Title: Sovereign debt, economic policy and world markets: why have creditors lent money to Mexico in 1888-1893?

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Abstract

The paper appraises Mexico's 1888-1893 borrowing based on two main theoretical approaches present in the literature on sovereign debt. The first approach argues that creditors will be willing to grant loans to countries that: commit to debt contract, perform responsible borrowing, and formulate orthodox policymaking. The second approach proposes that creditors are more likely to lend to countries with booming exports and when the world liquidity flow from developed to developing countries. The paper assesses how well these two approaches explain the 1888-1893 foreign loans contracted by Mexico. This is relevant as Mexico was perhaps the Latin American champion of debt mismanagement from independency to the 1880's, when she acquired creditworthiness overseas. Based on British contemporary periodicals the paper concludes that the two standard approaches cannot fully explain Mexico's borrowing. It is pointed out that the loans would have been less likely to happen had major creditors not been already enrolled in business in Mexico, and thus path dependency played an important role in shaping creditor's decision-making

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(Research in progress, please do no quote)

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1 - Introduction

Although Mexico was among Latin America's champions in debt mismanaging during the five decades that followed independency, Porfírio Díaz administration (1876-1910) put the country back to the world financial system in 1888. This paper is on the six loans granted to the Mexican government from 1888 and 1893. It proposes the following general question: how come was Mexico able to grant loans in Europe after six decades of defaults and moratorium?

The 1888-1893 borrowing will be studies based on two theoretical approaches common in the literature on sovereign debt. The first shall be called the *external approach*. It proposes that creditors regard the comportment of world markets when deciding to grant loans or not. The second approach, named here as the *tripod*, states that creditors are willing to grant loans to countries that enforce debt contracts, perform responsible borrowing, and formulates orthodox policymaking. Based on periodicals published in Britain at the time of the operations, the paper assess how well both approaches explain Mexico's lending, and indicates what factors not included in the theoretical literature may have played a role.

2 – Sovereign debt, world markets and policymaking: the external and the tripod approaches

Why do creditors lend the way they do? By appraising this question, this section propose two main approaches – the external and the tripod – that are present in the literature on sovereign debt. As a

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starting point, one should consider that creditors will be willing to grant loans to a certain country as long as the difference between the interest rate of the operation and the world interest rate compensates the risk of default they face. This appears in the spread of interest rate identity:

$$i \geq i^* + \rho$$

where: $i \equiv$ interest rate at which loans are granted;
$i^* \equiv$ international interest rate;
$\rho \equiv$ risk of default on the granted loans.

The external and the tripod approaches differ in their explanation on the perception of risk of default. The external approach proposes that creditor look at the dynamics of world markets when assessing countries' risk, whether the tripod presents institutions and policymaking as determinant to lending.

The external approach's main idea is that crises in developed countries have depressed exporting results in LDC's, with damaging consequences to their capacity to generate foreign exchange and fiscal revenue. The fiscal point was especially true in the Nineteenth century Latin America, where governments depended heavily on customs collection. The lack of foreign exchange and tax revenue decreases the LDC's capacity to pay services on their sovereign debt, which increases the likelihood of default. Similarly, such countries will have more foreign exchange to honour their sovereign debt the more capital flows from developed countries, which means that the risk of default is lower the more the financial market if booming. To use interest rate spread identity, the greater are LDC's exporting prices and the more liquidity flow from developed countries, the lower is the risk of default and the more LDC's governments will be able to borrow abroad.[2]

The tripod approach is based on a rather hash assumption: governments will default their sovereign debt whenever the benefits of doing so – not paying services and principal – are greater than its costs – not being able to borrow abroad for a while. The risk of default in the above spread identity is, therefore, determined by this cost benefit analysis. Therefore, creditors will not be willing to grant loans to countries whose tax revenues are insufficient to cover both expenditure and debt service. That is so because their central banks may print money to finance the fiscal deficit, which, *ceteris paribus*, depreciates the exchange rate. This will increase both debt and services on it vis-à-vis tax revenue, as the former is in foreign and the latter, in domestic currency. This may well lead governments to borrow more abroad in order not to default, regardless the lack of tax revenue to cover its services, which one shall call irresponsible borrowing. Consequently, the debt/tax revenue ratio will increase, which makes

[2] The external approach has been built out of the following contributions: Acena et al (2000); Eichengreen (1991); Dornbusch, 1988; Furtado, 1976; Marichal, 1989; Simonsen, 1985; and Reinhart, Rogoff, Savastano, 2003.

fiscal policy even more unsound. As a result, such vicious cycle increases services in relation to tax revenue and, thus, the benefit of defaulting.

Therefore, creditors will be keen to lend to countries that provide guarantees that such vicious cycle will not happen. This can be arranged by rules that, for example, limit the stock of sovereign debt, force policymakers to run fiscal surplus, and restrict money issue. By doing so, indebted countries would guarantee commitment to debt contracts and, thus, lower the risk of default. The gold standard worked in such a way from the mid Nineteenth Century to the First World War, and because of that it has been considered a "seal of approval".[3] To sum up, the tripod approach proposes that creditors are more willing to grant loans to government whose policymaking is bounded by institutions that guarantee: (1) commitment to debt contracts; (2) responsible borrowing; (3) orthodox monetary and fiscal policymaking.[4]

3 – From debt mismanaging to the 1888 loan: an overview on Mexican debt record

As everywhere in Latin America, Mexico granted loans in London after declaring independency. The country borrowed £6.4 millions in two operations carried on in 1824 and 1825.[5] However, Mexico's incipient tax system depended on customs, which were stroke by the world trade crisis in the mid-1820's. As no further loan was granted the country could not service its debt, which was defaulted in 1828, just as everywhere else in Latin America except Brazil.[6] Collective punishment prevented Mexico from borrowing abroad from then on, and the government had to face expensive domestic borrowing - from 30% to 200% per year – in order to finance its recurrent fiscal deficits. Those internal loans were granted by the few commercial houses operating in Mexico, which progressively gained control over customs collection as guarantees of debt payment.[7] Mexico tried persistently to convert the 1820's defaulted bonds from early 1830's to late 1850's. However, the country's precarious fiscal results, depressed by the expensive domestic borrowing, the war against the USA in the 1840's and the intermittent civil war between liberals and conservatives, caused a long series of defaults. A moratorium was declared in 1861 by the liberal Juaréz, which was followed by a foreign invasion that established the Mexican Empire under the rule of Maximilian.[8]

Maximilian's government converted the foreign debt in 1864, and borrowed £ 27.5 millions in London to pay services in arrears. However, rebels lead by Juárez defeated the Empiror and once more

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[3] Bordo and Rockoff, 1996.
[4] The tripod approach is present in the following papers: Bulow and Rogoff, 1989; Eaton, Gersovitz and Stiglitz, 1986; Eaton and Gersovitz, 1981; Taylor, 2003; Sachs, 1983; and Calvo, 2000.
[5] *Annual Report of the Council of the Corporation of Foreign Bondholders,* 1901-1902, p. 234.
[6] Liehr,1998*, pp. 35, 36.*
[7] Ludlow and Marichal, 2004, p. 190.
[8] Bazant, 1981, pp. 51-66.

declared moratorium in 1867.[9] The new liberal government, under the presidencies of Juárez and Tejada, launched a fiscal reform, which improved the tax system and raise tariffs. However, fiscal revenue still depended on customs, whose collection was depressed by that decade's world trade slowdown.[10] On the expenditure side, the new government was subsidising railways. Actually, subsidisation increased after Porfírio Díaz gained power in 1976.[11] Under poor fiscal results, such policy was financed with still very expensive domestic debt.[12]

The question then is why have the government subsidised railway companies? First of all, there was not enough domestic capital to invest in the sector, and foreign capital would only invest with government financial support.[13] Second, Mexico is a mountain country with almost no navigable river, so that the development of railways was necessary to improve transports from the countryside to the shore.[14] Railways were necessary to increase trade, which could improve tax revenue to levels at which the government would be able to service old defaulted debts, break the collective punishment down and once again borrow abroad at cheaper rates. Therefore, the government had to finance railways in the expensive domestic financial market in order to run sound fiscal policy and perform responsible foreign borrowing in the future, although subsidisation had a quite negative impact on public finance. This odd situation has been characterized by Maurer and Gomber (2004) as a "fiscal Catch-22", in which "the federal government found itself."[15] The 1880's domestic debt boom was enabled by the merger of the two public lenders, the Banco Mercantil and the Banco Nacional, into the Banco Nacional de México (BANEMEX) during the 1884 crisis. The new bank was owned by domestic and overseas investors. BANEMEX was quite close to the Mexican government: it not only became the country's main public lender, it also held monopoly on governmental banking transactions and granted loans to railways companies with state's guarantees.[16]

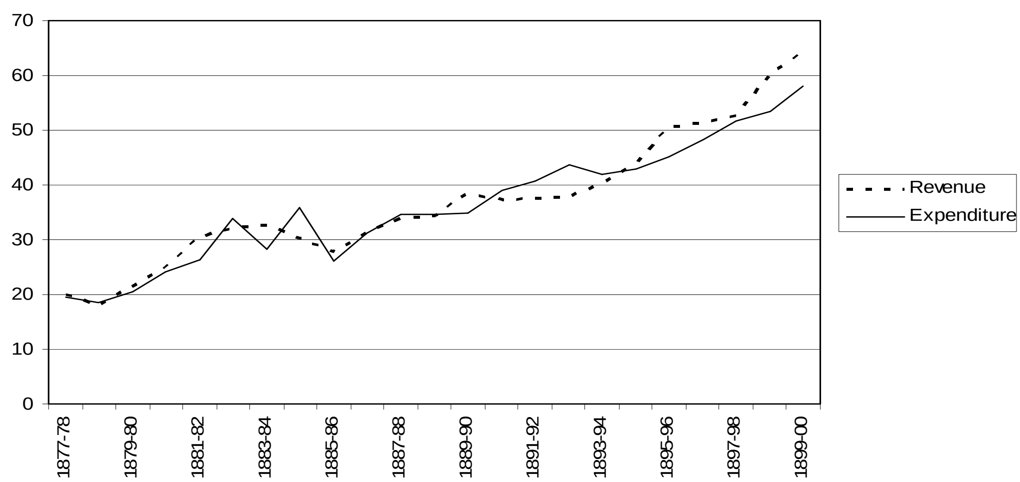
The conjunction of heavy subsidisation, expensive domestic borrowing and a crop failure caused a fiscal crisis in 1884-85, when revenue was 15.9% lower than expenditure. As a response, an emergency plan increased tariffs, decreased expenditure, suspended railway subsidisation for one year, and forcibly converted the domestic debt at better conditions.[17] Although the plain succeeded in increasing tax revenue in 12.6% between 1884-85 and 1887-88, expenditure remained constant and no persistent fiscal surplus was produced. As a result, only in two fiscal years (1881-82 and 1883-84) out

[9] Ibid, pp. 86, 87.
[10] Meyer and Sherman (1995), pp. 408-412.
[11] By 1884, railway subsidies had summed up to 33.5 millions pesos, the equivalent to 22.4% of the country tax collection. See Riguzzi, 1995, *p*. 533.
[12] Marichal 1998, pp. 195-196.
[13] Riguzzi, 1995, p. 520.
[14] Ibid, p. 1199.
[15] Maurer and Gomberg, 2004, p. 1091.
[16] Mauer, 1999, pp. 347-349.
[17] Ludlow and Marichal, 2004, p. 196.

of the eleven between 1877-78 and 1887-88 considerable fiscal surpluses were reached, which can be seen in Chart 1 bellow.

Meanwhile, the government was struggling to arrange some deal with the bondholders of the old defaulted debt, most of who were in London. This was done in the 1885 Dubán Conversion reached a final deal, when Mexico recognized a £15.4 millions debt. The conversion seems to be an important institutional change to the 1888-1893 loans as an arrangement on old bonds was necessary to launch any lending to Mexico. However, it is not clear how much it re-establish the good reputation of Mexico in the City because of two reasons. First, the Mexican government agreed to pay services on less than half of the bond's face value - which *per se* could be considered a default – while the agreed interest rates were ratter generous to the debtor: 1% in 1886, 1.5% in 1887, 2% in 1888, 2.5% in 1889 and 3% from 1890 on.[18] Second, the Mexican Congress approved the conversion by a very tight majority. This and the veto imposed by the same Congress in 1883 are evidences that a great deal of Mexican politicians opposed the recognition of foreign claims on the national debt.[19] Although Diaz's rule was not democratic, the lack of commitment on debt contracts by those politicians was a threat to the good reputation the country was attempting to establish in the world financial market.

Chart 1
Mexico: Federal Government Revenue and Expenditure (1877 - 1900)
(pesos)



Source: Estadísticas económicas del Porfiriato (1960). pp. 199. 201.

While fiscal results were bad and domestic borrowing was explosive, Mexico's policymaking was clearly not consistent with the tripod approach, which does not seem to explain how the country

[18] Bazant, J. (1981). *Historia de la deuda exterior de México (1823-1946).* Mexico, pp. 119-121.
[19] Ludlow, L. and Marichal, C. (2004). *La deuda pública en México en el siglo XIX: el tránsito hacia la modernidad*. p. 193.

could have borrowed abroad in 1888. One will have the same impression out of contemporary British publications. In 1883 the Investor's Manual published that:

"The Mexican Government was known to have committed themselves very heavily in the direction of railway subsidies, and by hypothecating Customs receipts toward meeting those subsidies, had cripple revenue a good deal."[20]

Mexico's fiscal problems were also subject of The Economist, which published in 1887 that:

"The recent growth in the expenditure has been (…) partly due to the resumption of payment of interest on the public debt, and also payment of railway subsidies."[21]

In that year, the same magazine drew a gloomy perspective on Mexico's financial position:

"The Mexican government is still a long way from being able to balance its income and expenditure (as) estimates for the present year will no doubt be considerably exceeded by the actual expenditure."[22]

The article then concludes that:

"In any case there will be a heavy deficit (and) the Government should (…) reduce its expenditures, for otherwise it is difficult to see what possibility there is of making both ends (expenditure and revenue) to meet."[23]

Mexico's fiscal results were quite bad in the most of the 1880's. Besides that – and perhaps more important – Europeans were aware of such messy situation, which turns the 1888 loan, the first after more than sixty years, into an apparent enigma if the tripod approach is considered.

However, the external approach may be able to explain some of it. First of all, the railway boom improved transportation, with positive consequences to exporting results. This was especially true in the second half of the 1890's, but exports were already increasing in the 1880's, as shown in the Chart 2 bellow. Besides that, the 1980's was a period of expansion in the world financial market, when European investors and creditors were keen to invest and lend resources to countries like Mexico, which resulted in a world financial bubble that collapsed with the 1890's Baring Crisis. [24] Therefore, Mexico exports were increasing in late 1880's, when the world financial market was lending extensively. This indicates that the external approach seems to explain why Mexico was able to return to the world financial market and, after several decades, borrow abroad in 1888.

[20] Investor's Monthly Manual, 1883, p. 247.
[21] The Economist (12/02/1887), vol. 45, n. 12, p. 208.
[22] Ibiden.
[23] Ibiden.
[24] Marichal, 1989, pp. 6, 7.

CHART 2
Mexico: Imports and Export
(US$ millions)

Source: Estadísticas Históricas de México, 1994, p. 679.

3 – The 1888-1893 loans, the tripod and external approaches, and creditors-borrowers relations

Mexico contracted, for the first time since the 1860's, a foreign loan in 1888. The operation included £10.5 millions, which was lent by Bleichroeder Bank, from Germany, and Antony Gibbs & Sons, from England, at 6% interest and 35.25 years of maturity. The bonds were sold in London and Berlin at 70% face value, so that the Mexican government received £8.37 millions.[25] The 1888 loan condition was far better than the ones offered domestically, whose interests were several times higher and maturity was usually limited to six months. Such improvement suggests a shift to more responsible borrowing, from domestic to foreign debt. Actually, it seems clear that the latter substituted the former: after peaking in 1887-88 with 129.9 millions pesos, domestic borrowing decreased to 63.7 millions pesos and 49.4 millions pesos in the two following fiscal years, respectively.[26] In fact, 24% of the 1888 loan was used in the amortization of domestic debt. However, if one considers that the service of responsible borrowing should be paid with tax collection rather than further borrowing, the debts consolidated in 1885 and the 1888 loans cannot be characterized as such. First of all, 69% of the latter were used to finance the purchase of the old default debt.[27] Therefore, Mexico bought old debt with money that hag been lent at more expensive rates. Second, Mexico was running a considerably fiscal deficit in 1888.[28]

[25] Zabludovsky, 1998, p. 155.
[26] Maurer and Gomberg, 2004, *p*. 1092.
[27] See p. 11.
[28] See Table 1.

Therefore, the loans' service depended on future lending, unless a significant change happened in the country's fiscal results. No matter how much the Mexican government was willing to establish good record, as long it was not running persistent fiscal surplus it could not perform responsible borrowing and, thus, formulate policies consistent with the tripod.

Although not so quantitatively expressive, it is relevant that 2% of the 1888 loan was used to amortize the debt of the Ferrocarril Interoceánico de Tuhuantepec, the only national railway in Mexico. Its construction had been financed by BANEMEX with guarantees from the government,[29] but it was on the edge of stoping because of lack of funds in 1888.[30] This is important as the 1888 lender Bleichroeder was one of the owners of the above Mexican bank. As the loan helped Tuhuantepec to be in business and supported the government finance, it increased the chances BANEMEX had to receive services from the domestic public debt and, thus, indirectly benefited Bleichroeder. In a similar way, two of the Antony Gibbs' owners, Henry Huck Gibbs and James Charles Hagne, held shares of the Mexican Railway,[31] the main British railway company in Mexico that had been financed by the BANEMEX since 1884.[32] Therefore, the loan Belichroeder and Antony Gibbs granted in 1888 was of their interest as it indirectly supported their business in Mexico.

More resources were acquires to support the Tuhuantepec in 1889, when a loan was contracted from the British house Messrs Seligman and the Dresdner Bank, from Germany. The Tuhuantepec Loan, as it was called, involved £ 2.7 millions at 5% interest rate and 50 years of maturity. The company's assets were the operation's guarantee, but the government committed to cover any eventual lack of service payment. The bonds were sold at 77.5% in London.[33]

In 1890 the government contracted another loan of £6 millions, again from Belichroeder, at 6% interest and 46.25 years of amortization. The bonds were issued in Berlin and London, under the operation of Antony Gibbs & Sons in the latter market,[34] at 88.75% of face value. The operation was guaranteed with 14% of Mexico's customs collection.[35] 80% of this loan was used to finance subsides to railways companies, while 13.6% covered debts of the BANEMEX.[36] Just like in 1888, the 1890 loan benefited Belichroeder's BENEMEX and Antony Gibbs's Mexican National Railway.

[29] Mauer, 1999, p. 347.
[30] Calderón, 1965, *p*. 557-556.
[31] Henry Hucks Gibbs was the son of Antony Gibbs, the founder of the company that carried his name, while James Charles Hagne was nephew of John Hayne, another son of Antony Gibbs. Gibbs (1922). The name of both H. H. Gibbs and J. C. Hagne appear as shareholders of the Mexican Railway in a meeting report of the company. Railway News, 19/05/1894, vol. 64, p. 748.
[32] Mauer, 1999, p. 347.
[33] Zabludovsky, 1998, pp. 159-160.
[34] Burdett, 1888, p. 204.
[35] Annual Report of the Council of the Corporation of Foreign Bondholders, 1901-1902, pp. 240-241.
[36] Zabludovsky, 1998, pp. 161-162.

The higher face value in the 1890 operation indicates that the world credibility on Mexico was improving. This may be explained by the 1889-90 fiscal surplus, just as the tripod would predict,[37] and by the fact that the country had not failed in honouring her foreign obligations. Such good period did not pass unnoticed in Europe, where the Council of the Corporation of Foreign Bondholders published in 1889 that:

"The sound fiscal policy inaugurated by the president of Mexico has been continued during the past year (…) and the result is shown in the improvement of the Revenues, the enhancement of public credit, and the introduction of foreign capital."[38]

This was to change dramatically in the following years, when Mexico went through a severe fiscal crisis caused by crop failures and the collapse of silver prices. Silver has always been important to Mexico, as it was the country's main exporting commodity[39] and the base of its monetary system, and therefore deserves some attention.[40] The world silver market had been under pressure of over-supply for a long period before the 1890's. European countries such as Germany, France and Italy switched from bimetallic monetary patterns to the gold standard, while India was slowly doing the same, and therefore importing less silver.[41] On the supply side, the world production increased at high rates in the last quartile of the 19th century.[42] As a result, the metal's price had been smoothly falling since the 1870's. Nevertheless, the silver market collapsed in 1890, when the USA Federal Treasure abandoned the policy of silver purchasing.[43] As a consequence, the metal's price in New York dropped 63% between the fiscal years of 1890-91 and 1894-95.

The silver collapse, together with the early 1890's crop failure, compromised the inflow of foreign exchange through exports, whose rate of growth decreased after 1890 and reached -23% in 1893-94.[44] Lower exports implied lower inflow of external exchange, which reduced the country's capacity to import. Other two factors contributed to decreased imports as well, the first of which was the depreciation of the peso, which was pegged to the silver and thus lost value before currencies on gold at the same pace the white metal's price slumped. The combination of low silver price with monetary orthodoxy and relative low component of imports in key sectors such as agriculture depreciated the real

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37 See Chart 1.
38 17th Annual report of the Council of the Corporation of Foreign Bondholders, 1889, p. 105.
39 According to Catão, the share of silver in Mexico's exports was 72.6% in 1877-1880, 68.2% in 1880-1889 and 55.0% in 1890-1899. See Catão, 1992, p. 21.
40 Casasus, 1896, p. 7.
41 Oppers, 1996, pp. 143-162.
42 Gaytán, 1944, p. 36.
43 Friedman and Schwartz, 1963, pp. 132-133.
44 See Data Annex, Table 3.

exchange rate, and therefore turned imports less competitive.[45] Finally, the government increased tariffs in order to compensate the negative impact of depressed imports on customs, which contributed to decrease imports even more.[46]

The fall in imports decreased revenue from tariffs in 29.6% between the fiscal year of highest silver price, 1889-90, and the worst of the crisis, in 1893-94.[47] This was quite serious, as over half of tax collection came from customs.[48] The result in the total federal revenue would have been very severe had an emergency fiscal reform not increased tariffs on imports - as mentioned above - and taxes on domestic activity.[49] The government taxed heavier an economy that was going through real exchange depreciation and whose exporting sector was responding accordingly. Although figures in dollar expressed in Chart 2 show a gloomy picture on exports, when counted in pesos, exports increased during the whole period at quite fast rate: on average 11.0% per year from 1892-93 to 1899-1900.[50] That is, the country's exporting sector was booming in national currency, which had impact in the whole economy.[51] This should explain the growth of non-customs tax revenue, which was large enough to compensated the 29.6% decrease in tariff collection on imports, from 1889-90 to 1893-94.[52] To sum up, fiscal reform and economic growth compensated depressed imports, and fiscal revenue remained constant in the period.[53]

Nevertheless, the silver slump had strong impacts on the relation between government's revenue and services on the foreign debt. As the former was paid in British pounds – pegged to gold – and the latter was earned in Mexican peso – pegged to silver – the burden of foreign debt on government's accounts increased significantly. To use some figures presented in Zabludowsky (1992), the ratio between debt services and public expenditure increased from 21.9% in 1891-93 to 27.3% in 1892-93.[54] The silver standard, an orthodox institution that had been regulating Mexican monetary policy since colonial times, worsened the country's fiscal position once an external shock – the silver crisis – depreciated the peso. This partially explains the increase in government's expenditure way over revenue, and thus the great fiscal deficit between 1891-92 and 1893-94.

In order to ensure the payment of such obligations, two short-term loans were granted. The first, of £600,000, was lent by Seligman Brothers in 1892, while the second was a £267,5000 loan from

[45] According to Zabludowsky (1992, p. 300-301), real exchange rate devaluated 3.34% per year from 1890 to 1901. This is impressive as most of the devaluation happened in yearly 1890's.
[46] Márquez, 1998, p. 407.
[47] *Estadísticas económicas del Porfiriato*, 1960, pp. 199-201.
[48] Ibid. pp. 199-201.
[49] Carmagnani, 1994, p. 85.
[50] Unfortunately, data is missing for the fiscal years 1890-91 and 1892-92. See Peñafiel, 1901, p. 172.
[51] This point is stressed in much of the literature. It appears, for instance, in Rosenzweig, 1992, p. 64; Márquez, 1988, p. 438; and Zabludowsky, 1992.
[52] Estadísticas Económicas del Porfiriato, 1960, pp. 199, 201.
[53] See Chart 1.
[54] Zabludovsky, 1998, pp. 163-64

Dresdner Bank in mid 1893. The terms of the operations were shorter and the interest rate was 7%, which is unsurprisingly higher than the usual 6% as the country's fiscal position was poorer.[55] The last loan this paper assesses was also granted in 1893, once more by Bleichroeder. It summed up £3 millions that has been lent at 6% interests and 48.25 years of maturity. The operation was divided in two parts, the first of which included £1.65 millions, whose bonds were issued at 60%, while in the second part £1.35 millions were lent in four monthly options that took place in 1894. From the amount the government received, 33.3% financed the obligations from the 1892 and 1893 short-term loans, 25.6% covered the services of the 1888-1890 loans, 10.5% was used to service the Tehuantepec loan, and BENEMEX received 9.5% as services of the domestic debt.[56] In middle of a strong fiscal crisis, Mexico borrowed abroad to cover obligations on the public debt. The country had never been so far from formulating policies consistent with the tripod since the collective punishment was over in 1888.

Summing up all figures together, Mexico's government used 28.3% of the 1888-1893 loans to subsidise railway companies and 62.8% to service public debt, both domestic and foreign.[57] In a more detailed perspective considering timing, Mexico borrowed abroad 1888-89 while running fiscal deficit in order to pay debt that had been contracted in the 1880's. The 1889-90 loans were granted when fiscal result were positive, but the country could not served it with tax revenue in the following four years because of the fiscal crisis. As a consequence, Mexico had to borrow abroad in 1892 and 1893 in order not to default. That is, Mexico borrowed abroad while running fiscal deficit in order to cover obligations on previous debt, and therefore was not consistently performing responsible borrowing. Just like in the 1880's, Mexico failed to persistently implement policies consistent with the tripod in early 1890's, and therefore such approach seems incapable of explaining why the 1888-1893 loans were granted. On the other hand, the world financial system was depressed after the 1890 Baring Crisis, and Mexico's export results were compromised by the fall of silver prices. The first half of the 1890's was a time of though liquidity constrain, and therefore the external approach does not explain how loans were granted then. If not the tripod nor the external approaches, the question now is what can explain Mexico's 1890-1893 loans?

The fact that Mexico borrowed abroad to support the railway sector may be relevant, for the City's interest in the latter increased reasonably in the period: the number of Mexican companies owned by British investor increased from three, in 1885, to nine, in 1895.[58] Not only large railway companies as Mexican National, Interoceanic, Mexican Southern and Mexican Railway were British, the Tehuantepec had been financed by the BANEMEX, which was owned by, among others, Glyn Mills

[55] Ibiden, pp. 163-164.
[56] Ibiden, pp. 165-168.
[57] *Annual report of the Council of the Corporation of Foreign Bondholders.* 1901-1902, pp. 240-241.
[58] Stone, 1987, p. 17A. See also D'olwer, 1965, p. 1066.

and Baring Bros.[59] Just as European financial houses that had invested in Mexican railways pressured the Council of Mexican Bondholders to convert the country's debt in early 1880's, the same group was benefited from Mexico's external borrowing. In the same way, it has been already regarded that Antony Gibbs and Bleichroeder benefited from their lending to Mexico as their resources were used to support BANEMEX and the Mexican Railway, in which the they had participation. Finally, Bleichroeder Bank, Dresdner Bank and Seligman Brothers lent to Mexico both in the period of good fiscal results – 1888-89 and 1889-90 – and in the bad times of fiscal crisis – 1891-92 and 1892-93.

Perhaps creditors expected that the sound fiscal policy of 1888-90 would last, in which case the future funds for the payment of services would have been guaranteed by fiscal surplus. When a fiscal crisis hit the country from 1890-91 to 1893-94, lenders faced two choices: allowing a default by not granting further loans, or lending more money and preventing the bonds they held from being defaulted. The second choice seems more reasonable the more creditors believed that: (i) Mexico was committed to meet its obligations; (ii) the economy was responding well to the exchange depreciation; (iii) Mexico's fiscal institutions had improved; (iv) the silver crisis was close to an end. Item (i) appears to be supported by evidences, as Mexican met all foreign obligations after the 1885 conversion. More importantly, the British financial community recognised the change in Mexico's attitude towards its debt. Such improvement in credibility appears in a report the Council of the Corporation of Foreign Bondholders published in 1888, which states that:

"The wise financial policy in Mexico (was) dealing in a spirit of equity with all just claims brought under their notice on behalf of bondholders (so that) the Government have materially contributed to raise the public credit of the country."[60]

The improvement in Mexico's credibility and its relation to the external loans also appeared in The Economist, which published in 1890 that: "A great deal of the credit which Mexico now enjoys may be attribute to the strenuous efforts she is making to meet her heavy obligations."[61]

In relation to point (ii), it may be argued that the main channel of contact between European investors and the Mexico economy was the railway companies, which constituted the sector with more foreign companies, mostly from Britain and the USA.[62] The sector's situation was ambiguous. In one side, exchange devaluation had a negative impact on the finance of the sector's companies, as their revenue was in peso and the price of the capital goods they imported and, mostly importantly, services and dividends they remitted were in gold. This was acknowledged in Europe. For example, The

[59] Powell, 1921, pp. 4, 5
[60] 16th Annual Report of The Council of the Corporation of Foreign Bondholders, 1888, p. 113.
[61] The Economist, 08/02/1890, vol. 49, n. 8, p. 172.
[62] Riguzzi, 1995, p. 159.

Investor's Review pointed out in 1893 that "bonded indebtedness of the Mexican Central and Mexican National Railway alone is greater than the total foreign debt of the Republic (of Mexico)."[63]

On the other side, Rigguzzi points out that, between 1893 and 1901, the total revenue in Mexico's railway sector increased 65% in silver but only 35% in gold. As a result, no company could pay dividends regularly in the period.[64] That is, railway companies were doing well in Mexican currency, and therefore their financial position in gold – necessary to service their debt and pay dividends - would improve if silver prices stopped decreasing. This positive impact can also be regarded in European contemporary publications. For example, an 1895 issue of the Railway News published a report of the Mexican National Railway in which profits of 125,168 pesos is presented for 1894, in opposition to the 33,568 pesos in 1893.[65] The report then says that:

"*As satisfactory as may be the result of the year's work from an operating point of view, the gains we have made(…) do not quite offset the increase in drain upon our income through the further fall in silver. The loss on the purchase of gold needed to meet our gold obligations accruing this year (1894) (…) amounts to $708,119."*[66]

Good results in pesos also appear in an 1892 issue of the Herapath's Railway (and Commercial) Journal, which reported that the Mexican Southern Railway's "Board were able to congratulate the Shareholders on the still growing traffic receipts."[67] In the following year The Railway News published a report on the Mexican Railway that explains quite well the situation:

"The business of the road during the half-year had not been so profitable as could have been desired, and the loss by exchange on remittances to this country had, owing to the depreciation of silver, has been very heavy. (…) the fall in the price of silver is not an unmixed evil to that country. The cheapness of the white metal has the effect of encouraging native industry and enterprise, and thus adding to the wealth and strengthening the national credit."[68]

A more general and positive perspective on Mexican economy under silver devaluation was expressed in an 1893 issue of The Investor's Review, in which the British Consul in Mexico, Mr. Lionel Carden, stated that:

"A low price of silver (…) would not only be prejudicial to Mexico as a whole, but would conduce to its ultimate benefit by the stimulus it would afford to the development of its immense agricultural resources. (…). A rise in the exchange is a clear gain to the farmer; (…) the value of his crop in

[63] Wilson, 1893, p. 627.
[64] Riguzzi, 1995, p. 168.
[65] The Railway News, 06/04/1895, vol. 65, p. 543.
[66] Ibiden.
[67] Herapath's Railway (and Commercial) Journal, 30/07/1892, vol. 54, p. 840.
[68] The Railway News, 11/11/1893, vol. 63, p. 683.

Mexican dollars being determined by the prices ruling in foreign markets, in gold, I increased in exact proportion to the rise"[69]

Mr. Carden then presented some figures whose sources are rather unclear but show the diplomat's strong confidence in the good impact of Mexico's agriculture boom in the country's fiscal policy:

"An increase in the premium on gold from 30 per cent to 50 per cent produces, all other things equal, a loss of 10 per cent in Customs duties to the Government, and this loss would be compensated by an increase of 11 per cent in purchasing power of the country."[70]

It is not only clear that the peso depreciation had some positive effects in the Mexican economy; it is mostly important that contemporary observers in Europe were aware of that fact.

Point (iii) is on credibility on Mexico's fiscal capacity, which was improved by the 1893-1893 fiscal reform. Evidence on such issue appeared in a 1893 issue of The Economist, which expressed expectation on deficit reduction, as "the revenue of the coming years (was to) be swollen to the extent of $3,8000,000 by the proceeds of newly decreed taxes." The magazine then declared that "it is well, therefore, that Mr Romero (ministry of finance) is pursuing a policy of restrenchment."[71]

If revenue was expected to increase, expenditure with railways companies was expected to decrease. This was reported by The Railway News, which says that the

"Mexican government, who had represented the difficulties caused in the financial position of Mexico by the serious depreciation of silver, (…) had asked that for three years from September 1 next the subsidy collection should be suspended"[72]

The above reports sound like a repercussion of a speech done by Díaz one year before in the Congress. The president asserted that the government was supposed to follow a policy of expenditure saving, beginning with the expenditure of resources whose revenue was foreseen in tax collection.[73] That is, the president was launching a policy designed to produce fiscal surplus, which was being acknowledged in Europe.

If the final point of the above hypothesis is concerned, evidences show that contemporaries expected that the silver crisis was to meet an end shortly, which would stop the depreciation of Mexican tax revenue in relation to foreign obligation. This appeared on a front page report in the Council of the Corporation of Foreign Bondholder:

[69] Wilson, 1893, p. 628.
[70] Ibiden, p. 626.
[71] The Economist, 07/01/1893, p. 11.
[72] The Railway News, 19/08/1893, p. 315.
[73] In the original, "hacer todas las economías compatibles con el servicio publico, empezando por no disponer de ciertas asignaciones que con el carácter de simples autorización de gastos figuran en el presupuesto de egresos." Quoted in Carmagnani, 1994, p. 85.

"While (…) the production of silver has diminished, and is certain to fall of still more, the production of gold has been increasing very materially, and these changes in production must ultimately affect the relative prices of the two metals. It is not at all improbable, therefore, that before long we may see the fall in silver arrested, and there are even those who believe that it has already proceed further than is justifiable."[74]

To sum up, European creditors not only believed that Mexico's government did not intend to default and was taxing heavier a growing economy; they expected the country to be free from falling revenues in gold when silver prices stabilized. Based on that, it is reasonable to assume that the world financial community expected that Mexico would be soon paying services on its foreign debt with fiscal resources. If that is so, the choice of not lending money and, thus, allowing the country defaulting its debt during the bad years of 1892 and 1893 appears to be quite irrational, while the option of helping Mexico during the crisis and wait further remittance in the near future seem wiser. In perspective, one knows that such strategy was right as Mexico entered a long period of fiscal surplus after 1894,[75] which allowed the government to meet its foreign obligations without the need of further borrowing.

Going back to the tripod approach, it seems that lenders accepted irresponsible borrowing and unsound fiscal policy during the silver crisis because they believed the crisis was transitory. Once the latter was over, Mexico's government would be able to run fiscal surplus and perform responsible borrowing. The tripod per se does not explain the 1892 and 1893, but it perhaps could do so if an expectation factor was introduced in it. According to this new augmented tripod, lenders would be willing to grant loans to countries that run fiscal deficit and perform irresponsible borrowing as long as they expect that policymaking will become consistent with the tripod in the near future. This seems more likely to happen whenever external shocks compromise fiscal position of a borrowing country that enjoys reasonable credibility in the world financial system, and has well established relations with some specific creditors. This seems indeed to be the case of 1890's Mexico, whose initiatives of sound fiscal policy and commitment to contracts were known in the world financial community, and whose relation with the Bleichroeder bank was quite narrowed.

The tripod seems to be even less applicable if one considers that the Mexican economy would have grown less if the railway system had not increased. According to data presented by Calderón,[76] Mexico's railway system grew 33.8% from 1884 to 1887, and 35.8% between 1889 and 1893. Such growth was sustained by government subsidisation, which, under the tripod definition, was financed by irresponsible domestic borrowing in the first period, and irresponsible foreign borrowing in the second,

[74] Investor's Monthly Manual, 28/02/1894, vol. 19, p. 51.
[75] See Chart 1.
[76] Calderon, 1965, p. 568.

once that the government was running fiscal deficit in almost the whole period.[77] Had the government not acted in such a way, the railway system would have been smaller, and the country's ability to take advantage of the 1890's real exchange devaluation would have been reduced. If that was the case, lender's expectation on Mexico's future fiscal position would have been worse, and the 1892 and 1893 lending would have been less likely to happen. Therefore, the loans depended in current and past unsound fiscal policy and irresponsible borrowing, which supported the railway system and contributed to the improvement of the country's fiscal position once the silver crisis was over.

From that perspective, it seems appropriate to introduce a lag factor in the tripod, so that unsound fiscal policy and irresponsible borrowing may attract further lending as long as a government use borrowed resources to promote development, which increases tax collection in the near future. To sum up, while the 1889 and 1890 loans seems to be explained by the tripod, as fiscal results were good, the augmented tripod may explain the 1888, 1892 and 1893 operations, for evidences suggests that creditors had reasons to believe that those years' irresponsible borrowing was contributing for future sound fiscal policy which would guarantee service payment. However, creditor's decisions were somehow shaped by the ambient they were in, and therefore some new insights may be added to this hypothesis if the world financial market is regarded.

There seems to be no reason for these lending other than the conjunction of: (a) expectation of improvement in the country's fiscal position once the silver price was stabilized; (b) the simple fact that those institutions had lent to Mexico in the good times of 1888-1890, and would suffer with a default that was very likely to happen unless they granted new loans during the crisis. The applicability of the augmented tripod in the case studied is therefore supported by the analysis of the world financial market at the period.

4 – Conclusive remarks

Evidences suggest that the 1892 and 1893 loans were conditioned by the creditor's good expectations on Mexico's fiscal results and, mostly important, on the fact that they had already lent to the country. Therefore, path dependency seems to be important. This appears to be the case with the 1888 loan as well, as it was granted by creditors that had been doing business with Mexico since early 1880's and, because of that, indirectly benefited from the money they had lent. In any case, it is clear that the tripod does not explain the operations, as they were carried on while Mexico's fiscal policy was unsound. Finally, the 1889 and 1890 loans were granted when Mexico's fiscal results were improving, and

[77] See Chart 1.

therefore one may claim that the tripod does explain something. Nevertheless, it is reasonable to say that such operations were less likely to happen if the 1888 was not granted.

That is because the 1888-1893 borrowing would not have been possible without Mexico's commitment on foreign debt contracts, which represent a change from the decades of default and moratorium. Such institutional change became apparent with the 1885 debt conversion and, more importantly, with the punctual payment of debt service after 1888. It is important to note that the debt conversion was a formal institution, while service payment reflects informal institutional change on debt contracts. The distinction between formal and informal institutions seems to be crucial, as the latter can compromise the former.[78] In the case studied, the conversion would not mean much if Mexico kept defaulting its debt. Therefore, it seems reasonable to consider Mexico's credibility in the world financial market has only been established when converted debt started to be consistently paid.

Nevertheless, the service payment of Mexico's converted debts started in 1888 and was financed by that year's loans, whilst Mexico began to service the new foreign debt in 1893, also with resources borrowed abroad. The country would not have been able to service the debt if no loan was granted, which leads to the following conclusion: the formal institutional change referred above – service payment - became clear to the world financial community because the 1888 lenders supported Mexico financially. This suggests that Bleichroeder Bank and Antony Gibbs believed in the informal institutional change, or perhaps they were interested in believing so, as their business in Mexico (BENEMEX and Mexican Railway Company, respectively) benefited from the loan they granted and all the borrowing the country performed afterwards. By doing so, Bleichroeder and Antony Gibbs opened the way to the 1889 and 1890 loans, which therefore also depended on a path dependency factor conditioned by the business interests some European lenders had in Mexico.

To sum up, the tripod approach seems to explain the 1889 and 1890 loans, while the external approach appears to explain the operations performed from 1888 to 1889. Besides that, evidences suggests that the augmented tripod version proposed in this paper explain the 1888, 1892 and 1893 borrowing, as creditors had interest in financially support Mexico in order to secure sound fiscal policy in the future. Finally, the 1888 operation was crucial, as it allowed Mexico to pay services on its foreign debt and, therefore, established the country's credibility in European financial markets. Path dependency was then highly important, as creditors lent money to Mexico because some of them had been already making business there. This papers concludes that besides elements from the external and the tripod approaches, the path dependent relation between lenders and borrowers played a crucial role on creditor's decision-making

[78] North, 1990, p. 61.

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