

ORIGINAL ARTICLE

Developing public-private partnership initiatives in the Middle East and North Africa: From public debt to maximizing finance for development*

Rabah Arezki

World Bank & Harvard's Kennedy School of Government, USA

ABSTRACT

This paper argues for a novel approach to financing infrastructure needs in Arab countries. It first describes the context of rising public debt in the region, contrasting it with the vast infrastructure needs. It then discusses the challenges in meeting these needs with traditional financing. The paper then makes the case for maximizing finance for development by using public-private partnerships and presents a few successful examples in Arab countries. Finally, the paper explores the way forward and concludes on the need for strong state capacity and integrity to promote the “maximizing finance for development” approach.

Keywords: *infrastructure; Public-Private Partnership; economic development; Middle East and North Africa*

1. Introduction

In March 2017, the World Bank Group set out a long-term vision of using development assistance and/or government spending to spur private sector investment—often called “crowding in”. That document, produced for discussion at the Development Committee, introduced the “maximizing finance for development” (MFD) approach to infrastructure finance, which entails promoting private finance, wherever possible, to pay for the trillions of dollars of global infrastructure needed to support the sustainable development goals.¹

The MFD approach argues for a changed role for multilateral development banks (MDBs), in which they would use their development assistance funds to encourage private finance, especially from largely untapped long-term institutional investors.

Specifically, to entice commercial financing, the MFD approach promotes reforms to address market failures and other constraints, such as improving the domestic legal and regulatory framework. Where risks remain high, the MFD approach calls for the use of guarantees and other

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*CORRESPONDING AUTHOR

Rabah Arezki, 1818 H St NW,

Washington, DC 20433, USA;

arezki@worldbank.org

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¹ See <http://siteresources.worldbank.org/DEVCOMMINT/Documentation/23745169/DC2017-0002.pdf>.

risk-sharing instruments. Only when market solutions are not possible through reforms and risk mitigation does the MFD approach deem official development assistance appropriate. This paper aims to demonstrate why and how the MFD approach could help the Middle East and North Africa (MENA) region unleash its potential.

Indeed, when governments have limited or no ability to increase spending, the MENA region could leverage private finance to help build infrastructure—such as power plants and airports—and help enhance the quality of public service delivery. The vehicle to do just that is commonly known as public-private partnerships (PPP). While there is no one widely accepted definition, the World Bank’s PPP Knowledge Lab defines a PPP as a “long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance.” PPPs typically do not include service contracts or construction contracts, which are categorized as public procurement projects, or the privatization of utilities where there is a limited ongoing role for the public sector.²

Scaling up PPPs is essential if MENA countries are to address the multifaceted set of challenges they face: moribund private sectors, low public-sector efficiency, and the need to create millions of jobs for their young populations. Given their vast experience and knowledge, MDBs can help with the origination and the financing of PPP projects by providing technical assistance to governments, making government commitment to reforms credible and mitigating risks by providing guarantees.

Conceptually, the matching of demand and supply of funds for infrastructure is hindered by both market and government failures, some of which are well understood and others somewhat less so:

- the public good nature of infrastructure projects, in which non-paying consumers cannot effectively be excluded from using them and their availability is not diminished by use—more formally known as non-excludability and non-rivalry in consumption,
- the market power of the operator of the infrastructure facilities, and
- the externalities (positive and negative)—including through trade, growth, and network spillovers—associated with infrastructure investments.

Infrastructure projects often encounter obstacles because they are so complicated—they involve many agents (among them: construction companies, operators, insurers, government, owners, citizens), a complex chain of tasks (including building, maintenance, service delivery), and, inevitably, multiple informational asymmetries regarding quality, costs of service, and ultimate benefits. Informational asymmetries, in particular regarding quality—for example, related to the inputs used for the infrastructure project by the private sector—lead to market failures. These failures call for a delicate balancing of public and private interests to ensure incentive compatibility—to limit opportunistic behavior on the part of both the public and private sectors—and appropriate risk-sharing at various stages of the infrastructure project, as a large economics literature on PPPs has emphasized.

One of the central insights of the literature (see Iossa and Martimort (2015) for an overview and Estache and Fay (2007) for discussion of the evolution of the debate on infrastructure) is that it is

² See PPP Knowledge Lab (<https://pppknowledgelab.org/guide/sections/1-introduction>). An increasing number of countries are enshrining a definition of PPPs in their laws, each tailoring the definition to their institutional and legal particularities.

generally incentive-efficient to structure concession contracts by bundling construction and service-provisions together with a single private operator. That provides a strong incentive to the builder to construct the facility in a way that minimizes future operating costs. While the literature has focused on incentive issues, researchers have paid little attention to origination and financing, including under PPPs, and to the role of MDBs.

One important exception is Arezki *et al.* (2017), who identify the main institutional obstacles that prevent the flow of savings towards infrastructure investment and propose a key institutional fix to unlock the current savings glut and reverse the recent trend of secular stagnation. They argue that the solution is to reshape the PPPs in infrastructure and the classic model of MDBs.

Traditionally, PPPs have been bilateral contracts between a private concession operator and a government agency, while development banks offer financing to projects that could not attract private funding but have a high development impact.

Arezki *et al.* (2017) propose a model in which PPPs can involve three or even four partners, with the additional partners being a development bank and long-term institutional investors. And the new model for development banks is to transform them into originate-and-distribute banks for PPP infrastructure projects. That is very much related to the so-called MFD approach that aims to maximize private sector financing.

This paper looks at the situation in the MENA region and its infrastructure needs and the challenges in meeting those needs with the traditional financing model. It makes the case for MFD financing and presents a few examples of successful examples in MENA. Finally, the paper looks at the way forward.

2. Context

Although there is a sustained global economic recovery, the MENA region is benefiting little because of myriad persistent shocks—including persistently low oil prices and escalating tensions and conflicts that are spilling over across borders. Those conflicts have created refugee crises.

Oil exporters in MENA have been severely hurt by low oil prices, which are about half the 2014 levels (see **Figure 1**). In oil-exporting countries, the oil price decline has turned fiscal and current account surpluses into deficits (see **Figure 2**). There are, however, important differences across countries in MENA. The effect of the decline in the price of oil on GDP depends very much on a country's degree of dependence on oil exports and on what proportion of oil revenues goes to the state.

In response to this historical collapse, many MENA countries, especially those in the Gulf Cooperation Council (GCC), have undertaken bold reforms, such as eliminating fuel subsidies, cutting capital and current expenditures, and introducing revenue-raising measures such as value-added taxes. These measures have helped stabilize their economies by reducing deficits and even moved some countries back to (small) surpluses. In the medium run, oil exporters in MENA need to transform their economies by creating the conditions to foster risk-taking and entrepreneurship in the private (and public) sector to absorb the fast-growing youth population entering the labor market.

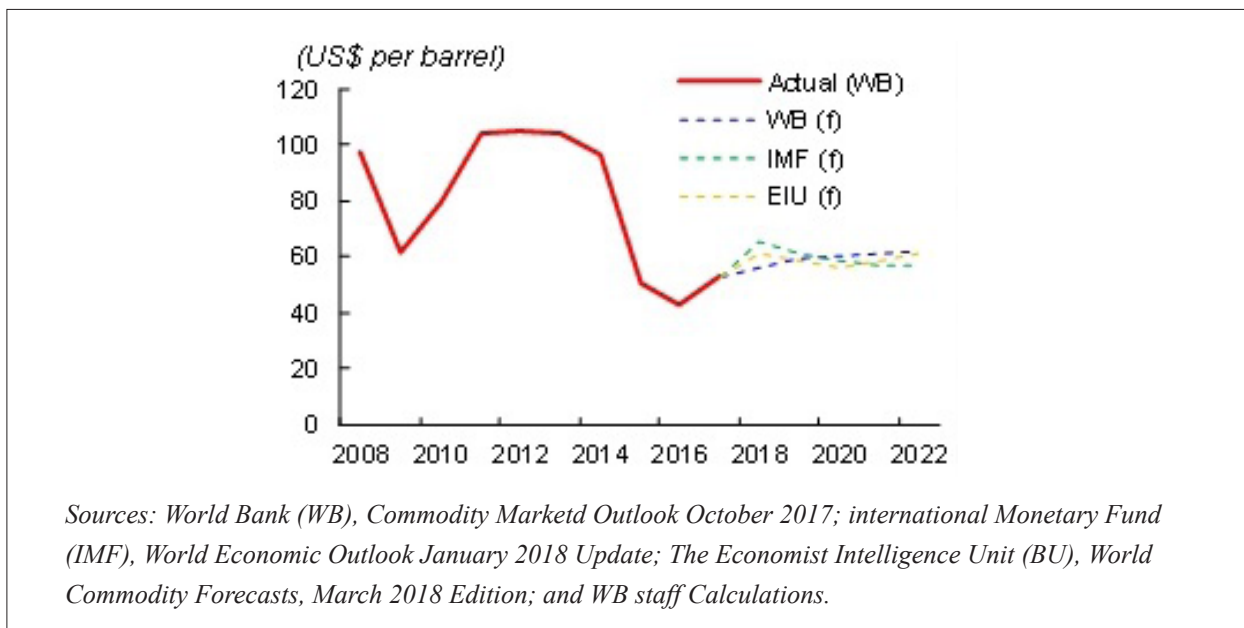


Figure 1. Crude oil price, actual and forecast.

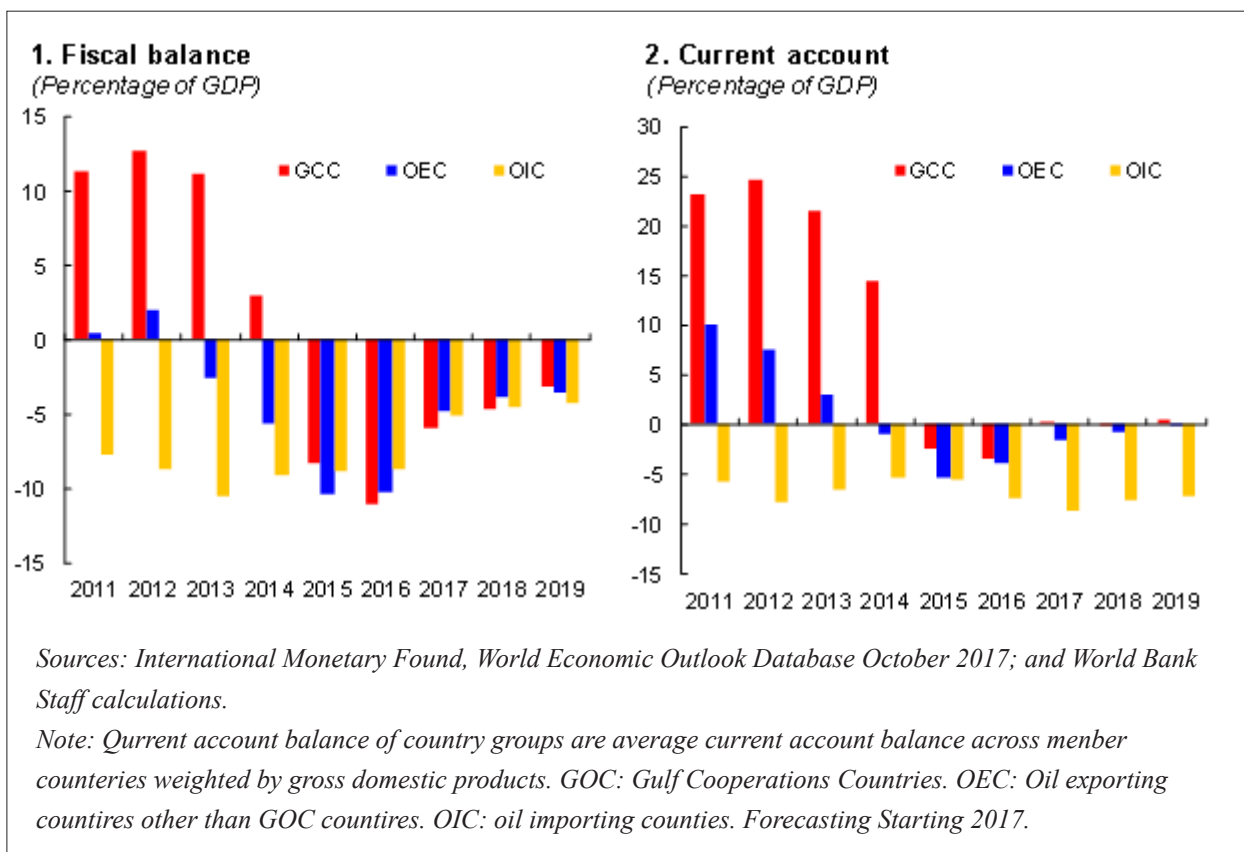


Figure 2. From "Twin Surpluses" To "Twin Deficits" for Country Groups in MENA region.

Although MENA oil importers have realized an increase in real income from lower oil prices, they have also experienced severe adverse spillover effects because of the lower income in their neighboring oil exporters, especially large GCC countries. These spillovers include a reduction in grants, remittances, and investments. On balance, oil importers in MENA have continued to run

fiscal and current account deficits and to accumulate debt (see **Figure 2**).

Even if many MENA countries, especially oil exporters, appear to have relatively low levels of debt, there are important contingent liabilities related to state-owned enterprises—such as non-performing loans—that suggest an escalation of public debt. With little ability to increase spending to embark on the kind of transformational agenda that is required to address the socio-economic challenges they face, MENA countries will have to mobilize private sector financing.

3. Infrastructure needs and challenges

The infrastructure needs in the region are large. They are estimated to be around US\$100 billion annually. Most of the needs are in electricity generation and transportation, followed by water and sanitation and information and communication technologies.

Infrastructure traditionally has been financed, and managed, by governments with little private sector involvement. Because budgets are tighter, there will be underinvestment in the maintenance of publicly owned and operated infrastructures. Interestingly, this is what led to the privatization of infrastructure in the United Kingdom in the 1980s, among other places (Estache and Fay, 2007).

Existing PPPs in MENA are not large both in relation to what is needed (see **Figure 3**) and in comparison with other regions³ (see **Figure 4**). PPP investment in the region amounted to a few billion US dollars as of 2016. These PPPs are mainly in a few countries—Jordan, Iraq, and Morocco. They are concentrated in telecom, electricity, and seaports (see **Figure 5**).

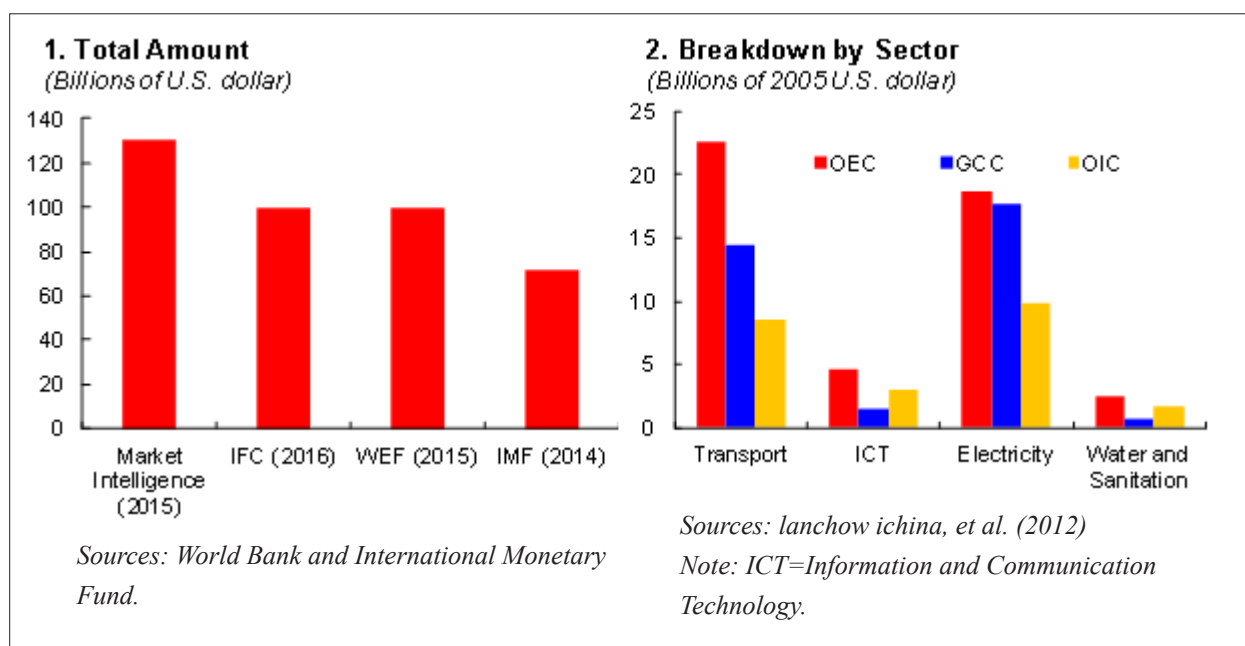


Figure 3. Annual infrastructure investment needs in the MENA region.

³ Due to data availability of the source, only low- and middle-income countries are covered in the figure.

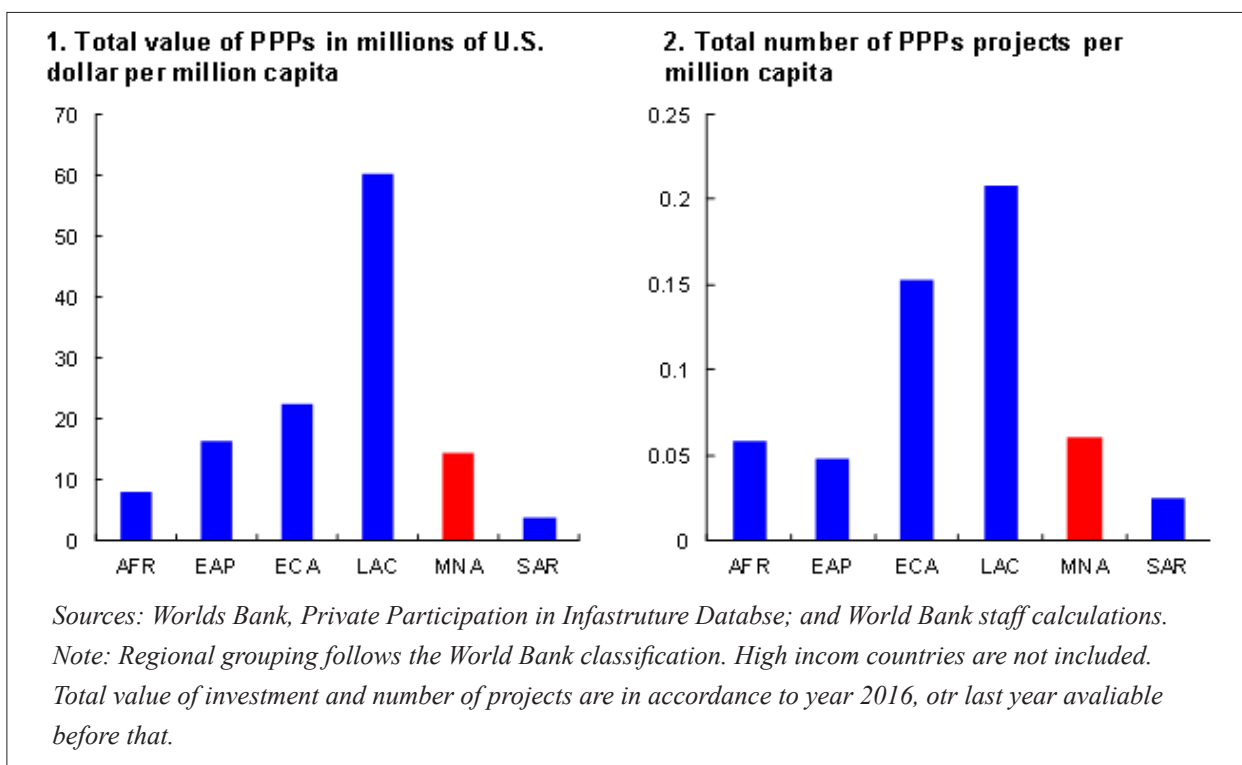


Figure 4. Public-Private Partnerships in the Global Context.

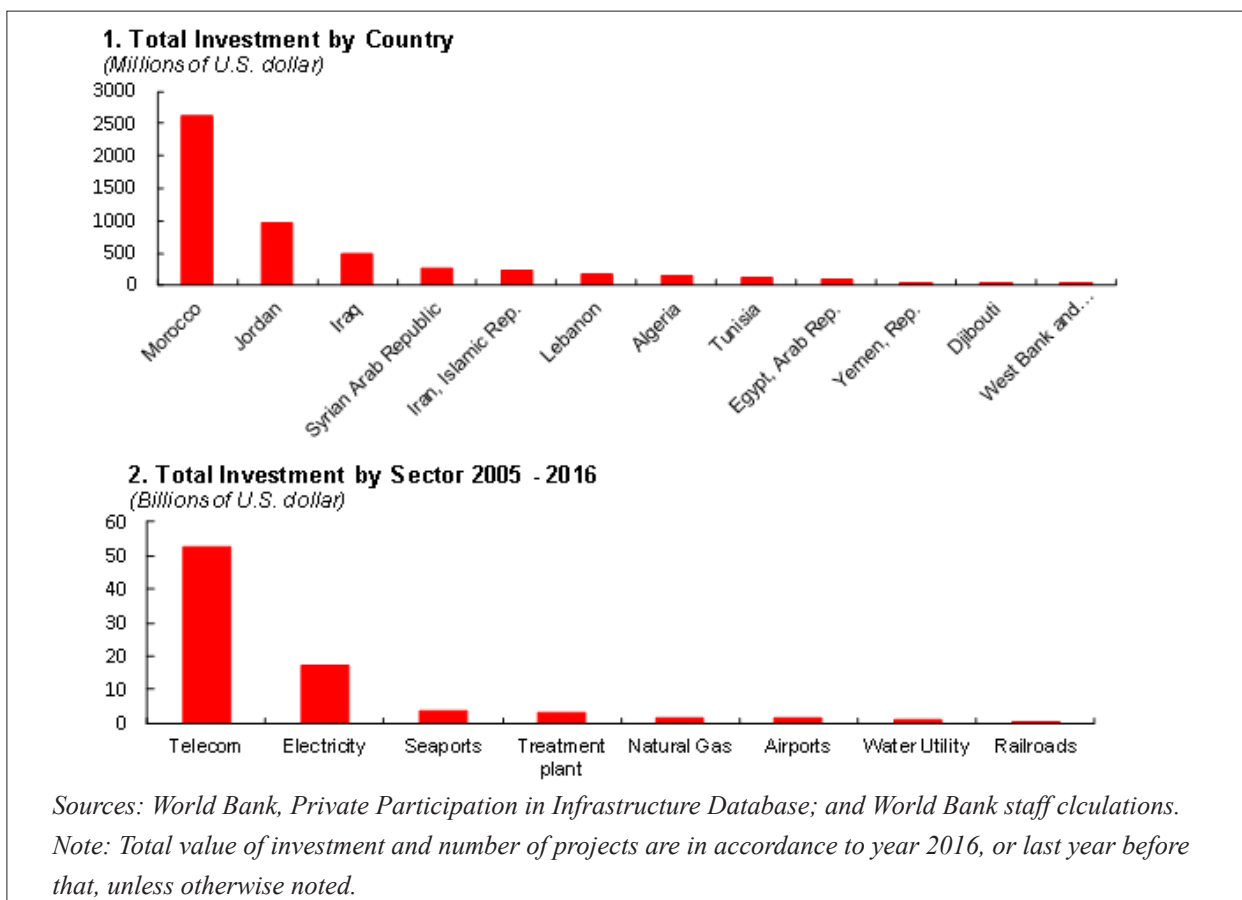


Figure 5. Breaking down PPPs in MENA.

4. The political economy of implementation and management in MENA

MENA states have had a poor track record in both the delivery and the management of public utilities. There are many reasons.

A primary factor is the so-called curse of financing. The excess profits from oil have turned governments into principals and citizens into agents. It is the reverse in economies in which taxpayer monies are the main sources of government revenue. As a result, there is little pressure on governments to do better. Moreover, the excessive reliance on the traditional source of financing (entirely from public finance) also plays a role in inducing inefficiency. Public financing of infrastructure without internal checks and balances allows for overpricing and capture. It also prevents efficient pricing of risks and risk sharing with other partners such as the private sector and MDBs.

Another factor in the poor track record of MENA countries is the concentrated nature of bureaucracies that make decisions from distant central states but have limited understanding of and pay little attention to local needs. The results often are poor implementation and delivery of services to citizens. That overconcentration of the state and the lack of information accessible to citizens make it unlikely that states will achieve the dynamic adjustments needed to address the region's socio-economic challenges and in fact drive down efficiency. State capacity at the local level ends up being even weaker than at the center, making it unlikely that subnational entities can borrow. Overconcentration is compounded by the lack of manager empowerment. Within overly concentrated bureaucracies, there are few incentives for managers to take initiatives and build new expertise. The lack of talent selection and retention reinforces poor state capacity.

5. The case for “MFD” finance: Crowding in the private sector

With government coffers empty(ing), the needed transformation in the region should be largely financed by the private sector—an approach called “maximizing finance for development” or the MFD.

There are three main advantages to the MFD approach.

The first is the potential efficiency gains that come from involving the private sector. Governments in the region have a poor track record of delivering and managing utilities, especially when compared with countries with similar income levels. The private sector can potentially better deliver and manage utilities, provided that the right incentive system is in place.

The second advantage is the ability of governments to shed some of the risks involved in building and maintaining infrastructure. The public sector can share risks with the private sector and MDBs. Depending on the nature of projects (whether building new or on an existing facility, for example), the balance between construction, demand, and regulatory risks differs. MDBs play a key monitoring role of both the service provider and the government agency, but also a fundamental role in structuring financing efficiently and providing optimal insurance or guarantees to private investors in PPPs.

The third advantage is a modulation in the cost of borrowing. For MENA countries, the

borrowing costs are rising even though they are historically low globally. MENA countries are paying more because of lower oil prices, government inefficiency in building and managing infrastructure, and the interest rate premium associated with political risk. In some cases, an exchange rate premium is in play because of potential overvaluation.

The region already has some successful PPPs that illustrate how a scaled-up MFD approach could bring about important the transformation in the delivery of public services in the MENA region:

i. Jordan: Queen Alia Airport

In 2007, the International Finance Corporation (IFC), which is part of the World Bank Group, advised the Government of Jordan on structuring and awarding a 25-year concession for the Queen Alia International Airport in Amman following a competitive bidding process. The project includes rehabilitating existing facilities, constructing a new terminal to handle 12 million passengers per year, and operating the airport.

The concession was awarded to Airport International Group, whose bid returned 54.58 percent of gross revenues to the government—the highest revenue-sharing percentage for similar projects anywhere in the world. This was the first successful airport PPP project in the Middle East and the largest private sector investment of any type in Jordan to date. It is serving Jordan as a model for launching a full-scale public-private partnership program in infrastructure.

ii. West Bank and Gaza: Solid waste management

The provision of standard municipal public services, especially solid waste management, was of particular concern in West Bank and Gaza. Local capacity to manage a new solid waste facility was insufficient, so the Joint Services Council for Hebron and Bethlehem (JSC-H&B) sought IFC support to find an experienced private sector partner to manage the new facility through a PPP. The IFC provided an integrated solution that led to the first PPP in the West Bank. The Greek consortium that won the tender in 2013 is responsible for operating and maintaining the Al-Minya landfill and two transfer stations at Hebron and Tarqoumiya. The concession has contributed to improved quality of services, reduced health and environmental risks, and lower greenhouse gas emissions.

iii. The nexus between reforms and PPPs: the Egyptian experience

Economic reforms have unlocked tens of billions of dollars of private investments in the Arab Republic of Egypt's energy sector. The reforms included a transition to bills that reflect the actual cost of providing energy and the introduction of market competition across the energy sector. Between 2014 and 2016, the cost of subsidies in the electricity sector fell from 6.6 percent of GDP to 3 percent of GDP. In addition, competition and transparency are being promoted in the electricity, renewable energy, and gas sectors through private investment and newly established independent regulators. The World Bank Group has been working on reforms in Egypt that have unlocked more than \$20 billion of private investments in oil and gas exploration and \$5 billion of investment in renewable energy. Similarly, the World Bank is supporting 1,500 megawatts of private renewable energy capacity through development policy financing (so-called DPF), which are being supported by the International Finance Corporation

(IFC) with actual investments. IFC has been involved in parallel to the World Bank to anchor the private aspects of the sectoral reform agenda from the start, which facilitates a seamless process.

Value capture and urbanization: The case of the China Development Bank

Value capture has been overlooked as a way to finance greenfield investment, where China has decades of experience in collaboration with the China Development Bank (CDB). The China Development Bank is both the leading bank in China for medium- and long-term funding and investment and the largest development finance institution in the world. At the end of 2016, its total assets were RMB14.3 trillion (US\$2.3 trillion), including loans of RMB10.3 trillion (US\$1.6 trillion). It had a net profit of RMB109.7 billion (US\$17.3 billion). The CDB's principal source of funding is through debt securities. Urbanization is an important goal of CDB financing and it has pioneered a partnership in financing urban-related projects with local governments. CDB has been playing a key role in funding China's massive urbanization. This box draws lessons from the CDB's leveraging value capture to help finance urbanization in China.

In 1998, CDB along with the Wuhu Municipal Government in Anhui Province created the “Wuhu Model”, which established a bank-government cooperative approach to financing local infrastructure construction, and overcame the legal prohibition on local governments borrowing directly from markets. The Wuhu government used some of its high-quality assets to set up the Urban Development Investment Corporation” (UDIC) for infrastructure investment and financing. CDB then provided 10-year loans of RMB1.08 billion to the UDIC for a bundle of six Wuhu infrastructure projects, including road construction and water supply system refinement. Loan repayment was guaranteed by a “repayment reserve fund” set by the Wuhu government. Recently, the focus has been on a single project rather than many. The UDIC model—in which the CDB channels funds into local urbanization development, overcoming the financing difficulties faced by resource-strapped local governments—has been copied extensively throughout China.

In the UDIC approach, repayment of loans has been financed through three channels:

- revenue from the project(s),
- government budgets, and
- income from the increase in the value of the land surrounding the projects.

The land income accrued from the value capture process seeks to recover some of the increase in revenue or land value realized by businesses located near infrastructure projects. With monopoly power over the supply of land, local governments have been able to lease state-owned land use rights, which generate a significant volume of income. The revenue from the approach has grown rapidly—from less than RMB0.5 trillion in 2003 to more than RMB4 trillion in 2017. For two urban renewal projects in Shanxi Province funded by CDB, 10 percent of the local government's land income was allocated to loan repayment.

CDB, among other Chinese banks, has been undoubtedly successful in supporting China's

urbanization. And the fundamental base has been China's rapid economic growth—driven by the country's reform policy and integration into the world economy. The main risk to urban finance is the changing gears of the Chinese economy and the world economy. Another comes from local governments' provision of collateral for the urbanization projects that brings them mounting debts; thus, deleveraging has been the current policy direction.

6. Getting MFD right

Reinforcing state capacity and devising appropriate legal frameworks for PPPs are essential if MFD is to succeed. The capacity of the state to negotiate PPPs must be reinforced to maximize job creation and government revenue.

At its core, success requires that the state moves from being a “doer” to an “enabler”. This relegates the state to a regulatory role and to promote markets that have few, if any, barriers to entry and exit. Governments in MENA should disengage from sectors where there is no rationale for public intervention and should be seen as honest brokers by providing a regulatory framework that improves markets. Many countries in the region have promotion policies on their books but enforcement is selective.

Rate regulation is a critical issue.⁴ PPP operators are often local natural monopolies. The regulation of monopoly pricing is therefore key to protecting both customers and the PPP operator. Of course, rates are set during the bidding stage. But contingencies are likely to arise and require rate revisions. It is in this scenario that a regulatory commission, as well as representatives of consumer associations charged with setting or revising rates, becomes important.

MDBs play a fundamental role in reducing both market and government failures and in helping governments identify and structure infrastructure projects. The impact studies they undertake and the strict due diligence standards they impose on the origination of new infrastructure projects are the best guarantees of the sustainability of these projects. Moreover, because of their international governance structure, they also are ideally placed to help mitigate political risk. Indeed, MDBs' debt is senior to other commercial creditors according to existing conventions. Also, as repeat players and essential partners in infrastructure investments, MDBs are in a stronger position to be able to enforce repayment on their debt. MDBs can thus play a critical disciplining role, without which private lenders would not be willing to invest. MDBs could further leverage this disciplining role and act more as catalysts stimulating private investment in projects that are currently perceived as too risky and with too few protections for private investors. To fully play that role, however, MDBs must venture further in the direction of extending guarantees to private investors, so as to bring in more private capital (Arezki *et al.*, 2017). The Multilateral Investment Guarantee Agency (MIGA), part of the World Bank Group, provides political risk insurance guarantees to private sector investors and lenders. MIGA's guarantees protect investments against non-commercial risks and can help investors obtain access to funding sources with improved financial terms and conditions.

But MDBs have limited funds available for infrastructure investment. This is why MDBs should adopt the MFD approach—which would allow them to conserve their scarce capital and leverage

⁴ See <http://ppp.worldbank.org/ppp/legislation-regulation/framework-assessment/legal-environment/dispute-resolution>.

their gate-keeping capabilities to give PPP infrastructure projects access to the vast pools of long-term institutional savings.

Other commitments a country makes towards the international community can also be important. For instance, signing an international arbitration treaty can have an important signaling role. Indeed, signing such treaty could act as a commitment device to also encourage private sector investment and the establishment of PPPs.

Fiscal risks and public-private partnerships

A well-structured PPP brings private capital for investment, private-sector expertise, and management incentives needed for enhancing service provision to users. But it also entails potential fiscal risks for the government, which, if not foreseen, can exacerbate the already big constraints on MENA government spending. The fiscal risks PPPs pose are potentially large (World Bank, 2017) and occur for at least three reasons.

First, the fiscal costs of PPPs tend to be deferred or contingent. Deferred and contingent costs are not effectively controlled by traditional government budgets, which along with medium-term fiscal forecasts, can deal with predictable costs that will be incurred in the next few years. But traditional budgeting is largely ineffective in accounting for costs that will be incurred after the period of the forecasts. They are also ill-equipped to deal with the uncertain cost of guarantees—say, for an off-take agreement, construction, and exchange rate risks. As a result, the fiscal commitments contained in PPPs—whether in the form of deferred costs or guarantees—that can escape proper scrutiny. Moreover, the deferred fiscal costs of PPPs may lead to move debt off the balance sheet and create contingent and future liabilities, reducing fiscal space in the long term (Queyranne, 2014).

Second, governments face an opportunity cost when they concede the right to collect tolls or user fees to a private company. There is a common, but incorrect, perception that procuring via a concession or toll-based arrangement shifts the responsibility for paying for the project from the government to users and therefore reduces government expenditure (Organization for Economic Cooperation and Development [OECD], 2014). In fact, the government loses revenue it would have collected had it paid for the project. This opportunity cost is not usually included in government accounts but remains a cost.

Finally, almost all PPPs can create liabilities for future taxpayers and are onerous to prepare (OECD, 2014). Even if a government is not contractually liable for a minimum stream of future cash flows, it will still incur costs. PPPs are complex to design and implement and involve high transaction costs. Moreover, structuring procurement, preparing the tender, and negotiating the contract require substantial capacity and resources that governments facing spending constraints may not have. But in many if not most cases, governments are also likely to have to guarantee some minimum revenue because it is unlikely that private investors or their lenders will be willing to face the project risks without one (OECD, 2014). Any such guarantee creates additional liabilities and costs for the state.

A cash-strapped government under pressure to reduce its deficit in the short term may

prefer PPPs over public financing without taking into account that a PPP can cost more in the long run. This bias creates a risk of accumulating financial commitments that could prove unaffordable. Still, a properly constructed PPP that takes account both the potential costs to the government and any future stream of fees and payments to the private partner can be a win-win venture.

There are important complementarities among the government, the private sector, and MDBs which call for the following preconditions to participate in a PPP.

Preconditions for governments and the private sector include:

- **Political will and attractive returns:** The host government should be determined to involve the private sector in a competitive manner, including through international bidding process and limit collusion. That is, the government should be willing to enter into contracts (directly or through its subsidiaries) with the private sector. The risk allocation between the government and the private partner should be in line with market expectation and borne by the party best able to do so. The return on a project must be attractive enough to interest investors. This means, for instance, that in the power sector, tariffs should provide a reasonable return to investors for the risk they are taking.
- **Enabling legislation:** The law, along with implementing regulations, should open the door to private participation and authorize various government agencies to engage the private sector. For example, in the case of power generation, the government bodies should facilitate the supply of fuel, purchase power, and transmit and distribute it, while also enabling the Ministry of Finance to provide any guarantees that may be required. Government-controlled contractual bodies should be solvent and able to pay, and in certain cases backstopped by the Ministry of Finance to ensure that these are arrangements in which private commercial lenders can participate. Other contractual arrangements should be clear with minimal uncertainty (regarding, for example, arbitration of disputes and termination). A transaction advisor is often hired by the Ministry of Finance to ensure the integrity of the PPP process. Specifically, the transaction advisor will provide the necessary technical, legal, and financial advisory support for the procurement of a private partner involved in the PPP. The advisor should organize and run the procurement process—e.g., tender, feed-in tariff, etc. This must be in compliance with all elements of the legislation and all implementing regulations.

Preconditions on the side of MDBs include:

- **PPPs should be beneficial to the country:** In the electricity generation sector, for example, PPPs should reduce the average cost of generation, address production shortages, and lessen the sector's import dependence.
- **MDBs require a clean and reputable private sector “sponsor” with the requisite expertise and financial strength:** The IFC will not finance more than 25 percent of a project's cost but can mobilize financing from other banks if a reputable firm is involved in the project. To attract private financing, MDBs also require a clear regulatory framework in which contractual arrangements are strong and the distribution of risks and rewards is equitable.

7. Conclusion

In sum, PPPs are institutional arrangements that, if properly designed and implemented, allow authorities to improve infrastructure procurement and management, while also reducing overall public expenditure. This is done by auctioning off to the private sector a contract for the construction and/or the operation of an infrastructure asset—say, a toll road—for a specified period (usually 20 years or more), after which full ownership is generally passed on to the public.

If a PPP is well structured, different risks associated with the project will be borne by the party that is better able to manage them—that is, by the party that can control the risk through its behavior and is in the best position to absorb a potential negative shock. Typically, PPPs allocate the risk of construction and operation to the private party, which therefore has an abiding interest in controlling costs and delivering on time because it will hence not receive any payment until the infrastructure project is ready to be used. Moreover, because the private party will manage the asset for many years, there is no incentive to cut corners in ways that cannot be detected easily—a problem in many standard procurement procedures. Bundling construction and management also induces the private company to consider the overall lifetime cost of the infrastructure, and thus choose the design that will best minimize construction and operating costs.

Once the infrastructure is in place, the private company will begin to receive remuneration for its investment either through regulated user fees or so-called “availability payments” from the public authority. Availability payments are based on the achievement of predetermined performance targets. In some cases, remuneration comes from both user fees and availability payments. Because the infrastructure asset is monopolistic in nature, when user fees are involved, appropriate safeguards must be put in place to prevent the private manager from exploiting its market power over users. Forward-looking incentive price regulation, such as the so-called price cap, is usually preferred. That is because imposing limits on the tariffs that the regulated company can charge users—usually determined by an index that takes into account such factors as potential efficiency gains inflation—allows the company to appropriate any cost reductions it achieves during the period in which those limits are in place, while setting a firm ceiling on potential charges to consumers. Availability payments are more conducive to generating efficiencies because they focus on output rather than input, and therefore can encourage the private party to adopt innovative solutions.

While these potential benefits can be significant, it must be recognized that PPPs can have serious drawbacks. Probably the most important is their low level of flexibility when unforeseen circumstances occur. This is the result of the need for very detailed contracts to cement the trust between both the public and private parties, due to each being exposed to the risk of an opportunistic behavior of the other. These detailed contracts make it very difficult to change the core characteristics of the project once a contract has been awarded. That, in turn, makes PPPs particularly unsuitable in sectors in which technological change is so rapid and disruptive that the future is very hard to predict, making the associated risks too high.

Finally, the need for strong state capacity and integrity cannot be underestimated. Indeed, designing effective PPPs is a complex task that requires substantial technical expertise in all phases—which include feasibility analysis, bidding process, contract writing, setting performance targets, and monitoring, among other things. Moreover, commitment to the common good is

essential for establishing the right balance of risks and rewards with the private counterpart. This commitment will avoid the political backlash that would be associated with arrangements that place an excessive burden on the public sector, while allowing easy profits to the private sector.

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