weakening coordination capacity, ultimately delaying schedules and escalating costs. By contrast, other examples, such as the La Yesca hydroelectric power plant in Mexico, show that sufficient planning and stakeholder coordination, as well as flexible governance regimes and state-of-the-art risk management practices, are most likely to ensure on-time and on-budget delivery of large infrastructure projects. With the current interest in and need for infrastructure investment, challenges for project delivery mount, yet the case studies and innovation toolbox presented here suggest that delivery can in fact be significantly improved.

Choosing the Right Delivery Model

The challenge of good infrastructure governance demands strengthening the entire institutional architecture in order to deliver the right infrastructure on time, within budget, and in a manner that commands the confidence of all stakeholders. Ian Hawksworth and Juan Garin present the elements and contours of such a national governance framework to enable countries to take a fresh look at their infrastructure delivery choices and identify where changes might add value. While the decision tree and checklists offered in the chapter seek to raise issues that would need to be assessed by governments, they do not posit that one size fits all; rather they emphasise that choices need to be conditioned by a country’s unique circumstances given set political priorities.

The framework’s three-step process suggests that countries should first conduct a sober assessment of the national infrastructure governance system and set a preferred sectoral approach by assessing reform objectives. Ultimately, the role for governments in providing infrastructure and the optimal choice of delivery mode depend on prevailing economic and political characteristics in specific sectors such as water, transport or energy—including the potential for market failures as well as public expectations and political sensitivities involved. As a next step, countries should assess how macroeconomic...
parameters, governance capacities, private sector capabilities, and the legal environment impact specific infrastructure sectors. If gaps between circumstances and requirements are too wide, some modalities are likely to lead to failure, whereas as others may entail bridging approaches to compensate for weaknesses. Against this background of such a two-step assessment, the final step involves choosing a delivery model.

The focus in these assessments is on systems, principles, processes, and tools rather than on sectoral policies. The issue is not that country decision-makers do not understand the factual issues of, say, good waste management. The issue is that suboptimal governance systems impede good decision-making, thereby undermining good infrastructure service delivery.

Governance Innovations

Shifts in governance and search periods for new ways and means are nothing unusual in the field of infrastructure. Recent decades have seen an expansion of the number of voices demanding to be heard as technological and financial opportunities, and hence complexity, increased. Today, infrastructure is a prototypical case of multi-stakeholder and multi-level governance. Innovations now respond to challenges at different levels—international, national, regional, local—and involve diverse stakeholders, be they governments, public agencies, businesses, or civil society groups.

The focus here is on governance innovations, i.e. improvements in how we manage public problems, rather than on technological innovations, although these are certainly important in the field of infrastructure. Helmut Anheier and Sonja Kaufmann examine innovative approaches that address the governance challenges presented by the field’s inherent complexity and the multiplicity of stakeholders to improve planning, delivery, and outcomes. For example:

- In Nepal, by way of Water Use Master Plans, and in Samso, Denmark, citizens, beneficiaries, and providers have been engaged from the beginning in planning, analysis, financing, and delivery of needed infrastructure, thereby building responsibility, trust, and capacity, but requiring significant coordination.
- RAKLI Procurement Clinics in Finland bring together government entities with potential infrastructure providers to limit uncertainty and risk, and thereby produce more efficient and transparent solutions to complex project procurement challenges.
- The Bus Rapid Transit Standard developed by a civil society organisation offers a clearly delineated tool, applicable in settings around the world, for planning transit projects as well as assessing outcomes in terms of urban mobility and value for money.

If anything, the crowded field of infrastructure requires a better spread of governance capacities across stakeholders. As demonstrated in the cases presented in the Report, uneven playing fields and varying capacities were common deficiencies that produced a need for innovation in order to avoid planning or delivery failures. Importantly, coordination capacity among and across stakeholders, including adequate communication and inclusion strategies, becomes critical in that regard. Thus, coordination capacity emerges as a proactive, even pre-emptive tool for infrastructure management and decision-making.

The varied innovations taking place in the field of infrastructure governance may be pointing to some future pattern that has not yet become clear. We can, however, already detect some contours in that, by themselves and jointly, regulatory and delivery capacity may no longer be enough, if they ever sufficed. Indeed, the innovations reviewed show that analytical and especially coordination capacities are likely to gain in importance.

The proposed national governance framework’s three-step process should enable countries to take a fresh look at their infrastructure delivery choices and identify where changes might add value.

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Governance Indicators

Despite some progress, we still know relatively little about what role administrations and internal decision-making processes play in the success or failure of large infrastructure projects. This lack of knowledge about the capacities of governments to manage infrastructure has led to contradictory conclusions about the effect of infrastructure spending on outcomes and has produced confounding messages for policy-makers. For example, while consultancy reports frequently claim that increased investments in infrastructure boost the economy, evidence in academic publications suggests that spending has little effect on countries’ economic development.

The indicator suite developed by Matthias Haber and his team for The Governance Report 2016 offers a holistic, comparative assessment of countries’ abilities to plan, manage, and carry out infrastructure projects by looking at three key dimensions of infrastructure governance: planning, management, and outcomes. The indicators are based on a combination of macroeconomic variables of infrastructure outcomes and expert evaluations derived from the joint Hertie School–OECD Global Expert Survey on Public Infrastructure.

The sample analyses presented in the Report show that countries performing well on one dimension also tend to do so on the other dimensions, although only few countries such as Switzerland and the Netherlands manage to perform equally strongly across all three dimensions of infrastructure governance. OECD member states generally outperform non-OECD countries. However, once we take into account the countries’ levels of economic development, OECD countries lose their edge and previously low-scoring countries such as Nigeria and Egypt move to the middle of the rankings.

In examining how spending on and investment in infrastructure affect infrastructure outcomes, one surprise emerged: a negative relationship between a country’s infrastructure investment and its performance on the infrastructure outcomes dimension. In effect, increased spending and investment do not

Change in infrastructure spending and overall infrastructure quality (2010–2015)
Source: Hertie School—OECD Global Expert Survey on Public Infrastructure
necessarily improve infrastructure quality, at least not in the medium term. Although according to experts responding to the survey infrastructure investments increased in many states over the last five years, the quality of their infrastructure did not significantly improve (see chart). Likewise, the relationship between investment and productivity growth, though moderately positive, is less strong and clear cut than conventional economic wisdom assumes. Over the last ten years, a percentage increase in infrastructure investment on average helped to boost productivity by less than half a percent. Governance capacity rather than investments volumes alone mitigate between spending and outcomes.

These and other findings are examined in greater detail in the Report. The full indicator suite, dataset, and methodological notes can be downloaded at www.governancereport.org

Improving Infrastructure Governance: Implications and Recommendations

Contributions to this Report have reached conclusions, suggested best practices, and put forth rich sets of recommendations in the context of their respective chapters. In the Report’s concluding chapter, Helmut Anheier and Rolf Alter go beyond them and propose concrete steps with the potential to enhance performance in the field of infrastructure.

1. Acknowledge tensions

The first recommendation is to acknowledge the tensions—endemic to the complex field of infrastructure—that exist between politics, policies, and the technological and logistical requirements at the project level. When this Report advocates bringing governance into infrastructure policies, it highlights the need to recognise rather than deny their inherent political nature, and to take into account the relationship between political priorities and existing capacities.

2. Develop coordination capacity

Whereas the field of infrastructure seems dense in terms of rules and regulations for procurement, technical specifications, and oversight, it seems less populated with institutions that properly address the governance challenge of coordination. A determining factor of overall performance, coordination capacity—especially among the many stakeholders—must be enhanced.

3. Improve the evidence base

Efficient and effective coordination is more likely to happen if actors have the capacity to provide and analyse sufficient data and have adequate knowledge and expertise for project planning, risk assessment, and implementation, especially under conditions of political, financial, or technical uncertainty. Such analytical capacity needs to be encompassing and strategic, politically savvy and astute, and technically and economically sound to encourage cross-learning.
4. Create dedicated infrastructure institutions

To address all three recommendations, Anheier and Alter propose the creation of dedicated, arm's-length infrastructure institutions that not only reflect the diversity of political views among stakeholders and affected constituencies but also rest on technical, economic, and administrative-managerial expertise and comparative data. Such institutions should combine elements of deliberation and inclusion with expert knowledge. Importantly, they would bring the complex relationship between politics, policies, and projects out into the open.

Irrespective of their organisational form, the tools they use, their charge, duration, and portfolio—all of which will be determined by the country’s needs and context—the performance of such institutions would be evaluated based on at least three criteria:

- Whether the arm’s-length principle has been observed and independence and inclusiveness in giving and affecting voice have been achieved;
- Whether deliberations and proposals by the institution have enhanced the quality of political decision-making, such as by requiring political actors to justify decisions about infrastructure policies with independently vetted evidence or by requiring project managers to be mindful of the wider social, environmental, and economic impact, including future-proofing; and
- Whether infrastructure needs have been met and with the quality intended.

If increased investments have not automatically led to better infrastructure outcomes in the past, the reason may well have been the lack of attention to analytical and coordination capacities. The proposals made here point to a way that such deficiencies could be corrected. Indeed, some countries have established institutions that come close to meeting the performance criteria noted above. However, for any arm’s-length body to work as intended, stakeholders need to support its role, and the institution must develop a strong reputation early on and build on it over time. As a governance innovation, the proposal of an arm’s-length institution to coordinate infrastructure, grounded in sound analytical capacity, will take time to develop and will hopefully improve with experience gained. Yet given the state of infrastructure governance, such innovation may well be worth the effort.
The Hertie School of Governance is a private university based in Berlin, Germany, accredited by the State and the German Science Council. Interdisciplinary and practice-oriented teaching, first-class research, and an extensive international network set the Hertie School apart and position it as an ambassador of good governance, characterised by public debate and engagement. The School was founded in 2003 as a project of the Hertie Foundation, which remains its major partner.

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