



# An Overview of the Brazilian PPP Experience from a Stakeholders' Viewpoint

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Gaston Astesiano  
Tomas Serebrisky

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By

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Marzo 2014

Inter-American Development Bank

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## ABBREVIATIONS

ABCR Associação Brasileira de Concessionárias de Rodovias  
ABDER Associação Brasileira dos Departamentos Estaduais de Estradas de Rodagem  
ANATEL Agência Nacional de Telecomunicações  
ANEEL Agência Nacional de Energia Elétrica  
ANTAQ Agência Nacional de Transportes Aquaviários  
ANTT National Agency of Land Transport  
ARTESP Agencia de Transporte do Estado de Sao Paulo  
BDMG Banco de Desenvolvimento de Minas Gerais [MG Development Bank]  
BNDES Brazilian National Bank of Economic and Social Development (Banco Nacional de Desenvolvimento Econômico e Social)  
BNDESPAR BNDES Participações  
CEMIG Companhia Energética de Minas Gerais [State energy company]  
CESI Committee on Environment and Social Impact  
CGAPP Public-Private Partnership Management Council  
CGU Controladoria-Geral da União  
CODEVASF Companhia de Desenvolvimento dos Vales do São Francisco e Parnaíba  
COF/CBR Bank's Country Office in Brazil  
COPASA Companhia de Saneamento de Minas Gerais [State sanitation company]  
CPD Companhia Paulista de Desenvolvimento  
DNIT National Department of Transport Infrastructure  
EBP Empresa Brasileira de Projetos  
FIEMG Federation of Industries of the State of Minas Gerais  
GDP Gross domestic product  
IFC International Finance Corporation  
IMF International Monetary Fund  
MG [State of] Minas Gerais  
MIF Multilateral Investment Fund  
MPOG Brazilian Ministry of Planning, Budget and Management  
MT Ministerio dos Transportes  
PPP Public-Private Partnership  
RE1/FI1 Finance and Basic Infrastructure Division 1  
SEDE MG Economic Development Department (Secretaria do Estado de Desenvolvimento Econômico)  
SICEPOT-MG Construction Industry Association of the State of Minas Gerais

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## Executive Summary

There is a consensus among specialists, both economists and policymakers, that an adequate supply of infrastructure services is a key element for economic development. Under budgetary constraints, many countries have launched Public Private Partnership (PPP) programs to help cope with the need to improve their infrastructure.

This paper reviews the current status of the Inter-American Development Bank (IDB), hereinafter “the Bank”, intervention on PPP in Brazil, including a stakeholders’ survey on the performance of the Brazilian PPP program. The survey indicated several positive aspects of the program, as well as some areas of possible improvement. Aspects highly rated by all stakeholders, indicating general agreement on the high level of PPP effectiveness, includes:

- (a) The performance of common (or traditional) concessions;
- (b) The performance of the PPP Unit of Minas Gerais State;
- (c) Risks are viewed to be relatively minor regarding demand, credit availability, and foreign exchange; and
- (d) Availability of public and private funds for PPP.

Issues relatively poorly rated by all categories of stakeholders, indicating areas where stakeholders generally agree that more needs to be done to strengthen the prospects of successful PPPs, include:

- (a) Poor effectiveness in the use of traditional procurement procedures for the transparent, competitive selection of the private partner in PPP/concession projects;
- (b) Poor prospects of further PPP investments in education and health infrastructure; and
- (c) Poor quality of long-term monitoring of PPP/concession contracts.

Issues that are substantially more optimistic as viewed by the public sector (or internal stakeholders) than their private counterparts (or external stakeholders) include the following:

- (a) There are critical procurement constraints for the transparent, competitive selection of the private partner, as viewed by the external stakeholders, but not as much by the internal ones;
- (b) The internal stakeholders consider that auctions have been very effective for the transparent, competitive selection of the private partner in PPP/concession projects, but this view is not shared by the external stakeholders;
- (c) The internal stakeholders have a substantially more positive view about the outcome of existing procurement procedures to select concessionaires than the external stakeholders;
- (d) The external stakeholders are much less optimistic about further PPP infrastructure investments in education and health than internal stakeholders;
- (e) The private sector has a lower view on the human skills of the PPP Unit in the MPOG than the public counterparts;

- (f) The performance of the two PPP Units (MOPG and MG) to support other agencies is substantially viewed as more positive by the public sector than by private sector representatives;
- (g) The performance of IDB in providing support to the PPP Units in MOPG and MG is viewed as more successful by public than private sector stakeholders;
- (h) The performance of the PPP Management Committee (Conselho Gestor de PPP – CGP) is more successful as viewed by public than private stakeholders;
- (i) The potential lack of long term PPP commitment by the Federal Government is considered a more serious risk by the private sector than by the public sector representatives; and
- (j) While internal stakeholders rate as “fair” the performance of regulatory agencies (e.g., ANEEL, ANATEL, ANTAQ, ANTT), the external stakeholders rate them as “poor.”

Regarding the above issues, external stakeholders consider that certain activities or events are not properly conducted, while internal stakeholders provide more positive related answers. This may indicate areas where the public sector should invest more in tasks such as training and procedures; it may also indicate that not all PPP activities or events the public sector conducts are clearly communicated to external stakeholders (or the public). The public sector should consider conducting stronger public outreach to better inform the public.

While in general the IDB support to PPP in Brazil is considered satisfactory, a review of PPP implementation in Brazil and related lessons learned permit to formulate actions that will enhance future performance, including:

- (a) Aligning the program design with development priorities established by the government facilitates project preparation and implementation. This was the case when the Bank was responsive to the Brazilian government in assisting the country with PPP expertise exactly when the government had set as a priority expanding its PPP and concession program. As several Brazilian states, and some municipalities, are currently preparing to launch ambitious PPP programs, it will be very timely for IDB to reach out and provide its support, both financial and institutional, at the state and local levels.
- (b) Assist the federal government in reducing redundancy and inconsistency in the legal framework to expedite and increase the efficiency in implementing PPP and concession projects. This would avoid delays and additional costs as was the case with projects initially launched as PPP following the PPP Law (11.079/2004) and later rebid under the Concession Law.
- (c) Help government agencies improve communications. Public support is a requirement for the success of any PPP project, and a clear means of communication is therefore essential. Different groups of stakeholders may have very different views on PPPs, and different priorities and expectations. It is essential that the entities implementing

- a PPP project establish a clear communication strategy, with special attention to politically sensitive areas.
- (d) Assist in enhancing public disclosure of the contractual obligations of the concessionaries, which can lead to several benefits: (a) it provides a further check on corruption, which in addition to its direct benefits can enhance the legitimacy of private sector involvement in often sensitive sectors; and (b) when the concession agreement relates to the provision of services to the public, it provides consumers with a clearer sense of their rights and obligations, and can facilitate public monitoring of concessionaire performance.
  - (e) Carry out periodic audit of PPP projects, using adequate expertise, and making the results available to the public, which can contribute to assure public support to PPP and concession projects.
  - (f) Improve the dialogue with the private sector, including the provision of training, if needed.
  - (g) Consider the success factors identified by stakeholders. As part of the stakeholder survey carried out under this study, the respondents to the questionnaire identified the several factors as having great effect on the success of infrastructure PPP projects, such as appropriate project selection and preparation, adequate PPP staff training, adequate risk sharing mechanism between the private and public sector, and procurement procedures.
  - (h) Enhance public consultations. Under the stakeholder survey, 98 percent of the respondents considered that it is “very important” or “important” to carry out adequate public consultations as part of the preparation of a PPP project, while only 40 percent of them rated as adequate the public consultations carried out in the country for major PPP infrastructure projects.
  - (i) Step up support to PPP units, particularly the one in the MPOG and in states preparing to launch or enhance their PPP program.

A survey instrument, especially designed for this study, was answered by internal and external stakeholders in Brazil. A rating system was established to quantify most of the answers provided. The resulting scores were used to develop an overall PPP perception indicator, which this study has denominated PPP Perception Index (PPPPI), expressed on a scale of zero (worst) to 100 (best). The resulting PPPPI for Brazil was 66, computed by analyzing 58 quantifiable answers provided by each one of the 50 respondents (stakeholders), thus using a 58x50 data matrix (or 2,900 data points). This compares with a broad evaluation by the Economist Intelligence Unit (EIU) of the legal and regulatory framework and the investment environment for PPP infrastructure projects in Latin America and the Caribbean, which scored Brazil (along with Chile, Mexico and Peru) in the range between 60 and 80 (also on a 0 to 100 scale, where 100 represents the ideal environment for PPP projects).

In the potential case that this study will be extended to cover other countries in the region, and possibly states/provinces in some countries, a proposed broad interpretation of the PPP Perception Index is (a) Very good, 80.1 to 100; (b) Good, 60.1 to 80; (c) Fair, 40.1 to 60; (d) Poor, 20.1 to 40; and (e) Very poor, 0 to 20.

## An Overview of the Brazilian PPP Experience from a Stakeholders' Viewpoint

### I. Background

There is a consensus among specialists, both economists and policymakers, that an adequate supply of infrastructure services is a key element for economic development. There is an extensive academic research, empirical and theoretical, that analyzes the contribution of infrastructure development to growth and productivity.<sup>2</sup> While the empirical studies<sup>3</sup> on the impact of infrastructure on poverty and inequality are not unanimous, there is agreement that, under the right conditions, infrastructure development can play a major role in promoting growth and equity, thus contributing to reduce poverty. In particular, there is a growing perception that deficient infrastructure is one of the main obstacles to economic growth and development across Latin America and the Caribbean (LAC).<sup>4</sup>

The Ninth General Capital Increase (GCI-9) of the Bank<sup>5</sup> has set five priority sectors of which three are intimately related to the development of infrastructure of the region: (a) Infrastructure for social welfare and competitiveness; (b) Competitive Regional and Global International Integration; and (c) Protect the environment, respond to climate change, promote renewable energy and ensure food security. In particular the Governors of the Bank endorsed the Region's "need to step up investments in productive infrastructure to close the gap with the emerging markets and ensure sustainable growth."<sup>6</sup> As a study on infrastructure in LAC concluded, "the region is spending less

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<sup>2</sup> Queiroz, C. and S. Gautam (1992): "Road Infrastructure and Economic Development: Some Diagnostic Indicators." World Bank Policy Research Working Paper No. 921: <http://go.worldbank.org/T6Q3BII430>. Sanchez-Robles, B. (1998): "Infrastructure Investment and Growth: Some Empirical Evidence." Contemporary Economic Policy 16, 98-108. Canning, D. (1999): "The Contribution of Infrastructure to Aggregate Output." World Bank Policy Research Working Paper 2246. Demitriades, P. and Mamuneas, T. (2000): "Intertemporal Output and Employment Effects of Public Infrastructure Capital: Evidence from 12 OECD Economies." Calderón and Servén (2004): "The Effects of Infrastructure Development on Growth and Income Distribution." World Bank Policy Research Working Paper No. 3401. Leduc, S. and D. Wilson. 2012. "Highway Grants: Roads to Prosperity?" FRBSF Economic Letter 35, Nov. 2012. UK Department for International Development (2012): "Infrastructure and Growth." Growth Research News, December 2012 - <http://www.dfid.gov.uk/Documents/publications1/growth-research-news-1212.pdf>.

<sup>3</sup> Estache, A., Vivien Foster and Quentin Wodon (2002). Calderón and Chong (2004). [http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=22621](http://publications.worldbank.org/index.php?main_page=product_info&products_id=22621)

<sup>4</sup> Calderón, C. and Luis Servén. (2010): "Infrastructure in Latin America." World Bank Policy Research Working Paper No. 5317. <http://elibrary.worldbank.org/docserver/download/5317.pdf?expires=1355627707&id=id&accname=guest&checksum=885A71F302B9FEFBE49DA51F59815328>

<sup>5</sup> Report on the Ninth General Increase in the Resources of the Inter-American Development Bank, AB-2764. <http://www.bicusa.org/proxy/Document.102320.aspx>

<sup>6</sup> Paragraph 3.15AB-2764.

than 2% of GDP on infrastructure – but 4-6% *per annum* is needed if it is to catch up or keep up with countries that once trailed it, such as Korea or China.”<sup>7</sup>

LAC region needs to invest more and better in infrastructure. The investment need is so vast that it calls for public, private, and public-private partnerships (PPP) to be able to attract the levels of required investment. The Bank has been involved in the promotion and financing of these projects by responding to different needs ranging from strengthening the institutional, legal and regulatory framework, supporting the technical preparation of PPP projects, providing technical assistance and knowledge, and providing financial support to projects with different mechanisms according to the needs of each sector. The transportation and private sector teams of the Bank have participated in a variety of innovative PPP financings ranging from public sector risk mitigation for the IIRSA Norte Highway program in Peru to fully-private credit wraps for local currency bond issuances for Chilean highways. The Bank has acted on a project or program-specific basis when the needs of the market suggested a specific niche role for the Bank. At the same time, a region wide evaluation of the Bank’s experiences in PPP in all the sectors and all the stages of the project cycle has not been carried out; the Bank’s participation in PPPs remains *ad-hoc* when the need arises.

In the particular case of Brazil, the Bank has supported both the national and sub-national authorities from the beginning of the early stages of the development of the PPP law that was approved by Congress<sup>8</sup> and through the support to the development of the institutional capacity for PPP project preparation, evaluation and structuring, project financing and co-financing (BR-M1001, Institutional Support to the Minas Gerais PPP Program, BR-M1126 Institutional Support to the National PPP Program, BR-T1046 and BR-T1256 Brazil Private Participation on Infrastructure Project Preparation Facility, among others). In this context, the Bank’s Infrastructure and Environment Department (INE) has promoted the preparation of a Technical Note on the Bank Intervention on PPPs in Brazil<sup>9</sup> in order to extract lessons learned to be applied in future PPP interventions. This paper draws heavily on the above Technical Note.

## II. Objectives

The objective of this paper is to present a review of the current status of the Brazilian environment (including legal framework and institutional arrangements) for launching and implementing PPP projects, key features of the Inter-American Development Bank (IDB) intervention on PPP in Brazil, and a stakeholders’ survey on the performance of the Brazilian PPP program. Perceived strengths and areas of potential improvement in PPP in infrastructure (Transportation, Water and Sanitation, and Energy), resulting from

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<sup>7</sup> Fay, M. and M. Morrison (2006): “Infrastructure in Latin America and the Caribbean: Recent Developments and Key Challenges.” Directions in development. Washington D.C. - The World Bank.  
<http://documents.worldbank.org/curated/en/2006/11/7190505/infrastructure-latin-america-caribbean-recent-developments-key-challenges>

<sup>8</sup> Brazilian Federal Law 11,079 (PPP Law) of December 30, 2004 (subsequently modified by Federal Law 12,766 of December 27, 2012).

<sup>9</sup> IDB (2013): “A Review of Inter-American Development Bank Interventions on Public Private Partnerships in Brazil.” RG-K1284. Technical Note, June 2013. Washington D.C.

the survey, are also discussed. It is expected that the lessons learned will help improve the likelihood of success of development and implementation of PPP infrastructure projects in Brazil.

### III. Infrastructure Needs in Brazil

Brazil, like the LAC region in general, needs to invest more and better, particularly in infrastructure. The investment needs are so vast that the country's public resources are not enough to meet all the required level of investment. Despite such needs, the level of investments in Brazil has been relatively low. While China, for example, has aggregate investment levels of over 40% of its GDP, investments in Brazil have been only about 19% of its GDP; it is estimated that Brazil would need to invest at least 24% of GDP to achieve a growth rate of 5% per year.<sup>10</sup> Infrastructure investment shows similar levels between China and Brazil; while China has invested over 6% of GDP, Brazil invested on average 3% of GDP in the last decade.

Knowing the limitation of her country's budget and public debt, the President of Brazil, Ms. Dilma Rousseff, has clearly concluded that "without private sector involvement, the infrastructure Brazil needs will never be built."<sup>11</sup> In 2011, economic growth was only 2.7%, and it is was even lower in 2012, at 0.9%.<sup>12</sup> To boost growth, the country will have to cut the *Custo Brasil*, as the cost of doing business in Brazil is known. There seems to be a consensus that the model of increased consumption and indebtedness of Brazilian citizens has been exhausted and growth has to come from investments, local and foreign. As a result, further development of public private partnership in Brazil has become crucial.

In August 2012, the Brazilian Government stated, at the launch of the "Logistics Investment Program in Highways and Railways,"<sup>13</sup> that Brazil ultimately will have an infrastructure commensurate with its size. The government recognized that partnerships with the private sector (public private partnerships – PPPs, and concessions) are essential to growth acceleration, and that such partnerships enable the country to provide public goods and services more efficiently.

Private participation, including private financing, is recognized worldwide as a means to improve infrastructure without overburdening public budgets.

Public-Private Partnership (PPP) refers to contracts between the government and private sector entities for the purpose of the joint execution or provision of a project or a service

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<sup>10</sup> "Não existe PIB gratis." Veja, December 5, 2012. <http://www.abtp.org.br/noticias-do-setor-ler.php?cod=12398&q=N%C3%A3o+existe+PIB+gr%C3%A1tis>

<sup>11</sup> "Facing headwinds, Dilma changes course." The Economist, August 18, 2012, p. 32-33. <http://www.economist.com/node/21560565>

<sup>12</sup> "Brazil Overview." World Bank. 2013. <http://www.worldbank.org/en/country/brazil/overview>

<sup>13</sup> "Logistics Investment Program: Highways and Railways – Expanding Brazil's transportation networks through concessions and public-private partnership." Secretariat for Social Communication (SECOM) of the Presidency of Brazil. <http://www.brasil.gov.br/para/press/reference-texts/logistics-investment-program-highways-and-railways>

traditionally handled by the public sector.<sup>14</sup> The PPP approach implies a division of responsibilities and risks between the private sector and the public sector. Usually, under this system, responsibilities and risks associated with the financing, design, construction and operation of the project are assumed by the private sector, while other responsibilities and risks remain with the public sector, such as provision of basic assets (such as land), subsidies (when needed), political risk guarantees, and (if it is not a user-pay project), a guaranteed income flow.

There are various options for providing public services, ranging from direct supply by a public entity to full privatization, where the government transfers all responsibilities, risks, and rewards to the private sector. Within this broad spectrum, PPP projects represent operations in which the public sector transfers a significant portion of risks and responsibilities to the private sector with a view to optimize the use of available resources and improve the efficiency of public services.

#### **IV. The Brazilian PPP Legal Framework**

The Brazilian PPP Law 11.079/04, the draft of which benefitted from the Bank's seminal support to PPP in Brazil,<sup>15</sup> establishes general rules for competitive bidding and contracting the private partner at both the national and sub-national levels. The PPP law complements the concession laws (Laws 8.987/95 and 9.074/95) and the procurement law (Law 8.666/93). The PPP law also established an organizational structure in the federal government to oversee the Brazilian PPP program.

Among its features, the PPP law allows government entities to assume long-term commitments, including the payment of subsidies to service providers, with the overall objective of increasing efficiency. The PPP legal framework contains provisions that prevent the administrator to adopt projects without proper prioritization studies and to assume future financial commitments for which there would be no assured source of financing. The law also requires public hearings to be held, and economic and financial assessments to be carried out for each proposed PPP project.<sup>16</sup>

The Brazilian PPP model can be defined as special concession arrangements through which the Administration delegates to a private partner the provision of a service, with or without prior construction works, and remuneration paid by the users and the state, or only by the state.<sup>17</sup>

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<sup>14</sup> "Brazil. Non-reimbursable technical-cooperation funding for a public-private partnership (PPP) program for the State of Minas Gerais." IDB, Multilateral Investment Fund (MIF/AT-594), 4 May 2004.

<http://www.iadb.org/en/projects/project-description-title.1303.html?id=br-m1001>

<sup>15</sup> The Bank's technical cooperation project TC-02-02-01-3, approved in 2002, helped the Brazilian Ministry of Planning, Budget and Management (MPPG) establish a PPP conceptual framework for the federal government.

<sup>16</sup> Motta, Carlos E., and Cesar Queiroz. "An Overview of the Brazilian PPP Legal Framework: Guiding Steps for Selecting and Contracting PPP Projects." 1<sup>st</sup> International Conference on PPP, Dalian, China, 2013. <http://ppp-china.dlut.edu.cn/program.php>

<sup>17</sup> Rocha, Gustavo, and Joao Horta (2010): *Parcerias Público-Privadas: Guia Legal para Empresários, Executivos e Agentes do Governo.* Belo Horizonte, Brazil: Prax Editora, p. 30.



The law sets certain constraints on this type of contract, including the following: (i) people cannot be hired under this system for government employment; (ii) the contract has a minimum term of 5 years and a maximum term of 35 years; (iii) the minimum value is 20 million reais (about US\$10 million); (iv) payments to the private sector must be tied to the quality of service provided, and monitoring and evaluation must be based on performance standards; and (v) the asset will revert to the public partner, with or without payment, at the end of the contract period, depending on the specific terms of the contract.

Based on the federal law, Brazilian states and municipalities can enact their own PPP laws. As an example, the states of Minas Gerais and São Paulo implement their PPP projects according to PPP state laws.<sup>18</sup> The laws governing PPP contracts in these two states have been reviewed and found compatible with the federal law.<sup>19</sup> Henceforth, the federal PPP law will be referred to as PPP law.

The PPP law defines PPP as a concession contract that may take one of two forms: (a) “sponsored” concession; or (b) “administrative” concession.

In a sponsored concession, the private partner revenues come from: (a) fees charged to the users; and (b) financial subsidies paid by the contracting public entity as the services are delivered.

In the case of administrative concessions, the contracting state entity pays fully for the services provided; there are no user fees. Under an administrative concession the state entity has the contractual obligation to guarantee a stable income flow for the private partner.

Law 12.766 of December 27, 2012 introduced changes to several laws, including the PPP Law. It gives more flexibility to the PPP legal system, for example by allowing subsidies to be provided prior to the beginning of service delivery. The PPP legal framework in Brazil was developed taking advantage of related international experience, including the UK Private Finance Initiative (PFI).<sup>20</sup> Coincidentally, in the same month changes were introduced to the Brazilian PPP Law (i.e., December 2012), the UK Treasury made changes to its PPP program, by *inter alia* introducing the new brand name of PFI -- it is now PF2.<sup>21</sup> According to the report, changes were introduced because PFI, the form of

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<sup>18</sup> The State of Minas Gerais, in fact, enacted its PPP law prior to the federal government.

<sup>19</sup> International Monetary Fund (2005): “Public Investment and Fiscal Policy—Summaries of the Pilot Country Studies.” Fiscal Affairs Department. <http://www.imf.org/external/np/pp/eng/2005/040105b.pdf>

<sup>20</sup> As of March 2012, the United Kingdom had 717 ongoing PFI projects with a total capital cost of £54.7 billion, the largest PPP program of any country. The government will be paying an estimated amount of £9.3 billion as unitary payments to these projects in fiscal year 2012-13. Source: UK Private Finance Initiative Projects: Summary data as at March 2012. [http://www.hm-treasury.gov.uk/d/summary\\_document\\_pfi\\_data\\_march\\_2012.pdf](http://www.hm-treasury.gov.uk/d/summary_document_pfi_data_march_2012.pdf)

<sup>21</sup> UK Treasury (December 2012): “A new approach to public private partnerships.” The report is available at: [http://cdn.hm-treasury.gov.uk/infrastructure\\_new\\_approach\\_to\\_public\\_private\\_partnerships\\_051212.pdf](http://cdn.hm-treasury.gov.uk/infrastructure_new_approach_to_public_private_partnerships_051212.pdf)

PPP used most frequently in the United Kingdom, "has become tarnished by its waste, inflexibility and lack of transparency."

Subsidies (and other possible contractual incentives) offered by the public sector are needed, in several cases, for the contract to be attractive enough for a private firm. If a project is shown to be financially viable without any public funding, instead of falling under the PPP law, it should be managed as a "common" concession, to be bid and implemented under the country's concession laws and other related norms.

The challenge for the public sector in formulating a PPP contract is to devise a formula of financial and contractual incentives that will force the private contractors to fulfill all their contractual obligations, while receiving an adequate return on their investments.

## **V. PPP Institutional Arrangements**

In Brazil, at the federal level, several agencies are responsible for different aspects of the PPP program, as discussed below.

The Ministry of Planning, Budget and Management (MPOG) assesses, models, and monitors potential PPP projects, which have been identified as priorities by the Partnership Steering Committee (Comitê Gestor de Parcerias - CGP).

The Ministry of Finance (MF) is responsible for appraising any proposed PPP project and making sure that the program is within the maximum allowable allocation for PPP projects. Such limit is set as 3 percent of the net current revenues, as defined in Articles 195 and 239 of the Constitution. The limit applies to all levels of government. The National Treasury Secretariat (STN), after receiving information about the project, verifies that the proposed spending is within the spending limits established by the Fiscal Responsibility Law.

The PPP Steering Committee (CGP), established by presidential decree No. 5385/05, and modified by decree No. 6.037/07, works under the coordination of MOPG, and is composed of representatives from the Ministry of Finance and the Presidency. Its responsibilities include to:

- Approve the Projects and PPP contracts.
- Authorize the opening of the bidding process.
- Define the priority services to be provided under PPP arrangements.
- Define the criteria for analyzing the appropriateness and timing of the contract.
- Set up the procedures for contract award.
- Authorize the launching of the bidding and approve the bidding documents.
- Approve the PPP plan, and monitor and evaluate its implementation.
- Review the contract monitoring reports.
- Develop standard bidding documents and sample PPP contracts.

- Authorize the use of the resources of the PPP Guarantee Fund (FGP) to guarantee the government financial obligations.

The Technical Committee of Public-Private Partnerships (CTP) is coordinated by the Chief Economic Advisor of the MPOG, and includes members from the Ministry of Finance and the Presidency of the Republic. CTP can request studies, surveys or investigations to support a proposed PPP project, which has already been established as a priority.

The Special Purpose Company (SPE), to be established by the successful bidder, is exclusively responsible to implement and manage the object of the partnership (e.g., a motorway, an airport). This feature facilitates the control and supervision by the Government, as the SPE cannot have any other responsibility. The SPE may be incorporated in the form of a publicly traded corporation, with the majority of its voting capital in the private sector. The PPP law forbids the government to be SPE's majority partner. In any case, the government participation in the SPE requires legislative authorization.

The PPP Guarantee Fund (FGP) was established by the government to guarantee the payment of financial public obligations under PPP projects awarded by federal agencies. It has its own assets, consisting of fixed and variable income securities. The FGP capital is entirely public, subscribed by eligible shareholders (i.e., the Union and public companies and foundations). The legal limit for the FGP capital is R\$6 billion (about US\$3.0 billion), which is also the overall limit for the provision of guarantees by the Union. The FGP is managed by the Bank of Brazil. In order to reduce the cost of raising finance, the FGP can also provide counter-guarantees to insurance companies, financial institutions and international organizations, which ultimately will assure payment of the public sector obligations to the private partner.

The Government Auditor General (TCU) monitors the bidding process and contract awarding, as well as the implementation of PPP projects. The public partner is required to send to TCU relevant documentation during all stages of implementation of the PPP program.

The next sections of this Note discuss the Bank's operations to support PPP and provide a review of the overall PPP program in Brazil, focusing on areas that have received the Bank's support.

## **VI. Main IDB's PPP Operations in Brazil**

In view of the infrastructure gap in Brazil and considering a path that has helped other countries bridge that gap, the Bank has supported Brazil's PPP program, both at the national and sub-national levels, from the very beginning, through a series of actions with the government to institute PPPs in Brazil, including:

- (a) A technical cooperation project, approved in 2002, in the amount of US\$120,000 (TC-02-02-01-3), to help the Brazilian Ministry of Planning, Budget and Management (MPOG) establish a PPP conceptual framework for the federal government;
- (b) Loan 1560/OC-BR for an Infrastructure Investment Fund to support basic infrastructure development in Brazil;
- (c) MIF technical cooperation project for the state of Minas Gerais, approved in 2004 (MIF/AT-594);
- (d) Public-Private Partnership (PPP) Program for the State of Minas Gerais (BR-M1001), MIF/AT-594 (US\$675,000), approved on 4 May 2004;
- (e) A program (BRL1026) to support the modernization and transparency of fiscal management in the state of Bahia, including activities to develop fiscal management of PPP projects (2005);
- (f) Non-reimbursable technical-cooperation funding for a national program for the institutional development of public-private partnerships (BR-M1026), in the amount of US\$2,288,450 (MIF/AT-708), approved on 22 November 2005;
- (g) Institutional Support to the National PPP Program (BR-M1126)
- (h) Private Participation on Infrastructure Project Preparation Fund (BR-T1046 and BR-T1256)

Next paragraphs present a summary of the above operations. Follow-up sections present a brief assessment of each operation and main lessons learned.

### Institutional Support to the Minas Gerais PPP Program

For implementing the PPP approach in the State of Minas Gerais (MG), the state government undertook a reorganization and modernization of public systems, as well as reform of the legal framework and internal administrative procedures, incorporating lessons learned from international experience. Such lessons included the need for: (i) a reliable legal framework; (ii) clear legal authority to award concessions to the private sector; (iii) transparent, fair and orderly procedures for bidding and awarding contracts; (iv) investment of financial and human resources by the public sector for the preparation and implementation of projects; (v) public consensus in favor of the PPP approach; and (vi) political commitment.<sup>22</sup> In December 2003, the state government enacted Law 14.868 (the PPP Law) and Law 14.869 (PPP Fund Law).

In operational terms, the PPP law established the Public-Private Partnership Management Council (CGPPP)<sup>23</sup> and created the PPP Unit<sup>24</sup> under the Department of Economic Development (SEDE), which is responsible for coordinating public-private

<sup>22</sup> For further details, see "Public-Private Partnerships: a New Concept for Infrastructure Development," Economic Commission for Europe, United Nations, 1998. <http://rru.worldbank.org/documents/toolkits/highways/pdf/42.pdf>

<sup>23</sup> The CGPPP (Conselho Gestor de Parcerias Público-Privadas) is chaired by the MG Governor. Other members of the CGPPP include: State Prosecutor General, State Secretary for Economic Development, State Secretary for Planning and Management, State Secretary of Finance, State Secretary for Transportation and Public Works, State Secretary for Regional Development and Urban Policy, and State Secretary for Environment and Sustainable Development. <http://www.conselhos.mg.gov.br/conselho/cgppp>

<sup>24</sup> In Portuguese: Unidade Operacional de Coordenação das Parcerias Público-Privadas (Unidade PPP).

partnerships.<sup>25</sup> The PPP Fund Law created a guarantee fund for PPP projects. The Fund provides financial backing for long-term service contracts with the state, an essential element for attracting greater participation by private firms in PPP projects.

The general objective of the Bank program in the State of Minas Gerais (MG) has been to expand the supply of public services and infrastructure through private initiative, ensuring greater quality and efficiency and making optimum use of public resources available for the sustainable development of the State.

The specific objective of the operation was to institutionalize the system of public private partnerships by creating and implementing a new contracting model to encourage private sector participation in the provision of public services and infrastructure.

The operation supported by MIF/AT-594 (US\$675,000) was approved in May 2004 and completed in 2009. The executing agency was the Economic Development Department of the State of Minas Gerais (SEDE). This was the first MIF and Bank operation involving PPP projects at the state level in Brazil. It included five components:

- (a) Component I: consensus-building on the legal framework and PPP program;
- (b) Component II: developing the capacity of the PPP Unit;
- (c) Component III: structuring the PPP guarantee fund;
- (d) Component IV: developing financial, contractual and tendering models for PPP projects, including launching three PPP pilot projects;<sup>26</sup> and
- (e) Component V: PPP knowledge management and program monitoring and dissemination.

The total estimated cost of the project was US\$1.35 million, of which US\$675,000 from the MIF and US\$675,000 from the local counterpart contribution.

The increased efficiency and quality of public services that would come about through implementation of the pilot projects, and the increase in investments in public projects, through the mobilization of private capital, was expected to help expand the use of PPP methods in various areas of the State's economic and social development plan.

### National Program for the Institutional Development of PPP

One essential tool of sustainable economic growth is rehabilitation and maintenance of the country's infrastructure, especially transportation infrastructure, which significantly affects logistics costs and the economy's competitiveness.

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<sup>25</sup> Further details are available on the PPP Unit website at:

<http://www.ppp.mg.gov.br/legislacao/legislacao-de-ppp-em-minas>

<sup>26</sup> Two proposed PPP pilot projects were: (i) rehabilitation of the MG-50 Highway (370 km of highway between Itauna and São Sebastião do Paraíso, at an estimated total cost of R\$835.9 million (about US\$400 million), over the 25-year life of the contract); and (ii) basic sanitation in areas with low human development indices.

The need to meet growing demand for infrastructure services good enough to heighten the competitiveness of Brazil's economy must be seen in a context of tight fiscal constraints and social priorities in public spending. This means making the most effective use of scarce public resources, and exploring new options for greater private sector participation in the delivery and maintenance of public utilities and infrastructure services.

Recognizing this challenge, the federal government has made an aggressive program of infrastructure maintenance, construction and expansion a key component of its plan, in order to meet the Brazilian's economy's demand for strong growth while safeguarding the solvency of public finances through strict enforcement of the Fiscal Accountability Law. Building on nearly 10 years of experience with concessions, a key part of the plan is to institute a new type of arrangement, PPP, for the construction, maintenance and running of public utilities and infrastructure services.

The Federal Congress enacted Law 11,079 in December 2004, which allows for greater private sector participation, guaranteeing contributions from the State to make projects feasible, when they could not be financed solely through user charges.

Law 11,079 (with the increased flexibility introduced through Law 12.766 of December 27, 2012), sets out the general principles that are to govern PPP contracts, and the criteria to be applied in regulating and implementing them. It defines PPPs as administrative contracts for the delivery of public services of which the government is a direct or indirect user. Thus, these partnerships are a contractual means of transferring responsibility to the private sector for the construction, maintenance, or operation of assets.

Implementation of the PPP program at the federal level was considered a vitally important initiative for Brazil, since it would (i) create an effective relationship between the public and private sectors as partners in the delivery of public and infrastructure, and (ii) make knowledge transfer possible from the federal level to the state governments.

The general objective of the Bank program has been to make public infrastructure services more widely available through private sector participation for better and more efficient allocation of available public funds. The specific objective was to institutionalize the public-private partnership (PPP) methodology as a new contracting model that promotes private sector participation in the delivery of public and infrastructure services.

The operation was a non-reimbursable technical-cooperation funding for the national program for the institutional development of PPP (BR-M1026), in the amount of US\$2,288,450 (MIF/AT-708). It was approved on 22 November 2005, and the executing agency was the Public-Private Partnerships Unit<sup>27</sup> of the Ministry of Planning, Budget and Management (MPOG).

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<sup>27</sup> In Portuguese: Unidade de Associações Público Privadas: <http://www.planejamento.gov.br/hotsites/ppp/index.htm>

The project has three components: (i) institutional consolidation and strengthening of the PPP Unit of the MPOG, which will support the sector ministries and states in implementing the PPP institutional structure; (ii) regulation and formalization of the PPP methodology; and (iii) support for the design and execution of two PPP pilot projects.

The program was expected to produce the following outcomes: (i) an institutional structure able to properly structure PPP projects; (ii) a consolidated legal and regulatory framework that provides certainty for the private sector; and (iii) lessons learned from the pilot projects that will help to consolidate the PPP methodology. With these outcomes, the PPP methodology can be promoted as a new model for the management and financing of public and infrastructure services on the federal and state levels, creating incentives for private sector participation.

The above objectives seem to have been met: According to MPOG, a total of 17 PPP contracts are underway in Brazil. Table 1 provides an overview of the existing PPP projects in Brazil.

ESTADO	CONTRATOS ASSINADOS (quantidade)	SETOR DO EMPREENDIMENTO	INVESTIMENTOS ESTIMADOS (R\$ milhões)
BAHIA	3	Saneamento Hospital Estádio para a Copa	853
CEARÁ	1	Estádio para a Copa	452
DISTRITO FEDERAL	2	Centro administrativo Habitação	885
MINAS GERAIS	4	Rodovia Complexo Prisional Centro de atendimento ao público Estádio para a Copa	1.492
PERNAMBUCO	3	Rodovia Presídio Estádio para a Copa	827
RIO GRANDE DO NORTE	1	Estádio para a Copa	420
SÃO PAULO	3	Metrô Trem metropolitano Saneamento	2.244
TOTAL	17		7.173

Table 1 An overview of existing PPP projects in Brazil

Source: *Assessoria Econômica, Ministério do Planejamento (2012)*

### Infrastructure Project Preparation Fund

Two operations were implemented under the Fund: BR-T1046 and BR-T1256.

BR-T1046. The goal of this Technical Cooperation has been to finance, jointly with the International Finance Corporation of the World Bank (IFC) and the Brazilian National Development Bank (BNDES) the creation, and then implementation, of the BNDES Infrastructure Project Preparation Fund (The Fund, or InfraFund).

The total initial committed funding was US\$ 3.9 million, with IFC and IDB contributing US\$ 1 million each and BNDES US\$ 1.9 million. Management of the Fund was delegated to the Private Sector Advisory Services Department of the IFC.

The Fund was expected to finance pre-feasibility, technical, economic, environmental and legal studies and consulting services for the development and implementation of long-term contractual relationships between government and private parties, such as PPPs, concessions, Build Operate and Transfer (BOTs), operation and maintenance contracts and other similar mechanisms in Brazil (all such mechanisms referred to herein as “private sector participation” or PSP).

The projects may be in traditional infrastructure sectors (e.g., roads, railroads, ports, mass transit, airports, water and sanitation, electricity distribution, generation and transmission) and in social infrastructure (e.g., the Bahia primary care center). The Fund: (i) selects eligible projects; (ii) identifies the studies and technical work required to structure the projects so that they can be offered to the private sector for investment; (iii) selects and hires consultants to provide the required services; (iv) manages the delivery of consulting services; and (v) pays for the cost of such services.

The executing agency has been the Brazilian National Development Bank (BNDES). The Fund was established to finance preparatory activities and studies for infrastructure projects, including project identification tasks not related to specific projects. One of the most attractive features of the Fund stems from the large leverage effect that Bank participation generates. For each dollar of Bank funding, about three additional dollars are brought into the financing of preparation of new infrastructure projects.

Projects to be financed by the Fund are executed by a Lead Project Execution Advisor (LPEA). The LPEA will be in charge of: (i) assisting the relevant government entity to oversee the work of the Project Executor; (ii) procuring consulting services and studies, (iii) supervising the work of consultants; and (iv) taking all steps required to lead the transaction to closing.

Management of the Fund has been delegated to the Private Sector Advisory Services Department of the IFC. The Fund is meant to perform upstream deal selection (Project Selection) and downstream project execution (Project Execution).

Project Selection consists of selecting the best projects to be offered to the private sector, considering each project’s prospective economic, social and environmental externalities and development impacts in Brazil, and the feasibility of attracting private investors. Project execution consists of structuring PSP projects, and bidding them out on a transparent basis to the private sector.



The Administration Agreement (TF070907 and TF070908) of the Brazil PSP Development Program was signed on October 19, 2007 by the Bank, IFC and BNDES Participações (BNDESPAR).

In the first four years of existence the Fund has supported five projects, as indicated in Table 2.

Project	Year of Fin. Closure	Brief Description	Private Sector Investment Mobilized \$Million	Benefited Population People Per Year	Main Features
BR 116/324	2009	Transportation: ROT of 680 km of roads linking the NE and SE of Brazil	US\$615	912,500	The project's contractual structure based on performance influenced the model used for seven road concessions in Brazil (totaling over 2,600 km).
BA 093	2010	Transportation: ROT of 126 km of roads	US\$95	2,500,000	- 1st concession structured for a network of roads surrounding the metropolitan area of a city; - 1st road concession in Brazil in which the contract requires the compliance of Equator Principles.
Hospital do Subúrbio	2010	Healthcare: full PPP of a 298-bed emergency hospital	US\$50	400,000	1st Health PPP in Brazil, being the pioneer of several other health PPPs in the country.
BH Primary Care	2011	Healthcare: PFI of 147 primary care units in the municipality of Belo Horizonte	US\$220	1,700,000	1st PPP involving Primary Care Units in Brazil.
BH Schools	2012 (exp.)	Education: PFI of 32 kindergartens and 5 elementary schools	US\$100	18,000	1st Education PPP in Brazil.
<b>TOTAL</b>			<b>US\$1.080</b>	<b>5,530,500</b>	

Table 2 Projects supported by the Fund in its first four years of existence

Source: BR-T1256 TC Document

*BR-T1256*. This follow-up TC is being prepared to continue supporting, jointly with the IFC and the Banco Nacional de Desenvolvimento Econômico e Social (BNDES), through its subsidiary BNDES Participações (BNDESPAR), the Brazil PSP Development Program (The Fund). The Fund was created by the IFC, BNDESPAR and the Bank in October 2007 with an initial contribution of US\$1 million each by the IFC and the IADB, and US\$1.9 million by the BNDESPAR in October 2007. IFC and IADB committed to contribute up to US\$3 million each, and the BNDESPAR up to US\$5.9 million. The initial contribution of the Bank was approved by the TC titled Brazilian Project Preparation Fund (BR-T1046 -- see above) approved in December 2006. This operation

is the second phase of financing of the Brazil PSP. BNDESPAR and the IFC have already completed their second financing by contributing as follows: BNDES US\$1 million (for a total of US\$2.9) and IFC US\$0.912 million (for a total of US\$1.912 million).

The Brazil PSP Development Program has as main goal to contribute to the private participation on infrastructure in Brazil, through financing preparatory activities and studies for infrastructure projects.

## **VII. A Survey on the Performance of the PPP Program**

A survey instrument, especially designed for this study, was drafted and applied on a pilot basis, in December 2012, to a small, strictly selected sample of stakeholders in Brazil. The external and internal (i.e., from IDB) comments received were then used to finalize the survey instrument, which is shown in Annex 1. The final version of the survey instrument was then applied, in January and February 2013, to a sample of 50 “internal” and “external” stakeholders. Internal stakeholders, in this study, are those directly related with governmental entities (e.g., federal or state) that are responsible for the planning, preparation, implementation, or oversight of the PPP program in Brazil. Typically, they work for an executing agency or other government organization closely related to the PPP program.

Conversely, external stakeholders are involved or interested in the outcome of the PPP program, but do not play a direct role in establishing and implementing the legal and regulatory framework for the PPP program. Typically, external stakeholders work for entities outside of the government, such as non-government organizations, academia, or private sector firms (e.g., banks, consultants, concessionaires), which have an interest in the successful implementation of the PPP program.

A main advantage of surveying both internal and external stakeholders is that it allows the identification of possible “blind spots,” that is, the perceptions of success by directly involved personnel that are not shared by those who are not directly involved in the program design and implementation. Differing perceptions between internal and external stakeholders will also help prioritize and formulate specific actions by government agencies to improve public perception with respect to their administration.

In this study, the 50 respondents to the PPP survey questionnaire (most of them interviewed in Brazil in January and February 2013) comprised:

- (a) Federal government stakeholders: 18 respondents from the Ministry of Planning, Budget and Management (MPOG); Ministry of Finance, Ministry of Transportation; Controladoria-Geral da União (CGU), Brazilian National Bank of Economic and Social Development (BNDES), Brazilian Navy, National Department of Transport Infrastructure (DNIT), and Tribunal de Contas da União (TCU).

- (b) State governments' stakeholders: 18 respondents from Minas Gerais, Bahia, Sao Paulo, Ceara, Rio de Janeiro, Rio Grande do Sul, and Tocantins.
- (c) Private sector stakeholders: 14 respondents from PPP concessionaires, consultants, auditors, and academia.

A review of information provided by the survey shows that the PPP experience of the stakeholders varies substantially across the three categories, with the private sector representatives being the most experienced and the federal government representatives the least:

- (a) Federal government stakeholders: 76 percent has 2 or less years of experience; 6 percent, more than 11 years.
- (b) State governments' stakeholders: 56 percent has 2 or less years of experience; 17 percent, more than 11 years.
- (c) Private sector stakeholders: 8 percent has 2 or less years of experience; 46 percent, more than 11 years.

#### Aggregating Indicators – the PPP Perception Index

The survey instrument used in this study (Annex 1) contains a number of questions whose answers are quantifiable, if a score or rating is assigned to each different answer. The multiple answers offered were arranged such that they follow the sequence from higher (better) to lower (worse) perception of the PPP issue being assessed. For example, answers ranging from (a) – best, to (e) – worst, were recoded to generate 100 points for (a), 80 points for (b), 50 points for (c), 10 points for (d), and 0 points for (e).<sup>28</sup> Some questions (e.g., 1.1 and 1.2) were already scaled suitable for aggregation, and did not require any recoding. Answers to a total of 58 questions were thus quantified, which were used to provide summary evaluation indexes, including an overall PPP perception indicator (discussed later), which this study has denominated PPP Perception Index.

One of the key issues when aggregating indicators to form an index is the weight one assumes for each of the indicators. For example, some studies that have aggregated different governance indicators used principal component analysis (PCA). PCA does not assign weights for each indicator but identifies patterns in the data on which basis weights are computed. Other studies have explicitly assigned weights by making an informed judgment on the importance of certain indicators or questions. This embeds a certain amount of subjectivity, even if the weighting is informed by expert knowledge. Simple averaging makes a similar judgment, as it assumes that all indicators or questions have equal importance.

In this review of PPP in Brazil, answers were simply averaged to obtain aggregate indicators, i.e., it was assumed that all the questions have equal importance, which is

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<sup>28</sup> Such weightings, while deemed appropriate for the index calculation, are not meant to represent a final judgment on the relative stakeholder assessment. They may be changed in future, where found appropriate.

more easily understandable and replicable.<sup>29</sup> The detailed calculations, for each stakeholder, and for each group of stakeholders, are given in Annex 2.

The overall PPP Perception Index, henceforth referred to as PPPPI, emanating from this survey, was computed by analyzing 58 quantifiable answers provided by each one of the 50 respondents (stakeholders), thus using a 58x50 data matrix (or nearly 2,900 data points, as not all stakeholders answered all questions). The results, expressed on a scale of 0 (worst) to 100 (best), are summarized in Table 3. The PPPPI obtained for Brazil is 66, with a range between 44 and 89, and a standard deviation of 9.7, or a coefficient of variation of 14.7 percent.

The PPPPI obtained from internal stakeholders (public sector), as expected, is higher than the one from external stakeholders (private sector), respectively 68 and 60. The coefficient of variation for the external stakeholders (i.e., 15.8 percent) is slightly higher than for the internal stakeholders (i.e., 14.7 percent), probably reflecting more homogeneity among the internal stakeholders.

***Average and Range of PPP Perception Index (PPPPI) by internal and external stakeholders:***

	Average	Min	Max	Standard Deviation
<b>Internal (Public) Stakeholders</b>	<b>68</b>	<b>50</b>	<b>89</b>	<b>9.9</b>
<b>External (Private) Stakeholders</b>	<b>60</b>	<b>44</b>	<b>79</b>	<b>9.5</b>

***Overall Average and Range of PPP Perception Index (PPPPI)***

Average	Min	Max	Std Dev	Coefficient of variation
<b>66</b>	<b>44</b>	<b>89</b>	<b>9.7</b>	<b>14.7%</b>

Table 3 Summary results of the overall quantified perception of PPP success in Brazil, expressed in terms of the PPP Perception Index (PPPPI)

In the potential case that this study will be extended to cover other countries in the region, or possibly states/provinces in some countries, it will be useful to have a broad interpretation of the PPP Perception Index, with range of values showing the overall assessment of experience, current capabilities and future prospects of implementing

<sup>29</sup> See, for example, “Road Asset Governance Filter: Case Study of Kazakhstan and Armenia.” 2011. World Bank Transport Paper No. TP-34. Washington, D.C., USA. <http://go.worldbank.org/9XN7FBUCDO>

successful PPP projects in the country or state. Accordingly, a proposed interpretation scale for PPPPI is given in Table 4. The overall PPP assessment in Brazil, as obtained in this study, summarized as a PPPPI = 66, falls in the “Good” range (i.e., 60.1 to 80).

A broad evaluation by the Economist Intelligence Unit (EIU) of the legal and regulatory framework and the investment environment for PPP infrastructure projects in Latin America and the Caribbean,<sup>30</sup> based on telephone interviews, industry analysis and secondary research, has scored Brazil, Chile, Mexico and Peru in the range between 60 and 80 (also on a 0 to 100 scale, where 100 represents the ideal environment for PPP projects).

<b>Overall Assessment</b>	<b>PPPPI</b> <i>(0-100 scale)</i>
Very good	80.1 to 100
Good	60.1 to 80
Fair	40.1 to 60
Poor	20.1 to 40
Very poor	0 to 20

Table 4 Proposed interpretation scale for the PPP Perception Index (PPPPI)

The individual resulting scores, for each one of the 58 quantifiable answers obtained from the 50 stakeholders who responded to the questionnaire, are depicted in Figure 1, for the main categories of stakeholders, namely (a) representatives of the private sector (“Private”), (b) representatives of the federal public sector (“PuFe”), and (c) representatives of the States’ public sector (“PuSt”).

As can be seen in Figure 1, in general the scores by federal and States’ representatives tend to be relatively similar, with a few exceptions. For example, regarding the view on sponsored concessions, the former are substantially more optimistic than the latter (Question 1.1.b). Likewise, federal stakeholders consider their financial and legal constraints much less critical than their State counterparts (Qs. 2.1.1 and 2.1.4). Conversely, the performance and skills of the PPP Unit of Minas Gerais are considerably more positive as seen by the States’ stakeholders than those from the federal public sector (Qs. 2.7.1.b and 2.7.2.b).

It can also be observed in Figure 1 that some dimensions are highly rated (i.e., adopting a threshold of 70, in this case) by all stakeholders, indicating general agreement that the level of PPP effectiveness or optimism in such aspects is high. This includes:

- (e) The performance of common (or traditional) concessions (Qs. 1.1.a and 1.2.a);

<sup>30</sup> Economist Intelligence Unit. 2013. “Evaluating the environment for public-private partnerships in Latin America and the Caribbean - The 2012 Infrascopes.”

<http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=37447865>

- (f) The performance of the PPP Unit of Minas Gerais (Q. 2.7.1.b);
- (g) Risks are viewed to be relatively minor regarding demand, credit availability, and foreign exchange (Qs. 2.9.a, 2.9.c, and 2.9.f); and
- (h) Availability of public and private funds for PPP (Qs. 3.1.a and 3.1.b).

It can also be observed, however, that there are issues relatively poorly rated (adopting a threshold of 60, in this case) by all categories of stakeholders, indicating areas where stakeholders generally agree that more needs to be done to strengthen the prospects of successful PPPs. This includes:

- (d) Poor effectiveness in the use of traditional procurement procedures for the transparent, competitive selection of the private partner in PPP/concession projects (Q. 2.1.7);
- (e) Poor prospects of further PPP investments in education and health infrastructure (Q. 2.2.3.g); and
- (f) Poor quality of long-term monitoring of PPP/concession contracts (Q. 4.3).<sup>31</sup>

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<sup>31</sup> A good monitoring system helps prevent and evaluate deviations of the outcomes from indicators established in the PPP contract; it also facilitates the corrective measures to protect the quality of service for the users.

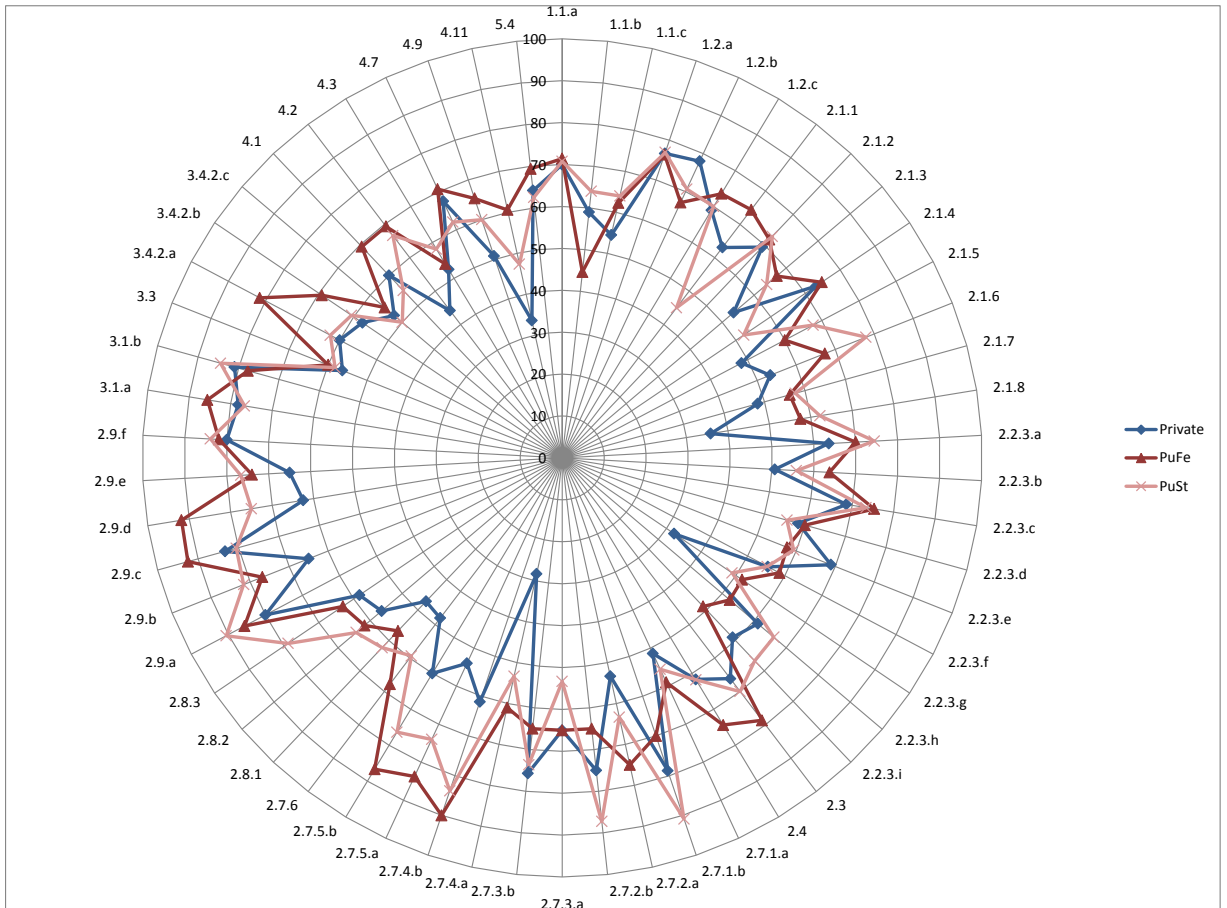


Figure 1 Scores for each quantifiable answer for three main categories of stakeholders: private, federal and state

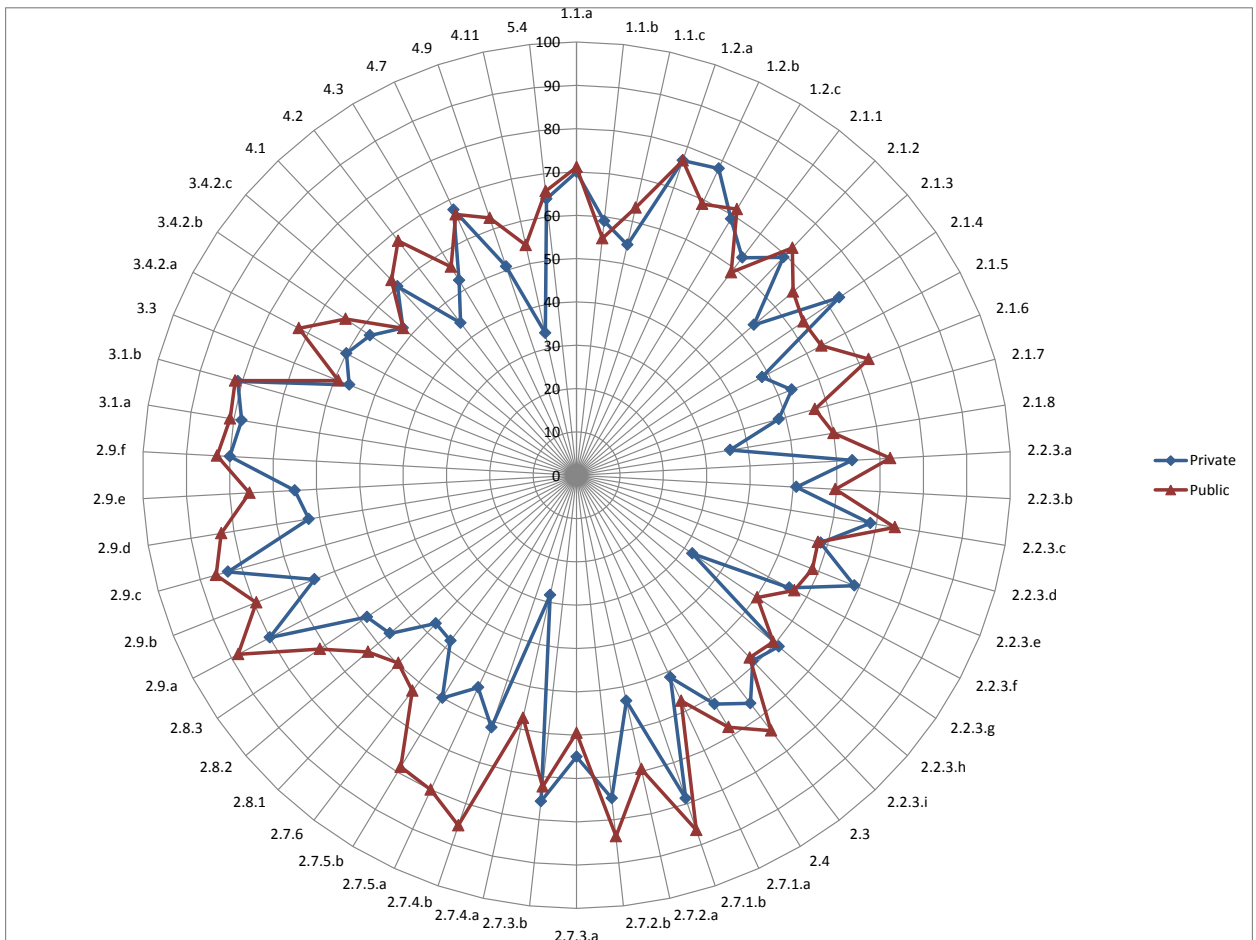


Figure 2 Scores for each quantifiable answer for two main categories of stakeholders: private and public

In order to highlight possible differences in perception between the public and private sectors, Figure 2 shows the scores for each quantifiable answer for the two main categories of stakeholders, namely (a) representatives of the private sector (“Private”), and (b) representatives of the public sector - federal and States (“Public”).

As can be seen in Figure 2, the data can be divided into three broad categories:(i) issues highly rated by both internal and external stakeholders, indicating areas where stakeholders generally agree that the PPP market is highly rated; (ii) issues highly rated by internal stakeholders but less so by external stakeholders, indicating areas where road agencies need to do more to gain public trust in PPP; and (iii) issues poorly rated by both internal and external stakeholders, indicating areas where stakeholders generally agree that more needs to be done to strengthen PPP perspectives. Points (i) and (iii) above are similar to those discussed in regard to Figure 1. Issues that are substantially more



optimistic as viewed by the public sector than their private counterparts include the following (using a perception difference threshold of 15 points):

- (k) There are critical procurement constraints for the transparent, competitive selection of the private partner, as viewed by the external stakeholders, but not as much by the internal ones (Q. 2.1.5);
- (l) The internal stakeholders consider that auctions have been very effective for the transparent, competitive selection of the private partner in PPP/concession projects, but this view is not shared by the external stakeholders (Q. 2.1.6);
- (m) The internal stakeholders have a substantially more positive view about the outcome of existing procurement procedures to select concessionaires than the external stakeholders (Q. 2.1.8);
- (n) The external stakeholders are much less optimistic about further PPP infrastructure investments in education and health than internal stakeholders (Q. 2.2.3.g);
- (o) The private sector has a lower view on the human skills of the PPP Unit in the MPOG than the public counterparts (Q. 2.7.2.a);
- (p) The performance of the two PPP Units (MOPG and MG) to support other agencies is substantially viewed as more positive by the public sector than by private sector representatives (Qs. 2.7.4.a and 2.7.4.b);
- (q) The performance of IDB in providing support to the PPP Units in MOPG and MG is viewed as more successful by public than private sector stakeholders (Qs. 2.7.5.a and 2.7.5.b);
- (r) The performance of the PPP Management Committee (Conselho Gestor de PPP – CGP) is more successful as viewed by public than private stakeholders (Q. 2.7.6);
- (s) The potential lack of long term PPP commitment by the Federal Government is considered a more serious risk by the private sector than by the public sector representatives (Q. 2.9.d); and
- (t) While internal stakeholders rate as “fair” the performance of regulatory agencies (e.g., ANEEL,<sup>32</sup> ANATEL,<sup>33</sup> ANTAQ,<sup>34</sup> ANTT<sup>35</sup>), the external stakeholders rate them as “poor” (Q. 4.11).

Regarding the above issues, external stakeholders consider that certain activities or events are not properly conducted, while internal stakeholders provide more positive related answers. This may indicate areas where the public sector should invest more in tasks such as training and procedures; it may also indicate that not all PPP activities or events the public sector conducts are clearly communicated to external stakeholders (or the public). The public sector should consider conducting stronger public outreach to better inform the public.

Such different views between internal and external stakeholders may also highlight potential “blind spots,”<sup>36</sup> or situations that the public sector is slow to realize about itself

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<sup>32</sup> ANEEL - Agência Nacional de Energia Elétrica [www.aneel.gov.br](http://www.aneel.gov.br)

<sup>33</sup> ANATEL - Agência Nacional de Telecomunicações [www.anatel.gov.br](http://www.anatel.gov.br)

<sup>34</sup> ANTAQ - Agência Nacional de Transportes Aquaviários <http://www.antaq.gov.br/>

<sup>35</sup> ANTT - Agência Nacional de Transportes Terrestres [www.antt.gov.br](http://www.antt.gov.br)

that are obvious to the private sector. Whether it is a question of perception or reality, the public sector should review more carefully the issues identified above to increase the potential for the widespread implementation of more successful PPP projects in the country.

### Financial indicators of future PPP projects

Regarding the expected values of financial indicators for future PPP projects in Brazil, most stakeholders believe that the debt/equity ratio will be between 80/20 and 67/33; debt service coverage ratio, 1.2 to 1.4; project financial internal rate of return, 8% to 16%; and return on equity, 10% to 18%. In a more detailed way, the respondents expressed their opinions as follows:

- Debt/equity ratio
  - Higher than 80/20: 12 percent of respondents
  - Between 80/20 and 67/33: 80 percent
  - Lower than 67/33: 8 percent
  
- Debt-service coverage ratio
  - 1.2 or lower: 8 percent
  - 1.2 to 1.4: 92 percent
  - Higher than 1.4: 0 percent
  
- Project financial internal rate of return
  - Lower than 8%: 13 percent
  - 8% to 16%: 84 percent
  - Higher than 16%: 3 percent
  
- Return on equity
  - Lower than 10%: 8 percent
  - 10% to 18%: 88 percent
  - Higher than 18%: 4 percent

The stakeholders rated the capability of government PPP staff to use existing financial models to calculate the above financial indicators of PPP projects as follows:

(a) At federal level

Very capable: 11 percent of respondents

Capable: 43 percent

More training is needed: 46 percent

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<sup>36</sup> “Blind spot” as used here is a phrase borrowed from Psychology. See, for example: Pronin, E., D. Lin and L. Ross. 2002. “The Bias Blind Spot: Perceptions of Bias in Self Versus Others.” *Pers Soc Psychol Bulletin* Vol. 28 No. 3, March 2002 31: 369-381.

<http://psych.princeton.edu/psychology/research/pronin/pubs/2002BiasBlindSpot.pdf>

(b) At state level  
Very capable: 5 percent  
Capable: 33 percent  
More training is needed: 62 percent

(c) At local (“municipios”) level  
Very capable: 0 percent  
Capable: 8 percent  
More training is needed: 92 percent

The above results show a strong case for more training in financial assessment of PPP projects, at all levels, and more particularly at the state and local levels.

#### Auction versus Traditional Procurement

The stakeholders were asked to rate “auction” and “traditional procurement” with respect to their effectiveness for the transparent competitive selection of concessionaires (see Qs. 2.1.6 and 2.1.7). The result is that both internal and external stakeholders give a higher rating to auction (respectively 53 and 72, on a 0 to 100 scale) than to traditional procurement procedures (respectively 48 and 57).

Moreover, the ratings regarding the effectiveness of traditional procurement are quite low, thus indicating that this is an area that should deserve further attention by the public sector, particularly regulatory agencies.

#### Optimism about Future PPPs

There is relative optimism by both the public and private sector in future PPP projects in several areas, airports and roads being the two sectors most positively viewed by internal and external stakeholders, followed by water and sanitation (Question 2.2.3). This is illustrated in Figure 3. The two sectors viewed most positively by the private sector are airports and water and sanitation; by the public sector, airports and roads.

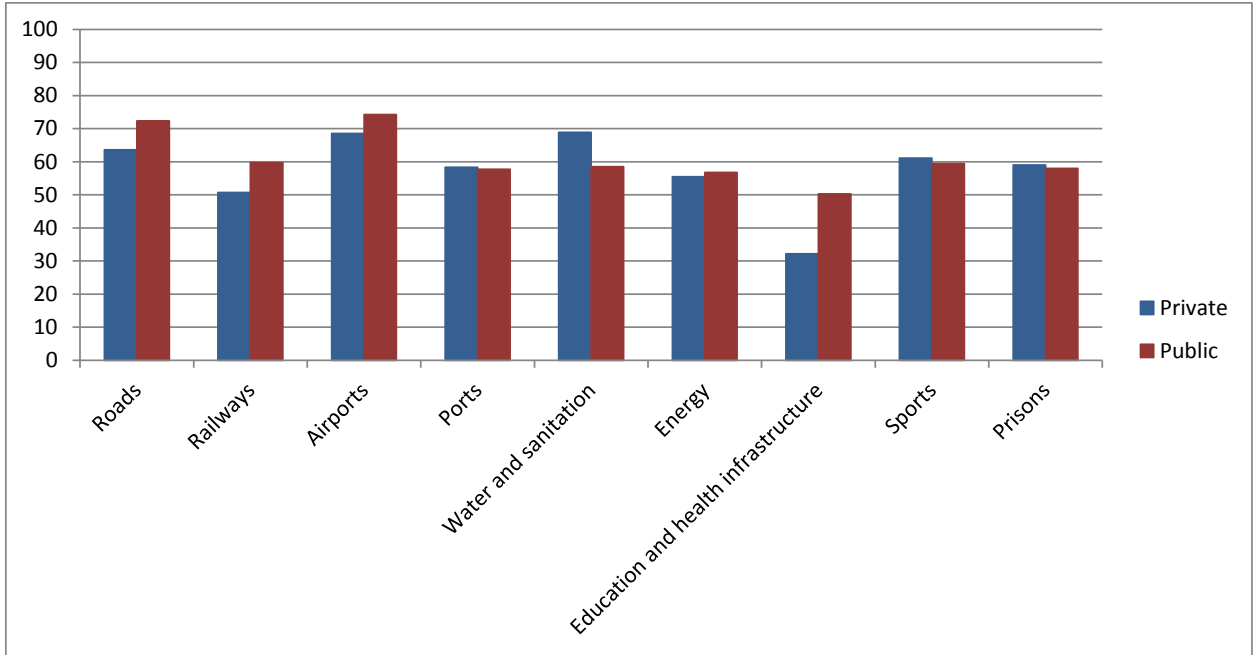


Figure 3 Optimism by both the public and private sectors in future PPP projects (on a 0 to 100 scale, 0 being least optimistic and 100 most optimistic)

Conversely, education and health infrastructure is the sector seen with the least favor by both the public and the private sectors, regarding the prospects of future successful PPP projects.

#### Assessment of the PPP Units in MPOG and MG

The answers provided to questions related to the performance of the two PPP Units are summarized in Figure 4, indicating that, overall, the PPP Unit of MG has been rated more satisfactory than the PPP Unit in MPOG.

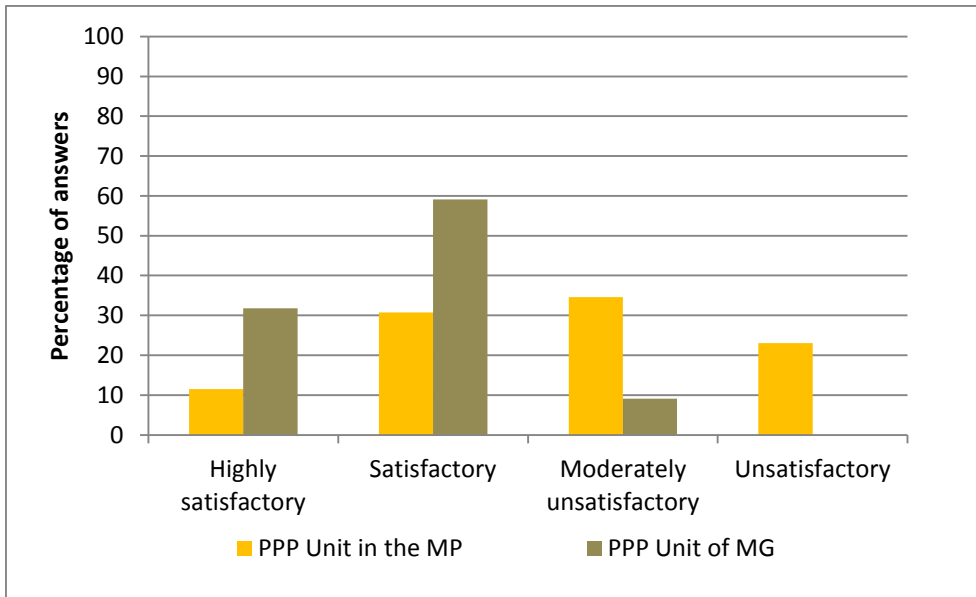


Figure 4 Comparative assessment of the PPP Units of MPOG and MG

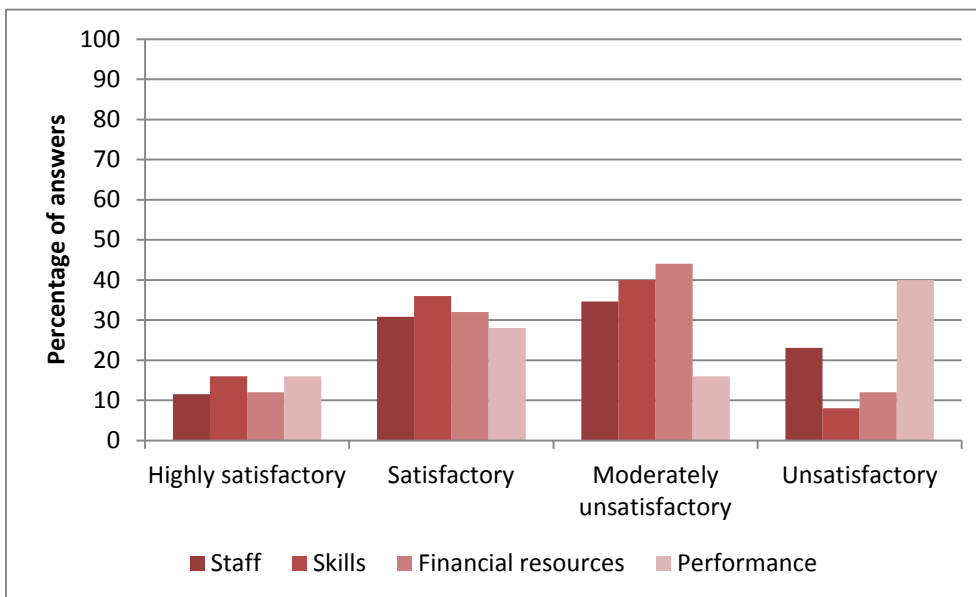


Figure 5 Assessment of the PPP Unit of MPOG

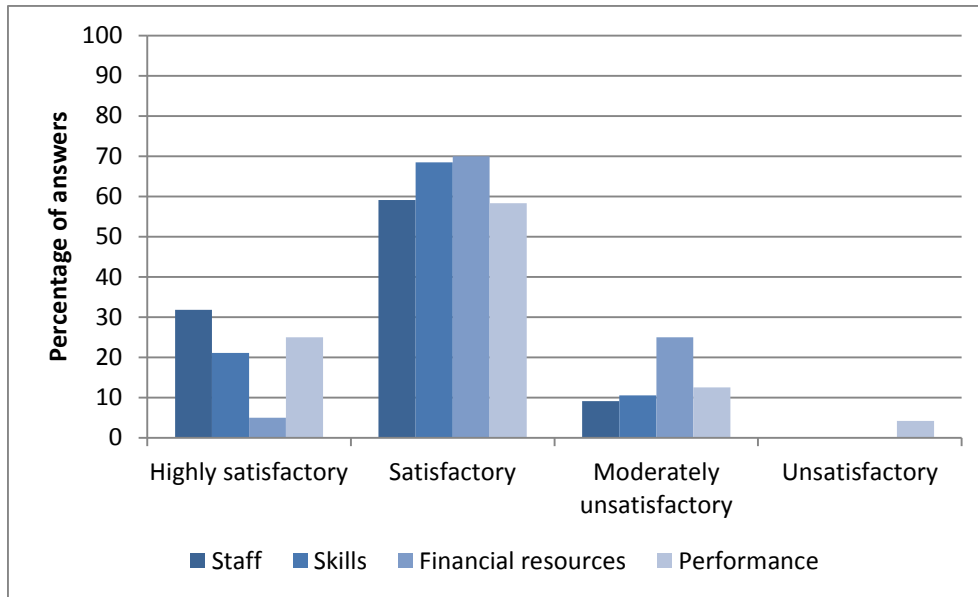


Figure 6 Assessment of the PPP Unit of Minas Gerais

Figures 5 and 6 provide a summary of the stakeholders view on the PPP Units of MPOG and Minas Gerais, respectively, with respect to four dimensions:

- (a) Current staff in the Unit, including regular staff and consultant support;
- (b) Skills available in the Unit;
- (c) Financial resources available for the Unit to perform its functions; and
- (d) Overall performance of the Unit to implement (or to support other agencies to implement) successful PPP projects.

As indicated in Figures 5 and 6, most of the stakeholders have rated the PPP Unit in MG as “highly satisfactory” and “satisfactory,” while the PPP Unit in MPOG has been rated mostly as “satisfactory” or “moderately unsatisfactory.”

The stakeholders’ answers provided in this study’s survey were recoded (using appropriate weights) to come up with an overall rating. Applying such procedure with respect to the two PPP units, they are rated as follows: (i) PPP Unit in MPOG: 58.2 (on a 0 to 100 scale, 0 being the worst and 100 the best); and (ii) PPP Unit in MG: 79.2. While the latter can be considered an example of good practice, the former’s rating is relatively low, particularly referring to the country’s central PPP Unit, responsible for assisting and advising many other federal and state PPP teams.

According to the same evaluation criterion, the IDB performance in providing support to the two PPP Units to implement (or support other agencies to implement) PPP projects (Question 2.7.5) was rated as 73.5 (Figure 7). The performance of the PPP Management Committee (Conselho Gestor de PPP – CGP) in providing support to the implementation of successful PPP projects in Brazil (Question 2.7.6), was rated as 60 (Figure 8).

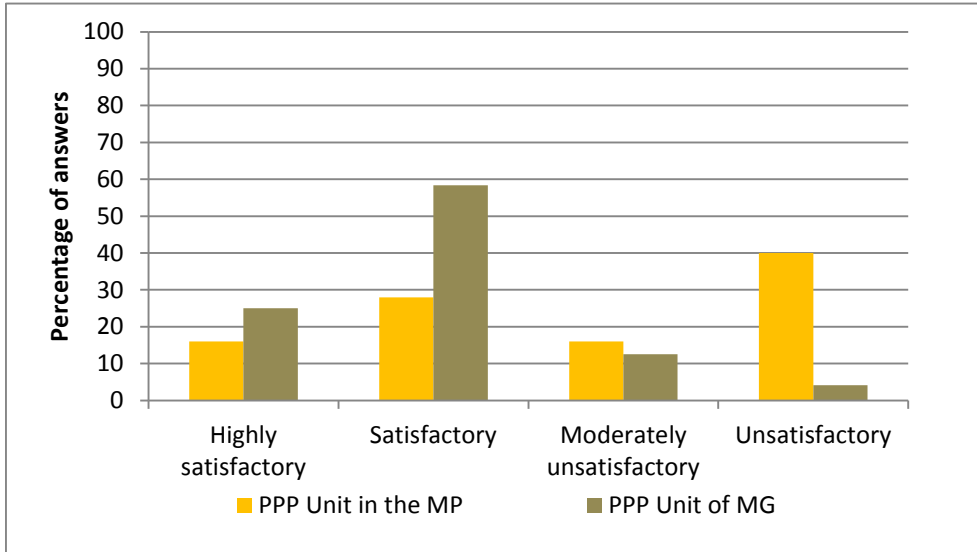


Figure 7 IDB performance in providing support to the two PPP Units

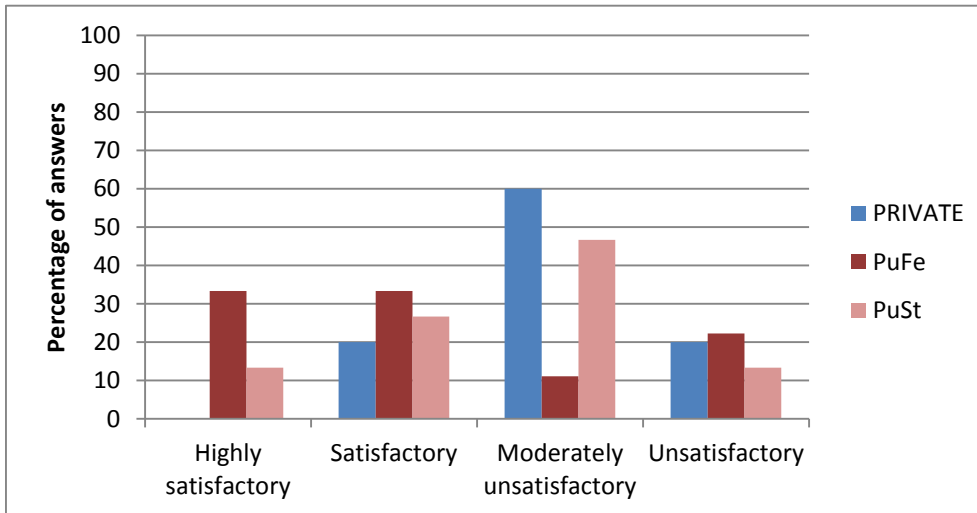


Figure 8 Performance of the PPP Management Committee (CGP) in providing support to the implementation of successful PPP projects in Brazil

Feedback from survey respondents

When asked to identify one or two of the most successful PPP projects under implementation in Brazil, the project most cited by the stakeholders was the Suburban Hospital in Salvador, State of Bahia, followed by Line 4 of the Sao Paulo Metro. Both projects have been included in the “Top 40” list of PPP projects in emerging markets, which was published by the International Finance Corporation (IFC) and Infrastructure

Journal.<sup>37</sup> The Sao Paulo Metro Line 4 was judged one of the four best PPP projects in the developing world (the "Gold Selection"),<sup>38</sup> and the number one in Latin America and the Caribbean.

Two other projects shown in Table 6 have been included in the “Top 40” list: (a) Ribeirao das Neves Prison Complex, Minas Gerais; and (b) Porto Maravilha, Rio de Janeiro.

Table 6 lists the projects considered most successful in Brazil, while Table 7 lists the projects considered least successful.

The main PPP success factors cited by the survey respondents included:

- (a) Good preparation, management and monitoring (cited by 11 stakeholders);
- (b) Government guarantees and capacity of pay annuities - “contraprestacoes” (six stakeholders);
- (c) Proper risk sharing between public and private sectors (five stakeholders);
- (d) Capable staff; Government commitment; Use of PPP unit (two stakeholders each); and
- (e) High expectations; High demand; Proper return on investment (one each).

<b>Most Successful PPP Projects</b>	<b>Number of Stakeholders Making the Selection</b>
1 <sup>st</sup> Hospital do Suburbio, Salvador, Bahia	13
2 <sup>nd</sup> Sao Paulo Metro Line 4	5
3 <sup>rd</sup> Ribeirao das Neves Prison Complex and Mineirao Stadium, Minas Gerais	4 each
5 <sup>th</sup> Sao Paulo Road Concessions; Road MG-050 Minas Gerais; Banco do Brasil Data Center	3 each
8 <sup>th</sup> Porto Maravilha and PPP Unit of Minas Gerais	2 each

Table 6 Most successful PPP projects in Brazil as selected by the stakeholders participating in the survey

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<sup>37</sup> IFC and Infrastructure Journal. 2013. “Emerging Partnerships: Top 40 PPPs in Emerging Markets.” Washington, D.C., USA.  
[http://www1.ifc.org/wps/wcm/connect/511912004ebc2c059d48bd45b400a808/EmergingPartnerships\\_FINAL\\_lowres.pdf?MOD=AJPERES](http://www1.ifc.org/wps/wcm/connect/511912004ebc2c059d48bd45b400a808/EmergingPartnerships_FINAL_lowres.pdf?MOD=AJPERES)

<sup>38</sup> The "Gold Selection" comprises Punjab Grain Silos (India), Queen Alia International Airport (Jordan), São Paulo Metro Line 4 (Brazil), and KivuWatt Power (Rwanda).



<b>Least Successful PPP Projects</b>	<b>Number of Stakeholders Making the Selection</b>
1 <sup>st</sup> Road MG-050 Minas Gerais; Federal Road Concessions; Pontal Federal Irrigation Project, Pernambuco	3 each
4 <sup>th</sup> Road Concessions of Rio Grande do Sul	2
5 <sup>th</sup> High Speed Train Sao Paulo-Rio; Ribeirao das Neves Prison Complex; Energy Concessions; Telephone Line Operations; Sponsored Concessions; Airport Concessions; Estadio do Castelao, Fortaleza, Ceara; Sao Paulo Municipal Hospitals; Sao Paulo Metro Line 4	1 each

Table 7 Least successful PPP projects in Brazil as selected by the stakeholders participating in the survey

An observation of Tables 6 and 7 shows that some projects were selected both as most successful and least successful (i.e., Road MG-050 Minas Gerais, Ribeirao das Neves Prison Complex, and Sao Paulo Metro Line 4), suggesting that there are opposing perceptions about such projects among the stakeholders who expressed their opinion. This might be the result of some very positive aspects perceived by some stakeholders and some very negative ones perceived by other stakeholders, under the same project. When audits of such PPP projects have been carried out, such discrepancies in opinion may be clarified. The respondents cited the following main factors contributing to the difficulties of the above projects (see details in Annex 3):

- (a) Low quality of feasibility study, design, and PPP modeling (nine stakeholders);
- (b) Government interference and lack of commitment to established rules (four stakeholders);
- (c) Government team without proper training and experience (three stakeholders);
- (d) Poor procurement procedures (two stakeholders); and
- (e) Taxation issues; Government as a concessionaire's partner; Lack of required investments by the concessionaire; Poor monitoring of concessions; Poor performance of regulatory agencies; Corrupt negotiations; and Lack of transparency (one stakeholder each).

### **VIII. Lessons Learned from IDB Intervention on PPP**

The review of the Bank's PPP program in Brazil has indicated that there are lessons to be learned from the program preparation and implementation in several dimensions, including:

- (a) Aligning the program design with development priorities established by the government facilitates project preparation and implementation. This was the case when the Bank was responsive to the Brazilian government in assisting the country with PPP expertise exactly when the government had set as a priority expanding its PPP and concession program. As several Brazilian states, and some municipalities, are currently preparing to launch ambitious PPP programs, it will be very timely for IDB to reach out and provide its support, both financial and institutional.
- (b) Reducing redundancy and inconsistency in the legal framework could expedite and increase the efficiency in implementing PPP and concession projects. An example of delay caused by such issue was provided by the Federal Government's first effort to launch a PPP project, namely the highway concession for BR-116 (from the border Minas Gerais-Bahia to Feira de Santana) and BR-324 (Feira de Santana to Salvador).<sup>39</sup> The technical, economic and financial studies were carried out in 2006 for a sponsored concession, to be bid and implemented following the PPP Law (11.079/2004). However, when it was found out that revenues from toll collection would be sufficient to attract private sector companies for the project (without public subsidies), the government decided to revise the studies and bidding documents and re-launch the project as a common concession, which follows the Concession Laws (8.987/95 and 9.074/95).<sup>40</sup> Should the country have a comprehensive PPP/Concession Law, instead of two seemingly inconsistent laws, there would have been no double effort in launching the above projects. The society in general incurred losses with such delay, and in particular the users of the two roads, who faced higher vehicle operating costs over a longer period.
- (c) Transparency is essential, but other factors are also critical for a successful PPP or concession project, including good communications. Public support is a requirement for the success of any PPP project, and a clear means of communication is therefore essential. Different groups of stakeholders may have very different views on PPPs, and different priorities and expectations. It is essential that the entities implementing a PPP project establish a clear communication strategy, with special attention to politically sensitive areas. This should allow the public to fully understand what the project means and its expected benefits. The public and private partners should cooperate on a common communications effort, so as to ensure a consistent message, and reduce potential confusion. Fairness and confidentiality (where justified) should be ensured throughout the process.

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<sup>39</sup> Prado, Lucas N. (2011): "Relatorio sobre Evolucao das PPPs no Brasil." Programa Nacional de Desenvolvimento Institucional de Parcerias Público-Privadas e Cooperação Técnica Não-Reembolsável Nº ATN/MT-9587-BR – Banco Interamericano de Desenvolvimento e Fundo Multilateral de Investimentos. Brasília, September 2011, p. 62.

<sup>40</sup> Currently, the PPP Law applies to sponsored and administrative concessions, while the concession laws apply to common concessions.

- (d) Transparency can also be enhanced by public disclosure of the contractual obligations of the concessionaries. Public disclosure of concession agreements is highly desirable, leading to several benefits: (a) it provides a further check on corruption, which in addition to its direct benefits can enhance the legitimacy of private sector involvement in often sensitive sectors; and (b) when the concession agreement relates to the provision of services to the public, it provides consumers with a clearer sense of their rights and obligations, and can facilitate public monitoring of concessionaire performance.<sup>41</sup> While not currently included in the Brazilian PPP Law, it appears appropriate that in future revisions a clause be added on the full disclosure of contract documents, which would increase accountability of both the concessionaire and the regulator. Furthermore, it appears that full disclosure of concession agreements is foreseen by Brazilian Law 12.527, of November 18, 2011, which regulates the citizens' constitutional right of access to public information. Such law aims at greater popular participation and social control of government actions, which can contribute to improvements of the public administration.<sup>42</sup> The Brazilian legislation, in this regard, is in line with a number of other countries that have enacted laws guaranteeing the right to information (RTI).<sup>43</sup> Minas Gerais State's PPP disclosure procedures can be considered an example of good practice.<sup>44</sup> Of the 50 respondents to the survey carried out as part of this study, 40 of them considered as "very important" or "important" to add a clause mandating the full disclosure of PPP contract documents (except for specific proprietary information), in the case of future revisions of the PPP Law.
- (e) Carry out periodic audit of PPP projects, using adequate expertise, and making the results available to the public, can contribute to assure public support to PPP and concession projects. A case to consider is the second phase of federal road concessions in Brazil. Compared to the first phase of road concessions, the innovative approach used in the second phase (through auctions) led to substantially lower toll rates than those from the first phase.<sup>45</sup> However, there have been allegations that these low toll rates resulting from the auction have been inflated by the concessionaries. An adequate and timely

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<sup>41</sup> Queiroz, C., and H. Kerali (2010): "A Review of Institutional Arrangements for Road Asset Management: Lessons for the Developing World." World Bank Transport Paper No. TP-32. Washington, D.C., USA. <http://go.worldbank.org/6HDCYBMRT0>

<sup>42</sup> Brazilian Ministry of Transport (2012): "Acesso à Informação." <http://www.transportes.gov.br/acessoainformacao>

<sup>43</sup> More than 90 countries now have laws guaranteeing the right to information (RTI), toward opening up the decision-making and functions of the state to public scrutiny. See: Dokeniya, A. (2013). "Implementing Right to Information: Lessons from Experience." World Bank, Washington, D.C., USA. <http://go.worldbank.org/TUHO8VMQ00>

<sup>44</sup> See, for example, World Bank. 2013. "Disclosure of Project and Contract Information in Public-Private Partnerships." World Bank Institute, Washington, D.C., USA. <http://wbi.worldbank.org/wbi/document/disclosure-project-and-contract-information-public-private-partnerships>

<sup>45</sup> Véron, A., and J. Cellier (2010): "Private Participation in the Road Sector in Brazil: Recent Evolution and Next Steps." World Bank Transport Paper No. TP-30. Washington, D.C., USA. <http://go.worldbank.org/6HDCYBMRT0>

audit would help dissipate these concerns. Such issues, if not fully addressed, can harm public support to the PPP program.

## **IX. Recommendations to the PPP Program and Further IDB Interventions**

In view of the Lessons Learned (see previous section) and the review of the Bank's PPP program in Brazil, several recommendations can be made for the PPP program and further Bank interventions in the sector in Brazil, including:

- (a) Update the legal framework. The international experience was reviewed and taken into account when the PPP legal framework was developed in Brazil. More particularly, the United Kingdom (UK) experience was a reference. As a common feature, for example, projects designed according to the Brazilian PPP Law involve payments by the government ("contra-prestacoes" or "aportes publicos"), which was also the case with the projects under the UK Private Finance Initiative (PFI) in the first years of its implementation.<sup>46</sup> However, in the last several years, reforms to PFI were called for by institutions such as the UK Parliament and the Financial Times, which led to changes to PFI, as described in a recent report by the UK Treasury, "A new approach to public private partnerships."<sup>47</sup> According to the report, PFI, the form of PPP used most frequently in the UK, "has become tarnished by its waste, inflexibility and lack of transparency." The report reviews the concerns raised about PFI and sets out the Government's new approach, PF2, for involving private finance in the delivery of public infrastructure and services.<sup>48</sup> It would appear that, if one of the original sources has changed, there may be a good reason to review the Brazilian PPP legal framework and, as and if justified, make the required changes to it.
- (b) Carry out more capacity building in the financial assessment of PPP projects. The stakeholders' survey showed a strong case for more training in financial assessment of PPP projects, at all levels, and more particularly at the state and local levels. While recognizing that the detailed and final financial and economic modeling and assessment of PPP projects may require experienced analysts, the Toolkit for PPP in Roads and Highways<sup>49</sup> includes financial models that can be used to carry out preliminary assessments of PPP projects (for example, for screening potential PPP projects and identifying those most able to attract private investors). The financial models in the toolkit are also particularly helpful for training non-financial experts in

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<sup>46</sup> Prado, Lucas N. (2011): "Relatorio sobre Evolucao das PPPs no Brasil." Programa Nacional de Desenvolvimento Institucional de Parcerias Público-Privadas e Cooperação Técnica Não-Reembolsável Nº ATN/MT-9587-BR – Banco Interamericano de Desenvolvimento e Fundo Multilateral de Investimentos. Brasília, September 2011, p. 15.

<sup>47</sup> UK HM Treasury (2012): "A new approach to public private partnerships." London, UK, December 2012. [http://cdn.hm-treasury.gov.uk/infrastructure\\_new\\_approach\\_to\\_public\\_private\\_parnerships\\_051212.pdf](http://cdn.hm-treasury.gov.uk/infrastructure_new_approach_to_public_private_parnerships_051212.pdf)

<sup>48</sup> As stated in the UK Treasury report of December 2012, "PF2 addresses the fundamental concerns that have been expressed by Parliament, the public sector and taxpayers."

<sup>49</sup> World Bank and PPIAF. 2009. "Toolkit for PPP in Roads and Highways." Washington, D.C., USA. <http://go.worldbank.org/P2XMGNYLDO>

carrying out the financial assessment of potential PPP projects.<sup>50</sup> Decision makers and staff of core and line ministries are not expected to become financial experts; however, it is important that they understand and quantify the impact that parameters such as interest rates, taxes, demand, and construction, maintenance and operational costs have on the feasibility of a proposed PPP project. This understanding will allow public officials to have a more informed dialogue with consultants and advisers, leading to higher-quality service provision. A one-week training program, using the financial models in the Toolkit, can fulfill this need.

- (c) Improve the dialogue with the private sector, including the provision of training, if needed. PPPs involve two agents whose objectives are different, who are in possession of different levels of information (informational structure), and who are rational economic agents, each trying to maximize their objectives with minimum effort.<sup>51</sup> Such complexities pose some constraints to private-sector involvement in infrastructure projects. When a government is considering whether to launch a PPP project, several constraints regarding the private partner should be considered. These constraints can be summarized as follows: (i) The private sector will do what it is paid to do and no more than that—therefore incentives and performance requirements should be included in the contract; (ii) There is a cost attached to debt—while the private sector can make it easier to get finance, finance will only be available where the operating cash flows of the concessionaire are expected to provide an acceptable return on investment; (iii) Bidding and ongoing costs in PPP projects are likely to be greater than for traditional government procurement processes; (iv) There is no unlimited risk bearing—private firms will be cautious about accepting major risks beyond their control, such as exchange-rate risks, the risk of existing assets, and some demand risks. The concessionaire will take into account, when making its proposal, the cost associated with the risks it is expected to bear. A better mutual understanding of such factors may facilitate the launching of complex PPP projects, such as the High Speed Train (TAV).
- (d) Keep the “clients” informed. Many external stakeholders rely on publicly available information to keep themselves updated with project progress and other developments, including possible investment opportunities. A good means to enhance communication is to keep a website easily accessible by the public and with updated information. In particular, the website maintained by the PPP Unit in the MPOG needs substantial improvement. To some extent, it may be even a bit misleading to those seeking information: while the information posted has not been updated recently, the web page shows the current date.
- (e) Consider the success factors identified by stakeholders. As part of the stakeholder survey carried out under this study, the respondents to the questionnaire identified the

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<sup>50</sup> The Toolkit financial models are available at:

[http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/6/financial\\_models/index.html](http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/6/financial_models/index.html)

<sup>51</sup> Rosário Macário, Rosario (2010): “Critical issues in the design of contractual relations for transport infrastructure development.” Research in Transportation Economics, Elsevier: Amsterdam. The Netherlands.

<http://www.elsevier.com/locate/retrec>

- following factors as having the greatest effect on the success of infrastructure PPP projects: (i) Appropriate project selection and preparation (rated 9.0 on a 0 to 10 scale, 0 being no effect and 10 the greatest effect); (ii) Adequate PPP staff training (8.7); (iii) Adequate risk sharing mechanism between the private and public sector (8.3); and (iv) Procurement procedures (8.0).
- (f) Enhance public consultations. Under the stakeholder survey, 98 percent of the respondents considered that it is “very important” or “important” to carry out adequate public consultations (e.g., public hearings) as part of the preparation of a PPP project. Only 40 percent of them rated as “very adequate” or “adequate” the public consultations carried out in the country for major PPP infrastructure projects.
- (g) Step up support to PPP units. The stakeholders’ answers provided in this study’s survey were recoded (using appropriate weights) to come up with an overall rating. Applying such procedure with respect to the two PPP units, they are rated as follows: (i) PPP Unit in MPOG: 58.2 (on a 0 to 100 scale, 0 being the worst and 100 the best); and (ii) PPP Unit in MG: 79.2. While the latter can be considered an example of good practice, the former’s rating is relatively low, particularly being the country’s central PPP Unit, responsible for assisting and advising many other federal and state PPP teams. According to the same evaluation criterion, the IDB performance in providing support to the two PPP Units to implement (or support other agencies to implement) PPP projects was rated as 73.5. This is certainly a good rating, and it is timely to extend support, in addition to the existing units, to several state and municipal PPP units being established (or recently established) that claim for support.

## **X. Summary, Conclusions and Recommendations**

This Technical Note reviewed the current status of the IDB’s intervention on PPP in Brazil, including: (i) review of key IDB projects; (ii) lessons learned from the implementation of the IDB projects and the PPP program; (iii) current investment trends in the latest PPP projects; and (iv) recommendations for the PPP program and potential future IDB interventions on PPPs.

While in general the IDB support to PPP in Brazil is considered satisfactory, a review of PPP implementation in Brazil and related lessons learned permit to formulate actions that will enhance future performance, including:

- (j) Aligning the program design with development priorities established by the government facilitates project preparation and implementation. This was the case when the Bank was responsive to the Brazilian government in assisting the country with PPP expertise exactly when the government had set as a priority expanding its PPP and concession program. As several Brazilian states, and some municipalities, are currently preparing to launch ambitious PPP programs, it will be very timely for

IDB to reach out and provide its support, both financial and institutional, at the state and local levels.

- (k) Assist the federal government in reducing redundancy and inconsistency in the legal framework to expedite and increase the efficiency in implementing PPP and concession projects. This would avoid delays and additional costs as was the case with projects initially launched as PPP following the PPP Law (11.079/2004) and later rebid under the Concession Law.
- (l) Help government agencies improve communications. Public support is a requirement for the success of any PPP project, and a clear means of communication is therefore essential. Different groups of stakeholders may have very different views on PPPs, and different priorities and expectations. It is essential that the entities implementing a PPP project establish a clear communication strategy, with special attention to politically sensitive areas.
- (m) Assist in enhancing public disclosure of the contractual obligations of the concessionaries, which can lead to several benefits: (a) it provides a further check on corruption, which in addition to its direct benefits can enhance the legitimacy of private sector involvement in often sensitive sectors; and (b) when the concession agreement relates to the provision of services to the public, it provides consumers with a clearer sense of their rights and obligations, and can facilitate public monitoring of concessionaire performance.
- (n) Carry out periodic audit of PPP projects, using adequate expertise, and making the results available to the public, which can contribute to assure public support to PPP and concession projects.
- (o) Improve the dialogue with the private sector, including the provision of training, if needed.
- (p) Consider the success factors identified by stakeholders. As part of the stakeholder survey carried out under this study, the respondents to the questionnaire identified the several factors as having great effect on the success of infrastructure PPP projects, such as appropriate project selection and preparation, adequate PPP staff training, adequate risk sharing mechanism between the private and public sector, and procurement procedures.
- (q) Enhance public consultations. Under the stakeholder survey, 98 percent of the respondents considered that it is “very important” or “important” to carry out adequate public consultations as part of the preparation of a PPP project, while only 40 percent of them rated as adequate the public consultations carried out in the country for major PPP infrastructure projects.
- (r) Step up support to PPP units, particularly the one in the MPOG and in states preparing to launch or enhance their PPP program.

A survey instrument, especially designed for this study, was answered by internal and external stakeholders in Brazil. A rating system was established to quantify most of the answers provided. The resulting scores were used to develop an overall PPP perception indicator, which this study has denominated PPP Perception Index (PPPPI), expressed on a scale of 0 (worst) to 100 (best). The resulting PPPPI for Brazil was 66, computed by analyzing 58 quantifiable answers provided by each one of the 50 respondents (stakeholders), thus using a 58x50 data matrix (or 2,900 data points). This compares with a broad evaluation by the Economist Intelligence Unit (EIU) of the legal and regulatory framework and the investment environment for PPP infrastructure projects in Latin America and the Caribbean, which scored Brazil (along with Chile, Mexico and Peru) in the range between 60 and 80 (also on a 0 to 100 scale, where 100 represents the ideal environment for PPP projects).

In the potential case that this study will be extended to cover other countries in the region, and possibly states/provinces in some countries, a proposed broad interpretation of the PPP Perception Index is (a) Very good, 80.1 to 100; (b) Good, 60.1 to 80; (c) Fair, 40.1 to 60; (d) Poor, 20.1 to 40; and (e) Very poor, 0 to 20.



**Survey Instrument Developed for the Study**

**IDB Interventions on PPP in Brazil  
Survey Instrument**

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**Introduction to the Survey**

The Inter-American Development Bank (IDB) wishes to carry out an assessment of its support to the development of public-private partnership (PPP) in Brazil. In particular, IDB is interested in assessing the degree of success of two agencies that have received direct support from IDB, the PPP Unit in the Ministry of Planning and the PPP Unit in the State of Minas Gerais, Brazil. This survey seeks to gather information on the strengths and, where applicable, to identify areas deserving improvement through possible further assistance by IDB to the above mentioned agencies, as well as other entities that could potentially benefit from PPP related support.

The information sought in this survey includes subjective and objective questions. In the absence of hard data, please answer the question based on your personal view. It includes the following: (1) experience with PPP projects in infrastructure; (2) opinion on key issues involved in current and future project success; (3) areas that would contribute to successful development and implementation of PPP projects in infrastructure in Brazil. If you wish to add any comments, please do so following your answer to any question. If you prefer not answering a specific question (for example, because of unavailability of related information), please write NA (No Answer, or Not Available).

It is expected that the review results will help motivate discussions (e.g., through a round table or workshop) and to formulate recommendations for the successful implementation of current and future infrastructure PPP projects in Brazil.

Questionnaire: The survey questions presented in the next pages explore issues likely to determine the development effectiveness of PPP projects in infrastructure in Brazil:

1. Questions on general situation.
2. Position on long-term investment/strategy/market conditions.
3. Financial issues and availability of funds.
4. Legal and regulatory issues.
5. Improving success of infrastructure sector PPP projects.

Although you will be asked to provide your name and contact email, your answers will be kept confidential -- they will not be associated with your name in any report. All answers will be analyzed and reported using averages or statistical distributions.

NAME OF RESPONDENT:

ORGANIZATION:

DATE:

Contact email: .....Tel.....

### Survey Questions

#### Q.1. General

1.1. In your view, what forms of PPP/concessions have been mostly successfully implemented in Brazil?

Please give a rating on a 0 to 10 scale (0 being the poorest; 10 the best)

(a) Common (or traditional) concessions: 0 1 2 3 4 5 6 7 8 9 10

(b) Sponsored concessions: 0 1 2 3 4 5 6 7 8 9 10

(c) Administrative concessions: 0 1 2 3 4 5 6 7 8 9 10

(e) Other (Please specify): .....

*Note: According to law 11.079/2004 (the PPP Law), only (b) and (c) above are considered as PPP in Brazil.*

---

1.2. What forms of PPP/concessions have the best potential for future implementation in Brazil?

Please give a rating on a 0 to 10 scale (0 being the poorest; 10 the best)

(a) Common (or traditional) concessions: 0 1 2 3 4 5 6 7 8 9 10

(b) Sponsored concessions: 0 1 2 3 4 5 6 7 8 9 10

(c) Administrative concessions: 0 1 2 3 4 5 6 7 8 9 10

(e) Other (Please specify): .....

---

1.3. Regarding your professional experience, for how many years have you worked (directly or indirectly) on PPP/concessions in Brazil?

(a) 2 years or less

(b) 3 to 5 years

(c) 6 to 10 years

(e) 11 years or more

---

1.4. How familiar are you with the institutional and operational aspects of the:

(a) PPP Unit in the Ministry of Planning: very familiar; familiar; moderately familiar; or not familiar

(b) PPP Unit of the State of Minas Gerais: very familiar; familiar; moderately familiar; or not familiar

## **Q.2. Sector Strategy & Issues**

2.1. CONSTRAINTS ON PPP INVESTMENTS:

2.1.1 How critical are financial constraints, in the public sector, for further PPP investments in Brazil?

(a) Very critical

(b) Critical

(c) Moderately critical

(d) Not critical

---

2.1.2 How critical are financial constraints, in the private sector, for further PPP investments in Brazil?

(a) Very critical

(b) Critical

(c) Moderately critical

(d) Not critical

---

2.1.3 How critical are technical constraints (e.g., engineering design of infrastructure PPP projects, tariff collection technology) for further PPP investments in Brazil?

(a) Very critical

(b) Critical

(c) Moderately critical

(d) Not critical

---

2.1. 4 How critical are legal constraints for further PPP investments in Brazil?

- (a) Very critical
- (b) Critical
- (c) Moderately critical
- (d) Not critical

---

2.1. 5 How critical are procurement constraints (e.g., for the competitive selection of the private partner) for further PPP investments in Brazil?

- (a) Very critical
- (b) Critical
- (c) Moderately critical
- (d) Not critical

---

2.1. 6 In your view, how effective is the use of auction (“leilao”) for the competitive selection of the private partner in PPP/concession projects?

- (a) Very effective
- (b) Effective
- (c) Moderately effective
- (d) Not effective

---

2.1. 7 How effective has been the use of traditional procurement procedures in the competitive selection of the private partner in PPP/concession projects?

- (a) Very effective
- (b) Effective
- (c) Moderately effective
- (d) Not effective

---

2.1. 8 How effective have been the existing procurement procedures to ensure transparency and that the best private sector bidder is awarded the PPP/concession contract?

- (a) Very effective
  - (b) Effective
  - (c) Moderately effective
  - (d) Not effective
- 

2.2. STRATEGIES:

2.2.1 How should the Government plan to fund the public contribution (“contra-prestacoes”) of infrastructure PPP projects?

*Note: Please indicate all applicable answers, in your opinion.*

- (a) Dedicated infrastructure fund (e.g., federal, state).....
  - (b) Budget (e.g., federal, state).....
  - (c) Dedicated (or earmarked) special taxes (e.g., fuel tax, sales tax).....
  - (d) Other.....
- 

2.2.2 What should be the main criteria for the public sector (e.g., “Organização Interessada no Projeto – OIP”) to define what type of concession should be launched (i.e., traditional, sponsored, or administrative concession)?

*Note: Please indicate all applicable answers, in your opinion.*

- (a) Project financial internal rate of return (FIRR).....
  - (b) Debt service cover ratio (DSCR).....
  - (c) Return on equity (ROE) .....
  - (d) Other.....
- 

2.2.3 How optimistic are you about further PPP infrastructure investments in Brazil on:

- (a) Roads: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (b) Railways: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (c) Airports: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (d) Ports: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (e) Water and sanitation: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (f) Education and health infrastructure: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (g) Sports (e.g., stadiums): Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (g) Prisons: Very optimistic, Optimistic, Moderately optimistic, or Not optimistic
  - (h) Other (Please specify) .....
- 

2.3. EASE OF ACCESS TO FINANCE: How easy will it be for private concessionaires to obtain loans for further PPP projects in infrastructure?

- (a) Very easy
  - (b) Easy
  - (c) Moderately difficult
  - (d) Very difficult
- 

2.4. SECTOR INCOME & BUDGET: How reliable and sufficient are the current sources of public finance for PPP projects?

- (a) Very appropriate
  - (b) Appropriate
  - (c) Relatively inappropriate
  - (d) Very inappropriate
- 

2.5. SOURCES OF INCOME: What income sources should be used to fund the infrastructure sector?

Examples:	Yes/No
Fuel Tax?	

Vehicle Tax?  
Tolls?  
Infrastructure fund?  
Budget allocation?  
Others:

2.6. PPP OR PUBLIC FINANCE STRATEGY: What should be the main focus of public and/or private investments in infrastructure for new construction/ rehabilitation/ upgrade/operation and maintenance?

New infrastructure construction (a) Public (b) Private (c) Both

Rehabilitation/upgrade (a) Public (b) Private (c) Both

Operation and maintenance (a) Public (b) Private (c) Both

## 2.7. CAPACITY AND PERFORMANCE OF PPP UNITS

2.7.1 Regarding staff, how satisfactory are the following PPP Units?

(a) PPP Unit in the MP: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

(b) PPP Unit of MG: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

2.7.2 Regarding skills (including staff and consultants), how satisfactory are the following PPP Units?

(a) PPP Unit in the MP: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

(b) PPP Unit of MG: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

2.7.3 Regarding financial resources, how satisfactory are the following PPP Units?

(a) PPP Unit in the MP: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

(b) PPP Unit of MG: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

2.7.4 How would you rate the performance of the following PPP Units to implement (or support other agencies to implement) successful PPP projects?

(a) PPP Unit in the MP: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

(b) PPP Unit of MG: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

2.7.5 How would you rate the performance of IDB in providing support to the following PPP Units to implement (or support other agencies to implement) successful PPP projects?

(a) PPP Unit in the MP: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

(b) PPP Unit of MG: Highly satisfactory; Satisfactory; Moderately unsatisfactory; Unsatisfactory

2.7.6 How would you rate the performance of the PPP Management Committee (Conselho Gestor de PPP – CGP) in providing support to the implementation of successful PPP projects in Brazil?

Highly satisfactory --- Satisfactory ---- Moderately unsatisfactory ---- Unsatisfactory ----

2.7.7 Considering the overall objective of improving the likelihood of success of PPP projects in Brazil, do you have any suggestions to enhance the performance of:

(a) PPP Unit in the MP: .....

(b) PPP Unit of MG: .....

(c) IDB: .....

(d) PPP Management Committee (CGP): .....  
.....

---

## 2.8. COMPETITION:

2.8.1 How would you rate the degree of competition during the selection of the private partner for the existing PPP projects in infrastructure?

(a) Very good competition

(b) Good competition

(c) Reasonable competition

(d) Poor competition, even with the participation of foreign candidates

---

2.8.2 How would you rate the degree of competition during the selection of the private partner for the existing concession (i.e., traditional or “pure” concession) projects in infrastructure?



- (a) Very good competition
  - (b) Good competition
  - (c) Reasonable competition
  - (d) Poor competition, even with the participation of foreign candidates
- 

2.8.3 How would you rate the perspective degree of competition for future PPP projects in infrastructure?

- (a) Very good competition
  - (b) Good competition
  - (c) Reasonable competition
  - (d) Poor competition, even with the participation of foreign candidates
- 

2.9. RISK/RISK LEVELS: How would you rate the following risks for further PPP development in Brazil?

- (a) Demand risk (e.g., traffic volumes lower than anticipated): High; Moderate; Low
- (b) Construction risks (e.g., cost overruns, poor design): High; Moderate; Low
- (c) No credit availability or too high interest rates: High; Moderate; Low
- (d) Lack of long term commitment by the Federal Government: High; Moderate; Low
- (e) Lack of long term commitment by State (or Local) Governments: High; Moderate; Low
- (f) Foreign exchange rate risk: High; Moderate; Low
- (g) Other: .....

2.10. In your view, to what extent should the demand risk in PPP projects be assumed by the Government?

- (a) Completely
  - (b) Partially
  - (c) Not at all
- 

2.11. RISK ALLOCATION IN EXISTING PROJECTS: Considering the way existing PPP projects are being implemented, what sector has assumed the demand risk?

- (a) Public      (b) Private      (c) Both

2.12. WHAT IS THE GOVERNMENT WILLING TO DO TO REACH FINANCIAL CLOSE IN FUTURE PPP PROJECTS? Looking at how risks are shared between the public and private sectors, what are the top two or three issues to make or break a PPP arrangement? What is the Government asking the Private Sector to do? (Project closure issues below illustrate some examples. Please write in other issues you consider relevant).

Key Closure Issues:

- (a) Who takes Demand Risk      1. Public sector   2. Private sector   3. Both
- (b) Should the Government provide Financial Guarantees to the private partner?      1. Yes   2. No   3. Depends on the project
- (c) What levels of Return on Equity would the private partner expect?      1. Less than 8%; 2. 8% to 12%; 3. Higher than 12%
- (d) Should the Government provide subsidies to the construction cost?      1. Yes   2. No   3. Depends on the project
- (e) Should the Government provide subsidies to the operation cost?      1. Yes   2. No   3. Depends on the project

Other:

**Q.3. Financial Issues and Availability of Credit**

3.1. AVAILABILITY OF FUNDS: How do you see the availability of funds for PPP projects in Brazil?

	Public	Private
Availability of Funds	(a) Good, (b) Fair, (c) Poor	(b) Good, (b) Fair, (c) Poor

3.2. FUNDING MECHANISHMS: Have any dedicated funding mechanism been created or proposed? (Example: investment fund, guarantee funds)

.....

3.3. RELATIONSHIPS: In general, how do you perceive the relationship between bank/investors/government in Brazil, regarding PPP investments?

- (a) Very good

- (b) Good
  - (c) Fair
  - (d) Poor
  - (e) Very poor
- 

### 3.4. FINANCIAL INDICATORS:

3.4.1 What are the expected values of financial indicators for future PPP projects in Brazil?

- (a) Debt/equity ratio: higher than 4/1; 4/1 to 2/1; lower than 2/1
  - (b) Debt service cover ratio: 1.2 or lower; 1.2 to 1.4; higher than 1.4
  - (c) Project financial internal rate of return: lower than 8%; 8% to 16%; higher than 16%
  - (d) Return on equity: lower than 10%; 10% to 18%; higher than 18%
- 

3.4.2 In general, how capable are government PPP staff (at federal, state and local levels) to use existing financial models (for example, to calculate financial indicators such as debt service cover ratio and return on equity)?

- (a) Very capable
  - (b) Capable
  - (c) Moderately capable
  - (d) More training is needed
- 

### **Q.4. Legal/Regulatory issues:**

4.1. Overall, how adequate is the PPP legal/regulatory framework in Brazil?

- (a) Very adequate
- (b) Adequate
- (c) Moderately adequate

(d) Inadequate

4.2.

---

How are the existing procurement procedures adequate for PPP?

(a) Very adequate

(b) Adequate

(c) Moderately adequate

(d) Inadequate

---

4.3. How satisfactory has been the long-term monitoring of PPP/concession contracts in Brazil? [A good monitoring system helps prevent and evaluate deviations of the outcomes from indicators established in the PPP contract; it also facilitates the corrective measures to protect the quality of service for the users.]

(a) Highly satisfactory

(b) Satisfactory

(c) Moderately unsatisfactory

(d) Unsatisfactory

---

4.4 Do you have any recommendation to improve the long-term monitoring of PPP/concession contracts in Brazil?

.....  
.....

4.5 In the case of future revisions of the PPP Law, how important will it be to add a clause mandating the full disclosure of PPP contract documents<sup>52</sup> (except for specific proprietary information)?

(a) Very important

(b) Important

(c) Moderately important

(d) Not important

---

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<sup>52</sup> It appears that full disclosure of contractual documents is foreseen by Brazilian Law 12.527, of November 18, 2011, which regulates the citizens' constitutional right of access to public information.

4.6 In the case of future revisions of the PPP Law, how important will it be to add a clear mechanism for renegotiation and amendments of PPP contracts (as a way to minimize potential contract distress and cancellation).

- (a) Very important
  - (b) Important
  - (c) Moderately important
  - (d) Not important
- 

4.7 Provisional Measure MP 575/2012 added some flexibility to the PPP legal system (e.g., by allowing the transfer of public funds to the private partner during the construction period). In the case of future revisions of the PPP Law, how important will it be to add clauses of MP 575/2012 to the PPP Law?

- (a) Very important
  - (b) Important
  - (c) Moderately important
  - (d) Not important
- 

4.8 Do you have any recommendation to improve the PPP Law?

.....

4.9 In case of any disagreement during preparation or implementation of a PPP project (which cannot be settled by amicable agreement between the parties involved), some form of conflict resolution may have to be applied. How satisfactory are the conflict resolution mechanisms currently available in Brazil?

- (a) Highly satisfactory
  - (b) Satisfactory
  - (c) Moderately unsatisfactory
  - (d) Unsatisfactory
- 

4.10 Do you have any recommendation to improve the current conflict resolution mechanisms?

.....

---

4.11 The federal government and several state governments have established PPP/concession regulatory agencies (e.g., ANEEL, ANATEL, ANTAQ, ANTT). Overall, how satisfactory has been the performance of such regulatory agencies in assuring the implementation of successful PPP projects?

- (a) Highly satisfactory
  - (b) Satisfactory
  - (c) Moderately unsatisfactory
  - (d) Unsatisfactory
- 

4.12 Do you have any recommendation to improve the performance of the regulatory agencies?

.....

**Q.5. Success of Infrastructure PPP projects:**

5.1. FACTORS FOR SUCCESS: What factors would have/have had the greatest effect on the success of infrastructure PPP projects?

Please give a rating on a 0 to 10 scale (0 being no effect; 10 the greatest effect)

Factor	Rating										
	0	1	2	3	4	5	6	7	8	9	10
• Adequate risk sharing mechanism between the private & public sector											
• Type of PPP/concession structure (i.e., traditional concession, sponsored concession, or administrative concession)											
• Provision of guarantees by the public sector (e.g., loan guarantee, minimum revenue guarantee)											

- Mechanism for financial support from public sector (e.g., infrastructure funds)      0 1 2 3 4 5 6 7 8 9 10
- Appropriate project selection and preparation      0 1 2 3 4 5 6 7 8 9 10
- Procurement procedures      0 1 2 3 4 5 6 7 8 9 10
- Adequate PPP staff training      0 1 2 3 4 5 6 7 8 9 10
- Other:

5.2. **ADVICE ON NEW PROJECTS:** Would you have any advice/recommendation on how the government should prepare new PPP projects?

.....

---

5.3 **PUBLIC CONSULTATIONS:** In your view, how important is it to carry out adequate public consultations (e.g., public hearings) as part of the preparation of a PPP project?

- (a) Very important
- (b) Important
- (c) Not important

5.4 How adequate and sufficient have been public consultations carried out in the country for major PPP infrastructure projects?

- (a) Very adequate
- (b) Adequate
- (c) Moderately adequate
- (d) Needs improvement

5.5 Please identify two or three of the most successful PPP projects under implementation in Brazil:

.....  
\_\_\_\_\_

5.6 Can you give one or two factors contributing to the success of the above projects?

.....  
\_\_\_\_\_

5.7 Please identify two or three of the least successful PPP projects under implementation in Brazil:

.....  
\_\_\_\_\_

5.8 Can you give one or two factors contributing to the difficulties of the above projects?

.....  
\_\_\_\_\_



## Annex 2

### Calculations of the PPP perception index for each respondent to the survey

This annex presents the detailed calculation results of PPPPI for each respondent to the survey, grouped by the three main categories of stakeholders:

(a) Federal government stakeholders: 18 respondents from the Ministry of Planning, Budget and Management (MPOG); Ministry of Finance, Ministry of Transportation; Controladoria-Geral da União (CGU), Brazilian National Bank of Economic and Social Development (BNDES), Brazilian Navy, National Department of Transport Infrastructure (DNIT), and Tribunal de Contas da União (TCU).

(b) State governments' stakeholders: 18 respondents from the following States: Minas Gerais, Bahia, Sao Paulo, Ceara, Rio de Janeiro, Rio Grande do Sul, and Tocantins.

(c) Private sector stakeholders: 14 respondents from PPP concessionaires, consultants, auditors, and academia.

The following color scheme is used to denote the range of scores in this annex:

Range of Scores	Color
< 30	Red
30 – 70	Yellow
>70	Green

A statistical summary of the PPPPI provided by the stakeholders is given below:

<b>All</b>	<b>Average</b>	<b>65.9</b>
	<b>Min</b>	<b>44.0</b>
	<b>Max</b>	<b>88.6</b>
	<b>Std Dev</b>	<b>9.7</b>
<b>Private</b>	<b>Average</b>	<b>60.4</b>
	<b>Min</b>	<b>44.0</b>
	<b>Max</b>	<b>78.6</b>
	<b>Std Dev</b>	<b>9.5</b>
<b>PuFe</b>	<b>Average</b>	<b>68.6</b>
	<b>Min</b>	<b>49.8</b>
	<b>Max</b>	<b>84.2</b>
	<b>Std Dev</b>	<b>10.7</b>
<b>PuSt</b>	<b>Average</b>	<b>66.9</b>
	<b>Min</b>	<b>56.4</b>
	<b>Max</b>	<b>88.6</b>
	<b>Std Dev</b>	<b>7.4</b>

Question	PUBLIC STAKEHOLDERS - FEDERAL LEVEL																		Average
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Q 1.1.a	70	80		60		70	80		90	50	90	90		90	60	30	60	80	71.4
Q 1.1.b	20	20		40		30			50	50	30	80	90	80	10			30	44.6
Q 1.1.c	60	20		40		60			100	100	100	70	90	80	70	10		10	62.3
Q 1.2.a	80	70		90		30			90	40	100	100		90		80	70	76.4	
Q 1.2.b	50	50		80		50	80	70	80	40	50	80	100	90	60	60			67.1
Q 1.2.c	60	30		80		80			100	100	100	100	100	90	60	30	60	40	73.6
Q 2.1.1.	50	100		80	80	50	80	80	50	80	100	80	50	100	80		80	50	74.4
Q 2.1.2.	80	100		50	80	80	80	80	50	80	100	50	100	80	100	10	50	50	71.8
Q 2.1.3.	100	80		80	50	10	50	50	100	10	100	50	80	80	100	50	100	50	67.1
Q 2.1.4.	80	100		80	50	10	80	80	80	100	100	50	100	100	80	80	50	50	74.7
Q 2.1.5.	80	50		50	50	50	100	50	100	10	100	50	100	50	80	10	80	10	60.0
Q 2.1.6.	80	80		10	50	80	80	100	100	50	80	80	80	80	50	10			67.3
Q 2.1.7.	80	50		50	50	80	80	80	100	50	10	80	80	10	10	10	80		56.3
Q 2.1.8.	80	50		50	50	50	80	50	100	50	50	80	80	80	50	10	10	80	57.5
Q 2.2.3.a	100	100		10		80	80	50	50	50	80	100	80	80	50	50	80	80	70.0
Q 2.2.3.b	80	100		80	80	80			50	50	50	50	80	80	80	50	10	50	63.8
Q 2.2.3.c	80	100		80	80	80	100	80	80	50	80	50	80	80	50	80	50	80	75.3
Q 2.2.3.d	80	80		50	50	80	50	80	80	50	10	50	80	50	80	50	50	50	60.0
Q 2.2.3.e	80	10		50	50	10	50	100	50	50	80	100	80	80	80	10	50	50	57.6
Q 2.2.3.f	10	50		10	80	50	80	50	50		100	80	80			50	80	50	58.6
Q 2.2.3.g	100	10		100	10	10	10	80	80	10	80	80	80	80	80	10	10	50	51.8
Q 2.2.3.h	80	10		10	10	50	100	100	100	10	50	80	80	50	50	50	10	50	52.4
Q 2.2.3.i	80	80		80	10	50	80	80	50	10	50	50	50	80	50	10	10	10	48.8
Q 2.3	80	80		50	50	100	80	80	80	80	80	100	80	80	80			80	78.7
Q 2.4	10	80		80	50	80	80	100	80	80	80	100	80	80	50	80	80		74.4
Q 2.7.1.a			50	10					100	100	100	50		80	80	10		10	59.0
Q 2.7.1.b				80											50		80		70.0
Q 2.7.2.a			80	10					100	100	100	80		100	80	50		50	75.0
Q 2.7.2.b				80											50				65.0
Q 2.7.3.a			80	50					50	100	100	50		80	80	50		10	65.0
Q 2.7.3.b				80											50				65.0
Q 2.7.4.a			50	10					100	100	100	10		100	80	50		10	61.0
Q 2.7.4.b	100			80					100						80				90.0
Q 2.7.5.a				10					100	100	100	80		100	100	80			83.8
Q 2.7.5.b				80					100						80				86.7
Q 2.7.6				10					100	100	80	10		100	80	80	50		67.8
Q 2.8.1	50	10		10	10	80	80	100	80	100	50	80	80	10	80	10	80		56.9
Q 2.8.2	80	10		50	10	80	80	50	80	50	100	80	80	50	80	10	80	80	61.8
Q 2.8.3	50	10		10	50	80	80	100	80	50	80	80	80	50	80	50	80		63.1
Q 2.9.a	80	100		80	80	100	80	80	80	100	80	80		100	50	100	100	80	85.6
Q 2.9.b	80	50		80	50	80	80	80	100	100	80	80		80	80	80	80	50	76.9
Q 2.9.c	100	100		80	80	80	100	100	100	100	100	100		100	80	100	80	80	92.5
Q 2.9.d	100	80		100	80	100	100	100	100	100	80	100	100		100	50	80	100	91.9
Q 2.9.e	80	50		80	50	80	100	80	100	80	50	100		80	50	80	50		74.0
Q 2.9.f	80	100		80	50	50	50	80	80	100	100	80		100	80	100	100	80	81.9
Q 3.1.a	80	100		80	80	80			100	80	100	80	100		100	80	80	65	87.0
Q 3.1.b	50	100		80	80	80			80	80			100	100		80	80	50	77.7
Q 3.3	50	50		80	80	50	80	100	80	10	50	80	80	50	50	10			60.0
Q 3.4.2.a	100	80		80	50				100	80	100	100		80	80	50	80	80	81.5
Q 3.4.2.b	80	50		80	50				100	80	80	80				50	80	50	70.9
Q 3.4.2.c	50	50		50	50				80	80	50	50				50	50	50	55.5
Q 4.1	80	50		50	50	50	50	100	80	100	80	100	80	80	50	50	80	50	69.4
Q 4.2	80	50		50	50	50	80	100	80	100	80	100	80	80	50	50	50		69.4
Q 4.3	10			50	50	50	50	80	80	80	50	50	80	80	80	10	10	80	54.0
Q 4.7	80	10		80	50	80			100	50	80	80	80	80	50	80	80		70.7
Q 4.9		50		50	50	80	80	80	80	10	80	80	80	80	50	80	50		65.3
Q 4.11	80	50		10	50	65			80	80	10	80	80	80	10	50	80	80	60.3
Q 5.4	80	50		50	50	50	80	100	80	80	50	80	100	80	80	50	50	80	69.4
PPP Perception Index (PPPI)	72	60	65	57	53	63	76	84	82	65	72	82	83	76	58	50	62	59	69

Question	PUBLIC STAKEHOLDERS - STATE LEVEL																			Average
	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		
Q 1.1.a		70	90	80			70		70	50	100		50	50	100	100	90		76.7	
Q 1.1.b	100	60	80	90	100	60	90		50	70	50		40	70	10	50	40		64.0	
Q 1.1.c	40	70	70	70	100	100	80		90	80			30	40	40	30	40	80	64.0	
Q 1.2.a	100	90	90	90			40		80	40	70		50	70	80	100	100		76.9	
Q 1.2.b	30	80	90	80	80		90		60	70	90		80	70	70	60	40	70	70.7	
Q 1.2.c	60	40	90	60	90	100	80		90	90	30		70	50	80	50	40	100	70.0	
Q 2.1.1.	50	50	50	10	10	80	80	80	10	10	50	10	50	50	80	80	50	10	45.0	
Q 2.1.2.	80	50	50	100	80	100	80	100	80	50	80	80	10	10	80	100	100	80	72.8	
Q 2.1.3.	50	50	100	10	80	100	80	50	80	80	10	80	80	10	10	100	100	80	63.9	
Q 2.1.4.	50	10	100	80	80	80	80	50	10	50	10	80	10	10	10	50	100	80	52.2	
Q 2.1.5.	80	10	100	50	80	100	80	80		80	10	100	50	50	50	50	80	100	67.6	
Q 2.1.6.	80	100	100	80			10			50	50	100	80	100	80	80	100	80	77.9	
Q 2.1.7.	50	50	80	50	50		80	80	80	10	10	80	50	80	50	50	50	80	57.6	
Q 2.1.8.	50	50	80	50	80	100	80	50	50	50	10	80	50	80	80	50	50	80	62.2	
Q 2.2.3.a	80	80	80	50	50	100	80	80	100	50	100	50	50	80	80	100	50	80	74.4	
Q 2.2.3.b	80	50	50	50		50	100	50	80	50	100	50	80	50	10	10	10	80	55.9	
Q 2.2.3.c	50	100	80	50	80	100	50	50	100	10	100	80	80	100	80	100	10	100	73.3	
Q 2.2.3.d	50	100	50	50	10	100	80	50	10	50	50	10	50	100	50	80	10	100	55.6	
Q 2.2.3.e	50	50		50	50		80	50	100	10	80	80	50	50	50	100	50	50	59.4	
Q 2.2.3.f	80		50	50	10	80	50	50	80	50	100	10	10	80	80	100	10	50	55.3	
Q 2.2.3.g	10	10	100	10	50	100	80	80	50	50	80	10	10	10	50	50	50	80	48.9	
Q 2.2.3.h	50	10	80	50	80	100	100	80	100	10	50	80	80	80	80	50	10	100	66.1	
Q 2.2.3.i	50	10	50	50	100	100	100	80	80	100	100	50	50	50	50	80	50	50	66.7	
Q 2.3	80	50	50	50	50	50	80		80	80	80	80	50	50	100	100	80	80	70.0	
Q 2.4	50	80	50	50	100		80	50	80	50	50	50	50	80	80	50	50	50	61.8	
Q 2.7.1.a		50	50				80		50	50		80	80			10	50		55.6	
Q 2.7.1.b		80	80		100	100	100	100	100	80		100	80			80			90.9	
Q 2.7.2.a		80	50				80		50	50		80	80			50	50		63.3	
Q 2.7.2.b		80	80		100	100	100	80	80	80		100	80			80			87.3	
Q 2.7.3.a		50	50				50		100	80		50	80			10	10		53.3	
Q 2.7.3.b		50	100		80	80	50	80	80	50		80	80			80			73.6	
Q 2.7.4.a		80	50				80		10	80		10	80			10	80		53.3	
Q 2.7.4.b		50	80	80	100	100	100	100	80	80		80	80			80		80	83.8	
Q 2.7.5.a		80	50										80			80	80		74.0	
Q 2.7.5.b		80	50		80	100	80		80	50		80	80			80		80	76.4	
Q 2.7.6	10	80	80	50	80	100	80		100	50		50	50	50		50	50	10	59.3	
Q 2.8.1		50	50	10	80	100	80	80	80	50	80	80	50	50	80	50	80	10	62.4	
Q 2.8.2	50	50	80	10		100	50		50	50	80	80	50	50	100	80	100	50	64.4	
Q 2.8.3	50	80	80	50	80	100	80	80	100	80	100	80	80	50	100	80	100	50	78.9	
Q 2.9.a	100	100	80	100	80	100	100	80	80	100	100	50	100	100	80	100	100	80	90.6	
Q 2.9.b	80	100	80	100	100	50	80	50	100	80	80	50	80	80	80	100	100	80	81.7	
Q 2.9.c	100	50	80	80	50	100	80	80	50	80	80	80	80	100	100	80	80	100	80.6	
Q 2.9.d	80	100	50	80	50	80	80	50	80	80	50	80	100	80	80	80	50	100	75.0	
Q 2.9.e	80	80	80	50	50	100	80	50	80	80	50	80	100	80	100	80	80	80	76.7	
Q 2.9.f	80	80	100	80	50	80	80	100	80	80	80	80	80	80	80	100	100	100	83.9	
Q 3.1.a	50	100	100	50	80	80	100	80	100	50	80	50	80	100	100	80	50	50	76.7	
Q 3.1.b	80	50	80	100	80	100	50	80	80	80	80	80	80	100	100	100	100	100	84.4	
Q 3.3	10	10	50	0	10	100	80	50	100	80	80	80	50	80		80	50	80	58.2	
Q 3.4.2.a	50		80	50				50		80	50	80	80		50	80	50	50	62.5	
Q 3.4.2.b	50		50	50		100	80	50	80	80	50	50	50	50	50	80	50	50	60.6	
Q 3.4.2.c	50		50	50			50	50		50	50	50	50	50	50	50	50	50	50.0	
Q 4.1	10	80	50	50	10	80	80	50	80	50	10	50	80	80	50	50	50	80	55.0	
Q 4.2	10	100	80	50	80	80	80	50	80	50	10	80	80	80	80	50	80	80	66.7	
Q 4.3	50	50	50	50		80		80	10	10	50	80	80	50	80	80	80	50	58.1	
Q 4.7		50	100	50	80	80	80		10	80	80		80	50	50	50	10	80	62.0	
Q 4.9	10	80	50		80	50	80		50	50	50	80	50	10	80		100	80	60.0	
Q 4.11	50	10	50		10	80			10	80	50	50	50	50	80	80	10	50	47.3	
Q 5.4	100		80	50	50	80	80		80	80	50	50	50	50	50	50	50	50	62.5	
PPP Perception Index (PPPI)	58	62	72	56	68	89	77	69	70	60	62	66	64	63	68	69	60	71	67	

Question	PRIVATE STAKEHOLDERS														Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Q 1.1.a	90	70	90			60	60	80	60	80	60	40		80	70.0
Q 1.1.b	80	50	60		40	40	70	90		50	70			40	59.0
Q 1.1.c	60	50			30	40	80	100		30	60			40	54.4
Q 1.2.a	100	70	50		70	90	90	80	60	80	90	60		80	76.7
Q 1.2.b	80	70	80		70	70	80	90		80	80			80	78.0
Q 1.2.c	60	70	50		40	60	80	100		80	80			70	69.0
Q 2.1.1.	10	50	80		50	50	100	100	80	100	50	50	50	50	63.1
Q 2.1.2.	80	50	100	80	50	80	100	100	80	100	50	80	10	10	69.3
Q 2.1.3.	50	50	50	10	80	10	80	50	80	100	50	10	80	50	53.6
Q 2.1.4.	10	80	100	80	80	10	80	100	100	100	80	50		80	73.1
Q 2.1.5.		80	50		10	10	50	80	100	50	80	10	50	10	48.3
Q 2.1.6.	50	50	10	80	10	50	50	50	80	80		50		80	53.3
Q 2.1.7.	50	50		80	50	50	10	50	80	50	50	10		50	48.3
Q 2.1.8.	50	50	10		10	50	10	50	80	10	50	10		50	35.8
Q 2.2.3.a	80	50	80	50	50	50	80	100	80	80	80	10	50	50	63.6
Q 2.2.3.b	50	50	80	50	80	50	50	50	80	50	10	50	10	50	50.7
Q 2.2.3.c	80	50	80	50	50	80	80	100	80	80	50	80	50	50	68.6
Q 2.2.3.d		50	80	10	50		50	80	80	10	80	80	80	50	58.3
Q 2.2.3.e			50		80	80	80	100		50	50		80	50	68.9
Q 2.2.3.f			10	50	80	50	10	50	100	80	50		80	50	55.5
Q 2.2.3.g			10	10	50	10	80		100	10			10	10	32.2
Q 2.2.3.h				50		50	80	100	100	10	50		10	100	61.1
Q 2.2.3.i			50	10	80	10	80	100	80		80		50	50	59.0
Q 2.3	50	50	80		80	50	80	50	80	80	80	80	50	50	66.2
Q 2.4	80	50	80		50	80	50	80	80	50	50	10	80		61.7
Q 2.7.1.a					10	50	50	80		80			10	80	51.4
Q 2.7.1.b			80		50	80	80	100		80			80	80	78.8
Q 2.7.2.a			10		50	50	50			80				80	53.3
Q 2.7.2.b			80		50	80	80			80				80	75.0
Q 2.7.3.a					50	50	50			80			80	80	65.0
Q 2.7.3.b			80		50	80	80			80			80	80	75.7
Q 2.7.4.a					10	50	10			10			10	80	28.3
Q 2.7.4.b			80		10	50	50			80			80	80	61.4
Q 2.7.5.a					50	10	50			80				80	54.0
Q 2.7.5.b					50	10	80			80				80	60.0
Q 2.7.6						10	80			50			50	50	48.0
Q 2.8.1	50	80	10	80	50	50	50	50	80	50	10	10	80	10	47.1
Q 2.8.2	50	80	10	80	80	50	50	50	80	80	10	10	80	80	56.4
Q 2.8.3	80	80	10		100	50		50	80	50	50	50	50	50	58.3
Q 2.9.a	80	80	100		100	80	80		80	50	80	50	80	100	80.0
Q 2.9.b	80	50	50		50	50	80		80	80	50	80	50	80	65.0
Q 2.9.c	80	100	100		100	50	100		80	100	50	80	80	80	83.3
Q 2.9.d	50	80	50		50	50	50		80	50	80	80	50	80	62.5
Q 2.9.e	80	80	50		50	50	50		80	80	80	50	50	80	65.0
Q 2.9.f	100	50	100		80	80	80		50	100	80		80	80	80.0
Q 3.1.a		80	100		80	50	100		80	80	80	80	50	80	78.2
Q 3.1.b		80	80		100	80			50	100	80	80	80	80	81.0
Q 3.3	50	80	50		50	10	80		80	80	80		10	50	56.4
Q 3.4.2.a	80			50	50	80	80		65	50	50	50	50	50	59.5
Q 3.4.2.b	50			50	50	50	80		65	80	50	50	50	50	56.8
Q 3.4.2.c	50			50	50	50	50		65	50	50	50	50	50	51.4
Q 4.1	50	50	80	80	50	50	80	100	80	80	50	10	30	80	62.1
Q 4.2	80	50	10	80	10	50	10	80		50	50	10		50	44.2
Q 4.3	50	50	80		50	80	50	80	80	10	10	10		80	52.5
Q 4.7	80	80	80	80	50	100	50	100		80	10		50	50	67.5
Q 4.9	80	50	10	50		10	80	80		50	50	50	50	50	50.8
Q 4.11	50	50	50	10	10	50	50	50	100	10	10	10	10	10	33.6
Q 5.4	80	80	80		50	80	100		50	50	50	50	50	50	64.2
PPP Perception Index (PPPI)	65	63	60	53	53	52	66	79	79	65	56	44	53	61	60