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Accountability and the Allocation of Public Debt by the Mexico City Government

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Abstract

This paper explores the Mexico City Government's accountability with respect to public debt in the time period 1999-2015. The questions we pose are as follows: To which projects were resources emanating from public debt allocated? Did the accountability mechanisms make it possible to evaluate the projects funded with public debt? Although the laws stipulate that entities are bound to be transparent about their allocation of debt, there is clearly only partial accountability when it comes to all of the funding models, including: private banking, development banking, the stock market, and public-private partnerships (PPP). Moreover, the opacity is total where evaluating outcomes is concerned. Using a cointegration test for debt and public investment, we assert that total public debt has some effect on the behavior of public investment in Mexico City.

Keywords: Mexico City; accountability; public debt; public investment; public finance.

INTRODUCTION

Corruption, a problem as old as it is complex, is a matter of concern to Mexican society, against which several tools have been brandished over the years. One such preventive instrument (meant to deter public servants from committing acts of corruption) is transparency (Uvalle, 2013). It has been shown that when transparency is stronger, public debt and the deficit will be lower; in fact, institutions like the International Monetary Fund (IMF) consider transparency a precondition for macroeconomic fiscal sustainability (Alt and Lassen, 2006).

Article 14 of the Declaration of the Rights of Man and the Citizen of 1789 asserts that citizens are entitled to verify and oversee the use of public tax money. Thus, transparency and the right to know the destination of public contributions can be considered essential (Bellver, 2007). Tracking public resources used in different governmental programs is vital to keep a close eye on the government's actions, so that the citizens can sway their decisions. Accountability is one such mechanism that enables citizens to learn about where public resources are being used and evaluate the results.

The objective of this paper is to explore the Mexico City government's accountability with respect to public debt in the time period 1999-2015. The questions we pose are as follows: to which projects did money derived from public debt go? Is accountability truly a feasible way to evaluate projects underwritten with public debt? Public debt can serve as a funding resource that can aid in increasing a country, state, or region's productive capacity, or just as well simply mortgage future income, but it all depends on the use to which the money obtained through these means is put.

This paper begins with an overview of the role accountability plays in public finance, especially when it comes to public debt. The second section goes through the regulatory framework surrounding how public debt is taken out. After that, we study the Mexico City government's accountability pertaining to public debt held with both private and development banks, as well as the stock market and debt bound up in public-private partnerships (PPP).

The finding is that it is indeed possible to shed light on the amount of debt, as well as its origin, financial cost, and maturity profile, but impossible to track where the debt ends up, because only very few years have these data broken down for projects funded in this way, despite the fact that the constitution stipulates disclosure of borrowing and payment obligations.

In light of this partial accountability—which makes it very hard to understand the fate of Mexico City's public debt—and considering that Article 21 of Mexico City's constitution requires public debt to be used for productive public investment and refinancing or restructuring these investments, the following section contains a cointegration analysis between public debt and investment, the outcome of which reveals that debt certainly does have an impact on public investment in Mexico City.

The sixth section discusses an accountability quality measurement computed by the Mexican Institute for Competitiveness (IMCO), highlighting the Mexico City government's low score. Finally, although the Law for State and Municipal Financial Discipline (LDFEFM, 2016) does indeed assert, in terms of Mexico City's public debt, the duty to report how the debt is used via a list of works where these resources end up, accountability in this case is only partial. Accordingly, the regulatory framework is there, but the law needs to be enforced and penalties assessed when public servants fail to carry it out. In this realm, civil society has an essential role to play, as autonomous citizen bodies that can serve as a watchdog for how public debt is used.

1. ACCOUNTABILITY AND PUBLIC DEBT

Corruption hurts public finances both because it reduces revenue and because it allows public money to be siphoned away, all of which results in a public deficit, which gives rise to indebtedness, which in turn distorts the state's financial activities. There are legal and operational measures in place designed to detect corrupt acts, one of which is accountability, which, according to Schedler (2008, p. 13), "requires power to open itself up to public inspection." The exercise of political power must undoubtedly be subject to citizen oversight. It is extremely important for society to have information about how it is being governed and where public money is being spent (Fox, 2007). Accountability entails power acting transparently and the capacity to sanction civil servants who act illegally (Monsiváis, 2005).

The concept of accountability has been defined in different ways; nevertheless, they all agree that it is an obligation of those to whom responsibility has been conferred to be able to account for the job done, and, if it proves to be unsatisfactory, there should be negative consequences (Bolaños, 2010; Fox, 2007; Guerro and Ramírez, 2006; Lindstedt and Naurin, 2010).

To Mashaw (2008), several of the most salient features of accountability are as follows: who should be accountable and to whom? What processes can ensure accountability and what is the fallout from a lack of accountability? In Mexico, the government is accountable for the use and fate of public money via a publicly-available Financial Statement (literally, a public account, or *cuenta pública*), which the executive branch submits to the Lower Chamber (literally, Chamber of Deputies). Unfortunately, this accountability is at times incomplete, as is the case when it comes to the debt line. To prevent corruption in the public debt sphere, clarity is needed as to the use and fate of debt. Research by Astudillo, Blancas, and Fonseca (2017) demonstrated that debt tends to be 28% higher in states where disclosing debt levels is not mandatory.

2. ACCOUNTABILITY AND MEXICO CITY'S PUBLIC DEBT REGULATORY FRAMEWORK

Nationwide, Article 73, Section VIII of the Political Constitution of the United Mexican States (CPEUM, 2017) lays out the rules for states and municipalities to take on debt. It also enumerates the limitations and protocols to follow, which could affect their shares, and sets out the requirement to disclose borrowed money and payment obligations in one single registry.

In Mexico City, pursuant to the 1994 Federal District Government Bylaws, in effect until the Mexico City Constitution entered into force in 2018 (DOF, 2017), the President of the Republic is empowered to propose a budget to the Congress for approval, after which point the Ministry of Finance's Office of Accounting (*Contaduría Mayor*) shall ensure that it is properly carried out. The Head of Government proposes to the President of the Republic the debt amounts, and it is this person who has to disclose how the money ends up being used.

On another note, Mexico City has several laws on the books governing public debt. In 2016, the Mexico City Law for Transparency, Access to Public Information, and Accountability was enacted (GDF, 2016), in which Article 21 describes the obligation for the government to disseminate and update information pertaining to Public Accounts and Debt. The Higher Audit Office of Mexico City is charged with overseeing enforcement of this law, as well as coordinating disclosure and doing citizen outreach to foser a culture of accountability and government oversight, according to its 2016 regulations.

In 2016, the Law for State and Municipal Financial Discipline passed. Where public debt is concerned in Mexico City, one of the requirements is to raise public revenue, among others. The law states the duty to report on the state of public debt and how the authorized amount is being used, broken out by origin, payment source and destination, and specifying the financial characteristics of the transactions performed. Concretely, it says that reports must reflect how public debt has evolved over the time period being reported; the maturity profile; debt taken out by the recipient entity, and how it is being directed into specific projects; a list of projects in which this money has been involved; breakdown of the debt balance by user of the resources and creditor; debt service; financial cost; swap or refinancing; evolution by credit line; and investment program for the rest of the fiscal year; all of which is to be submitted no later than March 31 every year.

On the subject of public debt, the Mexico Quarterly Report on the State of Public Debt goes no further than to state: "security and dispensing of justice; infrastructure and mobility; economy and culture; and public debt," without going deeper into the projects where the money is spent.

In the Federal District Procurement Law (LADF) (2016), Article 5 states that acquisitions, leases, and provision of services related to assets either entirely or partially charged to revenue contained in the Fiscal Coordination and Internal Debt Law shall be subject to the specific provisions of the Expenditures Budget Decree and the Mexico City Financial Code (GCDMX, 2017).

As is evident, there is a suite of different laws to manage and control public debt in Mexico City; even so, the Financial Statement does not always specific the fortune of this debt. Bear in mind that when it comes to stock market debt, the ratings agency Fitch boasts ample fiscal and financial information on the Mexico City government, but it does not define the destination of the debt either.

3. PUBLIC DEBT AND ACCOUNTABILITY IN THE MEXICO CITY GOVERNMENT

As shall become evident later on (see Appendix), accountability when it comes to debt on the Mexico City Financial Statement over the various governmental administrations has at most times been only partial. From 1999 to 2002, the financial statements broke out the information per project by debt origin and amount, with a couple of exceptions, like the credit Banamex granted in 2000, which just contains the general assertion that it was used for "programs of public works and urban services, hydraulic infrastructure, urban transportation, the environment and social development, public safety, and strengthening service administration." From 2003 (when investment began in Stock Certificates) to 2006, there are no data available on projects funded or on amounts allocated.

From 2007 to 2009, the reports contain information with the appropriate amounts in general categories, like urban transportation, hydraulic infrastructure, and more. In 2010 and 2011, there is once again a project-by-project breakdown of where debt is being used. There are no projects listed in 2012. In 2013, there is information similar to the information provided for the loan granted by Banamex in 2000. 2014 and 2015 do not mention any projects funded with public debt. It is unclear how the information pertaining to use of money obtained via debt is being presented. Even so, there are certainly time periods of greater transparency, marked by the Cárdenas-Robles administration, two of the López Obrador years, and two of Ebrard Casaubón's years.

These Financial Statement data make it feasible to determine annual and cumulative variation in total debt balances for Mexico City by person at the helm of the administration. As summarized in Table 1, the growth rate exhibits a downward trend over the series.

3.1 Debt Management

Accountability when it comes to debt not only makes it possible to determine the debt balance, but also to understand how public debt is being managed. It turns out to be important to analyze the debt policy set forth in the Mexico City Financial Statement and its impact on the structure and composition of debt.

Table 1. Evolution of Cumulative Debt Balance by Administration Term
Weights and Percentages. 1994-2015

Year	Administration	Balance	Annual variation %	Cumulative variation over the term %
1994	Oscar Espinosa Villarreal (1994-1997)	5 786 400.0		
1995		6 371 575.0	10.11	
1996		14 956 723.0	134.74	144.85
1997	Cárdenas-Robles (1997-2000)	20 617 900.0	37.85	
1998		24 450 163.3	18.59	
1999		22 962 079.8	(-)6.09	
2000		28 649 770.8	24.77	75.12
2001	López Obrador (2000-2004)	32 784 527.7	14.43	
2002		38 285 164.0	16.78	
2003		41 634 034.9	8.75	
2004		42 310 012.0	1.62	41.58
2005	Alejandro Encinas (2005-2006)	43 527 421.8	2.88	
2006		44 132 998.3	1.39	4.27
2007	Marcelo Ebrard Casaubón (2006-2012)	44 079 516.4	(-)0.12	
2008		45 579 500.0	3.40	
2009		47 529 500.0	4.28	
2010		52 529 490.0	10.52	
2011		56 232 200.0	7.05	
2012		61 207 300.0	8.85	33.98
2013	Miguel Ángel Mancera (2012-2018)	65 529 800.0	7.06	
2014		69 511 800.0	6.08	
2015		73 713 900.0	6.05	19.18

Source: Cuenta Pública de la Ciudad de México. Secretariat of Finance. Mexico City Government. Various years <https://goo.gl/v93BCn>

As shown in Table 2, in the time period 1999-2015, the debt policy revolved primarily around actions designed to contain growth; the expected result was to endow the current account with a stable savings level and a surplus.

Table 2. Public Debt Management. Period 1999-2015

Year	Action	Purpose
1999	– The Liabilities Restructuring Program is implemented, including redocumentation and other pre-payment processes.	– Transform shortand medium-term obligations into other long-term obligations in order to reduce periodic payment amounts.
2000	– Support given to financial complementarity for revenue by financing. Article 2 of the Federation Revenue Act (LIF) and Art 2. of the Federal District Government Revenue Act (LIDF). – The credit allocation via auction scheme kicks off at banking institutions	– Preference given to multi-year financing or credit. Keep level below the authorized debt ceiling. – Policy of not taking on debt that exceeds annual fiscal revenue is established
2001	– Stabilize periodic debt payments, pursuant to the Federal District government's fiscal capacity. Article 2 "B" of the LIF and 2 of the LIDF.	– Stabilize debt pursuant to the Federal District government's fiscal capacity. – AAA rating earned for the Federal District as a credit subject.
2002	– Support given to a policy to keep the debt ceiling permitted by the LIF lower, Article 3, 2, and 2 of the LIDF.	– Preference given to multi-year commitments. – Avoid late payments.

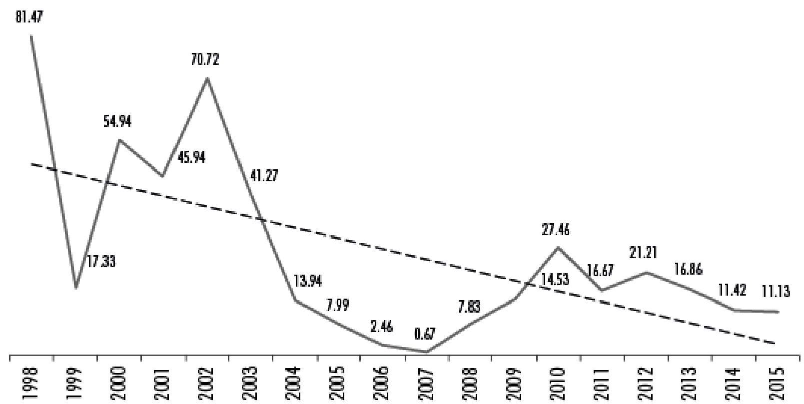
		– Guarantee the fate of the debt. – Disclose amount, term, and fate of the debt
2003	– Debt reduced by 39.6% below the debt ceiling stipulated in the LIF, Article 3, 1, and 2 of the LIDF. – The Administration and Payment Trust is instituted (FAP).	– Renegotiate credit lines that exceed the limits set by the auction with financial institutions.
2004	– A debt reduction plan is set as the government policy. As part of that, debt is cut by 16.6% below the debt ceiling stipulated in the LIF, Article 3, 1, and 2 of the LIDF. – The FAP manages Stock Certificate issuance.	– Renegotiate liabilities that exceed auction rates. – First debt issuance on the stock market for an amount worth 2.5 billion pesos.
2005	– Allocation of credit via auction with financial institutions. – Liability restructuring program. – Ongoing multi-year debt projects. – Transparency in debt management. – FAP is capitalized with 15% of federal shares.	– Renegotiate liabilities above auction rates. – Second debt issuance for 1.690 billion pesos. – Reserves constituted at the FAP for coupon and principal payments.
2006	Mix of financing sources: commercial banking, development banking, and the stock market. Negotiation of 37.3 of the total debt at a fixed-rate financial cost. New loans taken out (local Dexia and Banobras) agreed on a 25-year term.	– Reduce exposure to interest rate variability. – Improve the term maturity profile. – Financing through the stock market.
2007	– Two lines of financing (development banking and the stock market) are combined. – New loans are taken out with up to 40-year terms. – A debt refinancing policy is implemented, in search of greater liquidity for public finances.	– Reduce total debt balance by 3.7% in real terms and 0.01% in nominal terms. – Debt is redocumented by up to 35,423,696.7 thousand pesos, equivalent to 85.5% of the total debt.
2008	– A total debt refinancing policy is implemented. – Efforts made to streamline entering into loan contracts in administrative terms, pulling the reins back on the ALDF and centralizing decisions with the local executive.	– Reduce the financial cost of the debt. – A longer-term amortization scheme is agreed upon to free up resources to pay capital amortizations and reduce interest rates.
2009	– The decision is made to diversify credit sources and resource availability times.	– Get fresh debt with a lower financial burden for the local coffers.
2010	– Authorization obtained from the SHCP to refinance total accumulated debt. – -To diversify financing sources, the choice was made to take out debt in the stock market.	– Keep up the mediumand long-term debt policy restricted by the net revenue level.
2011	– Continue the mediumand long-term debt policy pursuant to potential revenue growth.	– Keep up conditions for operating liquidity in public finances.
2012	– Maintain the financing scheme via development banking and the stock market.	– Cover the city's financing needs derived from public works.
2013	– Maintain the financing scheme via development banking and the stock market.	– Boost fiscal capacity to undertake infrastructure and financing projects.
2014	– Borrow money with the best market conditions, – Maintain three sources of financing: commercial banks, development banks, and the stock market.	– Track public debt, when it is taken out, and record-keeping. – Cover the city's financing needs derived from public works.
2015	– Guarantee debt sustainability in the short, medium, and long term.	– Contain the level of obligations and improve the debt structure.

Source: Cuenta Pública de la Ciudad de México, website <https://goo.gl/68LZcX>

Figure 1 outlines how the rate of return on the public debt has evolved, which is the result of dividing the total debt, without considering liabilities held with commercial creditors, by gross savings; this figure is how long it would take to pay back with the funds generated by the government's current account in number of years. It also shows the trend of the financial weight accounted for by debt over the public finance capacity in each time period as a result of redocumentation. In this way, the rate of return on the debt went from an estimate of 81.47 years in 1998 to 11.13 years by 2015, thanks to the government's measures to restructure and refinance its liabilities.

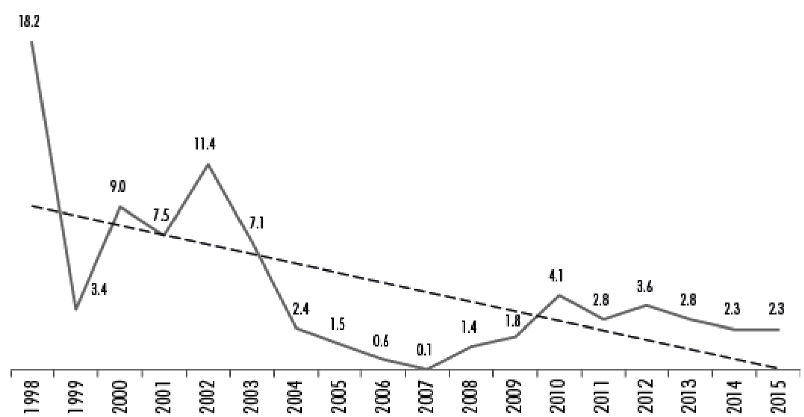
The fiscal year current income level is important because it denotes the amount of liquidity available to the government to handle its operational commitments. Figure 2 reveals a match between the measures implemented with the aforementioned debt rates of return, given that in 1998, the debt represented 18.2% of current revenue, but by 2015, it had fallen to 2.3%.

Figure 1. Public debt Return. Years to Settle Net Debt Each Year.
Series 1998-2015



Source: Created by the authors with data from the Cuenta Pública del Distrito Federal, various years, website: <https://goo.gl/68LZcX>

Figure 2. Share of Public Debt in Total Current Revenue
Percent Share. Series 1998-2015



Source: Created by the authors with data from the Cuenta Pública del Distrito Federal, various years, website: <https://goo.gl/68LZcX>

3.2 Stock Market Debt and Accountability

As documented in the Appendix, another source of debt for the Mexico City government has been the stock market, which just like the funding coming from development and private banking, is subject to only partial accountability, as the fate of this money is not fully disclosed either. This point is significant because the responsibility to report gets pushed aside, but above all because it is easy to lose sight of the limitations or viability of projects underpinned by debt.

Traditionally, the federal government has assumed responsibility for rescuing any subnational entity that falls into financial difficulties, despite the fiscal cost it entails for society. At present, this role has been delegated to the financial figure called Specific-Purpose Companies (Sociedades de Objeto Específico) (SOE), which provide liquidity when an entity runs into profitability issues, as was the case in the roadways case of 1997 (Mendoza, 2017).

This financing model applied to the states and municipalities began to emerge in June 2001 when Article 14 Bis, Sections 6, 7, and 8 of the Stock Market Law (LMV, 2001) was amended, permitting the creation of instruments known as Stock Certificates. Since 2003, the government has supplemented its revenue needs by investing in the stock market. This mechanism blurs the destination of public debt; for example, the consultancy Fitch Ratings (2017) reports all investments in matters of public safety, transportation, roads, environmental clean-up, and hydraulic infrastructure, but does not provide any further specification at all.

The Mexico City government established the figure of the Administration and Payments Trust (FAP), appointing it as the body in charge of managing rights meant to fulfill credit obligations entered into via stock certificates; the government funded the creation of the trust to support this mechanism with 15% of federal shares; later on, in 2005, reserves were set up to guarantee constant coupon and principal payments with the same percentage and source of resources. Thus, the supply of debt instruments is another mechanism to fund Mexico City's outlays, and it is through this channel that the government has diversified the source of its debt. The central argument consists of reducing the deficit in the short term entailed by taking on bank liabilities in the current account balance.

The source of payment for the stock certificates is the General Participations Fund (FGP) for the city, because the federal government is required to back up these transactions. From 2003 to the present, the debt rating has been AAA (mex), considered excellent for a local government. It is important to point out that the debt taken out by the Mexico City government is subject to the National Congress' approval and is governed by guidelines set by the Secretariat of Finance and Public Credit (SHCP). Table 3 contains a description of how these stock certificates have behaved from 2007 to date.

(SEE TABLE 3)

The Mexico City FGP underwrites the payment of this stock debt; this means both the average monthly repayment, the term, and the type of credit agreed on, meaning that the debt service payment or financial cost is higher to the extent that the capital amortizations are made on the aforementioned issuances, pursuant to the functioning of the FAP and their maturity.

One negative consequence of this securitization of public liabilities is that in the realm of assets, it subjects the supply of public goods and services to financial speculation. On top of that, as stated earlier, the destination of the money obtained through this mechanism is not disclosed.

4. FINANCING INFRASTRUCTURE THROUGH PUBLIC-PRIVATE PARTNERSHIPS (PPP): ANOTHER CASE OF PARTIAL ACCOUNTABILITY

Another source of financing, even more opaque than its other counterparts, happens to be public-private partnerships (PPP). To further diversify the debt mechanisms used for infrastructure investment, state and municipal governments, including Mexico City, have opted for the financing alternative offered by PPPs to foster public works.

Although the Public-Private Partnerships Act (LAPP, 2016) and the Regulations for the Public-Private Partnerships Act (RLAPP, 2017) both stipulate that the SHCP is required to disclose any PPP projects authorized and amounts disbursed or to be disbursed, as well as any real estate, assets, and rights pertaining to the project and their fate at the end of the contract, in the Quarterly Reports on the Economic Situation, Public Finances, and Public Debt, in practice, it is not so simple to identify cases of PPPs. Even though the federal government does report its main ongoing projects (SHCP, 2017), at the state and municipal level, this information is missing. It would come from bodies sponsored by the Inter-American Development Bank (IDB) or the private chambers, associations, or companies involved, so it is scattered and not up-to-date.

Looking at Mexico City, in 2015, the Federal District Legislative Assembly (ALDF) decreed the Public-Private Partnerships Act for the Federal District (ALDF, 2015), aiming to regulate and disseminate activities related to contracting with PPPs. Article 14 provides for setting up a:

> ...system called the Federal District Public-Private Partnerships Registry, which shall record any Public-Private Partnership Projects developed in Mexico City. This system shall list any ongoing projects done through Long-Term Service Provision Contracts, Joint Investments, Concessions, and Temporary Revocable Administrative Permits, and shall be available to the public.

Nevertheless, this Single Registry System has not come to fruition. As of 2013, the preponderance of PPPs was recognized through Service Provision Projects (SPP) as 80.0% of all public works projects in Mexico City (ObrasWeb, 2013), but the information reported by the government has yet to become more specific as to their fate and share.

Both the government and the partner companies publish only incomplete, diverse, and poorly updated information about the SOEs the administration commissions and the running of the PPPs. Some of the most widely known in Mexico City are summarized below:

Table 4. Details of Public Works via PPPs

Project	Term in years	Award	Initial investment in Mdp	Concessionaire
Management and improvement of the drinking water and sewage system (SACM)	10	1993	n.d.	n.d.
Urban improvement and holistic maintenance program for the inner circuit of Mexico City	12	2008 2009 2010 2011	3 000.00 37 700.00 74 000.00 120 000.00	CEMEX GAMI Ingeniería, La Peninsular e Idinsa
Metrobus system, Line 3	10	2009	2 894.00	CEMEX-GAMI
Mass transit system	15	2009	n.d.	CAF
Street lighting	10	2010	2 600.00	CITELUM
Poetas highway	33	2010	6 898.00	OHL Concesiones

Source: Created by the authors with data from the Secretariat of Works and Services (SOBSE) (2017), Mexico City government, website: <https://goo.gl/fcGmov>; OHL. Concessions. Súper Vía Rápida Poetas, website: <https://goo.gl/LQgFDu>

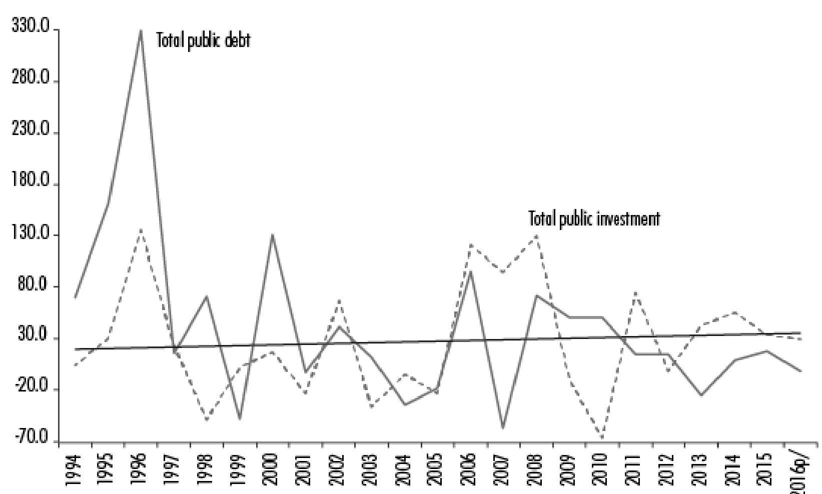
It is worth pointing out that there are no clear measures in place for running the PPPs. Above all, if there is neither transparency nor accountability, they may become a mechanism to hide the burgeoning public debt to the benefit of private capital, to the extent that the government takes on the sub-duty of serving as a secure payment bank. The risk is that public spending turns into a source of concentrating income to cover the commitments, restricting its role as a maker of economic and social policy.

5. ANALYSIS OF COINTEGRATION BETWEEN DEBT AND PUBLIC INVESTMENT IN MEXICO CITY

Given the incomplete accountability, it is very hard to know the true fate of Mexico City's public debt. Considering that Article 21 of the Mexico City constitution asserts that debt should be used for productive public investment or refinancing or restructuring, the following question arises: what is the impact of public debt on the Mexico City government's public investment? In order to answer this question, we begin with Figure 3—containing data from the Economic Information Database (BIE) —for the central sector of the Mexico City government. The idea is to show how total public debt has behaved irregularly as compared to total public investment.

The figure compares the evolution of total debt and total public investment in Mexico City, in real annual growth rates for the time period 1994-2016. The negative values in these two variables are due to smaller annual resource allocations. The public debt growth rate declines throughout the period, going from 329.0% in 1996 to (-)1.7% in 2016; on the flipside, public investment went from 4.6% in 1994 to 30.0% in 2016; in general, the fluctuations vary widely, but there is a soft upward trend over the entire period at an average annual growth rate of 28.2%.

Figure 3. Mexico City Government Total Public Debt and Investment, 1994-2016. Annual growth rates at 2013 prices



Source: Created by the authors based on data from INEGI (2017). BIE. State and Municipal Public Finance Statistics. Data set: Public finances for the Mexico City Government. Recovered from: <https://goo.gl/WKcEPy>

To measure the push made by debt on public investment, the following equations were formulated:

$$Y = \sum_j^n \beta_i X_j \qquad (1)$$

$$W = \sum_j^n \beta_i X_j \qquad (2)$$

They assume that *X* (net public debt) drives *Y* and *W,* in which case there is a causal relationship between total public investment (*Y*) and total revenue (*W*), as elements that can be determined by net debt flows.

Applying these equations to the Granger cointegration test for 28 periods, we obtain a significant probability of 0.0015%, of *Y* with respect to *X*, and of 0.0054%, also significant, in *W* with respect to *X.* To develop the tests, the coefficient of determination R^2 reached 98.0%, while the Durbin Watson test came in at 1.85%, which are indicators that econometrically validate this result.

In formal terms, it can be deduced that the probabilities obtained and their indicators meet the acceptance threshold for this cointegration test, leading to the assertion that debt does indeed have an impact on the makeup of public investment, as well as total city revenue.

Keep in mind that the determinant factor to obtaining results with a significant probability is the sample size, which in this case is 28 pieces of data, and that the existence of a Granger correlation between two variables does not necessarily mean that one of them is the cause behind the changes in the other. There is therefore a limitation to the interpretation that can be drawn, and this should be remembered when using this test.

6. MEASURING THE QUALITY OF ACCOUNTABILITY

Several bodies have taken up the task of measuring the quality of information available on the allocation and use of budgets; one such body is the Mexican Institute for Competitiveness (IMCO), created in 2003.

The IMCO has developed a Municipal Budgetary Reporting Index (IIPM), which consists of a set of 80 standardized criteria for new sections of transparency concepts that break down the availability of public information in a sample of 453 Mexican municipalities and the 16 districts of Mexico City. They began to calculate the index in 2009.

According to the IMCO, the IIPM can be understood as the degree of transparency or opacity of information on public management available. As of 2016, the average score was 35% in terms of quality of budgetary information, referring to spending of federal resources, public debt, tabulators, positions, and open-source data.

Table 5 shows that the districts in Mexico City performed poorly compared to the national mean, averaging 6.1% on transparency and ranked at the bottom of the list. The average ranking of the 16 delegations is 400 out of the 453 municipalities measured by the IMCO as a sample representative of the country as a whole.

Table 5. IIPM Scores for the Districts of Mexico City (2016)

	Ranking in the sample of municipalities	*Score %*
Azcapotzalco	424	3
Coyoacán	424	3
Cuajimalpa de Morelos	424	3
Gustavo A. Madero	384	8
Iztacalco	424	3
Iztapalapa	384	8
La Magadalena Contreras	384	8
Milpa Alta	424	3
Álvaro Obregón	384	8
Tláhuac	372	13
Tlalpan	384	8
Xochimilco	424	3
Benito Juárez	384	8
Cuauhtémoc	384	8
Miguel Hidalgo	384	8
Venustiano Carranza	424	3

Source: IMCO (2016). Municipal Budget Information, website: <https://goo.gl/ajZptl>

This evaluation represents the degree of opacity in the handling and disclosure of information on the part of the Mexico City government, according to the IMCO.

When it comes to the fate of public debt, in general, the IMCO does not identify it clearly, considering it part of the funding that states and municipalities receive, so they treat it as a component of the public budget, and as such, it is through this lens that their indicators should be read.

Table 6 reveals Mexico City's ranking in 30th place, coming in ahead of only Michoacán (31) and Quintana Roo (32), with a score of 53.0% against an average of 76.1% across all of the states.

Table 6. IIPM Scores for State Governments (2016)

	Ranking in the sample of state governments	*Score %*
Aguascalientes	13	83
Baja California	6	97
Baja California Sur	16	75
Campeche	9	92
Coahuila de Zaragoza	1	100
Colima	9	92
Chiapas	6	97
Chihuahua	8	94
Ciudad de México	30	53
Durango	17	71
Guanajuato	4	99
Guerrero	20	68
Hidalgo	12	86
Jalisco	1	100
México	26	59
Michoacán de Ocampo	31	50
Morelos	21	66
Nayarit	17	71
Nuevo León	27	58
Oaxaca	15	76
Puebla	1	100
Querétaro de Arteaga	28	56
Quintana Roo	32	48
San Luis Potosí	23	63
Sinaloa	17	71
Sonora	24	61
Tabasco	14	79
Tamaulipas	24	61
Tlaxcala	5	98
Veracruz	22	65
Yucatán	11	90
Zacatecas	28	56

Source: IMCO (2016). Municipal Budget Information. Recovered from: <https://goo.gl/DtkJBb>

The issue of public debt is concerning and important for Mexican society, on the one hand because of its relative weight as an operating cost involved in investment flows heading into overall economic activity, but also due to the fiscal burden it entails, which has repercussions for revenue.

The work of the IMCO is essential, because it has helped shape a series of indicators with the intent of revealing the specific nature of how information is handled, as well as the structure, dynamics, and evolution of the public debt held by state and municipal governments. For example, the IIPM questionnaire (2016) contains a battery of 11 questions that deal with such aspects as debt ceilings in each state, balances, allocated amounts, breakdowns by contracting instrument, terms, and rates. Table 7 shows an excerpt of the variables reflecting this information.

Note that there is no question pertaining to the fate of the debt. This point is important because from the get-go, there is a failure to examine a fundamental piece of transparency.

Table 7. Battery of Questions on Public Debt in States and Municipalities, IIPM

59. Are there limits on taking out public debt?
60. Are public debt balances broken down?
61. Is debt broken down by type of guarantee or payment source?
62. Does the fiscal year pertaining to the payment of public debt contain the allocated amount?
63. Is the allocated amount broken out in the fiscal year pertaining to the payment of public debt in the payment of principal or interest?
64. Is the public debt broken down by approval decree or code to make it identifiable?
65. Is the public debt broken down by type of obligation or contracting instrument (simple credit, stock issuance, service provision, etc.)?
66. Is the public debt broken down by banking institution?
67. Are the rates at which public debt is taken out broken down?
68. Are the amounts allocated in the fiscal year pertaining to the payment of public debt in commissions, expenses, hedging cost, and/or financial support associated with it broken down?
69. Is the term for the public debt broken down?
70. Are the amounts allocated in the fiscal year pertaining to the payment of the public debt in terms of payment from previous fiscal year debt broken down (ADEFAS)?

Source: IMCO (2016). Municipal Budget Information. Recovered from: <https://goo.gl/DtkJBb>

FINAL CONSIDERATIONS

Given the magnitude of corruption in Mexico, making the handling of public finances more transparent is a pressing matter, as it is a question that affects society as a whole. To do so, full accountability, as stipulated by law, is necessary, and if it is not fulfilled, then there should be appropriate sanctions assessed, as scholars in the field have asserted.

Is there full accountability in the way the Mexico City government handles its public debt? The answer is no. As shown in the Appendix, it is possible to find out the origin, amount, and service on the debt; nevertheless, the fate of the debt is only available in just a few years with a complete breakout of projects funded. There is total opacity when it comes to evaluating results obtained, making it impossible to judge whether the debt is useful or not to increasing Mexico City's productive capacity.

This situation is in spite of the fact that the State and Municipal Financial Discipline Law establishes the obligation to report on the state of public debt, broken out by origin, payment source, and destination. If the idea is to truly combat corruption, full accountability is urgent, so that all of society knows how public resources are being used, as sooner or later it is society that will have to underwrite the expenses with taxes.

In light of this opacity, the choice was made to perform a cointegration test on debt and public investment, leading to the finding, with a significant probability of 0.0015, that total public debt has an impact on the behavior of public investment in Mexico City.

As is clear, no new laws are required for effective accountability. What is needed is to enforce the laws currently on the books. And to do so, it would be a good idea to assemble autonomous citizen-run bodies to serve as watchdogs and enforce the laws.

APPENDIX

Table A1. Origins, Destinations, and Amounts of Public Debt in Mexico City. Debt Taken Out by Project and Total Debt Held. Period 1999-2015 (Thousands of Pesos)

Year	*Origin*	*Destination*	*Debt*	
			From the project	*Net in the period*
1999	**Total**		**8 376 372.6**	**1 600 794.4**
	Credit taken out with Banobras -(Japan Overseas Economic Cooperation Fund) OECF	Project to reforest the Metropolitan Zone of the Valley of Mexico, equipment for the San Luis Tlaxialtemalco Nursery.	58 713.2	
	Banobras-Inter-American Development Bank	Clean-up program for Valley of Mexico.	192 524.3	
	Banobras-Suppliers	Acquisition of electromechanical inputs and technical support services for the Line B Metropolitan Civil Works project.	588 318.3	
	Banobras	Liability restructuring project.	1 868 928.6	
		Support for public investment in infrastructure for the hydraulic system and equipment for urban	1 806 420.7	

		services in the city.		
	Financial National - International Bank for Reconstruction and Development (IBRD)	Specialized equipment for the Mexico City Air Quality Improvement Program.	5 500.4	
	Bancomer S.A. - Urban infrastructure	Execution of urban works and services to expand the security infrastructure and law enforcement, transportation, and the environment.	2 062 820.8	
		Liability restructuring program.	1 793 146.3	
2000	Total		6 138 651.5	5 010 005.0
	Banobras-IDB	Multi-year forestation and reforestation project in Guadalupe and Santa Catarina mountain ranges.	49 805.3	
	Banobras	Project to reforest the Metropolitan Zone of Valley of Mexico (MZVM), operating and maintaining the San Luis Tlaxialtemalco nursery complex.	38 228.4	
	Banobras-SVM	Valley of Mexico clean-up project.	5 564.9	
	Banobras-Suppliers	Ongoing civil and electromechanical works for Line B of the metro.	428 432.5	
	Banobras	Procurement of electromechanical inputs and technical support services for Line B of the metro.	99 095.7	
	Banobras	Public works and urban services, hydraulic infrastructure, law enforcement, and strengthening service administration infrastructure.	2 583 132.3	
	Bancomer	Public safety and social development programs.	1 038 877.9	
	Banamex	Public works and urban services programs, hydraulic infrastructure, urban transportation, the environment and social development, public safety, and strengthening service administration.	1 895 514.5	

Year	*Origin*	*Destination*	*Debt*	
			From the project	*Net in the period*
2001	Total		10 570 179.5	4 508 968.5
	Banobras	Ongoing multi-year MZVM reforestation project, operating and maintaining the San Luis Tlaxialtemalco nursery complex.	2 821.0	
	Banobras	Valley of Mexico clean-up.	5 441.9	
	Banobras	Ongoing civil and electromechanical works for Line B of the metro.	19 376.0	
	Banobras	Procurement of electromechanical inputs and support services for Line B of the metro.	55 660.0	
	Commercial banking	Liability refinancing.	7 962 339.2	
		Investment in public infrastructure.	2 524 541.4	
		Launch of a bank loan bidding scheme. Renegotiation of a little more than 60% of the balance of the debt taken out with development banks. Ongoing multi-year commitments.		
2002	Total		7 255 597.5	4 964 370.6
	Banobras	ONGOING MULTI-YEAR MZVM REFORESTATION PROJECT.	5 429.3	
		Procurement of electromechanical inputs and technical support services for Line B of the metro.	1 401.2 198 946.0 142 863.9	
		Hydraulic infrastructure project, public works, urban services, and environmental improvement.	452 132.0 1 654 925.1	
	Commercial banking	Investment in public infrastructure	4 800 000.0	
2003	Total		3 348 870.9	2 998 122.5
	Development banking	Urban transportation program.	n.d.	
		Environment and social development program.		
	Commercial banking	Hydraulic infrastructure program.		
	Administration and Payments Trust (FAP)	Public works program and urban services.		
		Public safety program.		
	First issuance of debt by the Federal District in the capital market	Issuance of stock certificates		
2004	Total		n.d	483 196.2
	Development banking	Urban transportation program		

	Development banking	Urban transportation program.		
	Commercial banking	Public works program and urban services.		
	FAP	Environment and social development program.		1 690 000.0
		Hydraulic infrastructure program.		
		Public safety program		

Year	*Origin*	*Destination*	*Debt*	
			From the project	*Net in the period*
2005	Total		n.d	1 246 350.1
	Development banking	Urban transportation.		
		Hydraulic infrastructure.		
	Commercial banking	Public works and services.		
	FAP	Public safety.		
		District projects.		
2006	Total		n.d.	538 111.8
	Development banking	Urban transportation.		
	Commercial banking	Hydraulic infrastructure.		
		Public works and services.		
	FAP	Public safety.		
		District projects.		
2007	Total		3 000 000.0	87 417.5
	Development banking	Urban transportation.	2 136 000.0	
	Commercial banking	Hydraulic infrastructure.	729 000.0	
	FAP	Health sector works	135 000.0	
2008	Total		1 914 700.0	1 500 000.0
	Banobras	Transporte urbano.	706 524.3	
	Bancomer			
	DEXIA **/	Infraestructura hidráulica.	294 863.8	
	HSBC	Obras en el Sector Salud.	24 891.1	
	Mercado de capitales	Obra pública.	888 420.8	
2009	Total		1 950 685.2	1 950 000.0
	Banobras	Urban transportation.	1 321 659.9	
	Bancomer			
	DEXIA **/	Hydraulic infrastructure.	157 845.3	
	HSBC	Health sector works.	426 417.9	
	Capital market	Public works	44 762.1	
2010	Total		5 517 930.0	5 517 930.0
	Banobras	Urban transportation program:	4 900 500.0	
	Bancomer	Tláhuac-Mixcoac Line 12 metro project;	4 278 500.0	
	DEXIA	Procurement of 99 original-use cars for Line A.	622 000.0	
	HSBC	Higher Court of Justice of the Federal District.	99 500.0	
Year	*Origin*	*Destination*	*Debt*	
			From the project	*Net in the period*
	Capital market	Amortization	517 930.0	
2011	Total		3 702 600.0	4 096 200.0
	Banobras	Mexico City water system.	152 400.0	
	DEXIA	Collectors.	62 200.0	
	HSBC	Drinking water plants.	64 600.0	
	Bancomer	Well construction.	25 600.0	
	Bancomer	Tláhuac-Mixcoac Line 12 of the metro	2 078 600.0	
	Banamex	Multidisciplinary system with sensors for the SMSC414 centers.	1 440 700.0	
	Capital market	Renovation of the Higher Court of Justice of the Federal District.	30 900.0	
2012	Total		n.d.	4 975 000.0
	Banobras	n.d.	n.d.	

	Bancomer			
	DEXIA			
	HSBC-FID			
	Banamex			
	Capital market			
2013	Total		3 351 500.0	4 385 500.0
	Development banking	Generate enough fiscal capacity to undertake infrastructure, transportation, water, and safety projects and social programs, and other priority pillars.	1 221 100.0	
	Commercial banking		3 500.0	
	Stock market		2 126 900.0	
2014	Total		4 312 600.0	3 919 000.0
	Development banking	n.d.	1 481 200.0	
	Commercial banking		2 140 900.0	
	Stock market		690 500.0	
2015	Total		3 786 300.0	4 202 100.0
	Development banking	n.d.	472 700.0	
	Commercial banking		370 500.0	
	Stock market		2 943 100.0	

Note: n.d./no data available; *The column of debt taken out for the project includes the total debt amount, which may be multi-year; the column of net debt for the period refers to the financing taken on during the fiscal period, even if it is related to the projects, as the central sector can use that leverage to also cover amortization payments and financial costs, which is why it is higher in some years; **/DEXIA is a Belgian-French banking institution that is 94.4% state owned.

Source: Cuenta Pública del Distrito Federal. Various years, website: <https://goo.gl/v93BCn>

BIBLIOGRAPHY

Alt, J. and Lassen, D. (2006), "Fiscal Transparency, Political Parties, and Debt in OECD Countries", *European Economic Review,* 50(6).

Astudillo, M., Blancas, A. and Fonseca, F. (2017), "La transparencia de la deuda subnacional como mecanismo para limitar su crecimiento", Mexico, *Problemas del Desarrollo. Revista Latinoamericana de Economía*, vol. 48, no.188, UNAM-IIEC, January-March.

Bellver, A. (2007), "Reformas en materia de transparencia: segunda generación de cambio institucional", *Revista del* CLAD*, Reforma y Democracia*, no. 38.

Bolaños, J. (2010), "Bases conceptuales de la rendición de cuentas y el rol de las entidades de fiscalización superior", *Revista Nacional de Administración*, vol. 1, no. 1.

Fitch Ratings (2017), "Panorama de Gobiernos Estatales en México", *Indicadores Presupuestales de 2017.*

Fox, J. (2007), "Government Transparency and Policymaking", *Public Choice*, 131(1-2).

Guerro, E. and Ramírez, L. (2006), "La transparencia en México en el ámbito subnacional: una evaluación comparada de las leyes estatales", in S. López Ayllón (ed.), *Democracia, Transparencia y Constitución: propuestas para un debate necesario,* México, IIJ-IFAI.

Lindstedt, C. and Naurin, D. (2010), "Transparency is Not Enough: Making Transparency Effective in reducing Corruption", *International Political Science Review*, 31(3).

Mashaw, J. (2008), "Rendición de cuentas. Diseño institucional y la gramática de la gobernabilidad", in J. Ackerman (coord.), *Más allá del Acceso a la Información, Transparencia, Rendición de Cuentas y Estado de Derecho*, México, Siglo XXI Editores-UNAM-Cámara de Diputados.

Mendoza, J. E. (2017), "Financiarización y sector carretero en México", *Problemas del Desarrollo. Revista Latinoamericana de Economía*, vol. 48, no. 189, UNAM-IIEC, April-June.

Monsiváis, A. (2005), *Políticas de transparencia: ciudadanía y rendición de cuentas*, Mexico, Instituto Federal de Acceso a la Información Pública.

Schedler, A. (2008), "¿Qué es la rendición de cuentas?", *Cuadernos de Transparencia*, no. 3, México, Instituto Federal de Acceso a la Información Pública.

Uvalle, R. (2013), *Oportunidades y restricciones de la política de transparencia en México*, UNAM, Facultad de Ciencias Políticas y Sociales.

LEGISLATION CONSULTED

ALDF (2015), Ley de Asociaciones Público Privadas para el Distrito Federal, Asamblea Legislativa del Distrito Federal, *Gaceta Parlamentaria*, Mexico City. Recovered from: <https://goo.gl/1L9Anw> [Accessed May 2017].

CPEUM (2017), *Constitución Política de los Estados Unidos Mexicanos*, Cámara de Diputados del H. Congreso de la Unión (ed.), Mexico City, Secretaría de Servicios Parlamentarios. Recovered from: <https://goo.gl/A6D- HWr> [accessed June 2017].

DOF (2017), Decreto por el que se expide la Constitución Política de la Ciudad de México, Recovered from: <https://goo.gl/zAa9dL> [Accessed June 2017].

Estatuto de Gobierno del Distrito Federal (2014), *Diario Official de la Federación*, Mexico City. Recovered from: <https://goo.gl/2KC59P> [Accessed June 2017].

GCDMX (2017), Iniciativa de Decreto por el que se reforman, adicionan y derogan diversas disposiciones del Código Fiscal del Distrito Federal, *Gaceta Official de la Ciudad de México,* Mexico City. Recovered from: <https://goo.gl/TjTbLY> [Accessed March 2017].

GDF (2016), Decreto por el que se expide la Ley de Transparencia, Acceso a la Información Pública y Rendición de Cuentas de la Ciudad de México. *Gaceta Official de la Ciudad de México*, Gobierno de la Ciudad de México, Mexico City. Recovered from: <https://goo.gl/Bzi88E>[Accessed February 2017].

LAPP (2016), Ley de Asociaciones Público-Privadas. Cámara de Diputados del H. Congreso de la Unión, Mexico City. Recovered from: <https:// goo.gl/oFn48a> [Accessed June 2017].

LADF (2016), Ley de Adquisiciones para el Distrito Federal, *Gaceta Official del Distrito Federal* (2015 ed.), Mexico City, Asamblea Legislativa del Distrito Federal (ed.). Recovered from: <https://goo.gl/cpwsQb> [Accessed May 2017].

LDFEFM (2016), Ley de Disciplina Financiera de las Entidades Federativas y los Municipios, Cámara de Diputados del H. Congreso de la Unión, Secretaría de Servicios Parlamentarios (29). Recovered from: <https://goo.gl/ AJgDHo> [Accessed March 2017].

LMV (2001), Decreto por el que se reforman, adicionan y derogan diversas disposiciones de la Ley del Mercado de Valores y de la Ley de la Comisión Bancaria y de Valores. Secretaría de Gobernación, *Diario Official de la Federación*, Mexico City. Recovered from: <https://goo.gl/L3azuD> [Accessed June 2017].

LIF (2015), Ley de Ingresos de la Federación. Secretaría de Gobernación, *Diario Official de la Federación*, Mexico City. Recovered from: <https:// goo.gl/H2GNW3> [Accessed June 2017].

LIDF (2015), Ley de Ingresos del Distrito Federal. Jefatura de Gobierno, *Gaceta Official del Distrito Federal*, ALDF, Mexico City. Recovered from: <https://goo.gl/b7tBvJ> [Accessed June 2017].

Reglamento Interior de la Auditoría Superior de la Ciudad de México (2016), Asamblea Legislativa del Distrito Federal, *Gaceta Official del Distrito Federal*, Mexico City. Recovered from: <https://goo.gl/CefM5C> [Accessed June 2017].

RLAPP (2017), Reglamento de la Ley de Asociaciones Público Privadas, Cámara de Diputados del H. Congreso de la Unión, Mexico City, Secretaría de Servicios Parlamentarios. Recovered from: <https://goo.gl/Jjt17e> [Accessed April 2017].

SHCP (2017), Registro para efectos estadísticos sobre proyectos bajo el esquema de asociación público privada. Documents. Mexico City. Recovered from: <https://goo.gl/F4RXWn> [Accessed November 2017].

WEBSITES

CPDF (2017), Cuenta Pública del Distrito Federal. Secretaría de Finanzas del Gobierno del Distrito Federal, Mexico City. Recovered from: <https:// goo.gl/jDWV8C>

Fitch Reports Mexico (2017). Recovered from: <https://goo.gl/88h6eg>INEGI (2017), Ingresos y Egresos Brutos de la Ciudad de México, Banco de Información Económica, Mexico City. Recovered from: <https://goo.gl/WKcEPy>

INEGI (2017), Ingresos y Egresos Brutos de la Ciudad de México, Banco de Información Económica, Mexico City. Recovered from: <https://goo.gl/WKcEPy>

IMCO (2016), Índice de Información Presupuestal, Estatal y Municipal, Instituto Mexicano de la Competitividad, Mexico. Recovered from: <https://goo.gl/YYf6to>

ObrasWeb (2013), *Redacción Obras. Participación público privada,* Mexico City. Recovered from: <https://goo.gl/zWR5u3>

OHL (2010), Mexico. Supervía poetas, May 2017, OHL Concesiones. Mexico City. Recovered from <https://goo.gl/38UsKj>

SOBSE (2017), Secretaría de Obras y Servicios, Gobierno de la Ciudad de México. Recovered from: <https://goo.gl/fcGmav>

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