Infrastructure “Privatization”: When Ideology Meets Evidence

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Abstract

The paper documents the differences between the rhetoric and the evidence on the infrastructure privatization experience that started in the mid-1990s. It shows the heterogeneity across regions and across sub-sectors of the relative importance of the private actors in infrastructure financing. It then reviews the long term evidence on the efficiency and equity effects of the policy. It shows that reformers have underestimated the trade-offs between efficiency and equity, as well as their fiscal effects. Moreover, it finds that in many cases, the initial improvements credited to privatization eroded with time in sectors in which competition was limited so that the performance differences with state-owned enterprises disappeared. Finally, it suggests that, in most countries, policies focusing on market structure, competition, regulation and institutional and governance strengthening have been much more important determinants of performance than privatization per se. It concludes by arguing that more realism and less ideology will go a long way in allowing the various forms of privatization to contribute to the global infrastructure agenda in the interest of all stakeholders.

JEL codes: H54, L14, L25, L32, L33, L5, L9
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1. Introduction

It seems that as soon as the option of giving up on the public provision of an infrastructure service, a debate between supporters and opponents starts and never dies. This may explain why one of the characteristics of the economic literature on the effects of infrastructure privatization is the extent to which its interpretation can be ideological rather than analytical.[1] When ideology drives a debate, rhetoric (often cheap talk) tends to dominate hard evidence, on all sides. And this can often bias the way the outcomes of a policy such as privatization are presented.

It is reasonable to predict that "conservative" analysts will support the idea of infrastructure privatization (defined broadly to include partial or temporary privatization) and focus on the efficiency payoffs that private skills can contribute. And this is in addition to highlighting the potential private contribution to the financing of the needs of the sector. In contrast, at the other extreme of the political spectrum, "progressive" analysts are more likely to raise concerns with the risks of exclusions of the poorest members of the population—i.e. cream-skimming by investors looking for high returns and low risks. Some will add a discussion of the fiscal costs of cream-skimming since pick-and-choose strategies tend to leave the projects most likely to underperform in the hands of the public sector, often at a higher total net fiscal cost as the margin to cross-subsidize disappears.[2] Others will also highlight the risks of confusion between public and private interests by the managers of privatized companies, resulting for instance in the excessive distribution of dividends by firms underinvesting in much needed capacity. [3]

These ideological biases are not systematic of course. They are often only implicit but can be observed in the way data is used in ex-post assessments of privatization. For instance, if the emphasis is on demonstrating the efficiency payoffs, the raw data on labor is likely to be turned into a partial productivity indicator. If, instead, equity is the main concern, the evolution of jobs (and staff reductions) will dominate the assessment. Same raw indicator, different "ideological/political"use. Similarly, if the focus is on improvements in investment, in the case of utilities, the increase in the number of connections will be emphasized. But critics will point out that this is not the same as improvements in access rates, if the connection growth rate lags the population growth rate.

Omitting these biases can easily lead to a misinterpretation of outcomes in terms of any of the traditional policy criteria (i.e. efficiency, equity, fiscal viability). A policy that improves one dimension may deteriorate another one. A policy that looks good in the short run may be counterproductive in the longer run. Ignoring that trade-offs are part of the ownership choice can be quite risky for a policy with multidimensional outcomes. Yet, this risk is the product of the too common decision to rely on statistically weak, biased or incomplete evidence. It runs the risk of reducing debates to cheap talk when this policy, like any other, deserves a more encompassing assessment of hard evidence. The main purpose of this paper is to try to offer an analytically balanced view of the record on infrastructure privatization addressing the concerns of both sides of the ideological spectrum with an emphasis on efficiency and equity.[4]

The paper focuses on the research published since the early 2010s, unless somewhat older sources are useful to set up an historical benchmark. The bulk of large scale "modern times" privatizations took place over a period of 10-12 years that started in the mid-1990s and then significantly slowed down since the 2008 crisis. This should be a long enough track record to allow the most recent literature to provide reasonably up-to-date credible information on the long term effects of the policy. In practice, we will see that it is not as simple because this assessment is constrained by three

[1] The debate thirty years ago was very similar as the one politicians and their advisors are having today. It was nicely described by Goodman, J.B. and G. W. Loveman (1991) early on Clifton et al. (2006) also raised these issues in Europe.

[2] See Reyez-Tagle (2018) for a very detailed assessment of the short term vs. long term fiscal implications of PPPs.

[3] See Helm (2019) for a discussion of the UK experience.

[4] The paper focuses on electricity, water & sanitation and transport. It leaves out ICT where the privatization experience is largely correlated with the fast evolving technological options in the sector.

other types of biases (besides the ideological one) that can be used to fuel cheap talk and distort evaluations in any direction.

First, there is a statistical robustness issue. The robust quantitative evidence based on the recent evolution of privatized infrastructure firms is quite modest. A large share of the recent global evaluations is based on narrative overviews (like this one) rather than econometric treatments of the information available through techniques such as meta-analysis. Moreover, even the robust analytical work is not problem-free since many of the econometric results quoted in the published overviews produced in the last 2-3 years still rely on information collected at best in the late 2000s when only the short term effects of the changes could be measured.

Part of the difficulty in getting up to date information is that, since the early 2010, the policy has enjoyed much less academic enthusiasm among empiricists (with a few exceptions discussed later). Yet in most countries, the governance of the sector, the global financial and political context as well as the degree of collective knowledge on what works and what doesn't has evolved, in particular since the 2008 crisis. For instance, most of the papers produced since 2010 have largely ignored the impact of ownership on inter-personal or inter-regional equity or on fiscal viability for instance and those who did usually relied on pre-2010 data.

It is even difficult to get a clear up-to-date story on the impact of privatization on efficiency, the only policy goal that continues to attract the interest of economic researchers. Some recent research anchored in case studies and recent ex-post evaluations by auditing courts (as discussed later) are offering useful insights but they mostly rely on partial outcome indicators. Only a few account for differences in context with "control variables". To minimize the risks of "abusive" conclusions, the paper will mostly rely on the statistically robust most recent muli-country evidence, usually validated by a publication in a peer reviewed journal.

Second, difference in the choice of analytical tools can also influence the diagnostics of the ownership choice for infrastructure services. For instance, financial analysts and economists do not rely on the analytical tools to assess privatization. The first group is more interested in the financial rate of return. The second is expected to concentrate on the social or economic rate of rate to account explicitly for a wide range of externalities and sometimes for distributional concerns. More complex assessments will rely on computable general equilibrium models to account for the multiple secondary spill-over effects across sectors of the privatization of a specific sector.

Third, differences in the degree of hands-on experience often make a difference. Authors with operational experience are likely to emphasize transaction costs, administrative constraints and implementation difficulties in their diagnostics. Those with a largely theoretical background are likely to ignore (assume away) these difficulties, including in the empirical tests of their theoretical models. Practioners often complain about the irrelevance of evaluations ignoring the relevance of crucial "control variables". The impact of the omissions of key dimensions is increasingly transparent in the growing number of up-to-date meta-analysis.

For this stocktaking exercise, these approaches are extremely useful. They allow the identification of important trends but also distortions and gaps in some of the academic papers analysing the privatization experiences. Some of this can be quite effectively identified in case studies as well since they address details that are hard to pick up in econometric or other more technical approaches but they are harder to lead to generalized results.[5]

With these limitations in mind, the rest of the paper is organized as follows. Section 2 provides a brief snapshot of the diversity of privatization concepts going around and of the evidence on the evolution of the relative importance of the private sector in infrastructure. Section 3 provides a summary of the evidence on the impact of privatization on the main policy criteria. Section 4

[5] Gomez-Ibanez (2006) offers one of the best illustrations of the policy payoffs to rely on case studies to integrate and highlight the relevance of the historical, institutional, and economic characteristics apparently unrelated to the ownership choice in the diagnostic of the effects of an ownership change in various infrastructure sectors.

concludes with a discussion of the reasons for the frustrating outcomes in terms of the main policy goals.

2. The basic data on infrastructure "privatizations"

To put the evaluation of the policy in perspective, it may be useful to start with evidence on the relative importance of privatized companies in infrastructure activities. There is actually no "public good" data on the ownership of infrastructure providers around the globe. It seems that about 30 years of experience have not been long enough for the international research and policy community to monitor systematically the evolution of dimensions such as ownership. There is a strong narrative around the progress of privatization as a policy preference, but no one is really looking at how much has actually taken place. Most of the partial information available is the fruit of an academic team or commercial organization interested in a specific sector or a specific region.[6] The following should thus be seen as an imperfect picture of the number of countries with privatized infrastructure services. But it is reliable enough to get a quantitative sense of the size of private operations in each subsector at the world level. Table 1 summarizes the information available at the global level. The differences between developed and developing countries is done next.

Table 1: Indications of global infrastructure total or partial privatization per subsectors

Sector	Shares of countries with private providers (2015-2018 data)
Electricity	
Generation (IPPs)	40% (94 countries sample, 2018)
Distribution	7% purely private, 30% mixed (175 countries sample, 2018)
Transport	
Airports	3% (world sample, 2016)
Ports	78% (world sample, 2015)
Rail	5% purely private, 29% mixed (133 countries sample, 2019)
Roads	25% (world sample, 2019)
Water & Sanitation	
PPPs with investments commitments	22% (174 countries sample, 2018)

a. How much private participation in infrastructure?

For electricity, privatization has mostly impacted generation thanks to the popularity of independent power producers (IPPs). In a 2018 snapshot of the number of IPPs in the world covering 94 countries, Bertomeu-Sanchez and Estache (2019) find that 40% have signed at least one IPP, illustrating the importance of private actors in the sector. For distributions systems, in a sample of 175 countries and 7621 firms analysed for 2018, Küfeoğlu et. al (2018) found that only 7% of the countries have a fully private DSOs (6% in the 125 developing economies sample and 12% in developed economies).[7] About 63% have purely public DSOs (76% for the developing countries sample and 30% in developed

[6] It is quite remarkable to note the fast growing market share acquired by large consulting firms in the publication of highly quoted assessments of the potential payoffs of privatization. A useful side effect of this evolution is the production of new datasets, even if they are often ignored by academic researchers.

[7] For 55% of the countries, there was only one operator. For the rest of the sample, there were at least 2 DSOs and often many more since they include small scale integrated companies as well.Almost 70% of the DSOs are concentrated in 4 countries (USA (with 3,112 operators), Switzerland (900), Germany (875) and Spain (340)). In many of the countries with a large number of DSOs, these include small scale municipal and cooperative distribution companies.

countries).[8] Countries with a combination of public and private ownership, i.e. mixed ownership, add up to 30% of the total sample (18% in developing countries vs 58% in developed countries).[9]

Their survey also shows that monopolies still dominate the distribution activity since 55% of the countries have a single DSO. When a DSO is public, it is also very likely to function with some degree of vertical integration (in over 90% of the cases in both developed and developing economies). The proportion drops to 61% and 29% when a DSO is respectively mixed or private. This is a solid first indication that the heterogeneity of context should be a factor to account for in any comparison of the relative performance of SOEs and private firms.

For the water & sanitation sector, providing a snapshot is more complex because of the extreme heterogeneity of its governance options. The traditional choice between large public and private firms to ensure the delivery of water & sanitation services continues to enjoy a high profile, in particular in medium- and high-income countries. But it tends to focus on the management of the service than on the financing of the necessary investment of the sector and when the partnerships include some commitments to invest by the private partner, these differ enormously in terms of size, specificity and financing risk sharing. The main evolution of the sector is towards decentralized and/or community-based solutions, cooperatives and other forms of autonomous local operations (which can include smaller PPPs) to address the needs of those often left out by the larger firms, whether public or private. This explains the relatively small number of countries with large scale privatizations suggested by the data produced by academic research.

In a survey of the governance choice in 174 countries of the world in 2018, Bertomeu-Sanchez and Estache (2019) find that 90% of the countries have adopted a public-private partnership approach in some way, including sometimes only for specific small contracts. But out of these, no more than 22% have managed to get private investment associated with the contract. This is consistent with the data collected for the 1990-2002 period conducted by Gassner et al. (2009). Their sample of 977 water utilities in developing countries counts only 15% of non-SOE providers. In other words, in most countries, most of the investment of the sector is financed by the public sector. Management contracts dominate concessions or divestitures and many exclude the poorest regions or the rural areas.

The role of privatization in the transport sector is more difficult to characterize since it covers subsectors as diverse as airports, ports railways, roads and urban transport. Moreover, there is no coherent source information across subsectors. The only strictly comparable (free) information is provided by the World Bank PPI database and only gives a sense of the relative importance of PPPs across the 132 developing and transition countries covered by their monitoring system. Between 1990 and 2019, 51 deals where signed for airports, 70 for ports, 44 for railways and 35 for roads. In other words, in each of the transport sub-sectors, less than 40% of the countries have been able to experience a form of privatization, and for roads, the share drops down to about 25%. The other sources provide the following additional insights on each subsector.

For airports, a 2016 estimation suggests that there are about 500 (at least partially) private airports around the world, out of 17,678 (Steer Davies Gleave (2016)). That's less than 3% of the total. But there are large differences between regions. Europe and Asia have been more actively moving towards privatization. In Europe, for instance, in 2016, 40% of the airports have been fully or partially privatized (Airport Council International (2016)). Latin America has also been quite active in terms of relying on PPPs to improve its airports. In North America, the Middle East, and Africa, however, the majority of airports are still owned and controlled by the public sector.

In the port sector, according to UNCTAD (2016), in 2015, 65% of global throughput was handled by terminals owned in full or in part by global and international terminal operators. Smaller private operators handled 18% and the public operators only handled 19%. This large share of privatized

[8] Purely public DSOs are defined as DSOs with more than 50% ownership by state or other public entities.
[9] Mixed ownership DSOs are defined as those with both private and public shareholders in the same distribution company.

operations is the product of the fact that about 85-90% of the ports are now landlord port model operating 65–70% of global container port traffic.[10]

In the case of railways, the International Union of Railways website provides a basic data set that had to be complemented to get a fuller picture of ownership in the sector. Despite the fact that privatization has a long history in this subsector as well, a sample of 133 of the main countries with at least some railways transport capacity suggests that only 5% of the countries have a system fully operated by the private sector and 29% by a mixed ownership structure. Essentially two-thirds of the countries still rely on a public provider to run their railways. The private and mixed approaches are mostly observed in North America, parts of Central and South America and in Western Europe. In contrast, most Eastern European, Commonwealth of Independent States (CIS) and Asian countries (with the notable exception of Japan) have chosen to mostly retain government ownership and operation of railways, although many have relied on PPPs to develop some of their activities.

Overall, just as in the case of electricity, there is significant heterogeneity in the way countries have mixed private and public operators to operate their railways. In one model, the private sector runs both the infrastructure and train services (i.e. Japan). A second model still relies on fully integrated company (mostly in Africa and Asia). A third model is a hybrid in which the public sector owns and/or operates the infrastructure while private railways companies pay to use the tracks. The USA and Australia, in view of their size, have developed their own hybrid type. Rail networks are dominated by private sector freight operators but their long distance services operated by the state at or a combination of public and private operators for commuters rail in the case of Australia.

With respect to roads, the estimation of the extent to which they have been "privatized" is approximated by the importance of privately operated toll roads. In most countries, the rest of the road networks are still typically public. According to The International Bridge, Tunnel & Turnpike Association (IBTTA) website, 50 countries count at least one toll road, most are developed or Latin American countries. This suggests that roughly 25% of the countries have some experience with private toll roads. This includes a growing number of poor developing countries without the ability to finance the development on their own their road network.

b. How (dis-)similar are the contractual arrangements with the private providers?

The discussion so far established that pure private provision is not that common in infrastructure. Since the mid-1990s, however, PPP contracts allowed partial or more targeted approaches to privatization to help in the modern development of the sector. [11] This growing role has often also been allowed by the horizontal and vertical unbundling of the "supply chain" in industries which, until the 1990s, had been structured around fully integrated monopolies. It is this sector restructuring that often allows the sector to pick and choose between various forms of PPPs.

Oddly enough, despite the large number of papers covering the topic, there is no standard formal or legal definition of a PPP. The PPP label has indeed been used to characterize a wide range of agreements between a public and a private partner. We'll rely here on the World Bank approach. It defines a PPP as "a mechanism for government to procure and implement public infrastructure and/or services using the resources and expertise of the private sector". It then goes on to identify four main types of PPPs: divestiture, brownfield concessions, greenfield projects, and management & leases. They can be briefly summarized as follows

- Divestitures are contracts that lead to the total or partial sale of public assets to the private partner.
- Brownfields contracts cover a wide range of contracts in which the state agrees with the private sector to use and/or upgrade existing assets but retains the ownership of the assets The most

[10] In a landlord port, the state owns and manages the port land and infrastructure but enters into PPPs agreement for a series of individual terminals.

[11] It is easy to forget that the first PPPs started in the early seventeenth century in France, expanded fast in the rest of Europe and the US in the eighteenth and nineteenth centuries (Grimsey and Lewis, 2004).

common are Rehabilitate-operate-transfer (ROT), Rehabilitate-lease/rent-transfer (RLT) or Build-rehabilitate-operate-transfer (BROT). In all these cases the private partner has to rehabilitate an existing facility, then operate and maintain it at its own risks for a long concession duration period (usually over 15 years and regularly up to 30 years). They differ according to the cost of the access to the assets during the contract period and the extent of new investments needed.

- Greenfield contracts are contracts through which a private operator builds a new facility largely at its own risk, transfers ownership to the government or leases the facility from the government and operates it at its own risk, then receives full ownership of the facility at the end of the concession period or transfers it back to the government at the end of the contract period. They include Build-lease-transfer (BLT), Build-operate-transfer (BOT) and Build-operate-own (BOO), merchant contracts and rental contracts.
- A management contract is a contract allowing the state to retain asset ownership but also the obligation to finance investments while transferring operation and maintenance to a private operator who tends to bear at least some of the operating risks. These types of contracts are usually for 3-5 years. The private operator is paid a fixed fee by the state and usually takes no risk on asset condition. Leases and affermage contracts are peculiar yet common cases of management contracts under which the private operator is allowed to charge "an operator fee" to consumers to cover its costs. In the case of a lease, the revenue from that fee is shared with the state as owner of the assets. in the case of an affermage, the operator can also charge users to cover part of the investment costs otherwise paid by the state.

Table 2 illustrates the relative importance of these contracts in developing and transition economies for broad category of infrastructure for the period 1990-2019. It shows that greenfield projects have dominated PPPs. In energy, this is largely because of the development of the generation capacity of many countries where IPP have long been popular and are still common. In water & sanitation, it hides the evolution of the contractual approaches. For some time now, management and lease contracts have become more common, a private sponsor are no longer keen on taking the investments in a sector quite sensitive politically and in which renegotiations rate have been quite high (over 90% in Latin America according to Guasch et al. (2014)).[12]

Table 2: Types of contracts signed between 1990 and 2019 in developing countries

Types of contracts	**Electricity and Gaz**	**Water & Sanitation**	**Transport**
Brownfield	182	399	206
Divestiture	377	23	28
Greenfield	3185	492	208
Management and Lease	49	161	29
Total	3793	1075	471
Basic statistics			
Number of contracts per year.	130.8	37.1	16.2
Number of countries with at least 1 PPP	110	65	70 [13]
Region with the largest share of PPP contracts	Latin America	East Asia	Latin America
Source: World Bank PPI database			

[12] See Saussier and de Brux (2018) for a broader perspective.

[13] The various transport subsectors have gone through very different experiences: 50 countries have an airport PPP, 70 a port PPP, 43 a rail PPP and 35 a road PPP.

The table also illustrates the significant differences in the number of contracts signed on average per year across subsectors. Even if it is now East Asia the region with the most active PPP market, Latin America continues to be the main actors in most of the sub-sectors. Sub-Saharan Africa and the Middle-East continue to be only modest actors in this market. The market is actually much more targeted than the regional data suggests. Argentina (until the mid-2010s), Brazil, China, India, Mexico and Turkey are the main host to a large share of the investment commitments made through PPP contracts.

As a share of GDP, infrastructure investments for PPPs now stand at around 0.9-1.1%, about the same level as in 1997 when it reached its peak and started to fall after the Asian crisis. It took till 2002 to get a full recovery but it has not really done much better than the 1997 level. As discussed in detail in World Bank (2019), the public sector continues to be the main source to finance the needs of the sector. This study is based on a detailed data base put together for 2017. This data shows that the private sector share of the financing commitments made through PPP is only 17% for a total of US$0.5 trillion of infrastructure project investment commitments in that year (and only 15% of the projects for that year).[14] In SSA, the private sector share was about 5%, in Asia, the Middle East or transition economies, 25% and in Latin America about 40%. Only about 16% of all infrastructure projects for that year were financed mostly with private money. The rest were fully or mainly publicly financed.[15]

That study also looked at the sources of financing is some detail. Public sources of finance, including public banks and equity, accounted for 25% of all PPI projects. Development finance institutions were the second-largest overall source of finance and accounted for approximately 30% of the investment commitment volumes (in both publicly and privately sponsored projects). In other words, about 55% of the investment came from non-private sources as discussed in World Bank (2019). Commercial banks and private equity covered the rest.

The financing of the sector continues to evolve. China has been playing a growing role around the world, initially entering markets that private investors were snubbing but increasingly present. In a growing number of countries, there has been a "financiarisation" of infrastructure sponsors with a growing role for hedge funds, infrastructure funds. This is having on impact on the management of firms. Horizons are shorter, dividends higher and investments slower as seen in the UK experience for instance.[16]

3. How effective has privatization been?

Now that the relative importance of the privatization tool has been established, the next step of this overview is to assess the extent to which a change in ownership from public to private through any of the forms of PPP makes a difference in terms of: (i) efficiency and equity and (ii) just as importantly, the extent to which it implies trade-offs between these two policy goals that can help understand the ideological positioning with respect to the policy. Looking for reliable evidence on privatization is not that simple as there are not many studies able to rely on counterfactuals. Most of the empirical evidence relies on the econometric or non-parametric treatments of cross-countries datasets with heterogeneous ownerships characteristics. But these differ in the extent to which control variables have been properly accounted for and this makes comparisons quite challenging. This necessity of accounting for context much more explicit to be able to account for interactions between ownership and other reform dimensions may be one of the main insights produced by recent meta-analysis and surveys for each of the main subsectors. Since meta-analysis do so, they provide the basis for the discussion of this section and they cover both country specific and cross-

[14] It is not clear the extent to which 2017 is a representative year, but the orders of magnitude of the relative important of public and private sector financing of the sector is roughly consistent with the macro figures computed in the 2000s.

[15] This is somewhat influenced by the large commitments made to 12 mega public enterprise projects in seven countries, including four projects in China.

[16] See Helm (2018) for an early discussion.

country studies. They also provide solid guarantees on the quality of the information since they often filter the papers they include to ensure that only the most robust one are accounted for.[17]

a. Efficiency

The empirical assessments of efficiency follow mulitple approaches. The oldest, but most reliable approach relies on econometric evaluations of partial performance indicators such as number of connections per worker or system losses. These help identify the factors driving differences accounting for ownership and other reform or contextual dimensions. They are popular in the literature because they identify the various interactions between the ownership choice and the other institutional or regulatory changes that can be adopted. But they usually are biased in that they do not account for the multi-output, multi-input dimensions of reforms and ownership effects. This is best handled by the latest frontier analysis techniques (see for instance Cherchye et al. (2018) for a survey. But since these can be quite demanding technically, they are less popular in the general economic literature and are under-represented in the meta-analysis results quoted here. [18]

For electricity, Jasmab et al. (2017), Bacon (2018), Lee and Usman (2018) and Bensch (2019) have recently synthesized the academic evidence on the global experience of reforms exploiting all the publications conducted until the mid-2010s.[19] Their main conclusion is that the privatization of generation, transmission and distribution can be associated with improvements in quality and efficiency in the region: higher quality, lower transmission and distribution losses and higher labor productivity have all been identified as outcomes by a large number of studies. However, they add two important limitations to this conclusion. First, the positive impacts of the ownership change ended up being relatively weak in the medium to longer terms. Second, the outcomes were often much more influenced by the regulatory and institutional quality than the type of ownership. And this is a recurring observation made for each of the infrastructure subsectors (e.g. Vagliasindi (2012) or Urpelainen and Yang (2017)).

The latest research not yet covered by these meta-analysis confirms the difficulty of coming up with a clean conclusion on the impact of privatization in electricity. Iman et al. (2019), for instance, find that privatization has had a positive effect on the generation capacity of SSA countries, but a negative effect of the access rates, although not always statistically significant. Similarly, for Asia, Sen et al. (2018) did not find any correlation of privatization on technical quality. As for Latin America, de Halleux et al. (2019) found that privatization shows no statistically robust correlation with access or quality indicators.[20] The three papers also validate with the latest data available, the importance of regulation and associated institutions for any of the outcomes that can be used to approximate efficiency.

For developed economies, the conclusions are also quite similar. The majority of empirical studies on performance differences according to ownership are still dominated by the literature on the US

[17] There is also a lot of data available to conduct more technical analysis, notably the global data produced by the World Bank for electricity and water. This data is very useful but it only provides basic readings of comparisons across utilities of large sets of performance indicators. They provide basic correlations, often untested and are useful to stimulate discussions but not to draw policy advice.

[18] The difficulty of accounting with all the necessary facts jointly is illustrated by the disconnect between the vast economic literature on efficiency trying to come up with estimation of efficient cost frontiers and the public management literature quite concerned with the high frequency of costs overruns in project implementation and operation. The first one largely ignores the relevance of construction phase and the details of procurement processes and the second one typically ignores the relevance of some of the key control variables that explain differences in costs levels across operators.

[19] Bensch (2019) is the most technical of all these surveys. He covers publications produced between 2002 and 2018. His quantitative assessment synthesizes the results of 27 quantitative studies (12 cross-regions, 8 on Latin America, and 7 on Asia).

[20] This is in contradiction with Balza et al. (2013) who 7 years earlier published a paper produced with older data and a different method (Generalised Least Squares) for the same region and find that privatisation had been robustly associated with improvements in quality and efficiency. They already had mentioned that it could not be correlated with better access.

experience from the 1960s to the 1990s. And in general, the results are quite heterogeneous and certainly do not point to a clear superiority of one form of ownership. For Europe, Borghi et al. (2016) find that depending on the quality of the institutional framework publicly owned firms exhibit a higher/lower level of productivity compared to privately owned ones. Note that Gugler et al. (2013) argue that there is trade-off between static and dynamic efficiency and a trade-off between vertical economies and competition in the electricity industry. They find for 16 European countries over the period 1998–2008 that higher electricity end-user prices in a country subsequently lead to larger aggregate investments.

For the water & sanitation sector, two recent overviews provide a number of coherent readings of the evidence accumulated since the late 1990s. Herrera (2019) and Bel (2020) cover an impressive volume of literature in their survey. The first focuses on the growing role of decentralisation and of alternative small scale operators in the sector. The second discusses the growing importance of re-municipalisation of water & sanitation services. Both provide a long term perspective on privatization and highlight that early studies were more positive on the scope to achieved efficiency gains or cost savings.

The most recent evidence suggests that no systematic improvement is observed over the longer run. Worthington (2014) and Stutsman et al. (2016) make a similar point looking a different sample of studies. These results are also noted for the UK, the poster country of privatizations. A recent study of its long term experience in the water & sanitation sector suggests that private operators improved performance over operations by SOEs initially but these improvements eventually reached a ceiling and in some cases were eventually partially reversed (Frontier Economics (2019)).

Bel (2020) notes also that SOEs do better in developed countries when compared to private providers than in developing countries.[21] Although Amaral et al. (2019) provide a less categorical evaluation showing that the ranking can depend on difference on a number of legal and institutional constraints as shown by Suarez-Varela et al. (2017) in the case of Spain or on the size of the cities as shown by Chong et al. (2015) in the case of France. Baker (2018) adds that in developing countries, when improvements were made, they mostly occurred in middle-income countries, often in cities with middle- and high-income residents. Overall, as in the case of electricity, these surveys show that the comparison across papers is not easy because they do not equally precisely account for differences in economic, institutional and regulatory context.

For the transport sector, the effort to identify coherent assessments of impact evaluations is quite frustrating. As shown by Button (2016), Chen et al. (2016), Hodge et al. (2018), or Valila (2019) who summarise empirical work on transport PPPs, the literature is largely dominated by case studies and counts very few systematic quantitative analyses.

In ports, the evidence, somewhat unsurprisingly, is that private sector involvement is associated with better financial performance (Wang et al. (2013), Lee et al. (2017) or Choi and Lim (2018)). Yet, others (Xiao et al. (2012) or Balliauw et al. (2019)) argue that public ownership is more effective at stimulating investment. According to Choi and Lim (2018), privatized port focuses more on profit than on trade volume; consequently, trade volume may not increase in privatized ports. Overall, Panayides et a. (2015) settles all disagreements by showing that regulatory quality, market openness, ease to start a business and contract enforcement are important institutional determinants of port PPP success

For rail, the recent evidence on the impact of various forms of privatization is relatively modest despite in contrast to the extensive literature focusing on the impact of the details of the restructuring and regulation built-in rail restructuring reforms (for Europe, see for instance, Mizutani

[21] Clifton et al. (2019) provides a useful more general overview of the debate.

et. al., 2015; Smith and Nash, 2014 for reviews).[22] As in the case of ports, most of the research published since 2010 covers the impact of the role of competition and industry restructuring, i.e. horizontal separation (separation of passenger and freight operations) and vertical separation (separation of infrastructure and train operations). Ownership has not really been on the agenda of academic researchers working on OECD economies for some time. And this is in spite of the de-facto renationalization of Railtrack in the UK for instance and similar decisions in Australia and New Zeland (Abott and Cohen (2016)). A notable exception is the review by Nash et al. (2016) of the European experience. The authors argue that cost reductions of 20-30% have been one of the main achievements of rail franchising in Europe.[23] The main exception is in the UK where sharp cost increases have been observed. Mizutani (2019) adds that public ownership is associated with higher passenger use of the railways.

In many ways, similar observations are made for developing countries. Private capital has been much more attracted by the freight than the passenger business whether in Africa or Latin America. Moreover, globally, PPPs have not really been very effective at stimulating investment. For instance, for Brazil, Pinheiro Sampaio and Tchepurnaya Daychoum (2017) show that privatization led to decreasing accident rates and improving freight capacity but it had no impact on network expansion.

For toll roads, the conclusions are somewhat more negative. We have known for some time that renegotiation are quite common since Guasch (2004) for the Latin American experience, Bajari et al. (2014) for the US experience or Albalate (2014) for the European experience. The most commented on part of this renegotiation is that tolls and contract duration change but in it is also quite common to see performance expectations to be adjusted in the process. Albalate (2014), for instance shows how in Europe, many failures can be linked to poor design and financing strategies. This also explains why it is quite common to observe re-nationalization as a final outcome. This has been the case in Spain for instance. In a very detailed assessment of the Spanish experience, Albalate et al (2019) focus on the long record of switches between public and a private management in Spain since 1984. The relevant part of their assessment in this context is that throughout the period, they find no efficiency difference between public and private roads.

In sum, this brief overview of the efficiency achievements of the privatization policy through various forms of PPP illustrates the great heterogeneity of experiences. This heterogeneity can however not really be turned into a simple ownership narrative. There is some evidence that when SOEs are found to be the less efficient ones in a given study, it is the results of a number of predictable control variables accounting for a wide range of relevant structural characteristics. Some are linked to the social, regulatory, institutional, financial or economic context. Others reflect the results of a restructuring process that allowed cream-skimming as discussed earlier.

b. Equity and distributional concerns

The coverage of equity and distributional concerns by the academic literature relying on statistically reliable tests to assess outcomes is much more modest.[24] It focuses on three types of indications: access rates, affordability and welfare measures of the incidence of reforms on the various income groups or types of users. Each of these measures carries its share of difficulties. Access rates have been used as discussed earlier by some authors as a proxy for efficiency. The real issue is that, in the case of utilities, they can be measured in two main ways which do not necessarily lead to the same conclusions. The first is in terms of the number of connections produced by a public or a private operator and the second is in terms of share of the population with access, with hardly any

[22] As of 2020, most European countries have totally unbundled infrastructure and train operators (often several firms), even if the single state owned company model remains dominant and most continue to rely on subsidies to operate.

[23] Mizutani (2019) adds that public ownership is associated with higher passenger use of the railways.

[24] Bayer et al. (2019) only find 31 out of 7,247 studies interested in "energy access" published since 2000 that have been conducted using formal statistical tests of impacts of policies on access and only 7 draws on a randomized experiment designed for causal inference.

correction for the quality of the service. For affordability, there is no real agreement as to what an energy, water or transport poor is as discussed in Bagnoli et al. (2020b)). The only rough agreement is that it should be measured as a share of income to be allocated to these services but there are many disagreements on the acceptable level and on the extent to which this needs to be normalized somehow to account for a wide range of contextual dimensions. Finally, with respect to distributional effects, the most encompassing approach is the modelling of ownership changes through computable general equilibrium models. They account, among other things, for the indirect effects of the changes in infrastructure services appearing through changes in product and labor markets (i.e. which final product prices change because the infrastructure prices changes and which type of workers gain and loose from the changes).

Each of these dimensions is important but they are not equally well addressed by the academic literature across sectors until recently. And when they are, they all tend to suggest that equity may not have been considered carefully in the design of reform packages that include privatization, in any of the infrastructure subsectors. This is the main conclusion reached by Bagnoli et al. (2020a) in the survey they conducted comparing the social impact of the ownership choice for utilities.

For electricity, according to Foster and Witte (2020), only one-third of countries manage to keep average electricity bills within 5 percent of household income. They also argue that this is related to the need to improve cost recovery as the correlation coefficient between the affordability indicator and limited capital cost-recovery lies at 0.8. Jasmab et al. (2014), Jasmab et al. (2017), Bacon (2018) and Bensch (2019) and Lee and Usman (2019) are again the main sources of comparable information across very different studies on developing countries available to assess how ownership fits into the explanations of this situation.

Their collective reading of the academic literature is that the long record of reforms anchored in some form of PPP suggests that there is no significant difference on the achievement of social goals according to ownership. For access, which is most relevant for developing countries, or at least as much as expected, and in particular in rural areas. Differences in effectiveness are largely driven by the rationality of the match of the ownership choice with local needs and constraints and in particular the adoption and implementation of complementary reforms (regulation, institutions, subsidies, pricing structure). In other words, these narrative reviews suggest that changing ownership only, either way, is not a sufficient condition to provide more access, however this improvement is measured. Gugler et a. (2013), for instance, argue that the irrelevance of ownership is also observed for affordability. What matters is regulation as well as the design of tariffs and subsidies. [25]

For developed economies, privatisation often resulted in positive outcomes but these were often smaller and more uncertain than expected when the reforms were implemented. For instance, Gugler et al. (2013), Fiorio and Florio (2013) and Hyland (2016) all find that privatizations do not necessarily impact investment or prices, even if this conclusion may be influenced by the sample (countries and period) and the estimation procedure. More importantly from a policy perspective, as explained by Fiorio and Florio (2013), the overall institutional details mattered much more in Europe than the ownership choices.

For water & sanitation, the analysis of the social impact has usually been more focused on developing countries were access rates are still well below 100% in many countries. For that sample, John et al. (2015), and the matching more detailed version by Thillairajan (2016), offer the most recent comparable technical synthesis of the evidence on the impact of ownership changes on access rates or connections in infrastructure that includes the sector. They find no or mildly negative social consequences as the privatizations had, on average, a negative impact, even if not significantly negative impact for their sample of 17 studies. These conclusions match those reached by Bakker

[25] For an update on the way regulation impacts outcomes in public services, see Auriol et al. (2021).

(2014) and Bakker and Ritts (2018) in their more narrative surveys of various meta-analyses of the old assessments of privatization and PPPs outcomes in the sector in developing countries and by Bel (2020) for developed economies. All conclude that the choice of ownership is less important than the choice of governance, regulation or tariff design if the targeting of access improvement is to be more effective.

It is worth noting that the latest negative perspective on privatization in the sector is a reversal of conclusion reached in the first generation of academic publications on the topic in this sector. The early research validated argued the superiority of PPPs over SOEs (Kosec (2014) for SSA or Clarke et al. (2009) for Latin America). In sum, for the case of water & sanitation, as in the case of electricity, the impact of choice of ownership on the evolution of the access rate is still unsettled but the most recent research leans towards the irrelevance of ownership on its own.

For transport, the debates are more complex but the multiplicity of the dimensions of mobility to account for to get a good sense of the social implications of the ownership choice. [26] Maybe because of this complexity, the debates are still dominated by conceptual perspectives than supported by robust empirical ex-post evaluations. One of the basic difficulties is that there is no universally agreed definition of transport poverty and/or equity in the design of transport policy (Gomez-Lobo (2011), Pereira et al. (2017), Serebrisky et al. (2009) or Vetter (2011)). Should the design of policy treat all population equality irrespective of their geographical location, i.e. dealing with horizontal equity? Should it focus on specific more vulnerable groups (low income classes, minorities, specific professions), i.e. focusing on a vertical perspective on equity? Or should it deliver a combination of both but then in what proportion? From the perspective of this survey, this broad uncertainty on what to aim at in the design of social transport policy is a real issue as there is no analytically robust academic view on the extent to which the ownership choice could impact the optimal design of a social transport policy: no matter what the social goal is.

The accumulated literature makes three main contributions of interest for our purpose. The first is that it recognizes and provides evidence on the social importance of the sector. For instance, in Latin America, Gandelman et al. (2019) show that the share spent by the poor households (bottom quintile) on public transport (whether they are publicly or privately operated) is more than twice the share spent by the top quintile (6.2% vs. 2.5%).The second is that, the cross-country evidence available suggest that in general, public provision is more correlated with affordability than private provision as illustrated by Currie et al. (2018) in the case of urban transport for a sample of 88 world cities.[27] This was consistent with the fact that, for the same sample, they found cost recovery to be significantly better for the cities in which the non-public providers dominated than in those dominated by the public providers. The third is that it makes the case for the management of the social concern by the regulators (i.e. the targeting of subsidies) and the fiscal authorities (i.e. the level of subsidies) rather than through the choice of ownership.[28] In many countries, the regulation of fares and the design of subsidies is indeed usually the approach adopted to address any social concern. And this regulation seems to apply in the same way to public and private providers of transport services-although, to my knowledge, there is no formal assessment of this characterization at the global or even regional level.

[26] See Poku-Boansi and Marsden (2018) for a discussion of the overall relevance of governance in assessing the various dimensions of urban mobility choices for instance, to get a sense of the complexity of the transport challenge in the African context.

[27] They measure affordability as the cost of fares as a ratio of GDP % per capita per trip.

[28] In a review of the East Asian experience with PPPs for urban rail transit, Chang and Phang (2017) argue that Singapore's experience illustrates that vertically unbundled PPPs as those adopted in Singapore, for instance, reduced the scope to rely on cross-subsidisation, increased coordination issues and gave up on economies of scale and scope, ultimately leading to underinvestment and maintenance issues. Their conclusion of a review of a number of case studies is that, in the case of in particular in the water and transport sector,metros at least, the optimal structure is a vertically integrated public-owned and driven system, with some margin to enter into selective PPPs with clearly defined risk sharing.

These approaches have their own policy limitations because they tend to focus on affordability rather than on access.[29] Yet, in many countries, the main issue is access to transport. From a strict economic perspective, in many contexts, it is much more rational to subsidize investment to increase access than use (i.e. the social rate of return will be the highest to subsidize capex rather than opex). And this is where access to private financing can make a difference. From political perspective, it is a risky strategy. Affordability continues to be perceived as a sensitive issue. In many countries, a fair share of the lower income classes tends to live outside of the cities centre or at least far from where they have their jobs. It should thus not be a surprise that an increasing urban transport fare continues to be a common source of social conflicts in many countries.

For this survey, this implies that the ability to rely on private funding and management skills in the sector is quite sensitive to the social context and the credibility of the fiscal commitments made by governments to a specific transport mode. In this context, again, cream skimming is an issue as it is unlikely that new developments will attract private funding if they are not associated with matching user fees revenue guarantees.

But cream skimming and mis-targeted regulation have much broader effects than direct but simple measures of access and affordability suggest. Consider transport again. If the low income groups cannot afford to get to where the jobs are, they will face much more general poverty risks rather than just transport poverty. And this is an issue that have been on the transport policy agenda for some time and also nicely illustrated by Currie et al. (2018).They find that on average "Public" operations had an average user trip distance normalised score significantly better than the average for "Non-Public" cities. This has additional distributional impact across different income groups and sometimes across consumer types (i.e. rural vs urban).

To get a fuller sense of the consequences of these types of difference associated with access and affordability, it is useful to rely on computable general equilibrium models (CGEs). They can account for the multiple ways in which the welfare of the poor can be influenced and they can be structured to account for the relevance of ownership.[30] The more encompassing social diagnostics allowed by these complex models shows that the consequences of mis-targeted commitments made through privatization can have consequences that go well beyond those discussed in the context of the preparation of a PPP deal for instance, notably because it their effects through the labor market. Chisari et al. (1999) for Argentina, Solaymani et al. (2014) for Malaysia, Boccanfuso et al. (2009a) or Estache and Grifell-Tatje (2013) for water privatization in Mali and Boccanfuso et al. (2009b) for electricity reform in Senegal all illustrate the necessity of accounting for multiple secondary interactions across sectors and factor markets to be able to get a full sense of the social impact of ownership choices. And once again, one of the main messages of this research is that it is not ownership that mattes but the regulation of the service that makes a difference. Unless this regulation is designed to share any efficiency gains associated with the reforms that come along with privatization, these gains simply turn into rents for the investors rather than welfare gain sfor all parties involved and in particular the poor consumers.

4. Concluding comments

Overall, this (selective) review of the latest evidence on the efficiency and equity effects of infrastructure privatization provides good reasons to make the case for more encompassing and more analytically robust assessments. Partial assessments are useful but can be misleading and reinforce the uncertainty on the actual effects associated with the limitations due to data quality, differences in methods and biases in perspectives.

[29] See Guzman and Oviedo (2018) for a recent illustration in the case of Bolivia and Gomez-Lobo (2020) for a more encompassing discussion of reforms failures, which includes social damage and policy reversals, as well as a detailed assessment of the Colombia urban transport sector reform experience.

[30] For a detailed discussion of the potential use of CGEs in the context of regulatory evaluations, see Chisari et al. (2007).

Despite these limitations, the first main message is that ownership is not the main performance driver in any of the sectors. The "control variables" that characterize the context generally matter much more (i.e. the redesign of a market structure, the degree of competition or the regulatory capacity) to the way each sub-sector delivers on the main policy goals. And in many ways, it is the matching of the overall reform package with the local institutional capacity that makes a difference.[31]

The second main message is that privatization, as most policies, comes with trade-offs and constraints. For instance, static efficiency (i.e. cost efficiency) may be achieved at the cost of dynamic efficiency (i.e. under-investment) or access may be achieved faster at the cost of lower quality or lower affordability. But once again, the direction these trade-off take are as much more correlated with the "control variables" than with the ownership choice. The difficulty for impact evaluations is that these factors often influence the trade-offs slowly, over time. First impressions can be misleading on any of the outcomes.

On the evolution of evaluations

In many countries, 20-30 years ago, privatization was indeed an attractive policy option because of the fiscal inability to finance investments needed to meet a fast growing demand. It did bring fresh capital into the sector in many countries. In most cases, the *initial* fiscal payoffs were actually quite positive and in many, they have continued to be positive since early on. Privatization often came also with sustained efficiency payoffs in some sectors as documented by the initial wave of academic research evaluating the first effects of the policy. But the most recent evidence highlights that neither the fiscal nor the efficiency gains could always be sustained (as already hinted at in Gassner et al. (2009) or Andres et al. (2008)).

In many cases, the disappointing long run fiscal effects reflect the outcomes of contract renegotiations, in particular in the water and transport sector. These did indeed often result in an increased fiscal burden as government were asked to compensate for the inability of the private operators to control costs and/or to increase revenue as initially committed (Reyes-Tagle (2018)). In developing countries, the financing gaps continue to be about as large as they were 20 to 30 years ago despite the efforts of international organizations to bridge financing needs. As for OECD countries, since the 2008 crisis, political speeches abound with commitments to scale up infrastructure investments in close collaboration with private partners, but there is little evidence that they made much of a difference in real terms. In practice, this boils down to cheap talk.

The evolution of the assessment of the efficiency effects is more likely to be explained by the limitations on the improvement margin defined by the initial composition of costs. In the initial wave of reforms, the main cost savings came from employment cuts. Once that "low hanging fruit" had been consumed, it was becoming harder to achieve equivalent gains from other costs components. The main instrument then became the change of technology. This was relatively easy in electricity, port or telecoms. It proved a lot harder in the other sectors. In roads, rail or water & sanitation, the difficulties encountered in implementing cost cutting efforts through technological change help explain the high rates of renegotiation. They also explain why, in addition to the fiscal transfers obtained, the operators managed to get the regulators to switch from the pure incentive based regimes to hybrids one, in which a fair share of costs were enjoying automatic pass-through to users or taxpayers. In sum, after some time, both the margin and the incentives to cut costs and improve efficiency had shrunk quite significantly.

While this evolution in the fiscal and efficiency effects associated privatization are important, they are less politically sensitive than the evolutions in the social effects of the policy. The slow progress made in improving access rates in poor countries is an obvious indication of an underperformance. And for all country groups, the slow progress made in finding the funding to implement the energy

[31] See Estache (2019) for a detailed discussion of the relevance of institutional characteristics in the design and implementation of infrastructure policies.

and mobility transitions is a second indication. But the most general and most antagonizing indicator may have been, in both poor and rich countries, the reduction in affordability that took place as a result of the reforms designed to include privatization as a policy option. This may be the most controversial effect associated with the privatization policies because it is also the most visible to the population at large. It has been a major factor in the wave of "re-municipalization" discussed earlier and in the years that will follow the recovery from the "virus recession", the share of income to be allocated by households to paying for regulated public services will continue to be a politically sensitive topic.

So… why did privatization not deliver as much as expected?

The first thought that should come to mind to any analyst is that the reforms did not really address major governance issues (reflecting corruption, lack of technical skills, lack of commitment to allocate the resources needed to get the regulatory job done, and lack of accountability for failing on any or all of the previous issues).[32] And these governance weaknesses have been a problem in all country groups, rich and poor. A majority of countries focused on creating autonomous regulatory agencies expected to ensure compliance by all parties with the contractual commitments made at the time of privatization.[33] This was supposed to eliminate self-regulation or political regulation by the sector ministries. But it has not been enough to fix inherited governance issues. Political interference continues to be an issue in all country groups and regulatory institutions have not been able to deliver as expected, even if initially many enjoyed somewhat of a honeymoon reflected in the initial performance assessments. In many ways, the bargaining power of regulators was often insufficient when compared to the leverage of private actors, in particular the growing role of institutional investors in the sector noted since the early 2010s.[34]

A second explanation is the underestimation of the relevance of processes by many of the teams dreaming up and implementing the reforms. According to the IMF Public Investment Management Assessment (PIMA) approach designed to help identify weaknesses in the implementation of infrastructure policies, and tested in a sample of 30 countries, the main weakness start as early as in the allocation and implementation stages (project appraisal, selection, and management, as well as asset monitoring).[35] In more concrete terms, this is about a poor design and implementation of the procurement process. These weaknesses lead to imperfect competition *for* the markets that offset the successes achieved by the efforts to stimulate competition *in* the market.

Unbundling the sectors to allow entry of new private players allowed by privatization in countries large enough to have a least two service providers was an important part of the restructuring. But it was not enough. And it was not supported by a more encompassing adjustment to processes inherited from the past approaches to management of the sector. Again, according to the survey conducted by the IMF, the design and implementation of policies are reducing the odds of successful PPPs as early as the planning stage. Similar conclusions were reached by the European Court of Auditors (2018) in their review of the EU experience with PPPs.

Finally, with respect to the social issues, the importance of efficiency-equity trade-offs were too often underestimated by the reform teams. This has been documented in recent research on the mistargeting of tariff designs adopted by regulators as discussed earlier. But just as importantly, and much less widely appreciated, it is also the result of the failure to recognize (and the decision to ignore upfront) the actual importance of cream skimming as a way of getting private deals done.

[32] Herrera (2019) for water, Imam et al. (2019) or Cummins and Gillanders (2020) for electricity

[33] Initially everyone was talking about independent regulatory agencies, but time has taught all observers that independence has been limited, which is why many now talk about autonomous or separate agencies, to reflect the fact that they are institutions separated from the Ministry they are related to.

[34] The growing role of non-sector specific actors has accelerated the confusion between public and private interests by the managers of privatized companies keen on meeting the return expectations of institutional investors rather than the commitments made to current and future users of the privatized services. This is illustrated by the excessive distribution of dividends by firms underinvesting in much needed capacity. See Bertomeu-Sanchez and Estache (2019) for instance.

[35] IMF (2018)

Ignoring the consequences of designing packages to maximize the odds of getting some private financing may lead to an underestimation of negative social and fiscal incidence. Private investors do not want high risk, low returns deals. These trade-offs are quite apparent in the water (i.e. Marson and Savin (2015)) and in urban transport sector (or Currie et al. (2018)), which are both quite politically sensitive. And they illustrate the consequences of the weaknesses in design assessed by the IMF (2018).

So… where do we go from here?

The fiscal pressure that followed the 2008 crisis is likely to be hardened by the fiscal packages needed to allow countries to recover from the "virus crisis". This means that the case to try to leverage private money with public money will become stronger. It is likely that PPPs will stay on the agenda of many countries. But their design, their implementation, their regulation and their enforcement should do a much better job at internalizing the lessons from the mistakes of the last 30 years. And this should probably start with much better diagnostics of the scope to improve governance and the efforts to match the PPPs decisions with the various institutional limitations the countries and/or the sectors face.

Ultimately, the needs are such that partnering with the private sector, not just to manage but also to finance the large investment and operational needs, has to be part of the policy toolkit. This is even more necessary now that fiscal constraints are increasingly binding. But it cannot be based on fake news about the risks and the challenges these partnerships imply, in particular the brutal social risks. It would be counterproductive.

It would also be unrealistic to expect that all forms of PPPs will be successful in all country types. The poorest countries are still seen as high risks by many potential investors and trying to force the deals in high risks context. Sticking to this strategy is likely to lead to the fiscal and social costs of cream skimming discussed earlier. It is also unrealistic to expect that PPPs will be equally successful across sectors, as illustrated by the wave of re-municipalisation or re-nationalization noted in the water and toll roads sectors.

Some more realism and a lot less ideology will go a long way in allowing PPPs to deliver more and better infrastructure for all. Without a real rather than simply a narrative change in that direction, the doubts on the effectiveness of this policy option will continue to dominate policy debates, simply because the encompassing evidence will validate these doubts. This is likely to imply that it will take much longer than needed to close the increasingly pressing social and environmental gaps characterizing the sector. Global infrastructure poverty is growing while these debates continue because politicians and their advisors still bet on tools they don't really fully understand and often misuse. And privatization is one of those tools.

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