

# Selection Criteria for PPP Projects

## Determinants of Value Generation in the Use of Public Resources (Value for Money)

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Vicepresidency for Countries

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# Discussion Papers

## PPP Americas 2021

# Selection Criteria for PPP Projects: Determinants of Value Generation in the Use of Public Resources (Value for Money)

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## About the Discussion Papers

The Discussion Papers - PPP Americas 2021 are a series of documents produced in preparation for the X Edition of PPP Americas, the main forum for Public-Private Partnerships (PPP) in Latin America and the Caribbean (LAC), organized every two years by the Inter-American Development Bank (IDB).

As part of the PPP Americas 2021 edition, eight groups of experts, professionals, consultants, and academics were directly involved in the planning, identification, structuring, and management of PPP projects in the countries of the region. The groups, coordinated by IDB specialists, reviewed the main topics of interest and current issues in the field of PPPs, to exchange experiences, discuss success stories and lessons learned in the ongoing projects in the region.

Following an open call in March 2020, to which more than 200 specialists, professionals and academics from the region applied, around 90 people from across the region were selected to be contributors. They actively participated in discussions on the following topics: reliability of state payments, project selection criteria and determinants of value creation in projects, best practices in contract management, diversification of the capital structure of projects, contract termination rules and their consequences for project viability, planning and prioritization in infrastructure development, fiscal impacts of PPP projects, and the role of control bodies.

Each topic explored in the groups led to a Discussion Paper, compiling the reflections shared by the specialists in their joint discussions between June 2020 and April 2021. In addition, in January 2021, each group of specialists shared their insights with the other groups, to encourage the development of a richer and deeper conversation, and to take advantage of synergies between the different areas.

This initiative aims to help consolidate an environment for the exchange of experiences and best practices in PPPs for the region. Its main purpose is to serve as an input for the discussions that will take place at PPP Americas 2021—where solutions will be proposed in all directions.

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## Acronyms

<b>Acronym</b>	<b>Meaning</b>
CBA	Cost-Benefit Analysis
PPP	Public-Private Partnerships
BPIN	Bank of National Investment Programs and Projects (Government of Colombia)
CAPEX	Initial investment costs of a project
CNAPP	National Council for Public-Private Partnerships (Government of the Dominican Republic)
CND	National Corporation for Development (Government of Uruguay)
CONFIS	Supreme Council for Fiscal Policy (Government of Colombia)
CONITE	National Commission on Foreign Investment and Technologies (Government of Peru)
CONPES	National Council for Economic and Social Policy (Government of Colombia)
COPRI	Commission for the Promotion of Private Investment (Government of Peru)
PPC	Public Private Comparator
WACC	Weighted Average Cost of Capital
DGAPP	General Directorate of Public-Private Partnerships (Government of the Dominican Republic)
DNP	National Planning Department (Government of Colombia)
EPEC	The European PPP Expertise Centre
FONADIN	National Infrastructure Fund (Government of Mexico)
ICE	State Contracting Institution (Government of El Salvador)
EI	Eligibility Index
OECD	Organization for Economic Cooperation and Development
OPEX	Operation and maintenance costs of a project
OPT	Traditional Public Works
PEF	Budget of Expenditures of the Federation (Government of Mexico)
PFI	Private Finance Initiative
PPIAF	Consultative mechanism on public and private infrastructure
PPIIS	Public Infrastructure and Services Investment Project(s)
PPP	Public-Private Partnership
PRP	Public Reference Project
PROESA	Agency for the Promotion of Exports and Investments of El Salvador
PROINVERSION	Private Investment Promotion Agency (Government of Peru)
LAC	Latin America and the Caribbean

<b>Acronym</b>	<b>Meaning</b>
LATAM	Latin America
MEF	Ministry of the Economy and Finance
MEPyD	Ministry of the Economy, Planning and Development (Government of the Dominican Republic)
MHCP	Ministry of Finance and Public Credit (Government of Colombia)
IRR	Internal Rate of Return
SIRR	Social Internal Rate of Return
SDR	Social Discount Rate
SHCP	Ministry of Finance and Public Credit (Government of Mexico)
UNECE	United Nations Economic Commission for Europe
SNPV	Social Net Present Value
AEV	Annual Equivalent Value
NPV	Net Present Value
WBI	World Bank Institute

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# Executive summary

This paper addresses the challenges faced when performing a Value for Money (VFM) analysis in four areas: a) the quantitative and qualitative components of VFM analysis and the need for their complementary application; b) the objectivity of the risk impact calculation procedure; c) the potential conflict of interest arising from VFM analysis and the need for a PPP governance structure to avoid it; d) the factors that enable VFM to be increased. The last section presents the results of a comparative analysis of countries in Latin America and the Caribbean (LAC), chosen based on the criterion that they are, lately, active in PPPs: Colombia, El Salvador, Ecuador, Mexico, Paraguay, Peru, and Dominican Republic.

## Qualitative and quantitative analysis of VFM

In most LAC countries, methodologies have been adopted for the selection and approval of the Public Infrastructure and Services Investment Projects (PPIIS) for infrastructure under any model of Public-Private Partnership (PPP), based on VFM analysis. Although there is no consensus on the definition of VFM, the most widely accepted interpretation is<sup>1</sup> “the optimum combination of whole-of-life costs and quality (...) of the good or service to meet the user’s requirements”.

VFM analysis is important because it recommends that a PPIIS be implemented as a PPP only if it has a positive VFM. The PPP project approval methodology can be carried out in three phases: a) Identification and selection of the PPIIS as a PPP; b) Preparation and structuring of the PPP project; and c) Administration of the PPP contract, in case it justifies changes in service scope. In the phase to identify and select the PPIIS as a PPP, among other studies, an assessment of the potential of the PPIIS as a PPP is carried out (initial qualitative VFM analysis). If in the previous phase the studies indicate that the PPIIS is socially profitable and has potential as a PPP, then in the preparation and structuring phase of the PPP Project, a quantitative VFM analysis is carried out, based on the Public-Private Comparator (PPC) methodology. In the administration phase of the PPP Contract it is possible to perform an additional VFM calculation when comparing the actual performance of the PPP Project by a developer investor with the total cost of the Public Reference Project (PRP).

As can be seen, VFM analysis has two components: a quantitative (including all the factors that can be measured by the Public-Private Comparator) and a qualitative element (covering aspects that cannot be quantified). Qualitative VFM analysis at an early stage assesses the potential of the PPIIS as a PPP, through the use of a questionnaire, which helps to build an eligibility index (EI), the value of which determines whether or not the PPIIS can be developed as a PPP. Once the potential as a PPP has been determined, the quantitative VFM analysis is carried out.

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<sup>1</sup> Dorothy Morillos and Adjo Amekudzi (2008).

Sometimes the quantitative analysis is complemented in an advanced phase by an evaluation based on qualitative criteria (multi-criteria analysis).

It is possible to identify three uses of the quantitative VFM depending on the timing of this analysis:

1) During the preparation and structuring stage of the PPP Project through the Public Comparator in which the total cost of the Public Reference Project (PRP) is compared with the total cost of the PPP project (prior assessment), and reinforces arguments for approving the PPIIS as PPP; 2) during the bidding process, when a VFM test is carried out at the time of receipt of bids in which the PRP total cost is compared with the bidder's financial bid (immediate evaluation); and 3) during the PPP contract administration stage in which the VFM of the actual performance of the PPP project is estimated (ex-post assessment), usually carried out by the Comptroller's Office.

The quantitative analysis based on the PPC is predominant in LAC and consists of comparing the cost to the government of developing the PPIIS through a PPP project (PPP) with the cost of the PPIIS procured in the form of traditional public works, which is better known as a Public Reference Project (PRP). These costs are adjusted by the potential retainable and transferable risks, in the case of the PRP, and by the risks transferred to the private part, efficiencies, and cost of private financing, in the case of the PPP; and the flows of these costs are discounted to estimate the current value of the PRP and the PPP total costs, and to estimate the VFM in quantitative or monetary terms, the interpretation of which indicates whether or not the PPP generates savings of public resources as an alternative for traditional public works. The PPC methodology has limitations as it depends on the cost and revenue assumptions considered on the estimation, the availability of data and historic information, as well as the choice of the discount rate to estimate the current costs and/or revenues.

The quantitative VFM approach, as mentioned, has debatable aspects on several issues: (a) in the assumptions used to estimate costs and revenues, and adjustments are therefore recommended to eliminate the optimistic bias of the estimates; (b) the incorporation or not, within the PRP cost, of aspects such as the cost of public expectation, the cost of public financing in the PRP or tax neutrality; c) a risk analysis approach that allows, in the absence of historical information, risk workshops to be held in which a group of experts establishes the probability and severity of each risk's impact, with a high level of subjectivity that affects the VFM estimate; d) the discount rates applied to the estimated flows of the PRP and the PPP project, since there are recommendations to use discount rates which don't replicate the opportunity cost of public resources use.

Problems with quantitative measurement of VFM sometimes lead to recommendations not to implement the PPIIS as a PPP (VFM less than or equal to zero), based on inaccurate analysis and assessments. The review of some methodologies applied in LAC countries indicates that the results of the quantitative VFM analysis approach are definitive in determining whether or not the procurement of a PPIIS is carried out as a PPP. In El Salvador's, Dominican Republic's, and Mexico's PPP policies, for example, if the VFM resulting from the quantitative approach is less than or equal to zero, it is not sufficient condition to recommend procuring the PPIIS through the

traditional route; since their legal frameworks advise to conduct, before decision making, an additional qualitative analysis (multi-criteria analysis) that confirms or rectifies the results of the quantitative VFM approach. The paper reviews whether or not the qualitative VFM assessment (multi-criteria analysis) is carried out in LAC countries.

## Risk Analysis

PPP project selection and approval methodologies in most LAC countries state that one of the most important factors that must be met for a government to implement a PPIIS as a PPP is positive VFM. Efficient risk transfer to the private sector is recognized in the literature as one of the main drivers of VFM; for example, a study of PFI projects implemented in the UK estimates that risk transfer accounted for 60% of VFM for PFI projects and that in 6 of the 17 projects studied, achieving a positive VFM was entirely dependent on risk transfer.<sup>2</sup>

For the transfer of risks to generate VFM, it is necessary to achieve an optimal risk allocation, with the criterion that the risk should be assigned to the party best able to manage it at the lowest cost. When the party managing the risk bears its financial cost, it will have incentives to mitigate it. Therefore, risk distribution based on these principles results in more efficient risk allocation, lower costs for the PPP Project, and higher VFM. Although each project faces different risks, most LAC countries publish lists of standard risks that should be considered in the analysis.

In most LAC countries, manuals of risk identification, quantification and allocation recommend that the analysis be based on information from historical records of similar projects, review of risk experiences in other countries, as well as bibliographic or documentary research to determine the probability of occurrence and severity of events that generate risks of cost overruns or income risks. When factual information is not available, the manuals recommend conducting a risk analysis workshop, with experts establishing the likelihood of the risk occurring and its impact based on their experience.

In the risk analysis workshop, the participants' subjective perspective prevails when determining the probability of occurrence and severity of the impact on the project's cost, which opens up the possibility of overestimating or underestimating the total cost of the PRP. Another questionable aspect is that the project authority may be interested in procuring the PPIIS as a PPP. These factors raise concerns about the potential conflict of interest in risk assessment, which highlights the need to avoid this with oversight mechanisms within a PPP governance structure.

## Governance and conflict of interest in VFM assessment

In addition to the debate on the subjectivity of the procedures used in risk assessment, a potential conflict of interest arises when the public entity responsible for the studies may skew the analysis in favor of or against the adoption of a PPP, especially if the same entity prepares the studies and approves the implementation of the project. To avoid the potential conflict of interest of the Project

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<sup>2</sup> See R. Ball, M. Heafey and D. King, (2003).

Development Unit in risk assessment, it is recommended that the PPP regulatory framework establishes the obligation to set up a PPP unit to act as a review body. In order for PPP units to prevent conflicts of interest, the legal framework needs to correctly establish their roles and locations and provide them with the capacity to deal with conflicts.

The key components of the PPP project governance structure can be grouped under three main headings: a) legal and regulatory framework; b) organizational structure; and c) control and monitoring instruments and mechanisms.

In order to facilitate the operation of the organizational structure of governance and prevent potential conflicts of interest, responsibilities should be distinguished according to project development stages: a) project approval, b) procurement, and c) control mechanisms. The phasing of the process of developing a PPIIS to be executed as a PPP allows for the administrative units involved in the different phases of the process to become specialized, as well as for responsibilities to be allocated within the organizational governance structure.

Most LAC countries have a legal framework that regulates the approval, procurement, monitoring, and control of PPP projects. In some countries such as Costa Rica and Chile, there is no PPP law, but PPPs are implemented under a concession law. Yet, in Costa Rica, the Dominican Republic, and Haiti there are drafts of PPP laws in development or waiting to be approved. Costa Rica has not yet passed its PPP Law, but there is a regulation that establishes the governance structure and regulates PPP projects there. Last, it has been analyzed most LAC countries, there is a governance structure for PPP projects that helps to eliminate conflicts of interest, considering that they have a PPP unit that reviews the studies to ensure that there is no bias in favor of or against the procurement of a PPP, while other administrative units approve them.

## **Factors that generate a positive VFM result in LAC projects**

The drivers of VFM in PPP projects are the mechanisms that can be used to improve VFM in the provision of infrastructure and services. LAC countries that implement PPIIS through PPPs identify the VFM drivers, which are either included in most PPP laws as principles or are in the regulatory framework as requirements that must be met for a PPIIS to be approved as a PPP. A review of the laws and official documents on guidelines or methodologies of most LAC countries for the preparation and implementation of PPP projects indicates that governments establish principles that are generally similar, with the following being the most frequently repeated:

1. Achieve Value for Money.
2. Optimal risk allocation.
3. Encourage competition in the tendering of projects.

For the drivers to be effective and VFM to be achieved, the procurement process must be well planned, managed, executed, and transparent, whatever PPP contracting system is adopted. This will reduce transaction costs, increase bidder participation, and ensure more competitive procurement.

# Chapter 1. Adequately Addressing the Quantitative Approach of the VFM Methodologies Adopted in LAC, and Combining them with the Qualitative Aspects

A public-private partnership (PPP) is a long-term contract signed between the public and private sectors, in which the private sector is generally responsible for providing services to the public sector; for this purpose, in most cases, a private entity designs, builds, finances, operates, and maintains an asset. In general, the private sector retains ownership of the asset during the service delivery phase, although the asset may be transferred at the end of the contract term. The main characteristic of a PPP is that the public sector buys a series of services rather than building or acquiring physical assets. The typical PPP business model is a DBFO project<sup>3</sup>, where the private sector finances, designs, builds, operates, and maintains an infrastructure asset that supports the provision of a public service to the end-user by the public sector. PPPs almost always involves the transfer of risk from the public to the private sector as a basic incentive mechanism. Before the advent of PPP procurement models, in deciding whether to implement a project of public investment, the government based the decision on a cost-benefit analysis to determine whether the PPIIS would deliver positive net benefits to society and an economical-financial assessment. Now the government also has to decide whether to choose the traditional procurement method or opt for a PPP. The main indicator for the decision is value for money.

In Latin America and the Caribbean (LAC), most countries have adopted methodologies for the selection and approval of infrastructure and services projects under the Public-Private Partnership (PPP) scheme, based on a value for money (VFM) analysis<sup>4</sup>. VFM analysis is important because it generally recommends that a PPIIS should only be pursued through the route of any of the variant PPP models if it generates VFM for society. Thus, the VFM analysis posits that a private-sector developer could use capital and labor more efficiently than the public sector, such that if the private developer's participation does not generate such budget efficiency gains, the PPP project will not generate VFM for society.

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<sup>3</sup> For types of PPP contracts, see: *The World Bank, Public-Private Partnerships: Reference Guide version 3*, Washington, DC, (2017), page 19.

<sup>4</sup> To a complete analysis see Hinojosa et al. (2020).

The concept of VFM is often linked to notions of efficiency and effectiveness in ways that are not very precise.<sup>5</sup> In addition, there is no consensus on a definition of VFM, although the specialist literature adopts the proposal made by the UK Treasury:<sup>6</sup>

“Value for Money (VFM) is the optimum combination of whole-of-life costs and quality (...) of the good or service to meet the user’s requirements.”

According to Grimsey and Lewis<sup>7</sup>, there are several reasons why governments undertake PPP projects, but the most important objective is to achieve higher VFM or better services for the same amount of money that the public sector would spend to implement a similar project using the traditional approach.

Indeed, the main motivation behind the proposal to pursue a PPIIS through a PPP is that they have the potential to deliver VFM compared to traditional public work. This is achieved by grouping the various stages of project development, allowing the private partner to internalize costs and coordinate project management across multiple phases, including financing, design, construction, operation, and maintenance, as well as risk allocation based on the criterion of comparative advantage, to be assumed by the public or private partner with the lowest risk management costs. The use of competitive bidding to award the contract for these grouped activities also allows for market-based pricing and competitive cost savings.<sup>8</sup>

VFM analysis helps to inform decision-making on the appropriateness of the PPP model as a means of procuring a PPIIS because it considers costs over the life cycle of the project and its quality. In terms of value, the VFM assessment includes calculating the quality and quantity of the service, in terms of standards of service and performance to be delivered over the life of the project; while in terms of cost, the VFM assessment considers the cost to the taxpayer or end-user over the same period of the different procurement options, including the costs of managing the risks transferred to the private sector and the efficiencies that the latter can generate. Therefore, VFM analysis will identify the PPIIS procurement option that represents the best long-term balance of value (quality) when compared to the risk-adjusted cost.

VFM analysis generally involves a combination of quantitative and qualitative approaches. On the one hand, qualitative VFM analysis aims to assess whether the proposed PPIIS has the potential to be pursued as a PPP and whether the conditions exist to achieve VFM. Qualitative analysis occurs at two points in the PPP project development process: a) often at an early stage of PPP development, at the project identification and selection phase<sup>9</sup> and b) at an advanced stage occurring in the project preparation and structuring phase. It should be remembered that broadly speaking, the PPP project development process is generally carried out in three phases:

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<sup>5</sup> See David Heald, (2003).

<sup>6</sup> Dorothy Morillos and Adjo Amekudzi (2008).

<sup>7</sup> Darrin Grimsey and Mervyn K. Lewis (2005).

<sup>8</sup> Gerardo Reyes-Tagle ed, (2008).

<sup>9</sup> The World Bank, (2017).

**Phase 1.** Identification and selection of the PPIIS: at this stage the “PPP suitability test” is carried out, i.e., what some countries call an eligibility index<sup>10</sup> is constructed, based on a qualitative VFM analysis, at an early stage of the approval of the project as a PPP. In general, the studies and analyses carried out at this stage are a) an analysis of needs and investment options; b) technical and socio-economic feasibility studies (cost-benefit analysis) of the PPIIS concept; and c) an assessment of the potential of the PPIIS to be procured as a PPP (initial qualitative VFM analysis).

**Phase 2.** PPP project preparation and structuring: if in the previous phase the studies indicate that the PPIIS is profitable for society and has potential as a PPP, then a quantitative VFM analysis is carried out involving estimates of the costs of the PPIIS for a conventional procurement option called a Public Reference Project (PRP) and a variant PPP model. Indeed, most LAC countries use methodologies that compare the total estimated costs of the PPP project with those estimated for the traditional public alternative, adjusted for risks. The studies, analyses and activities carried out in this phase include, among others, technical, legal, financial, environmental, and social impact feasibility studies; determination of the PPP project transaction model; quantitative VFM analysis, which includes the identifying, allocating, and quantifying risks; qualitative (multi-criteria) VFM analysis at an advanced stage; as well as a fiscal impact assessment, preparation of a draft PPP contract (including performance indicators), and a market survey.

**Phase 3.** Contracting and signing the PPP Contract: the activities include, among others, the bidding process, as well as the assignment and signing of the PPP contract. At this stage it is possible to perform an additional VFM calculation, when comparing the financial offer of the winning bidder who is awarded the PPP Contract with the risk-adjusted base cost of the PRP (total cost of the PRP).

Some studies include a fourth Phase<sup>11</sup> comprising the management of the PPP contract and, in particular, the ex-post VFM analysis.

It can thus be seen that the two approaches to VFM analysis<sup>12</sup> serve different purposes: the quantitative approach includes all the factors that can be measured by the Public-Private Comparator (PPC) and the qualitative approach covers aspects that cannot be quantified.

Qualitative VFM analysis is carried out at an early stage to assess the potential of the PPIIS as a PPP, through the application of a questionnaire (called an eligibility index in some LAC countries), and the result is used in the quantitative VFM analysis to begin to calculate in monetary and percentage terms (the savings of resources with respect to the total cost of the PRP). The quantitative analysis is sometimes complemented by an additional assessment based on qualitative criteria (called multi-criteria analysis in some countries).

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<sup>10</sup> See Hinojosa (2010).

<sup>11</sup> In El Salvador, the methodology includes *Phase 4: Follow-up* where contractual management is carried out by the Public-Private Partnership Supervisory Body (OFAPP) or the sectoral regulatory or supervisory bodies. See Government of El Salvador, (2019).

<sup>12</sup> See World Bank, (2013). pp. 12 -14.

In LAC, the results of the quantitative VFM analysis have been given more weight in determining whether or not the PPIIS is pursued as a PPP. To approve a PPIIS to be procured as a PPP, the quantitative VFM approach is used, which consists of comparing, inter alia, the risk-adjusted long-term (also considering other factors) PPIIS costs of the PPP option with the risk-adjusted costs of traditional procurement.

The comparison between the cost of the PPP option and that of traditional procurement has significant limitations as it depends crucially on the availability of information on costs, risks, and other factors, as well as on the discount rate chosen to discount the flows.

The credibility of the analytical techniques of the quantitative approach to VFM analysis can be tarnished if they are misused to legitimize a predetermined decision.<sup>13</sup> Notwithstanding these limitations, governments continue to base approval decisions on the results of quantitative VFM analysis to justify an investment decision or not.

In developed countries, it is now generally accepted that a quantitative approach should be treated as part of a broader process of project VFM analysis, as the results of the qualitative assessment should also be considered in the selection and approval of a PPIIS as a PPP.

## The quantitative approach to VFM

Grimsey et al.<sup>14</sup> note that it is possible to identify four main quantitative approaches to VFM, although, from the perspective of the time at which this analysis is carried out, three uses of quantitative VFM analysis can be distinguished:

- 1) during the preparation and structuring stage of the PPIIS through the Public-Private Comparator (pre-assessment);
- 2) a VFM test through a PRP-PPP comparison, at the time of receipt of bids where the PRP is compared with the bidder's financial bid (immediate assessment); and
- 3) a test during the PPP contract administration in which the VFM of the actual performance of the PPP Project is estimated (ex-post assessment) usually conducted by the Comptroller's Office.

The quantitative analysis based on the PPC is the dominant approach in LAC and consists of comparing the lifetime cost of the PPP project with the cost of the same PPIIS procured in the traditional way (OPT) or PRP. These costs are adjusted to consider the fiscal implications or the allocation of risks, among others; the cost flows are subsequently discounted to estimate the costs at present value and thus estimate the VFM in quantitative or monetary terms, and the percentage of savings of public resources that allows the PPIIS to be carried out through a PPP with respect to traditional public works.

However, in practice, the comparison of the PPP option with a PRP has limitations, because the quantitative analysis crucially depends on the cost and revenue assumptions considered for

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<sup>13</sup> See Heald, D. (2003).

<sup>14</sup> Grimsey, Darrin and Mervyn K. Lewis. (2005).

estimation, the availability of data and historic information, as well as other factors relating to the choice of discount rate and the challenges of quantifying cost overruns and income risks.

Although the quantitative approach is widely accepted, some studies have raised criticisms that question the objectivity of the results of this approach to estimating the VFM. Indeed, because of the high level of complexity of the calculations and assumptions adopted, quantitative VFM analysis may be perceived as biased and may also lead to uncertainty that all aspects of the project have been considered; in addition, the analysis may be vulnerable to apparent or real policy pressures. A number of studies<sup>15</sup> suggest that some parts of the quantitative approach to VFM analysis are debatable related to several aspects such as the following:

- the assumptions used to estimate project costs and revenues;
- the scope of the analysis (incorporation of additional costs or benefits, such as “cost of public expectation”, “cost of public financing” or “fiscal neutrality”, etc.);
- the approach to risk assessment;
- the rates used to discount the estimated cost and revenue streams.

*a) Cost and revenue assumptions.*

The infrastructure and material and human resources management areas of the Development Units have the experience and information to estimate the initial investment costs of the project (CAPEX), as well as the operation and maintenance costs (OPEX) of the public project to be procured in the traditional way. However, there is a systematic tendency for evaluators to make optimistic assumptions about key project parameters, especially CAPEX, OPEX, the duration of the construction phase of the project, as well as the expected demand for the project during the operating phase. This is why the UK Green Book recommends<sup>16</sup> adjusting costs to eliminate optimism bias in the estimates.

*Inaccurate projections.* Considering that even in developed countries there is a dearth of historical information on which to base cost estimates, accurate costing in developing countries for a project with a 25 - to 30-year horizon is very difficult.

*b) Scope of analysis: incorporating additional costs or benefits.*

*Cost of public expectation.* If the assessor estimates that there will not be sufficient budget in the timeframe foreseen to start the PPIIS, the PPP regulatory framework allows the cost of the PRP to include the cost of public expectation, i.e. the net social benefit that society does not receive due to the delay to the project because of the lack of budget availability. This may mean that the Total Cost of the PRP increases and if the total cost of the PPP remains unchanged, the VFM tends to support a decision for a PPP. In Mexico, for example, the PPP Manual allows the PRP cost to be affected by the *cost of public expectation*.

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<sup>15</sup> See James Leigland and Shugart Chris, (2006).

<sup>16</sup> See H. M. Treasury, (2018).

*Cost of Public Financing.* In Mexico and Paraguay, the PPP Manual allows the cost of public financing to be included, which can increase or decrease the VFM, depending on how the assumption is oriented. Assuming a 15-year Treasury Bond is issued, which pays a coupon every six months with the last coupon including principal amortization, this lowers the cost of the PRP and the VFM, because the cost of the investment is located in year 15, which will have a very low present value.

*c) Focus on risk assessment.*

The estimation of cost overrun risk in VFM analysis varies across countries. Although the risk analysis methodologies published by governments are similar in most countries in the region, the way in which risks are identified, quantified, and allocated differs in many respects. The differences depend on the availability of historical information regarding delays and cost overruns of PPIIS developed as traditional public works, which helps to determine the probability distributions and the impact of the cost overrun. When no historical information is available, the manuals authorize Risk Analysis Workshops, in which a group of government and private sector experts draw on their experience to establish the probability of occurrence and impact of each risk; in many cases, this result in significant divergences in risk assessment.

One way of estimating the cost overruns due to the occurrence of risks is based on the expected value (the weighted average probability of the risks recorded in the past in similar projects) multiplied by the economic impact of the occurrence.

If the risks materialize, there will be associated cost overruns, which are quantified on the basis of expected value following this approach. Multiplying the expected probability of a risk materializing by its estimated cost can be used to obtain an expected value. This requires objective estimates of the probability of a risk occurring, which is difficult to achieve because when estimates are made by expert panels the assessors give opinions on probabilities and impacts based on different experiences.

In this context, the cost estimates in the PRP and in the PPP are risk-adjusted, but with different probabilities and risk impact scenarios to reflect the various risk management possibilities and costs of the government and the private party. Because of differences in the implementation of risk assessment methodologies, risk-adjusted costs may affect the VFM estimate.

In addition, there is a possibility of omitting risks that may affect the expected results of the project. Some risks involve very significant potential effects on project costs, but also great uncertainty. These risks are difficult to estimate, as is the risk of contract renegotiation. Expected project costs are rarely adjusted for such risks.

*d) Discount rates used to discount the estimated PRP and PPP flows.*

There are different criteria to establish the discount rate to calculate the current cost and revenue flows for PRP and PPP. It is crucial, though, that the discount rate applied mirrors the opportunity cost of public resources.

At the international level, PRP base cost flows (risk-free cost) often come from the PPIIS cost-benefit analysis (socio-economic evaluation) with the social discount rate estimated by the Ministry of Finance applied, while the payment to the developer investor (capital subsidy or deferred availability payments) is estimated using a financial model, which considers the CAPEX, OPEX, financing costs, taxes, and other costs that are recorded throughout the life of the PPP contract. Some VFM methodologies suggest that, in order to estimate the total cost of the PPP, a discount rate called the Weighted Average Cost of Capital (WACC) should be applied to the payment flows to the developer investor. If the discount rate used to calculate the cost of the PRP is lower than the WACC, this increases the VFM. The above highlights that there is no consensus among economists, policymakers, or practitioners on what the discount rate should be and whether it should be the same for estimating the cost of the PRP and the PPP. Nonetheless, the review of PPP manuals of different countries, like Mexico, Colombia, Paraguay, shows that the usage of risk-free rates is recommended to discount costs and revenues flows for PRP and PPP.

In summary, the results of the quantitative VFM analysis depend crucially on the assumptions made by project evaluators about the costs and revenues of the PPIIS under traditional and private procurement options, as well as the application of the authoritative methodologies for risk identification, assessment, and allocation. Sometimes it is also assumed that a PPP will achieve lower costs as a result of efficiency or innovation. The PPP procedure sometimes involves the use of criteria and assumptions to estimate various variables, especially in cases where information on similar projects is limited or non-existent.

The problems with the quantitative measurement of VFM sometimes result in the difference between the sum of the current value of the total cost of the public reference project and the current value of the total cost of the PPP being less than or equal to zero; on this basis, it is not recommended to execute the project as a PPP, without taking into account other qualitative considerations that must be included in the decision-making process.

In order to assess the robustness and reasonableness of the assumptions used to estimate the PRP and PPP cost variables, it is recommended that, as part of the quantitative VFM assessment, a sensitivity analysis is carried out to identify changes in the VFM in response to adjustments in the main estimated cost variables.<sup>17</sup>

Internationally, the contribution of the quantitative approach to VFM analysis to the decision-making process often varies. In some countries, for example in the UK, the quantitative VFM assessment works as a gateway, meaning that a negative outcome of the VFM assessment is very unlikely to lead to the implementation of the PPIIS under a PPP procurement framework. In other countries, for example in Belgium, the VFM assessment plays a less decisive role, in the sense that other inputs, not captured in the quantitative VFM methodology, may influence the final decision on whether to apply the PPP option or conventional procurement.

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<sup>17</sup> See APMG International, (Undated).

The review of methodologies applied in LAC countries indicates that the results of the quantitative approach to VFM analysis is definitive in determining whether or not the procurement of a PPIIS is carried out as a PPP. In El Salvador, the Dominican Republic and Mexico, it is common that if the quantitative VFM is less than or equal to zero, traditional procurement is recommended; it is, therefore, advisable to review the suitability of conducting an additional qualitative analysis that confirms or rectifies the results of the quantitative VFM approach.

## The qualitative approach to VFM and comprehensive suitability analysis

It is common for a combination of quantitative and qualitative criteria to be applied in the VFM analysis, although they are not applied in a consistent manner. In the process of identifying the most suitable contracting model for developing priority PPIIS, projects can be qualitatively assessed first to identify their potential as PPPs.

In the early phase of PPP project selection and approval, the VFM qualitative assessment is based on aspects such as the country's experience in similar PPP projects; progress in completing technical, financial, and legal studies, environmental permits, etc.; and institutional strength. This information provides answers to a series of questions included in a checklist, which is the basis for the qualitative analysis at an early stage.

In some LAC countries, the qualitative VFM assessment is carried out in two phases: a) at an early stage of project selection and approval, where it verifies whether the PPIIS has the potential to be procured as a PPP and b) at a later stage after the results of the quantitative VFM analysis have been obtained. For illustrative purposes, the qualitative VFM assessment process in some LAC countries is outlined below.

**Colombia:** has a complete methodology for the approval of a PPP project, which involves, in addition to conducting technical, legal, socio-economic, environmental, and other feasibility studies, preparing an Eligibility Index (EI) and a suitability analysis. The VFM assessment, as part of the methodology for approving PPP projects, is divided into two stages: a qualitative and quantitative analysis.

To support the selection of the contracting method, the multi-criteria and eligibility analysis methodology is used, which is applied in the early stage of the pre-feasibility studies.<sup>18</sup> The PPP project development unit must conduct a multi-criteria analysis *workshop*, the stages of which are as follows: a) formation of the workshop group and definition of the workshop leader; b) selection and justification of the qualitative criteria to be used; c) execution of the workshop and collection of information and data; and, d) evaluation and weighting of the information and preferences resulting from the workshop. Each established criterion is qualified through a scale of acceptance

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<sup>18</sup> See National Planning Department (2015). *Nota Técnica 4*.

or rejection (between 1 and 9) to the answer obtained and, subsequently, using this information, the justification for the selection of the contracting method is prepared.

The multi-criteria analysis of the VFM requires the entity promoting the project to deliver the results of the quantitative VFM analysis, obtained through the PPC. Thus, the entities that wish to use the PPP structure must submit, as part of the qualitative analysis (multi-criteria), the quantitative VFM analysis, since they will be part of the documents that the National Planning Department will review to issue the *concept* (opinion) on the justification of using the PPP mechanism.

**Mexico:** the PPP legal framework, at the federal level, establishes that, in order to be approved, PPP projects must present the following studies listed in the PPP Law: a) Feasibility Report (technical, legal, environmental), b) Analysis of investment and contributions, as well as economic and financial feasibility; and c) Analysis of suitability to carry out the PPIIS as a PPP. The suitability analysis includes: i) the eligibility index (EI); ii) risk analysis; and iii) public-private comparator.

The qualitative VFM analysis is carried out through the estimation of the EI,<sup>19</sup> which is a questionnaire to measure the degree of perception of public officials about 30 topics, grouped under 7 criteria, each of which is attributed a rating between 1 and 5. The score on the degree of perception concerning each of the questions is grouped under a criterion; subsequently, the score assigned to each response is added up and multiplied by the weighting of the specific criterion. The Manual<sup>20</sup> establishes the methodology for calculating the EI.

The application of the Index is a necessary condition but is insufficient to implement a PPP. In order for it to be sufficient, the project must generate VFM, i.e. it must be demonstrated that the PPP is superior to traditional public works in terms of cost and/or quality. The studies required by the PPP Law are reviewed by the SHCP's Investment Unit, while the Financing Expense Commission<sup>21</sup> approves the Project as a PPP.

**Dominican Republic:** The Public-Private Partnerships Law was passed in February 2020, while its regulations and the methodologies for project evaluation and suitability are in the approval phase. Along with the delivery of an initiative to the General Directorate of Public-Private Partnerships (DGAPP), the private or public originator of the project must submit the legal, technical, and financial pre-feasibility studies. If the initiative is accepted, the DGAPP conducts an early stage eligibility analysis, which is under deliberation within the government, to indicate whether it is authorized to proceed with further studies or rejected. If it is rejected, the documentation is submitted to the National Council of Public-Private Partnerships (CNAPP), the highest authority of the DGAPP, to deliberate whether to accept or reject the initiative.

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<sup>19</sup> For more details see: Ministry of Finance and Public Credit, (2015).

<sup>20</sup> Secretary of Finance and Public Credit, (2012).

<sup>21</sup> Inter-Ministerial Commission on Public Expenditure, Financing, and Disincorporation, of the Ministry of Finance and Public Credit. For more details on its functions see Federal Government of the Republic, (2018).

The qualitative VFM analysis is carried out based on an EI that is constructed using a questionnaire. Based on the established weightings, the responses obtained in a workshop are assigned a numerical value between one (1) and five (5). If the value resulting from the calculation of the index is higher than 3.5, the CNAPP is advised to authorize all studies to be carried out.

In order to be authorized to proceed to the PPP evaluation phase, a socio-economic analysis is required which uses the social net present value (NPV), the annual equivalent value (AEV), the net present value index (NPVI), and the social internal rate of return (SIRR) as decision indicators.

The quantitative VFM analysis is performed using the CPP. The multi-criteria analysis uses a map of the VFM that allows both dimensions to be combined. The VFM Map will consist of a synthetic indicator in the qualitative part and a matrix with the CPP result. The synthetic indicator allows for collective verification of the suitability of the PPP alternative through a series of questions that are answered dichotomously, at the advanced stage of the suitability analysis. The questions are based on criteria and critical success factors present in the design and implementation of PPP contracting schemes, which aim to specify the VFM variables included in the PPC, complement the components that could not be quantified in the CPP, and include additional elements of judgment.

**Paraguay:** The National Government of Paraguay developed a methodology for evaluating PPP projects called “Comprehensive Analysis for PPP Schemes”, which is intended to determine whether a particular PPIIS is procured under the PPP approach. The introduction to the Methodological Guide<sup>22</sup> summarizes the sequence of the integrated analysis in three steps: a) socio-economic assessment of the project; b) VFM analysis: qualitative dimension at an early stage; and c) VFM analysis: quantitative dimension through the PPC.

The socio-economic assessment of the PPIIS is carried out through a cost-benefit analysis. If the cost-benefit analysis shows a positive social net present value ( $NPV > 0$ ) and the social internal rate of return is higher than the social discount rate ( $SIRR > SDR$ ), then implementation of the project is recommended.

Considering that the quantitative VFM analysis requires precise information that is time and resource-consuming, a decision was made to use an EI to evaluate the potential of a PPIIS. The Guide<sup>23</sup> highlights that the EI is a particular case of multi-criteria analysis applied in the early stages of PPP project identification. The outcome of the EI is a necessary condition but is not sufficient to decide to implement a PPP. In order to be sufficient, the project must generate VFM. After the socio-economic assessment and the construction of the EI, the optimal procurement method is identified, using the CPP methodology. The decision rules for implementing the PPIIS as an OPT or PPP are as follows: If  $VFM > 0$ , then Private Provision (PPP). If  $VFM < 0$ , then Public Provision (OPT). The Guide recognizes that the quantitative dimension of VFM analysis may be insufficient to guide optimal decision-making, and therefore recommends a complementary qualitative VFM assessment, applying a multi-criteria decision methodology.

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<sup>22</sup> National Government, (2016).

<sup>23</sup> *Ibidem*.

**El Salvador:** in 2012, the Export and Investment Promotion Agency of El Salvador (PROESA) was created, whose functions include promoting Public-Private Partnership (PPP) schemes. In 2013, the Legislative Assembly<sup>24</sup> approved the regulatory framework for PPP projects. For the project selection and approval process, PROESA published a Manual<sup>25</sup> that describes the phases of a PPP Project as follows: a) identification and selection of PPP projects; b) bidding documents; c) bidding and award; and d) monitoring.

In the project identification and selection phase, the contracting institution prepares a cost-benefit analysis. In order to analyze whether a PPIIS can be developed as a PPP, the PPIIS must first demonstrate social profitability. If the PPIIS is socially profitable, PROESA performs a quantitative VFM analysis using the PPC. The rule for deciding on<sup>26</sup> the procurement model is:

- If  $VFM > 0$ , PPP method
- If  $VFM < 0$ , OPT method
- If  $VFM = 0$ , the decision is based on a qualitative analysis.

The qualitative assessment tool is the expert judgment, which defines methodological approaches such as the multi-criteria matrix, allowing for the viability of the PPIIS as a PPP to be determined. However, no qualitative analysis guidelines were found for the early stage or the stage after the PPC results.

## Conclusions

- The review of the regulatory framework for PPP projects in various LAC countries shows that a combination of qualitative and quantitative approaches in VFM analysis is essential.
- In general, the quantitative VFM analysis is carried out following the Public-Private Comparator methodology before bidding (pre-evaluation).
- The quantitative VFM calculation based on the PPC methodology is widely regarded as the state of the art within the PPP industry worldwide<sup>27</sup>, and it is therefore recommended that it continues to be used.
- Although quantitative assessment is an important part of the VFM analysis, it is not the only factor influencing the approval of the PPIIS as a PPP, as qualitative analysis is often used in addition, either at an early or late stage in the formulation of the PPIIS or both to approve a PPIIS to be pursued as a PPP. For this reason, the results of the quantitative VFM analysis should not be binding, as there may be qualitative reasons to recommend whether or not to implement the PPIIS as a PPP.

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<sup>24</sup> Legislative Assembly. (2013).

<sup>25</sup> Government of El Salvador, (2019).

<sup>26</sup> **Ibidem**, p.42

<sup>27</sup> M. Siemiatycki and N. Farooqi (2012),

- Considering that the quantitative VFM assessment relies heavily on assumptions – such as risk assessment, cost estimates, and, in particular, adjustments made to the PRP (cost of public financing, cost of public expectation) and the discount rate, which are estimates with certain levels of inaccuracy – a sensitivity analysis is required to test the robustness of the quantitative VFM approach, modifying the main assumptions to identify the impact of the relevant variables on the cost projections of the PRP (including the amount of initial investment, operation and maintenance costs, revenue generated, etc.) and the PPP (such as efficiencies, cost of debt, expected return on invested capital, among others).

In this context, the findings of the quantitative VFM approach should be considered as a baseline and be accompanied by a sensitivity analysis. The recommendation for the quantitative VFM approach is that it should always be complemented by a qualitative VFM analysis. This is because: a) a positive VFM does not necessarily imply that the PPIIS should be procured as a PPP, as qualitative factors should inform the decision; and b) a negative VFM does not mean that PPP procurement is worse than traditional procurement. Sensitivities of the relevant variables should be developed in order to test the soundness of the results.

- Although quantitative VFM analysis is subject to criticism and questioning, it is highly recommended to carry out the PPC, as it is a systematic way of identifying all costs, revenues, and risks that will have to be assumed and managed throughout the life cycle of the project.
- In a few LAC countries that have a law or regulatory framework for PPPs a written document was found with guidelines for performing the qualitative analysis in advanced stages, i.e., once a quantitative VFM result has been obtained. This does not mean that it does not take place at some level of the PPP governance structure in the countries of the region. It is therefore recommended that methodologies for qualitative analysis (which could be based on multi-criteria analysis) are published for use after the results of the quantitative VFM analysis have been obtained.

# Chapter 2: Creating Standards for the Estimation of Risks Retained by Governments, to Ensure Impartial Assessment of the Selection of the PPP Model.

The methodologies for the selection and approval of PPP projects in most countries in the LAC region establish that one of the most important factors for a government to execute a PPIIS as a PPP is that it must provide positive VFM. Optimal risk transfer to the private sector is recognized in the literature as one of the main drivers of VFM; it is estimated that risk transfer accounted for 60% of positive VFM outcomes for PFI projects, and that in 6 of the 17 projects studied, achieving positive VFM was entirely dependent on risk transfer.<sup>28</sup>

For risk transfer to generate VFM, it is necessary to achieve optimal risk allocation, with the criterion that risk should be allocated to the party best able to manage it at the lowest cost. Underlying this approach is the view that risks are allocated to optimize the VFM, not to maximize risk transfer<sup>29</sup> and furthermore, to ensure that the cost of managing risk is minimized over the life of the project<sup>30</sup>.

If the party managing the risk pays its financial cost, this creates an incentive to mitigate it; therefore, risk allocation based on these principles is assumed to generate the most efficient risk allocation, the lowest costs for the PPP project, and the highest VFM. Considering the importance of risk allocation in tipping the balance in favor of PPPs, it is important to review the risk analysis process to understand how risk transfer creates VFM.

Each PPIIS implemented as a PPP or traditional public work faces different risks during its development stages, although in general most involve at least the following risks<sup>31</sup>:

- Technical risk: due to the possibility of engineering and design failures;
- Construction risk: due to faulty construction procedures and increased costs and construction delays;
- Operating risk: due to higher operating costs and maintenance costs;

<sup>28</sup> See R. Ball, M. Heafey and D. King, (2003),

<sup>29</sup> See HM Treasury. (2012).

<sup>30</sup> Australian Government (2008).

<sup>31</sup> See D. Grimsey, M. K. Lewis, (2002),

A similar list of risks is included in The World Bank, (2020).

- Revenue risk: due to lower demand for the public infrastructure service;
- Financial risks: arising from inadequate hedging of revenue streams and financing costs (interest rates, currency risk, etc.);
- Force majeure risk: arising from war and other calamities and acts of God;
- Regulatory/political risks: due to changes in legal systems or regulations that alter the project company's economic capacity or alter its financial equilibrium or government expropriation policies;
- Environmental risks: due to adverse environmental impacts and hazards;
- Social risks: arising due to the opposition of affected parties to the implementation of the project.
- Project default risk: due to the failure of the project due to a combination of any of the above risks.

The VFM analysis methodology followed in Colombia, for example, includes the obligation to conduct a risk analysis, which generally requires the following steps to be followed:

1. Risk Identification;
2. Qualitative estimate of the impact of risk occurrence;
3. Quantitative estimate of the impact of risk occurrence;
4. Assignment (Preliminary Risk Matrix); and
5. Approach to mitigation measures.

The regulatory framework for risk analysis in LAC countries<sup>32</sup> recommends that the analysis should be based on information from historical records, a review of bibliographic experiences with risks in other countries, and, in general, bibliographic or documentary research, to determine the probability of occurrence and severity of the impacts of each of the risks. In a few government sectors (roads, hospitals, and schools) there is historical information on the risks of delay and cost overruns for projects executed through as traditional public works or PPPs, while for the other risks, such as demand, there is usually no evidence or historical records.

When factual information is not available, the manuals recommend a risk analysis workshop; the Project Development Unit therefore often organizes a risk workshop attended by representatives from various areas (infrastructure, budget, legal, and services for project service users). The workshop starts with a description of the PPIIS, and then the risks are identified and assessed. The cost overrun risk is estimated based on participants' experience.

Once the risks have been identified, their probability of occurrence and impact in terms of costs are established; these variables are estimated based on the participants' experience. Subsequently, the risks are classified<sup>33</sup> in qualitative terms. After identifying, describing, and

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<sup>32</sup> Reference is made to Mexico, Colombia, Peru, Paraguay, Dominican Republic, and El Salvador.

<sup>33</sup> The example is based on the methodology published by the Ministry of Finance and Public Credit, (2012).

estimating the impact of the risk and probability of occurrence, the risks are ranked according to the following criteria:

**Table 1. Risk Criteria**

Impact Risk		Probability of Occurrence	
Critical (C)	Greater than or equal to 20%	Critical (C)	Greater than or equal to 20%
Severe (S)	Less than 20%	Severe (S)	Less than 20%
Moderate (Mo)	Less than 10%	Moderate (Mo)	Less than 10%
Minimum (Mi)	Less than 5%	Minimum (Mi)	Less than 5%
Negligible (N)	Less than 1%	Negligible (N)	Less than 1%

This information makes it possible to classify the risk as High, Medium, and Low, as shown in the following table:

**Table 2. Risk Classification.**

<b>Probability of Occurrence</b>	<b>Impact risk</b>				
	<b>Negligible</b>	<b>Minimum</b>	<b>Negligible</b>	<b>Severo</b>	<b>Negligible</b>
<b>Very High</b>	Medium	High	Medium	Very High	Medium
<b>High</b>	Medium	Medium	Medium	High	Medium
<b>Moderate</b>	Low	Medium	Low	Moderate	Low
<b>Low</b>	Low	Low	Low	Low	Low
<b>Very Low</b>	Low	Low	Low	Very Low	Low

Once the risks have been classified into the three categories mentioned above, a scatter graph comparing impact and occurrence is prepared to identify the risks with high impact and high probability of occurrence so that they can be assessed. The qualitative risk assessment (probability and impact) is carried out with the aim of identifying which of these should be assessed, but in no case does it restrict any of the parties to the contract (private or public entity) from assuming the risk. The next step is to connect the probability and impact of the risk with the estimated cost and risk in order to value them monetarily.

The assessment of retainable and transferable risks allows an estimate of the total cost of the Public Reference Project (PRP) and the PPP project with transferred risks. This makes it possible, in the case of co-financed PPP projects, to measure the fiscal impact in terms of firm obligations, and explicit and implicit contingent obligations arising from the allocation of risks. The regulatory

framework in Colombia<sup>34</sup> establishes that contingent obligations are those under which one of the state entities contractually agrees to pay a sum of money – which is determined or determinable based on identified factors – to its PPP contractor, if a future and uncertain event occurs.

Contingent liabilities may arise from guarantees granted by the public sector in relation to the coverage of the risk of the demand for services, project revenues, variations in the exchange rate, interest rates, etc., to make the PPP project sustainable; they may also be generated by the renegotiation or early termination of a PPP contract due to default by any of the counterparties, among the most important factors. As contingent liabilities can represent a significant burden on the treasury and compromise the management and sustainability of public finances, it is recommended that during the execution of the PPP project, contingent liabilities are properly estimated (to avoid underestimation), budgeted, accounted for, reported, and monitored.<sup>35</sup>

Subjectivity in determining the probability of occurrence and the severity of the impact on the base cost of the PRP (risk-free cost), underestimating the contingent liabilities to be assumed by the government, as well as the way in which risk allocation is carried out, open the door to the possibility that the risk assessment and quantification method may lead to an estimate that biases the calculation of the total cost of the public reference project.<sup>36</sup> In addition, the conservative approach of risk workshop attendees leads to an overestimation of risk costs. Also, there may be a possibility that the Project Authority is interested in procuring the PPIIS under the PPP scheme, in which case there may be an interest in overestimating the risks of the PRP (traditional procurement). These factors create reservations about the method of assessing and quantifying risks. In this context, during the (preliminary) PPC analysis of VFM, cost overrun risk may be retained too much in the conventional model and transferred too little in the PPP model, thus influencing the outcome of the evaluation and distorting the calculated VFM in favor of the PPP model.<sup>37</sup>

This is how the methodologies of the pre-quantitative VFM analysis provoked a first wave of debate, raising the potential conflict of interest in the allocation, valuation, and quantification of risks, highlighting the need for oversight mechanisms within a governance structure and the political environments in which VFM analysis documents are developed.<sup>38</sup>

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<sup>34</sup> See President of the Republic of Colombia, (2001).

<sup>35</sup> For a full explanation see: Gerardo Reyes-Tagle ed., (2018). and Joan Prats, (2016).

<sup>36</sup> See R. Ball, M. Heafey and D. King, (2003).

<sup>37</sup> M. Opara (2017).

<sup>38</sup> M. Siemiatycki and N. Farooqi (2012).

# Chapter 3. Designing Governance Mechanisms that Neutralize Potential Conflicts of Interest in the VFM Assessment and in the Promotion of the Progress of the PPIIS as a PPP.

Implementing a PPIIS has varying degrees of complexity, although most of them present major engineering challenges, often face strong political opposition, and unforeseen difficulties have to be resolved during their implementation. In the different phases of their development, traditionally procured PPIIS create interests that manifest themselves in different ways and affect the efficient exercise of public spending, including the following:<sup>39</sup>

- Benefits are often overestimated, and costs underestimated in the study and project preparation phase.
- During the design of the infrastructure work, decision-makers try to avoid future liabilities by developing conservative designs.
- In the construction phase, the minimum technical and operational specifications are met in the search for the lowest cost, under missing or ambiguous specifications, which sometimes leads to requests for changes in the scope of the contract.
- Contracts allow for price adjustments when the economic balance of the contract is broken. Adjustment negotiations result in overruns and cost overruns compared to the initial schedule.
- Budget decision-makers favor the construction of new infrastructure, relegating the maintenance of existing infrastructure to secondary importance.
- When infrastructure projects present a higher level of complexity, contracting agencies establish very high economic and technical solvency requirements, creating barriers to entry and conditions for corruption.

The inefficiency in public spending, mentioned above, has gradually brought about processes of transformation in infrastructure investment policies, formalized in changes in laws, regulations, and institutions, in order to increase efficiency in the use of public resources and improve the quality in the provision of public services and accountability, seeking to generate value for money in the form of budgetary efficiency. Indeed, in the early 1990s, an old form of infrastructure

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<sup>39</sup> See C. B. Casady, K.Erikssonb, R. E. Levitta and W. RScott, (2019).

development regained strength: the implementation of public infrastructure projects with the cooperation of the private sector, which were known in the United Kingdom as private finance initiatives and, later, in other regions of the world as public-private partnerships.

PPP projects take on some of the tasks necessary to meet the public sector's responsibility to regulate, provide services to citizens, and deliver VFM, while using private sector expertise, innovation, asset and service management, and oversight to deliver the infrastructure required for economic and social development.<sup>40</sup>

Similar to the traditional procurement model, a PPIIS under the PPP method can also present problems with conflicts of interest in the selection, preparation, approval, bidding, and monitoring processes. For this reason, a regulatory, institutional, and methodological structure has gradually been built, which has shaped the governance of PPP projects in LAC countries; in general, the governance in the various countries has many features in common, but also specific characteristics that differentiate one from another.

Wilson et al. (2010)<sup>41</sup> note that governance relates to how an entity is managed at the highest organizational level and involves the allocation of authority, responsibility, and accountability. The governance of PPP projects varies in its level of development and form of organizational and operational structure in different countries and is composed of three components<sup>42</sup>: a) a legal and regulatory framework, b) an institutional framework, and c) monitoring and control instruments.

**Legal and regulatory framework:** includes the laws, regulations, and decrees that establish the guidelines and criteria for a PPIIS to be developed as a PPP; the minimum requirements that PPP contracts must include, the rules under which projects are tendered; as well as the responsibilities of the various public entities involved in each phase of the PPP project cycle from the formulation of the business models; the preparation of technical, legal, and financial feasibility studies; the allocation and quantification of risks; the value for money analysis, the budget sustainability analysis; and the supervision and monitoring during the design, construction, operation, and maintenance stage of the project, among other elements.

**Institutional framework:** includes the entities that make the implementation of PPP projects possible, which includes:

- a) The congress that issues the PPP laws that regulate the preparation of feasibility documents and establish the responsibilities of the units involved in the selection, preparation, structuring, approval, bidding, and monitoring of projects.
- b) The government administrative units responsible for preparing, implementing, and monitoring PPPs, which are described below: (i) sectoral ministries that prepare feasibility studies, lead the PPP project structuring, contracting, and monitoring processes; (ii) PPP units responsible for technically assisting contracting institutions during the preparation, structuring, and contracting of

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<sup>40</sup> D. Wilson, N. Pelham and C. Duffield, (2010).

<sup>41</sup> **Ibidem.**

<sup>42</sup> See Joan Oriol Prats Cabrera, (2019).

PPP projects; and (iii) Ministries of Finance or Treasury that approve risk allocation, ensure that financial commitments of projects do not exceed the available budget ceiling, and assess fiscal contingencies for retained risks; iv) the oversight bodies that supervise the provision of services to meet service and performance levels set out in PPP contracts and those that regulate concession tariff adjustments; v) the internal control bodies and the supreme audit institution; and vi) the legal bodies that arbitrate disputes between partners in PPP contracts.

**Monitoring and control instruments:** regulators or supervisors of PPP contracts at various points, such as tariff regulation, revision of the service level agreement, or renegotiation of the contract, which can be regulated from within or outside the contract.<sup>43</sup>

A dedicated PPP unit within the institutional framework is a knowledge center that can provide technical assistance to Project Development Units to prepare a PPP transaction, as it is a repository of the knowledge needed to prepare value for money and risk transfer studies, structure, bid, and monitor PPP contracts. As PPP transactions are complex, it is highly recommended that governments have a dedicated PPP unit with a team of specialists with the necessary skills to negotiate on equal terms with the private sector and prevent asymmetries of information and experience.

A PPP Unit may also monitor Project Development Units through its approval mechanism to ensure that PPP agreements comply with all legal and technical requirements involved in the PPP transaction model. Regulatory approval and technical assistance are the main functions of a PPP unit, as it separates the technical aspects from policy by promoting, advising, and overseeing, leaving the responsibility for promoting actual projects to sectoral ministries. Thus, the main task of the PPP unit is not to advocate for PPP projects, but to ensure that transaction costs are as low as possible and that VFM is the main criterion for the approval process of the project as a PPP.

The OECD Public Governance Committee<sup>44</sup> recommends that the following principles of public governance of PPPs be taken into account:

- (i) Establish a clear, predictable, and legitimate institutional framework supported by competent and well-resourced authorities.
- (ii) Ground the selection of PPP projects in VFM.
- (iii) Use the budgetary process transparently to minimize fiscal risks and ensure the integrity of the procurement process.

According to Prats<sup>45</sup>, PPP governance consists of rules and procedures defining the incentives and constraints that guide the strategies of the different actors involved in the PPP project cycle. The main actors are:

- a) The sectoral ministries leading the project planning and procurement process (the procurement units).

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<sup>43</sup> **Ibidem**

<sup>44</sup> OECD (2012).

<sup>45</sup> Joan Oriol Prats Cabrera, 2019, *op. cit.*

- b) PPP units, in particular those dedicated to promoting and supporting the structuring of the design and contracting of PPP projects.
- c) The Ministries of Finance, which are involved in analyzing project risks, specifically measuring compliance with fiscal limits and contingencies.

The form of governance that is implemented in each country depends on the legal and regulatory framework, and its relevant PPP institutions. In Latin America, most governments with successful PPP programs have developed PPP governance structures, which can be characterized by how they implement a PPP unit (either as a separate entity or within an existing ministry), which may have different responsibilities, depending on the institutional structure adopted.

The establishment of a PPP unit provides governments with a specialized source of technical expertise that strengthens the capacity to select, prepare, implement, and manage PPP projects. However, strengthening government capacity depends to a large extent on the type of functions assigned to the PPP unit in the different phases of PPP project development.

PPP units perform a combination of the following three main functions<sup>46</sup>:

- a) Support for PPP policy and related activities,
- b) Support for program and project implementation, and
- c) Approval and quality control of studies to justify PPP procurement.

Combining the different functions can strengthen the capacity of the PPP unit (e.g. experience gained in project implementation contributes to better policies). In other areas, it may be necessary to prevent or manage potential conflicts of interest that may arise when combining functions, such as project promotion and project approval.

In some LAC countries, development banks perform functions similar to those assigned to PPP units and, in addition, finance PPP projects, subsidize PPP procurement justification studies, support policies to promote public-private partnerships, and perform quality control functions, as in the case of the National Infrastructure Fund in Mexico (subsidizes studies and finances PPP projects), the Development Bank of Jamaica (executes the PPP transaction) or the National Development Financial Organization in Colombia (structures PPP projects).

Even if they do not have project approval authority, PPP units can support project approving agencies in verifying that the studies that support decision-making have been prepared in accordance with the requirements of the PPP regulatory framework manuals and guidelines. At this point it is important to avoid a process of approval or support for a project that creates bias for or against the use of PPPs.

Approval and quality control by the PPP unit, alone or in coordination with other entities in the institutional framework, allows for the following:

- Reduced risk of poorly structured projects moving through the approval process.

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<sup>46</sup> See EPEC, (2014).

- Compliance with PPP policy guidelines and greater consistency in the use of PPPs across the program.
- Use of standard documentation and best practices, in terms of optimal risk allocation and ensuring that the PPP project delivers value for money to society.
- Positive market response to projects that are prepared and managed more consistently.
- Ability to assess and monitor the long-term accounting, statistical, and fiscal impact to the government arising from a PPP.
- Ensuring that projects are affordable, bankable, manageable, and cost-effective prior to the signing of any long-term contractual commitment with a private partner.

In addition to the three main functions of PPP units outlined by EPEC and described above, the UNECE<sup>47</sup> assigns them a function related to PPP capacity-building, considering that for the successful development of PPP programs it is necessary for governments to have staff with negotiation, contractual, and financial skills; they need to be able to establish specifications, deliverables for payment, monitor performance, and anticipate risks that may threaten project delivery, and understand the industry in which the government will seek partners. For capacity-building in PPPs, the UNECE recommends a 5-step program as follows: a) skills; b) institutions; c) private sector; d) National Training Program; and e) Multilateral cooperation. For more details on the capacity-building program, see the above-mentioned UNECE document.

The following is a review of the activities carried out by PPP units in selected LAC countries in order to identify their roles in supporting PPP policy (promotion and development of guidelines and methodologies), justification process, and review of the application of the regulatory framework in the preparation.

**Peru:** The regulatory framework on PPPs<sup>48</sup> authorizes the Private Investment Promotion Agency (PROINVERSION) to select the type of PPP, design it, and draft the contract. Approval from the Ministry of Economy and Finance (MEF) is required if the project requires subsidies. PROINVERSION is a technical agency, attached to the MEF, and was subsequently declared a PPP unit by Legislative Decree. Its functions<sup>49</sup> include:

- Executing the National Policy for the Promotion of Private Investment established by the MEF, especially on the promotion of PPPs.
- Approving technical normative directives on the evaluation process of PPPs and Asset Projects in the formulation, structuring, and transaction phases.
- Strengthening capacities and providing technical assistance to regional governments, local governments and other public sector entities, in the different phases of PPP projects, Projects in Assets and Works for Taxes.

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<sup>47</sup> See Chapter 2.3. Capacity-Building (Skills, Institutions and Training) in United Nations Economic Commission for Europe (2008).

<sup>48</sup> Constitutional President of the Republic of Peru, (2008).

<sup>49</sup> See President of the Republic of Peru (2017).

**Mexico:** In 2012, the PPP Law was published, which regulates federal government PPP projects, and is also applicable, in special cases, to PPP projects carried out by state and municipal governments. This Law establishes the analyses and studies necessary to determine the feasibility of carrying out a PPP project and defines the institutional structure for the preparation and implementation of PPP projects. The regulatory framework foresees three main actors during the development of a PPP project:

- The contracting entities are responsible for preparing feasibility studies on the suitability of a PPP.
- The Investment Unit of the Ministry of Finance and Public Credit (SHCP) reviews the VFM analysis and risk allocation. This can be considered the PPP unit of Mexico's federal government.
- The Inter-Ministerial Commission on Public Expenditure and Financing (composed of the ministers for SHCP, Social Development, Environment, Energy and Economy, and other lower-level authorities) authorizes PPP projects and multi-year spending commitments.

In addition, the National Infrastructure Fund (FONADIN) offers several products to strengthen the financial structure of PPP projects and has financial instruments to make investment projects, including PPPs, more sustainable.

**Colombia:** The PPP Law<sup>50</sup> aims to: a) attract investors with technical and financial solvency; b) introduce payment for availability and level of service; c) establish the roles of state entities involved in the process of formulation, review, and implementation of PPP projects; and d) design the regulatory regime applicable to private initiatives.

The contracting entity must justify the use of the PPP mechanism and obtain a favorable opinion from the National Planning Department (DNP). In the case of projects that require public resources, the contracting entity must prepare a risk matrix. The procedure for the approval of PPP Projects<sup>51</sup>, if it requires national public resources is as follows:

1. Registration in the Bank of National Investment Projects - BPIN
2. No objection from the Ministry of Finance and Public Credit (MHCP) on the financial conditions and contractual clauses proposed by the budget executing agency.
3. Favorable opinion issued by the relevant Ministry.
4. Favorable opinion of the DNP on the justification of the contracting method, review of the risk analysis, and favorable opinion of the risk unit (MHCP).
5. CONFIS defines the fiscal consistency scenario.
6. CONFIS issues fiscal guarantee (multi-year budget authorization).

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<sup>50</sup> Congress of the Republic of Colombia, (2012).

<sup>51</sup> See National Planning Department, (2013)

The PPP unit is located within the DNP and is responsible for developing and implementing policies related to PPPs and coordinating the PPP procurement process and project transactions, but it does not authorize the project to be procured as a PPP.

**Uruguay:** The PPP Act<sup>52</sup> created the National Development Corporation (NDC) with the following functions:

- Developing and promoting the execution of Public-Private Partnership (PPP) projects.
- Developing the technical guidelines applicable to PPP projects through the publication of guides, manuals, models, and instruments, which are approved by the Ministry of Economy and Finance (MEF).
- Advising on in the identification, studies, structuring, promotion, and contracting of PPP projects.

The CND acts as a PPP unit in that it provides assistance in structuring projects, gives advice and produces manuals and guidelines for the Contracting Units. A Contracting Unit may agree with the CND to structure the PPP project and pay the CND for its services. Additionally, the PPP Law approved the creation of the PPP Projects Unit, which reports to the MEF and approves the financial and budgetary aspects of the projects and supervises the implementation of the PPP, as well as being responsible for approving any adjustments to the contract during execution.

**Jamaica:** has a PPP policy<sup>53</sup>, which resulted in the establishment of two PPP Units, one in the Development Bank of Jamaica and the other in the Ministry of Finance and Public Service (MFPS).

The PPP Unit of the MFPS is responsible for the analysis of the VFM and fiscal impact of PPP projects. The PPP Unit of the Development Bank of Jamaica prepares the Business Case and executes the PPP transaction; it also coordinates the PPP Program, which includes the following:

- Providing advice and administrative support to PPP projects
- Identifying and managing funds for the development of project feasibility studies.
- Managing the process until the contract is signed.

**El Salvador:** the PPP Law<sup>54</sup> establishes that the Central Government (Executive) and Local Governments (Municipalities) may use the PPP contracting method, with prior approval of the project by the Board of Directors of the State Advisory Agency (PROESA), presented by the State Contracting Institution (ICE); the Ministry of Finance evaluates the Fiscal Impact of the PPP project.

The ICE identifies PPP projects, prepares the studies, conducts the bidding, awards and signs the contract. The PROESA Board of Directors approves the PPP projects, their bidding conditions, and model contracts, as well as contractual modifications. PROESA, among other things, advises the ICEs on the development of PPP projects and promotes the project portfolio among potential investors and financiers.

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<sup>52</sup> Uruguay Parliament, (2011).

<sup>53</sup> Ministry of Finance & the Public Service of Jamaica (Undated).

<sup>54</sup> Legislative Assembly of El Salvador, (2013).

The Ministry of Finance evaluates the allocation of risks and fiscal impacts of PPP projects, verifies and issues an opinion on the analysis of the VFM, issues a financial opinion on the fiscal implications of the bidding conditions and the contract; it also verifies the firm and contingent quantifiable future payment commitments of each PPP project.

This institutional framework prevents the ICE from having a biased position in favor or against PPP procurement, considering that the VFM analysis is carried out by PROESA, which verifies the studies, while the project is approved by PROESA's Board of Directors.

## Conclusions

- Countries that have implemented PPP project programs have established a governance system that includes a legal and regulatory framework, an institutional framework that establishes roles and responsibilities of the institutions involved in the selection, preparation, structuring, approval, bidding and tendering of PPP projects, and project monitoring units (regulators of prices paid by the end users of PPP project services or PPP supervisors).
- PPP units carry out three activities: a) support for PPP policy, b) implementation of programs and projects, and c) approval and quality control of studies to justify PPP procurement. In LAC, no country was found to have all three functions performed simultaneously.
- It is often observed that PPP units carry out two combined functions, by developing the methodologies and guidelines for conducting PPP justification studies and, in addition, by carrying out quality control activities in approving the application of the guidelines published in PPP project approval documents.
- PPP units can deliver benefits during the life cycle of the project, but government support is needed to provide them with budgetary resources, well-trained human resources, and authority to perform the functions assigned to them by the legal and regulatory framework.
- The effectiveness of PPP programs can be enhanced with PPP units, located in key government agencies, staffed with highly qualified, specialized personnel, technically prepared to assist public or private sector entities undertaking PPP projects.
- PPP units are often attached to the Ministry of Finance to exercise direct control over resources allocated to PPP projects, as well as contingent fiscal risks.
- To ensure a professional and transparent decision-making process, the actions of PPP units should avoid political pressures for biased review or approval.
- The definition of appropriate roles of the PPP units, the location in the government structure, and political support are critical to achieve the desired success of the PPP.

# Chapter 4: Identifying the Factors that Generate Positive VFM in LAC Projects, Considering the Context of the Limited Use of the Tool in the Countries.

A requirement for a project to advance to the PPP procurement phase is that the relevant studies show that it will deliver positive VFM. In most LAC countries, the PPC is used to estimate the VFM in quantitative terms. Considering that governments implement PPP projects to achieve good VFM, it is crucially important to identify the factors that drive the achievement of better VFM; this section therefore aims to identify the drivers of VFM. The literature<sup>55</sup> notes that the value-for-money (VFM) drivers of PPP projects are the mechanisms that can be used to improve the VFM of infrastructure provision, including the following:

- **Consider whole-of-life project costing:** integrating all costs under the responsibility of a single party can reduce project costs. Full integration encourages the responsible party to complete each project phase (design, build, operate, maintain) in a way that minimizes total costs and maximizes efficiency. Nisar (2007)<sup>56</sup> points out that construction quality is influenced by other costs, such as maintenance, so considering lifetime costs incentivizes construction quality to reduce long-term maintenance costs and deductions for poor service.
- **Risk transfer:** it is recommended that risks are allocated to the party that can manage them at the lowest cost, which can reduce the total project cost to the government and minimize risk to the taxpayer.
- **Upfront commitment to maintenance, and predictability and transparency of whole-of-life costs:** implementation of a PPP project requires a commitment by the private operator to the whole-of-life project cost to provide adequate maintenance for the assets. This commitment allows budget forecasts to be made for the entire life of the PPP contract and reduces the risks of budget allocations not being available for maintenance after the start of project service delivery.
- **Focus on service delivery:** allows the contracting agency to enter into a long-term contract for service delivery as and when required. The PPP company can then focus on service delivery without having to consider other objectives; for example, in the case of a hospital

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<sup>55</sup> See The World Bank, (2017), Box 1.2.

<sup>56</sup> Tahir M. Nisar, (2007).

facility, the authority focuses on the provision of health care services or, in the case of a prison, the authority focuses on the custody of prisoners.

- **Innovation:** specifying in the PPP contract the quantity and quality of services to be delivered, rather than prescribing inputs, provides a wider opportunity for innovation by the private partner. Competitive procurement incentivizes bidders to develop innovative solutions to meet these specifications. For example, in the United Kingdom hospital PPP contracts have seen increased innovation in soft services involving the use of robotics for the delivery of food and linen to wards, as well as an increased focus on patients by orderlies and support staff.<sup>57</sup>
- **Asset utilization:** optimizing the use of assets for the delivery of additional services leading to multiple revenue streams for the project. For example, the use of space in bus terminals for private vendors or unused space for advertisements.
- **Accountability:** government payments are conditional on the private sector delivering the specified results at the agreed quality, quantity, and timeframe. If performance requirements are not met, deductions are applied to service payments to the private-sector party.

As part of a study to identify the drivers of VFM, Li *et. al.* (2005)<sup>58</sup> sent a questionnaire to 500 people involved in PFI projects which included questions on 18 critical success factors. The results of this survey identified the top three success factors as: a) strong private consortium, b) risk allocation, and c) access to a mature financial market.

The selection of a strong private consortium suggests that private firms participating in PPP markets should explore the strengths and weaknesses of other participants and, where appropriate, join together to form consortia capable of creating synergies and exploiting their individual strengths. It also indicates that, at the stage of contracting and signing the PPP contract, the Contracting Unit should pay strategic attention to the most technically and financially solvent consortia of private participants. Proper identification of risks and their distribution secondly suggests allocating each risk to the party that can best manage it, as it reduces individual risk premiums and the overall cost of the project. The third factor identified is that the awarded consortium has easy access to a deep and broad financial market, as this allows for lower financial costs.

Furthermore, Cheung *et. al.* (2009)<sup>59</sup> conducted a survey in Hong Kong and Australia, based on the above questionnaire, to identify the main factors that strengthen VFM. The results placed “efficient risk allocation” and “output-based specification” top, indicating that when risks are well managed and output-based PPP contract specifications are used, there is the potential for higher VFM.

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<sup>57</sup> See the opinion of Gary Sturgess (2007).

<sup>58</sup> Bing Li, A. Akintoye, P. Edwards, and C. Hardcastle (2005).

<sup>59</sup> E. Cheung, A. P. C. Chan and S. Kajewski, (2009).

*Efficient risk allocation*<sup>60</sup> is one of the main ways to achieve better VFM. The objectives of risk allocation are: (i) to create incentives for PPP contract partners to manage risk well and reduce project costs; and (ii) to reduce the overall cost of project risk.

With regard to the *specification of outputs rather than inputs*, the PPP contract should clearly specify what is expected of the private party in terms of the quality and quantity of the assets and services to be provided. Product specification maintains competition and reduces opportunities for corrupt practices.

*Competitive bidding* can increase VFM since more competition and participation of several bidders will result in higher quality and lower price proposals. The successful consortium will be the one that meets all the requirements that help to increase VFM.<sup>61</sup> Li *et. al.* (2005)<sup>62</sup> identify three conditions for competitive bidding: a broad list of participating firms; a clear specification of the requirements to be met; and enabling competitive tension throughout the procurement phase. However, competitive bidding based on price alone may not help to secure VFM, which requires the selection of a strong private consortium.<sup>63</sup>

Another important driver is the *level of leverage and the capital structure*<sup>64</sup> involving a combination of debt and equity, which requires that the project design is profitable and therefore that the project company can borrow. In determining the capital structure, the structurer must ensure that the minimum capital requirements are adequate to guarantee the consortium's commitment to the project. In this context, creditors become an aid to the Contracting Unit because they: a) have an interest in the long-term performance of the project, as repayment of the debt depends on it; b) help assess the financial viability of the project in order to grant the loan; and c) ensure that the infrastructure is built on time, properly maintained and operates within budget.<sup>65</sup>

There are other factors that, despite being foreseen in the clauses of the PPP contract, if not well managed can negatively affect the obtaining of VFM, among which are the following<sup>66</sup>: completion of the infrastructure, contract variation, changes in the government, management of contract termination, and the reversion of the assets on expiry of the contract.

The literature highlights the importance of other drivers of VFM, but the above are considered the most important. The findings on the drivers of VFM that LAC governments have reflected in official documents guiding the implementation of PPP projects are presented below.

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<sup>60</sup> See World Bank, (2017).

<sup>61</sup> See for example, E. Cheung, *et. al.* (2009), p.18 and E. Farquharson (2007), p.6.

<sup>62</sup> Bing Li, *et.al.* (2005).

<sup>63</sup> E. Cheung, A. Chan and S. Kajewski. (2009). pp. 7-20, p. 9.

<sup>64</sup> See World Bank, (2017), pp. 44-49.

<sup>65</sup> E. Farquharson, C. Torres de Mästle, E. R. Yescombe and Javier Encinas. (2011).

<sup>66</sup> For more detail see Steven McCann, (2017).

**Brazil:** Article 10 of the PPP Law<sup>67</sup> states that PPP projects must have studies on the lifetime cost of the PPP contract, and they will be awarded through competitive bidding, subject to compliance with the following conditions, among others: a) authorization by the competent authority; b) estimate of the financial budgetary impact in the years of the PPP contract; c) public consultation of the draft call for tenders and public contract.

**Jamaica:** the Government<sup>68</sup> is responsible for considering whether higher VFM will be achieved through the use of a PPP, as opposed to conventional public procurement projects. The PPP program is guided in all cases by the following fundamental principles: optimal risk transfer; achieving VFM for the public; being fiscally responsible; and, maintaining probity and transparency.

**Peru:** Decree 1012<sup>69</sup> establishes that in the stages of the provision of public infrastructure or public services under the PPP method the following principles will be followed: Value for Money; transparency; competition; appropriate risk allocation; and budget accountability.

**Colombia:** in order to award contracts, it is necessary to consider which factors will have an impact<sup>70</sup> on VFM, among which are the following:

- i) efficiency of the bidding process and provision of infrastructure in a long-term context, with a focus on services and performance;
- ii) transfer of risk;
- iii) generation of innovation;
- iv) reducing or eliminating delays by timing payments to coincide with the start of operations;
- v) aligning incentives in the different phases (design, construction, operation, and maintenance) to reduce maintenance costs in the long term;
- vi) transparency and predictability of public spending in the long term;
- vii) generate competition in the bidding process, in order to reduce profit margins for potential contractors.

**El Salvador:** Article 8 of the PPP Law<sup>71</sup> establishes that the following principles, among others, must be observed: transparency, publicity, and social audit; economic efficiency; risk sharing; competition and transparency in bidding; and fiscal responsibility.

**Paraguay:** Article 2 of the PPP Law<sup>72</sup> requires compliance with, among others, the following principles: transparency and accountability; economic efficiency; competition and equality in bidding; and fiscal responsibility.

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<sup>67</sup> Presidency of the Republic (Brazil) (2017).

<sup>68</sup> Development Bank of Jamaica, (2017).

<sup>69</sup> Constitutional President of the Republic of Perú, (2008).

<sup>70</sup> National Planning Department, (2010).

<sup>71</sup> Legislative Assembly of the Republic of El Salvador, (2013).

<sup>72</sup> Legislative Power of the Republic of Paraguay, (2013).



In general terms, it can be stated that most LAC countries with a PPP policy or law explicitly establish the principles for the implementation of projects that in practice function as drivers of VFM. In other cases, such as Mexico and the Dominican Republic, there is no explicit statement of the application of principles to promote VFM, although in practice these principles are found in the requirements for approval of projects as PPPs.

# Chapter 5. Identifying the Similarities and Differences between Methodological Assumptions used by LAC Countries to Promote Learning on the Use of the Tool in the Region.

This section presents the results of a comparative analysis of the methodological assumptions established in the regulatory framework for PPPs in selected LAC countries based on the findings presented in the previous sections. The structure of the comments on differences and similarities follows the order in which the topics have been presented: a) qualitative and quantitative analysis of value for money (VFM); b) risk assessment; c) governance of PPP projects; and d) factors that help to increase VFM.

## Quantitative and Qualitative Value for Money Analysis

- The review of the PPP regulatory framework in various LAC countries shows that the combination of qualitative and quantitative approaches in VFM analysis is required.

**Table 3.** Suitability Analysis in selected LATAM countries

Country	Socioeconomic Assessment	Eligibility Analysis	Public Private Comparator	Multi-criteria Analysis
Peru	Yes	Yes	Yes	No
Mexico	Yes	Yes	Yes	No
Colombia	Yes	Yes	Yes	Yes
Uruguay	Yes	Yes	Yes	No
Brazil	Yes	No	Yes	No
Chile	Yes	No	No*	No*
Dominican	Yes	Yes	Yes	Yes**
Guatemala	Yes	Yes	Yes	No
El Salvador	Yes	Yes	Yes	Yes
Paraguay	Yes	Yes	Yes	Yes**
Ecuador	Yes	Yes	Yes	Yes**

Country	Socioeconomic Assessment	Eligibility Analysis	Public Private Comparator	Multi-criteria Analysis
Argentina	Yes	Yes	Yes	No

(\*) Not published.

(\*\*) Includes a Synthetic Indicator and a Value for Money map

**Source:** Based on S. Hinojosa, et al. (2020).

In general, in LAC countries, quantitative VFM analysis is based on the PPC before the bidding process, which is less difficult to prepare compared to other mechanisms. Jamaica uses the business case methodology to estimate VFM, and Chile does not use the public-private comparator methodology.

Most VFM manuals in LAC countries state that there should be a qualitative assessment at an early stage to discover the potential of the project as a PPP. This would imply that the qualitative VFM analysis is conducted before the PPC studies are developed, but this analysis (eligibility index) is part of the suitability analysis that includes quantitative VFM analysis.

Despite criticisms of the procedure for calculating the VFM using the PPC, this methodology continues to be the most accurate estimation procedure to date.

Although quantitative assessment is an important part of VFM analysis, it is not the only factor that influences the approval of a project to be implemented under the PPP scheme, as qualitative analysis is often used additionally in LAC countries to approve a project to be pursued as a PPP. It is important that the results of the quantitative or qualitative VFM assessment are not considered in isolation as a stand-alone case for or against the PPP procurement of the project.

Although quantitative VFM analysis of the VFM is subject to criticism and questioning, it is highly recommended to develop the PPC, as it is a systematic way of identifying all the costs and risks that will have to be assumed and managed.

In the methodologies for VFM analysis only in a few countries was a written document found with guidelines for carrying out the qualitative analysis (multi-criteria analysis) once a quantitative VFM result has been obtained, based on the PPC, which does not imply that it is not carried out at some level of PPP governance. Therefore, it is advisable to make public the guidelines for qualitative VFM analysis (multi-criteria analysis).

## Guidelines for estimating risks retained by governments, to ensure impartial assessment of the adequacy of the PPP model

There is a debate about the reasonableness of the assumptions and procedures used in the risk assessment in the PPC; in addition, potential conflict of interest arises when the public entity responsible for the studies may bias the analysis in favor of or against the PPP procurement,

especially if the same entity approves the execution of the project. This debate suggests the need for a governance structure for PPP projects.<sup>73</sup>

To avoid the potential conflict of interest of Project Development Units in risk assessment, it is recommended that the PPP regulatory framework establishes the obligation to form a PPP unit.

## Governance and conflicts of interest in VFM assessment

- PPP units can help to prevent the conflict of interest of contracting entities when acting as review bodies. However, PPP units may have a conflict of interest if they act simultaneously as a review body and a full-service agency.
- In order for PPP units to be successful in avoiding conflicts of interest, the legal and regulatory framework needs to correctly establish their roles, locations, and capacities to manage conflicts.
- The key components of PPP project governance can be grouped under three broad headings: a) legal and regulatory framework; b) organizational structure; and c) control and monitoring instruments and mechanisms.
- In order to facilitate the operation of the organizational structure for governance and avoid potential conflicts of interest, responsibilities should be distinguished according to project stages: a) project approval, b) procurement, and c) control mechanisms. Dividing the development process of a project to be executed as a PPP into stages allows the administrative units involved in the different phases of the process to become specialized, as well as the assignment of responsibilities within the organizational structure of governance.
- The main functions of the PPP units in selected LAC countries, included in the table below, are in line with EPEC recommendations: a) support for PPP policy and related activities, b) support for program and project implementation, and c) approval and quality control of studies to justify PPP procurement. However, the role in relation to PPP capacity-building, as recommended by the UNECE, is only performed by the PPP units of Colombia, Peru and Uruguay, as shown in the table below:

Country	Main Functions of the PPP Unit
Argentina	<p><b>Public-Private Partnership Unit</b> (later elevated to the rank of Undersecretariat of the Ministry of Finance of the Nation).</p> <ul style="list-style-type: none"> <li>• Advising the Executive Branch on the development of programs and plans for the development of PPP projects.</li> <li>• Assisting the Executive Branch in preparing regulatory provisions of the PPP system, as well as manuals, guides and contract templates, among others.</li> <li>• Advising contracting entities in the design and structuring of projects, including feasibility studies, preparation of bidding documents, promotion of projects and implementation of contractor selection procedures.</li> <li>• Advising contracting entities on the design, organization and operation of systems to control the activities of contractors.</li> </ul>

<sup>73</sup> M. Siemiatycki and N. Farooqi (2012).

Country	Main Functions of the PPP Unit
	<ul style="list-style-type: none"> <li>• Assisting contracting entities in strengthening their capacities for structuring and monitoring the development of PPP projects.</li> <li>• - Assuming delegated functions of structuring or control of PPP projects from the respective contracting entities.</li> </ul>
<b>Colombia</b>	<p><b>National Planning Department</b></p> <ul style="list-style-type: none"> <li>• Promoting, coordinating, and providing technical support for the development of partnership schemes between the private and public sectors on issues and projects of interest to the national Government.</li> <li>• Participating in the evaluation of national or foreign private investment projects, in which the national Government is a partner.</li> <li>• When requested, to support territorial entities in prioritizing and formulating projects to be financed with resources from the General Royalties System and their incorporation into the draft Biennial Budget Law of the General Royalties System.</li> <li>• - Strengthening technical capacities within the DNP, in order to build the capacity of the public administration in strategic areas of national planning.</li> </ul>
<b>Dominican Republic</b>	<p><b>General Directorate of Public-Private Partnerships</b></p> <ul style="list-style-type: none"> <li>• Promoting and coordinating with the competent public entities regarding the regulations, plans, policies, standards, and initiatives required for the operation of PPPs.</li> <li>• Receiving and consolidating information on the promotion of PPP projects.</li> <li>• Issuing responses to proposals submitted by public and private agents, related to the phases of the selection process.</li> <li>• Consolidating technical opinions of public entities participating in the National PPP Council.</li> <li>• Leading the presentation, declaration of public interest, and selection of private initiatives.</li> <li>• Keeping records and publishing all PPP projects that are executed.</li> <li>• Creating and maintaining a project bank.</li> <li>• Serving as the secretariat for meetings of the National PPP Council.</li> <li>• Preparing general regulations and issuing specific technical standards and plans.</li> <li>• Preventing anti-competitive or discriminatory practices.</li> <li>• Settling claims and disputes between public agents, private agents, and bidders.</li> <li>• • Controlling the supervision and monitoring of the execution of current PPP contracts;</li> </ul>
<b>El Salvador</b>	<p><b>PPP Unit (Directorate of Public-Private Partnerships of the Export and Investment Promotion Agency, PROESA)</b></p> <ul style="list-style-type: none"> <li>• Developing the design of the bidding conditions and draft contract.</li> <li>• Presenting the progress of the respective approvals of the PPP Law to the Presidency and the Board of Directors.</li> <li>• Promoting PPP projects.</li> <li>• • Performing legal analysis of the bases and contracts that the PPP Directorate drafts together with the contracting institutions.</li> </ul>
<b>Jamaica</b>	<p>a) <b>PPP Unit of the Development Bank of Jamaica:</b></p> <ul style="list-style-type: none"> <li>• Developing the business case.</li> <li>• Responsibility for the transaction phase of the PPP.</li> <li>• Providing advice and administrative support to PPP projects.</li> <li>• Identifying and managing funds for project feasibility studies.</li> <li>• Managing the process until the contract is signed.</li> </ul> <p>b) <b>The Ministry of Finance and Planning PPP Node</b></p> <ul style="list-style-type: none"> <li>• Value for money assessment.</li> <li>• • Analysis of the fiscal impact of PPP projects.</li> </ul>
<b>Mexico</b>	<p><b>Investment Unit of the Ministry of Finance and Public Credit</b></p> <ul style="list-style-type: none"> <li>• Integrating and managing the portfolio of investment programs and projects.</li> <li>• Providing advice to federal government agencies and entities on investment guidelines and criteria.</li> </ul>

Country	Main Functions of the PPP Unit
	<ul style="list-style-type: none"> <li>- Giving an opinion on the economic profitability assessments of projects.</li> <li>• Issuing guidelines and methodologies relating to investment schemes and expenditures.</li> <li>• Reviewing and issuing an opinion regarding new PPP projects, as well as changes in the scope of authorized PPP Contracts, and forwarding such opinions to the competent administrative units to determine future budget commitments.</li> <li>• - Serving as Executive Secretary of the Inter-Ministerial Commission on Public Expenditure, Financing, and Disincorporation (the body that authorizes investment projects, including PPPs).</li> </ul>
<b>Peru</b>	<p><b>PROINVERSIÓN</b></p> <ul style="list-style-type: none"> <li>• Implementing the National Policy for the Promotion of Private Investment established by the MEF, especially in the promotion of PPPs.</li> <li>• Approving technical normative directives on the evaluation process of PPPs and Asset Projects in the formulation, structuring, and transaction phases.</li> <li>• • Strengthening capacities and providing technical assistance to regional governments, local governments and other public sector entities, in the different phases of PPP projects, Projects in Assets and Works for Taxes.</li> </ul>
<b>Uruguay</b>	<p><b>National Development Corporation</b></p> <p>Since Law No. 18.786 was enacted on July 19, 2011, the following tasks in the area of Public-Private Partnership (PPP) have been assigned to the CND:</p> <ul style="list-style-type: none"> <li>• Developing and promoting the execution of PPP projects by applying technical criteria and in accordance with the principles of the law.</li> <li>• Developing technical guidelines applicable to PPP projects by developing best practice guidelines, standardizing procedures, and preparing manuals, models and tools. The dissemination of these requires the approval of the Ministry of Economy and Finance.</li> <li>• Advising on the identification, conception, design, study, structuring, promotion, selection, and contracting of PPP projects, under the terms and conditions agreed upon with the contracting public administrations. <ul style="list-style-type: none"> <li>- Contributing to the capacity-building of the contracting public administrations in the design and implementation of PPP projects.</li> </ul> </li> <li>• Advising the Executive Branch to identify and prioritize projects likely to be executed through the PPP system.</li> <li>• Facilitating the inter-institutional coordination of the activities of the contracting public administrations with PPP projects.</li> <li>• • Creating or acquiring commercial companies of any kind as well as financial instruments, when necessary for the development of PPP projects.</li> </ul>

- In general, most LAC countries have a legal framework that regulates the approval, procurement, monitoring, and control of PPP projects. In some countries such as Costa Rica and Chile, there is no PPP law but PPPs are implemented under a concession law. Costa Rica, Dominican Republic and Haiti are in the process of drafting or approving a PPP law. Costa Rica has not yet passed a Public-Private Partnerships Law, but there is a regulation<sup>74</sup> that establishes the governance structure and regulates PPP projects.
- In most LAC countries, the governance structure of PPP projects helps to eliminate conflicts of interest. Considering that in countries with a PPP policy or law that have a PPP unit, it is possible to check that the studies comply with the requirements established for their development and ensure that there is no bias in favor or against PPP procurement.

<sup>74</sup>. Costa Rica. Regulation No. 39965: Regulations for Public-Private Partnership Contracts.

- In some LAC countries, the assessment of firm and contingent risks is reviewed and authorized by units attached to the Ministries of Finance.

**Table 4.** *PPP Units and approval of projects in selected countries.*

Country	Law / Policy	Project Approval	PPP Unit
Argentina	√	Congress of the Nation	Public-Private Partnership Unit
Brazil	√	Governing Body of the PPPs (Ministry of Planning, Budget and Management, as coordinator; Ministry of Finance; and Cabinet of the Presidency of the Republic)	PPP Management Committee
Colombia	√	Ministry of the sector, Supreme Council for Fiscal Policy (CONFIS), DNP, and National Investment Projects Bank	National Planning Department
Costa Rica	√	National Concessions Council (CNC) (Attached to the Ministry of Public Works and Transport)	Technical Secretariat of the CNC
Dominican	√	National Council for Public-Private Partnerships (CNAPP)	General Directorate of Public-Private Partnerships
Ecuador	√	Inter-Institutional Committee on Public-Private Partnerships (CIAPP)	CIAPP-appointed technical team
El Salvador	√	PROESA Board of Directors	Export and Investment Promotion Agency (PROESA)
Guatemala	√	National Partnership Council for Economic Infrastructure Development (Inter-Ministerial Body)	National Partnership Agency for Infrastructure Development Economical (ANADIE)
Honduras	√	Commission for the Promotion of Public-Private Partnerships (COALIANZA) Art. 19 Decree 143/2010 (PPP Law)	COALIANZA
Jamaica	√	The Privatization Committee of Cabinet	a) PPP Unit of the Development Bank of Jamaica; b) The Ministry of Finance and Planning PPP Node
Mexico	√	Inter-Ministerial Commission on Public Expenditure, Financing, and Disincorporation	Investment Unit, Ministry of Finance and Public Credit
Peru	√	Sectoral Ministry (Contractor), Ministry of Economy and Finance.	PROINVERSIÓN
Trinidad and Tobago	√	Inter-Institutional Committee on Public-Private Partnerships	The Office of Procurement Regulation
Uruguay	√	Office of Planning and Budgeting and the Ministry of Economy and Finance	National Development Corporation
Paraguay	√	PPP Projects Unit and Ministry of Finance	Public-Private Partnership (PPP) Projects Unit (Technical Secretariat of Planning)

**Source:** Based on Joan Oriol Prats Cabrera, (2019).

## **Factors that generate a positive VFM result in LAC projects, considering the context of non-widespread use of the tool among the countries.**

The drivers of VFM in PPP projects are the mechanisms that can be used to improve VFM in infrastructure provision. The drivers are well identified in the literature.

LAC countries implementing projects pursued through PPPs identify the drivers of VFM, and they are included in most PPP laws as principles or set out in the regulatory framework as requirements to be met for a project to be approved as a PPP.

The review of the laws and official documents of guidelines or methodologies of most of the LAC countries, in the implementation of PPP projects, indicates that the governments establish principles that are generally similar, with the following being repeated most frequently:

1. Achieve Value for Money.
2. Optimal risk allocation.
3. Encourage competition in the tendering of projects.

For the drivers to be effective and VFM to be achieved, the procurement process must be well planned, managed, executed, and transparent, whatever contracting system is approved. This will reduce transaction costs, increase bidder participation, and ensure more competitive procurement.

## Bibliography

APMG International, **16.2.1 Quantitative VfM Analysis**, disponible en [https://ppp-certification.com/ppp-certification-guide/162-assessing-value-money#\\_ftn51](https://ppp-certification.com/ppp-certification-guide/162-assessing-value-money#_ftn51)

Australian Capital Territory (2016), **Guidelines for Public Private Partnerships**, The Partnerships Framework, Canberra, Second Edition: May 2016, available at: [https://apps.treasury.act.gov.au/\\_data/assets/pdf\\_file/0010/869941/Guidelines-for-PPPs-Second-Edition.pdf](https://apps.treasury.act.gov.au/_data/assets/pdf_file/0010/869941/Guidelines-for-PPPs-Second-Edition.pdf)

Australian Government (2008). **National PPP Guidelines: Overview, Department of Infrastructure and Regional development**, December 2008, p. 33 available at: <https://www.infrastructure.gov.au/infrastructure/ngpd/files/Overview-Dec-2008-FA.pdf>

Ball, R., Heafey, M., and King, D. (2003). *Risk Transfer and Value for Money in PFI Projects*. **Public Management Review** 5 (2): 279–290. Permanent link to this document: [Doi:10.1080/1461667032000066444](https://doi.org/10.1080/1461667032000066444)

Bing Li, A. Akintoye, P. Edwards, and C. Hardcastle (2005). *Critical success factors for PPP/PFI projects in the UK construction industry*. **Construction Management & Economics**. 23. 459-471. DO: [10.1080/01446190500041537](https://doi.org/10.1080/01446190500041537)

Boardman, A., Greve, C. y Hodge, G. 2015. *Comparative Analyses of Infrastructure Public-Private Partnerships*. **Journal of Comparative Policy Analysis: Research and Practice**. 17. 441-447. Permanent link: [DOI: 10.1080/13876988.2015.1052611](https://doi.org/10.1080/13876988.2015.1052611)

Caiyun Cui, Jianping Wang, Yong Liu and Vaughan Coffey. 2019. *Relationships among Value-for-Money Drivers of Public-Private Partnership Infrastructure Projects*, **Journal of Infrastructure Systems**, 25(2): February 2019, Permanent link: [DOI:10.1061/\(ASCE\)IS.1943-555X.0000479](https://doi.org/10.1061/(ASCE)IS.1943-555X.0000479)

Casady, C. B., Erikssonb, K., Levitta, R. E. y Scott, W. R., (2019), *(Re)defining public-private partnerships (PPPs) in the new public governance (NPG) paradigm: an institutional maturity perspective*, **Public Management Review**, Published online: Feb 26, 2019. Permanent Link <https://doi.org/10.1080/14719037.2019.1577909>

Cheung, E., Chan, A. P. C. y Kajewski, S. (2009). *Enhancing value for money in public-private partnership projects: Findings from a survey conducted in Hong Kong, Australia compared to findings from previous research in the United Kingdom*. **Journal of Financial Management of Property and Construction**, 14 (1), 7-20. Permanent link: [DOI: 10.1108/13664380910942617](https://doi.org/10.1108/13664380910942617)

Chung, Demi., (2016), *Risks, Challenges and Value for Money of Public-Private Partnerships*, **Financial Accountability & Management in Governments, Public Services and Charities**, October 3,2016, <https://doi.org/10.1111/faam.1210>

Congress of the Nation, 2016, **Law 27328 on Public-Private Partnership Contracts**, Argentina, November 2016, available at <http://servicios.infoleg.gob.ar/infolegInternet/anexos/265000-269999/268322/texact.htm>

Congress of the Republic of Colombia, **Law 1508 of 2012, which establishes the legal regime of Public-Private Partnerships, organic budget rules, and other provisions.**

January 2012, (update November 2020).

[http://www.secretariassenado.gov.co/senado/basedoc/ley\\_1508\\_2012.html](http://www.secretariassenado.gov.co/senado/basedoc/ley_1508_2012.html)

Constitutional President of the Republic of Peru. *Legislative Decree No. 1012, which Approves the Framework Law on Public-Private Partnerships for the Generation of Productive Employment and Establishes Rules for the Streamlining of Private Investment Promotion Processes*, “**El Peruano**” **Official Gazette**, May 13, 2008 (amended by Law No. 29771 and Legislative Decree No. 1016) <https://www.mef.gob.pe/es/normatividad-sp-29923/por-temas/asociaciones-publico-privadas-app/7030-decreto-legislativo-n-1012-2/file>

Constitutional President of the Republic, *Legislative Decree No. 1012, which Approves the Framework Law on Public-Private Partnerships for the Generation of Productive Employment and Establishes Rules for the Streamlining of Private Investment Promotion Processes*, “**El Peruano**” **Official Gazette**, May 13, 2008 (as amended by Law No. 29771 and Legislative Decree No. 1016)

<https://www.mef.gob.pe/es/normatividad-sp-29923/por-temas/asociaciones-publico-privadas-app/7030-decreto-legislativo-n-1012-2/file>

D. Wilson, N. Pelham and C. Duffield, (2010), *A review of Australian PPP governance structures*, **Journal of Financial Management of Property and Construction**, Vol. 15, Iss 3, pp. 198 - 215, Permanent link to this document: <http://dx.doi.org/10.1108/13664381011087470>

Development Bank of Jamaica, 2017, **Shaping New Partnerships for National Development. Policy and Institutional Framework for the Implementation of a Public-Private Partnership Programme for the Government of Jamaica: The PPP Policy**, (in consultation with the Ministry of Finance and Planning), available at:

[https://ran-s3.s3.amazonaws.com/dbankjm.com/wp-content/uploads/2020/06/23061327/PPP-Policy\\_Oct-2012\\_Updated-PIMC-only\\_Rev-December-2017.pdf](https://ran-s3.s3.amazonaws.com/dbankjm.com/wp-content/uploads/2020/06/23061327/PPP-Policy_Oct-2012_Updated-PIMC-only_Rev-December-2017.pdf)

Dutz, Mark; Harris, Clive; Dhingra, Inderbir; Shugart, Chris. 2006. *Public-Private Partnership Units: What Are They, and What Do They Do? Viewpoint: Public Policy for the Private Sector*, **Note No. 311. World Bank**, Washington, DC.

<https://openknowledge.worldbank.org/handle/10986/11175?locale-attribute=es>

EPEC, 2018. **A Guide to the Qualitative and Quantitative Assessment of Value for Money in PPPs**, The European PPP Expertise Centre (EPEC), 2018, pp. 41-43, available at:

<https://www.wbif.eu/storage/app/media/Library/8.%20Public%20Private%20Partnership/2.%20-Value-for-Money-Assessment-Guide-FINAL-310818.pdf>

EPEC. 2014. **Establishing and Reforming PPP Units: Analysis of EPEC Member PPP Units and lessons learnt**, European PPP Expertise Centre (EPEC), August 2014, [https://www.eib.org/attachments/epec/epec\\_establishing\\_reforming\\_ppp\\_units\\_en.pdf](https://www.eib.org/attachments/epec/epec_establishing_reforming_ppp_units_en.pdf)

EPEC. 2015. **Value for Money Assessment: Review of approaches and key concepts**, The European PPP Expertise Centre (EPEC), March 2015, p. 10, available at: [https://www.minfin.bg/upload/17040/epec\\_value\\_for\\_money\\_assessment\\_en.pdf](https://www.minfin.bg/upload/17040/epec_value_for_money_assessment_en.pdf)

Estrada, Valentín. 2017. **Comparative Study of the Implementation of Public-Private Partnerships (PPPs) in Colombia, Peru, Brazil and Argentina**, Fundación Ambiente y Recursos Naturales (FARN), Bogotá, Colombia, June 2017, retrieved at [https://www.ambienteysociedad.org.co/wp-content/uploads/2017/08/Estudio\\_comparativo\\_implementacion\\_asociaciones\\_publico\\_privadas\\_APP\\_Colombia\\_Peru\\_Brasil\\_Ecuador\\_agosto-2017-.pdf](https://www.ambienteysociedad.org.co/wp-content/uploads/2017/08/Estudio_comparativo_implementacion_asociaciones_publico_privadas_APP_Colombia_Peru_Brasil_Ecuador_agosto-2017-.pdf)

Farquharson, Edward, (2007), Conferencia organizada por el Gobierno de Japón, **PPP Web Tokyo Conference 2007, Theme 3: Value for Money**, disponible en [https://www8.cao.go.jp/pfi/en/ppp\\_discussion2007/2007\\_theme3.html](https://www8.cao.go.jp/pfi/en/ppp_discussion2007/2007_theme3.html)

Farquharson, Edward., (2011). **Value for Money in PPP Projects: An Introduction**, Infrastructure UK, Marzo del 2011, disponible en: <https://ppp.gov.ph/wp-content/uploads/2011/03/Value-for-Money.pdf>

Farquharson, Edward, Torres de Mästle, Clemencia, Yescombe, E. R. and Encinas, Javier. 2011. **How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets**. World Bank. [pp. 41-43], <https://ppiaf.org/documents/16/download>

Federal Government of the Republic, *AGREEMENT reforming and adding various provisions of the Agreement creating the Inter-Ministerial Commission on Public Expenditure, Financing, and Disincorporation on a permanent basis*, **Official Journal of the Federation**, 04/19/2018, Mexico, available at [https://www.dof.gob.mx/nota\\_detalle.php?codigo=5519862&fecha=19/04/2018](https://www.dof.gob.mx/nota_detalle.php?codigo=5519862&fecha=19/04/2018)

Federal Highway Administration. 2012. **Value for Money Assessment for Public-Private Partnerships: A Primer Toolkit**, December 2012 [https://www.fhwa.dot.gov/ipd/pdfs/p3/p3\\_value\\_for\\_money\\_primer\\_122612.pdf](https://www.fhwa.dot.gov/ipd/pdfs/p3/p3_value_for_money_primer_122612.pdf)

General Assembly of the Oriental Republic of Uruguay 2011. **Law No. 18.786 Public-Private Partnership Contracts for the Execution of Infrastructure Works and the Provision of Related Services**, Published in the Official Gazette of Aug 19/011 - No. 28290 <https://legislativo.parlamento.gub.uy/temporales/leytemp3640661.htm>

Government of El Salvador, 2019. **Metodología de evaluación de proyectos de Asocios Público Privados**, Export and Investment Promotion Agency of El Salvador (PROESA), 2019, available at [https://drive.google.com/file/d/1Ur5aVU2NjwOOA\\_nk18tUBwdGd5z1KSma/view](https://drive.google.com/file/d/1Ur5aVU2NjwOOA_nk18tUBwdGd5z1KSma/view)

Graeme A Hodge, *The risky business of public–private partnerships*, **Australian Journal of Public Administration**, 63(4):37–49, December 2004, available at <https://user.iiasa.ac.at/~hochrain/KIT%202017%20Material/Thema%2010%20Public%20Private%20Partnership.pdf>

Grimsey, Darrin and Mervyn K. Lewis. 2005. *Are Public Private Partnerships Value for Money? Evaluating Alternative Approaches and Comparing Academic and Practitioner Views*. **Accounting Forum 29 (4)**: 345 – 378. Permanent link: [doi:10.1016/j.acfor.2005.01.001](https://doi.org/10.1016/j.acfor.2005.01.001)

Grimsey, Darrin, and Mervyn K. Lewis. 2002. *Evaluating the Risks of Public Private Partnerships for Infrastructure Projects*. **International Journal of Project Management**. 20 (2): 107 – 118. Permanent link to this document: [doi:10.1016/S0263-7863\(00\)00040-5](https://doi.org/10.1016/S0263-7863(00)00040-5).

H. M. Treasury. (2012). **A new approach to public private partnerships**. pp. 61-62, available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/205112/pf2\\_infrastructure\\_new\\_approach\\_to\\_public\\_private\\_partnerships\\_051212.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205112/pf2_infrastructure_new_approach_to_public_private_partnerships_051212.pdf)

H. M. Treasury. 2018. **The Green Book, Central Government Guidance on Appraisal and Evaluation**, 2018, Annex 5, available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/685903/The\\_Green\\_Book.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf)

Heald, D. (2003). *Value for money tests and accounting treatment in PFI schemes*. **Accounting, Auditing & Accountability Journal**, 16(3), 342-371. Permanent link to this document: <https://doi.org/10.1108/09513570310482291>

Hinojosa, S.; Mascle - Allemand, A.L y D. Vieitez (2020), Análisis costo-beneficio integral para evaluar la conveniencia de aplicar esquemas de asociaciones público-privadas en América Latina y el Caribe, **Banco Interamericano de Desarrollo, Nota Técnica IDB TN 01925**, Junio del 2020, disponible en: <https://publications.iadb.org/publications/spanish/document/An%C3%A1lisis-costo-beneficio-integral-para-evaluar-la-conveniencia-de-aplicar-esquemas-de-asociaciones-publico-privadas-en-Am%C3%A9rica-Latina-y-el-Caribe.pdf>

Hinojosa, Sergio (2010). **Un Indicador de Elegibilidad para Seleccionar Proyectos de Asociaciones Público-Privadas en Infraestructura y Servicios**. BID, disponible en: <https://publications.iadb.org/publications/spanish/document/Un-indicador-de-elegibilidad-para-seleccionar-proyectos-de-asociaciones-p%C3%BAblico-privadas-en-infraestructura-y-servicios.pdf>

Hovy, Pauline., (2015), **Risk Allocation in Public-Private Partnerships: Maximizing value for money**, Discussion Paper, International Institute for Sustainable Development, Agosto del 2015, disponible en: <https://www.iisd.org/system/files/publications/risk-allocation-ppp-maximizing-value-for-money-discussion-paper.pdf>

Ismail, S. (2013), *Drivers of value for money public private partnership projects in Malaysia*, **Asian Review of Accounting**, Vol. 21 No. 3, pp. 241-256. Permanent link to this document: <https://doi.org/10.1108/ARA-06-2013-0042>

Kharizam Ismail., Roshana Takim., Abdul Hadi Nawawi, (2011), *The evaluation criteria of Value for Money (VFM) of Public Private Partnership (PPP) bids*, **2011 International Conference on Intelligent Building and Management**, Proc .of CSIT vol.5 (2011), ACSIT Press, Singapore, [https://www.academia.edu/26117904/The\\_evaluation\\_criteria\\_of\\_Value\\_for\\_Money\\_VFM\\_of\\_Public\\_Private\\_Partnership\\_PPP\\_bids](https://www.academia.edu/26117904/The_evaluation_criteria_of_Value_for_Money_VFM_of_Public_Private_Partnership_PPP_bids)

Legislative Assembly of the Republic of El Salvador, *Decree 379 enacting Special Law on Public-Private Partnerships*. **Official Journal No. 102, Volume 399**, June 5, 2013, available at: <https://www.asamblea.gob.sv/decretos/details/1640#:~:text=TIENE%20COMO%20OBJETO%20ESTABLECER%20EL,DE%20FORMA%20EFICAZ%20Y%20EFICIENTE.>

Legislative Branch of the Republic of Paraguay, **Law No. 5102 on Promotion of Public Investment and Expansion and Improvement of State-owned Goods and Services**, August 28, 2013. Available at: [http://snip.hacienda.gov.py/normativas/ley\\_5102.pdf](http://snip.hacienda.gov.py/normativas/ley_5102.pdf)

Leigland, James and Chris, Shugart. *Is the public sector comparator right for developing countries?: Appraising public - private projects in infrastructure*, **Grid Lines**, **Note 4**, April 2006, available at <https://ppiaf.org/d/2999/download>

McCann, Steven. 2017, *Delivering value-for-money in PPPs? Risks and insights in change management*, **Journal of Strategic Contracting and Negotiation**, Vol. 3(2) 102-114, Permanent link to this document: DOI: [10.1177/2055563617731370](https://doi.org/10.1177/2055563617731370)

Ministry of Finance & the Public Service, **Jamaica's Public Private Partnerships (PPP) Programme**, <https://mof.gov.jm/downloads/programmes/public-private-partnerships/jamaica-ppp-programme.pdf>

Ministry of Finance and Public Credit, **Eligibility Index for Infrastructure and Services Projects in Public-Private Partnerships**, Mexico, October 28, 2015, available at: [https://www.gob.mx/cms/uploads/attachment/file/23151/indice\\_elegibilidad.pdf](https://www.gob.mx/cms/uploads/attachment/file/23151/indice_elegibilidad.pdf)

Morallos, D. and Amekudzi, A..(2008), *The State of the Practice of Value for Money Analysis in Comparing Public Private Partnerships to Traditional Procurements*, **Public Works Management & Policy**, Volume 13 Number 2, October 2008, 114 -125, Permanent link to this document: DOI: [10.1177/1087724X08326176](https://doi.org/10.1177/1087724X08326176)

National Government of Paraguay, **Vol. 9 Guía Metodológica de Formulación y Evaluación de Proyectos de Participación Público Privada**, Technical Secretariat for Economic and Social Development, Asunción, Paraguay, April 2016, chap. 6. Available at <https://nube.stp.gov.py/index.php/s/fyLxCnh2yVNdFFg#pdfviewer>

National Government of Paraguay. 2016. **Vol. 0. Introducción a la Guía Metodológica de Formulación y Evaluación de Proyectos de Participación Público Privada**, Technical Secretariat for Economic and Social Development, Asunción, Paraguay, April 2016, available at <https://nube.stp.gov.py/index.php/s/zJm6N2NfmSB0iCU#pdfviewer>

National Planning Department, 2016. **Nota Técnica 2 – El concepto de Valor por Dinero (VPD) y el Comparador Público Privado (CPP)**, Colombia, February 11, 2016, page 11, available for consultation at <https://colaboracion.dnp.gov.co/CDT/Participacin%20privada%20en%20proyectos%20de%20infraestructu/Nota%20T%C3%A9cnica%202.pdf>

National Planning Department. 2010. **Nota Técnica: Comparador Público-Privado para la selección de proyectos APP**, Ministry of Finance and Public Credit, December 2010, available at: <https://library.pppknowledgelab.org/documents/4245/download>

National Planning Department. 2012. *Resolution 3656 of 2012*. Bogotá, D. C., **Official Journal 48651** of December 21, 2012. Retrieved from: <https://colaboracion.dnp.gov.co/CDT/Participacin%20privada%20en%20proyectos%20de%20infraestructu/Resoluci%C3%B3n%203656%20de%202012.pdf>

National Planning Department. 2013. **Asociaciones Público Privadas – APP – en Infraestructura en Colombia**, available at: <https://colaboracion.dnp.gov.co/CDT/Participacin%20privada%20en%20proyectos%20de%20infraestructu/Presentaci%C3%B3n%20GIP%20Cali%2028102013.pdf>

National Planning Department. 2015. **Nota Técnica 4 – Manual de Multicriterio para la selección de Proyectos de Asociación Público Privada**. National Planning Department: Private Participation in Infrastructure, available at <https://colaboracion.dnp.gov.co/CDT/Participacin%20privada%20en%20proyectos%20de%20infraestructu/Nota%20T%C3%A9cnica%204%202015.pdf>

Nisar, Tahir M. (2007), *Value for money drivers in public private partnership schemes*, **International Journal of Public Sector Management**, Vol. 20, Iss 2, pp. 147 - 156, Permanent link to this document: <http://dx.doi.org/10.1108/09513550710731508>

OECD- 2019. *Tools for addressing Competitive Neutrality – Note by Mexico*, **Working Party No. 2 on Competition and Regulation**, DAF/COMP/WP2/WD,(2019) 2, 3 June 2019, Organisation for Economic Co-operation and Development, available at [https://one.oecd.org/document/DAF/COMP/WP2/WD\(2019\)2/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2/WD(2019)2/en/pdf)

OECD. 2008. **Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money**. OECD. Available at: <http://www.oecd.org/gov/budgeting/public-privatepartnershipsinpursuitofrisksharingandvalueformoney.htm>

OECD. 2012. **Recommendation of the Council on Principles for Public Governance of Public-Private Partnerships**. Paris: OECD. Available at:  
<https://legalinstruments.oecd.org/public/doc/275/275.en.pdf>

Opara, M. 2017. **Value for Money and Risk Relationships in Public–Private Partnerships: Evaluating Program-based Evidence**, August 9, 2017, Permanent link to this document:  
<https://doi.org/10.1111/auar.12194>

Ostřížek, Jan, 2011. *Value for money drivers in PPP projects - impact on the Czech VFM methodology*, **Acta Universitatis Bohemiae Meridionales**, University of South Bohemia in Ceske Budejovice, vol. 14, pp. 1. 89-100. <https://ideas.repec.org/a/boh/actaub/v14y2011i1p89-100.html>

Parliament of Uruguay. 2011. Law No. 18786 (**Public-Private Partnership Law**). July 2011. Available at <https://www.impo.com.uy/bases/leyes/18786-2011>

Prats Cabrera, Joan Oriol. 2019, *The Governance of Public-Private Partnerships*, **Technical Note No. IDB-TN-1616**, Inter-American Development Bank, available at [https://publications.iadb.org/publications/english/document/The\\_Governance\\_of\\_Public-Private\\_Partnerships\\_A\\_Comparative\\_Analysis.pdf](https://publications.iadb.org/publications/english/document/The_Governance_of_Public-Private_Partnerships_A_Comparative_Analysis.pdf)

Presidency of the Republic, **Law No. 11.079, which establishes general rules for bidding and contracting public-private partnerships in public administration**. December 30, 2004, retrieved at [http://www.planalto.gov.br/ccivil\\_03/\\_ato2004-2006/2004/lei/111079.htm](http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/111079.htm)

President of the Republic, *Supreme Decree No. 185-2017-EF, approving the Regulation of Organization and Functions of the Private Investment Promotion Agency (PROINVERSIÓN)*, “**El Peruano**” **Official Gazette**, June 24, 2017, [https://www.proinversion.gob.pe/RepositorioAPS/0/1/JER/REGLAMENTO\\_ROF/ROF%20Publicado%20Rectificado.pdf](https://www.proinversion.gob.pe/RepositorioAPS/0/1/JER/REGLAMENTO_ROF/ROF%20Publicado%20Rectificado.pdf)

President of the Republic. **Regulation No. 39965: Regulations for Public-Private Partnership Contracts**. Costa Rica. Available at:  
[http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm\\_texto\\_completo.aspx?param1=NRTC&nValor1=1&nValor2=83225&nValor3=106758&strTipM=TC](http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=83225&nValor3=106758&strTipM=TC)

Reyes-Tagle, Gerardo ed., **Bringing PPPs into the sunlight: synergies now, pitfalls later?** Inter-American Development Bank, Washington, D.C. 20577, 2018, available at:  
<https://publications.iadb.org/publications/english/document/Bringing-PPPs-into-the-Sunlight-Synergies-Now-and-Pitfalls-Later.pdf>

Roine Leiringer. 2006. *Technological innovation in PPPs: incentives, opportunities and actions*, **Journal Construction Management and Economics**, Volume 24, 2006 - Issue 3, 301-308, available at: <https://doi.org/10.1080/01446190500435028>

Secretary of Finance and Public Credit, **Manual that establishes the provisions to determine the social profitability, as well as the suitability of carrying out a project through a Public-Private Partnership scheme**, Mexico, 2012, available at:

<http://www.hacienda.gob.mx/EGRESOS/ppi/ProyectosAPP/Manual%20APP%20221112.pdf>

Siemiatycki, M. 2015, '*Public Private Partnerships in Canada: Reflections on Twenty years of Practice*', **Canadian Public Administration**, 55 (3): 343–62. September 3, 2015, Permanent link to this document <https://doi.org/10.1111/capa.12119>

Siemiatycki, M. and Farooqi, N. (2012), *Value for Money and Risk in Public-Private Partnerships*, **Journal of the American Planning Association**, 78:3, 286-299, Permanent link to this document: [DOI: 10.1080/01944363.2012.715525](https://doi.org/10.1080/01944363.2012.715525)

Skelcher, C. (2012), *Governing partnerships*, included in G. Hodge, C. Greve and A. Boardman (eds) (2010) **International Handbook on Public-Private Partnerships**, Edward Elgar Publishing, pp. 292-304.

Sturgess, Gary. 2007. Conference organized by the Government of Japan, **PPP Web Tokyo Conference 2007**, Theme 3: Value for Money, available at [https://www8.cao.go.jp/pfi/en/ppp\\_discussion2007/2007\\_theme3.html](https://www8.cao.go.jp/pfi/en/ppp_discussion2007/2007_theme3.html)

Suhaiza Ismail, **What Drives Value for Money of Public Private Partnership (PPP) Projects Implementation in Malaysia?**, available at: [https://www.ukm.my/fep/perkem/pdf/perkemVII/PKEM2012\\_2C3.pdf](https://www.ukm.my/fep/perkem/pdf/perkemVII/PKEM2012_2C3.pdf)

Teisman, G. and Klijn, E. H. (2002). *Partnership Arrangements: Government Rhetoric or Governance Scheme?* **Public Administration Review**. 62. 197 - 205. p. 198. Permanent link to this document: [DOI:10.1111/0033-3352.00170](https://doi.org/10.1111/0033-3352.00170).

The World Bank- 2013. *Value-for-Money Analysis—Practices and Challenges: How Governments Choose When to Use PPP to Deliver Public Infrastructure and Service*, **Report from World Bank Global Round-table 28 May 2013**, Washington DC, World Bank Institute (WBI) and Public-Private Infrastructure Advisory Facility (PPIAF), available at <http://documents1.worldbank.org/curated/en/724231468331050325/pdf/840800WP0Box380ey0Analysis00PUBLIC0.pdf>

The World Bank, 2017, **Benchmarking PPP Procurement: Assessing Government Capability to Prepare, Procure and Manage PPPs**, Washington DC, 2016, available at [https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/documents/Benchmarking\\_PPPs\\_2017\\_ENpdf.pdf](https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/documents/Benchmarking_PPPs_2017_ENpdf.pdf)

The World Bank, (Undated). **Risk Allocation, Bankability and Mitigation in Project Financed Transactions**, Public-Private-Partnership Legal Resource Center, available at: <https://ppp.worldbank.org/public-private-partnership/financing/risk-allocation-mitigation>



*The World Bank*. 2009. **Good Governance in Public-Private Partnerships: A Resource Guide for Practitioners**. Washington, DC. World Bank, June 2009, available at <https://openknowledge.worldbank.org/handle/10986/12665>

The World Bank. 2016. **Public-Private Partnerships Fiscal Risk Assessment Model User Guide**, April 2016, <http://pubdocs.worldbank.org/en/422531461874706371/PFRAM20160401-Guidance-Note-for-PFRAM-March-28-2016.pdf>

The World Bank. 2017. **Public-Private Partnerships: Reference Guide version 3**, Washington, DC, 2017, Box 1.2, available at: <https://openknowledge.worldbank.org/handle/10986/29052>

United Nations Economic Commission for Europe (2008), **Guidebook on Promoting Good Governance In Public-Private Partnerships United**, United Nations, New York and Geneva, 2008, available at <https://unece.org/DAM/ceci/publications/ppp.pdf>

Zevallos Ugarte, J. C. (2011), **Concesiones en el Perú: Lecciones Aprendidas**, Lima, Peru: USMP Editorial Fund