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War, Taxes and Gold: The Inheritance of the Real

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WAR, TAXES AND GOLD:
THE INHERITANCE OF THE REAL*

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* Forthcoming in “The legacy of Western European Fiscal and Monetary Institutions for the New World: XVII-XIX century”, edited by Michael Bordo and Roberto Cortes-Conde, Cambridge University Press. We wish to honor the memory of Professor Teixeira Ribeiro, of Coimbra University and the Lisbon Academy of Sciences. Born in 1908, he influenced generations of Portuguese economists in the field of public finance and monetary economics (the latter is stressed in Macedo, 1980). He died on March 8, 1997 when we were finalising the first draft, which became *Nova Economics Working Paper* no. 318 (henceforth MSS). We are grateful to Mike Bordo, Fernando Teixeira dos Santos, Nuno Valerio and Eugenia Mata for comments received at a luncheon in Lisbon on the eve of the 12th International Economic History Congress in August 1998, where a summary of the paper was circulated. In his first presentation at the Lisbon Academy of Sciences on 18 June, 1998, Macedo used the research available at the time, which he completed during a short stay at the NBER in late March, 2000. He is now president of the OECD Development Centre, but the views remain personal.
1. Introduction

1.1. Approach to the currency experience

War – and its implications on the expenditure side of the government budget – has always been associated with taxes. During most of the Portuguese monarchy, taxes included gold and other domain revenues coming from monopolies established on domestic and international trade. Together with silver and copper, gold was used as money, making its interaction with war and taxes central to the long-term pattern of economic growth and development.

The overview of Portuguese fiscal and monetary institutions from the XVII to the XIX centuries contained in this paper is subtitled “the inheritance of the real” (plural réis), after the name of the national currency from 1435 until 1911. To the extent that currency experience is imbedded in the overall evolution of fiscal and monetary systems, the legacy becomes a case-study in institutional persistence and adjustment. In fact the “war, taxes and gold” interaction implies a mix between fiscal, monetary and exchange rate policies.

Beginning in the XVI century, increasingly expensive warfare became a source of pressure for fiscal change. Times of war were also an auspicious context for the social legitimisation of direct and indirect taxation capable of supplementing or replacing domain revenues. This legitimisation linked taxation to private property rights in an almost “contractual” manner, via the traditional representation of nobility, clergy and towns in the Cortes. The custom that any new tax should be discussed there reinforced the financial freedom derived from the availability of a stable and convertible currency.

The inheritance of the real includes debates about the political and social legitimacy of taxes under changing military circumstances at home, in the overseas possessions and in the European balance of powers. Due to the neutrality of Portugal during the Second World War, the link between war and taxes hardly involved the escudo (=1000 réis) but the growing level and the changing composition of public expenditures brought back the need for national legitimisation of taxes.

Having stated the approach, this introduction proceeds with the outline of the paper, provides a quantitative overview of the period 1555-1910 (section 1.2) and explains the role of the Cortes in fiscal and monetary developments since the XIV century (section 1.3). Section 2.1 emphasises the role of domain revenues. Section 3.3 uses the structure of state revenue to reveal how the entrepreneurial domain state undermined the

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1 There should be no confusion with the name of the Brazilian currency since 1994, even though Portugal and Brazil were politically united during most of the period, and the Portuguese monarchy subsided only two decades after the Brazilian one.

2 Standard open economy macroeconomic models of the exchange rate and of the balance of payments have been used in case studies of the performance of the classical gold standard in core countries in a volume edited by Bordo and Schwartz (1984). Bordo (1986) reviews their use in even more remote institutional environments.

3 Indeed, after the euro succeeded the escudo in 1999, the mix between fiscal, monetary and exchange rate policies re-acquired some of the features of the gold standard, and of our interpretation of the “war, taxes and gold” interaction. See Macedo (2000).
contractual basis of taxation, hindering reform and delaying economic development in the late XVIII century.

The three following sections correspond roughly to the XVII, XVIII and XIX centuries. Guiding the analysis in the different subsections are changes in the monetary or fiscal regime, largely a reflection of the pressure coming from foreign invasions, let alone successive wars or revolutions at home. In section 2, the pressure helps understand the build-up against the end of union with Spain and the fiscal and monetary effects of the restoration war, respectively the early introduction of an income tax in 1641 (section 2.2) and successive currency debasements until 1688 (section 2.3). Section 3 presents monetary and fiscal developments following the discoveries of gold in Brazil, beginning with a characterisation of the bimetallic monetary regime which preserved currency convertibility and stability until 1797 (section 3.1). The drop in tax revenues from foreign and colonial trade and the risks of further involvement in the Seven Years war led to a major reform of fiscal institutions in 1761 (section 3.2).

The impact of Napoleonic wars (1796-1808) on the tax system was most apparent in the efforts to overcome the tax immunities enjoyed by nobility and clergy. The tax debate achieved almost the same salience as it did in pre-Revolutionary France. But it did not bring about an efficient, equitable and simple tax system. Instead, mounting budget deficits resulted in the issuance of public internal debt. The transition to constitutional rule in 1820 was fraught with financial instability, including the first experience with inconvertibility followed by the transfer of the crown to Brazil and currency devaluation. After the Brazilian declaration of independence in 1822, social unrest continued and led to a civil war (section 4.1).

The redefinition of property rights and state functions is at the core of the political debates and actions attempting to build up a liberal state. Nevertheless, the establishment of representative institutions did not provide a new legitimacy for taxation. On the contrary, the liberal revolution was associated with the loss of social confidence and financial reputation, making the coexistence of political and financial freedom difficult, to the point that a major tax reform was introduced during civil war (sections 4.2 and 4.3).

Up to the 1850s, many financial schemes designed to raise government revenue were tried, including debt issue, tax reform, forced debt, forced donations from the mercantile community, property confiscation and privatisation of state property. Eventually, there was a peaceful change in economic regime, involving compromises that softened political conflicts and maintained political and financial freedom for forty years. Yet systematic resort to deferred taxation via external borrowing narrowed the domestic tax base and made the financing of public infrastructures unsustainable.

Domestic political instability returned and the Baring crisis of 1891 was sufficient to force Portugal off the gold standard, keeping the real and then the escudo inconvertible for the next hundred years (section 4.4). Section 5 concludes, stressing how forgetting the inheritance of the real may hurt Portugal’s prospects in the eurozone.
1.2. Overview of the evidence

The empirical evidence that we have been able to assemble to back up our approach remains scanty, especially before the end of the civil war in 1834. The summary, indicators reported in Table 1 should be interpreted accordingly. Except for population, all series were collected from a variety of sources. Output data suffers from a serious break in 1834. Price data links three different series in 1640, 1811 and 1867. No money data exists before 1688 and between 1798 and 1833.

Table 1 about here

A quantitative monetary story based on trends in the velocity of circulation of money (obtained by dividing nominal income by the money stock) can only be told during one half of our sample period. A downward trend can be attributed to increased monetisation, lower interest rates or a decline in hoarding. Trends in the real price of gold can also be identified from Table 1, but English prices are not available before 1750, preventing a more accurate estimate of the real exchange rate.

Real exchange rate appreciation tends to cause a deficit in the current account of the balance of payments, which in principle will lead to an outflow of gold and in time bring about real exchange rate depreciation – completing the cycle. Changes in the nominal exchange rate may accelerate the process of real exchange rate adjustment, if they do not generate the expectation of a continuously depreciating currency, which would wipe out the competitiveness gains through inflation.

This pattern of adjustment is seen over three century-long cycles of real appreciation and depreciation, 1555-1688, 1689-1834 and 1834-1910, with varying exchange rate regimes.

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* Annual data on prices in réis of gold, silver and goods for the full sample period 1435-1910 and European convergence and fiscal indicators from 1834 to 1910 are reported in Appendix Tables 4 and 5 of MSS.
* The series of population and gross domestic product assembled by Angus Maddison for the OECD Development Centre, updating Maddison (1995) and forthcoming in Maddison (2000) include estimates for 1500, 1600, 1700, 1820, 1870 and 1913. They were interpolated to coincide with the periods recorded in Table 1. After 1834, the annual growth rates of gdp reported in Macedo (1995) were used instead (the Maddison rates would be 1.1% for 1835-1854; 1.2% for 1855-1890 and 1.3% for 1891-1910).
* The price indices assembled by Nuno Valerio and reported in Valerio (1997) were replaced by the estimates in Sousa (1999) for the period 1640-1810 and in Esteves and Marques (1994) for 1867-1910. The Valerio rates would be 6.8% for 1641-1688, 2.6% for 1689-1759, the same for 1760-1797, 4% for 1798-1834, 5% for 1855-1890 and 4.5% for 1891-1910.
* The money stock figures assembled in Sousa (1991) for 1834-1890 were used instead of the ones reported in Neves (1994) for 1854-1910 but the average rate of growth for 1855-1890 is the same. There are, nevertheless, disturbing differences in series attributed to Jaime Reis in Neves (1994, p.249) and Mata and Valério (1994, p.277), especially with respect to coins after 1890. The estimates in Sousa (1999) for money stock growth in 1689-1797 were used, including 1378 contos in Castilian patacas in 1687 and then from 1702 and 1775 (without the deterioration factor of 1% assigned to domestic gold and silver coins). The required reconignment of foreign coins led the annual rate of money growth to fall by .5% during the first half of the XVIII century. The gold price series is from Sousa (1999) until 1854, the sterling exchange rate from Mata and Valério (1996) is used thereafter.
* Monetisation and financial development would make the income elasticity of money greater than one. Bordo and Schwartz (1984, p. 422) mention that in these cases money is like a "luxury good".
within each one of them. The upward trends in world prices during the first cycle dampens the rate of appreciation and magnifies the rate of depreciation relative to what can be calculated from Table 1. After the 1650s, the downward trend in world prices has the opposite effect until prices pick up in the late 1700s and become very volatile during the 1792-1813 period. Foreign deflation follows until the 1890s and inflation thereafter, magnifying again both relative price trends.

The nominal exchange rate remained fixed during most of the second cycle, with the resulting payments deficit being financed by outflows of gold. This allowed high private consumption growth and may justify the contention that “Portugal was one of the five richest countries in 1800”9. Comparing Portugal to the Western European average, there is a slow convergence during the XVI century, from 70% to 74%, and then the per capita income ratio falls to under 40% in 191310. This long divergence fits well with collective memories of “decadence” after the discoveries of the XVI century.

The unavailability of reliable national account data makes it difficult to establish the growth and development pattern for the XIX century. Even today, the monetary and fiscal overtones of “decadence” continue to be felt in collective memories. Still, with the distant horizon provided by Table 1, the alleged incompatibility between democracy and financial discipline disappears and the uneasy relationship between civil rights and financial freedom ceases to be grounded on the monetary history of Portugal.

Until further research leads to a satisfactory series of nominal income and the money stock, any assessment of the inheritance of the real will remain provisional. Nevertheless, the root of the political and social legitimacy of taxes, sometimes called “fiscal constitution” will continue to be part of this inheritance11. For most of the 200 year period between the Spanish and French invasions, the root was war. Table 2 shows the rising share of military expenditure, while the ratio of taxes to debt rises from 1588 to the 1760s.

Table 2 about here

Table 2 also shows the balance between revenues coming from domainial sources and other revenues having their origin in taxes, the relative weight of indirect versus direct

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9 Bairoch (1976), who added that “it was amongst the three or four poorest in 1913”. He concentrated divergence in the XIX century, even though, according to the data reported in Table 1, per capita income grew at an annual rate of only .1% in 1760-1797. The quote is in Macedo (1995), note 3, where other convergence data is presented for the three subperiods in Table 1: -2.71% in 1834-54; 1.115% in 1855-1890 and -0.15% in 1891-1910. See note 72 below.

10 The percentages were obtained using Maddison (2000)’s data. The ratio rises to 41% in 1950, 61% in 1973 and reaches the 1500 estimate of 70% in 1997. There is divergence even relative to the world per capita income from 1820 (127%) until 1913 (85%). Similar evidence is reported in Macedo (1999) with a different source.

11 This expression is used in the political economy literature to describe relations between the state and the population involving both taxes and transfers. It includes the institutions enforcing the social contract and thus incorporates various exchange rate regimes, monetary standards and state revenues: In particular, the existence of several redistributive revolutions during the XX century and the political instability observed during most of it did not change the fiscal constitution all that much. To the point that the resilience of public and private interest groups seeing transfers from the state and thereby holding on to the tax base still helped Macedo (1999) interpret Portugal’s European integration. The complementarity of political and financial freedom is stressed in Macedo (1996) and note 50 below.
taxes and the share of Lisbon\textsuperscript{12}. These features of the fiscal constitution will be illustrated below, together with the role of gold among domain revenues, rising in the 1700s, then falling and precipitating the financial crisis of the early 1800s.

1.3. The Cortes and the fiscal constitution

The threat of invasion from Spain obtained throughout the middle ages and explains a fiscal constitution where military expenditures had to be financed through innovative forms of taxation. It also helps to explain how the Cortes, a traditional form of representation of nobility, clergy and towns, acquired such an important say in fiscal and monetary affairs.

In 1435, after several debasements, in order to finance the wars against Castille, the libra (the first national currency, created in 1253) was replaced by the real. One gram of gold was then worth 35 réis, but successive devaluations brought the price to 107 réis in the early 1500s. On the side of taxation, the crucial date is 1387, when, for the same reason, the excise (sisa), previously a municipal tax, was transformed into an universal tax with a comprehensive base\textsuperscript{13}. The late medieval state attempted to seize and to tax new sources of wealth, mostly associated with the growing urban economy, in other European countries, such as Spain or France\textsuperscript{14}.

The creation of the sisa was approved by the Cortes and, to that extent, the tax had a «contractual» origin. Moreover, its general character, its incidence and collection methods were extensively discussed in the Cortes of the 1400s and beyond. The fact that Cortes approved the first general tax imprinted the fiscal constitution. Even though no written law existed on the fiscal relations between the Crown and the subjects, tradition and custom required that any new tax should be discussed in the Cortes\textsuperscript{15}.

In spite of the remarkable innovation in tax design represented by the sisa, tax administration proved difficult. To make the collection of the excise on movable goods easier, the crown and each municipal corporation agreed in 1525 by contract that a fixed sum (embraceamento) would be due. Municipal councils would be free to set tax parameters so as to raise the pre-defined amount (cabeção).

The only exception was the city of Lisbon, whose excise and real d'água were either directly collected by the crown or tax farmed. The local self-taxation did provide a resolution to conflicts between taxpayers and crown, but at the cost of a high degree of regional inequality in the distribution of the tax burden. In real estate transactions, municipalities requested a rate from non-residents higher than from residents. The tax began to be applied as a sort of toll on goods carried by outsiders into the towns, with negative effects upon internal trade and economic specialisation between different regions.

\textsuperscript{12} Years when available information included all sources of state revenues were selected. The data for 1716 are seemingly incomplete, as the décima tax is not mentioned. In addition, revenues collected in the State of India and in the Atlantic Empire were not considered, unless they were directed into mainland Portugal, as, for instance, the gold duties or the donativo tax. More details in MSS, especially notes 12 and 13.

\textsuperscript{13} On the sisa and on the pre-real (1 real = 35 libras) period, see MSS, note 2.

\textsuperscript{14} Omrod, 1995 presents evidence on this historical trend.

\textsuperscript{15} Cardim, 1998, discusses this tradition and its practice throughout the XVII century.
As a result of these attempts to primarily tax outsiders, inhabitants of a given municipality could be exempted from the payment of the excise on movable goods, since the cabeçao was raised from the tolls or from the excise. As happened in Spain after the encabezamiento general of the excise in 1536, the change in the method of taxation led revenue to stagnate. Furthermore, this transfer of tax responsibilities to municipalities reveals the incapacity of the crown to build up an infrastructure for tax administration across the territory. Concentrating tax collection in the city of Lisbon made it easier to administer.

Portugal was also present in international credit markets, although to a lesser degree than Spain, well before the XVII century. Seeking better access to northern European financial markets, where Genovese and German bankers were most active, the crown established the Feitoria da Flandres in 1508 and issued loans in Flanders through bills of exchange, payable in three months. Until the 1550s the increase in these credits implied the renewal of the bills and accumulated interest. The bills of exchange were instruments of transfer and credit. The cargo of the spice fleets, namely pepper, served as collateral.

Creditors accepted registered bonds, called padrão de juro real, paying a fixed rate of interest and carrying a variable price since the early 1500s. A public deed was necessary to sell these bonds, making them similar to real estate. In 1560, the crown consolidated and transformed royal debt in padrões de juro, with an interest of 5%, payable only in the kingdom. This measure hurt foreign creditors who did not have a local residence and explains why the interest rate charged on external debt rose to 12-16%, much higher than the one set for domestic instruments.\(^6\)

2. Spanish rule and the restoration war

2.1. Domain revenues

Seigneurial duties and other domain revenues are remnants of a time when it was thought that the sovereign was entitled to have enough land so as to be able to "live from his own means". They include any items which are part of the patrimony of the crown and can be directly exploited, rented or donated.\(^7\) Revenues from trade in pepper, slaves, pau brasil or gold from Mina, in Eastern Africa, must be considered as domain or patrimonial revenues too. They were a source of income for the crown, associated with a royal trade monopoly whose importance is far greater than the traditional domain revenues: for instance, in 1587, these monopolies account for at least 207 contos (=million réis or thousand escudos, a unit still in use) net of the slave trade and sugar from Madeira, while the traditional «domain income» (rents from land and houses or seigneurial duties) was responsible for 45 contos. Nevertheless, monopoly revenues fell from one third to one

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\(^6\) On the consequences of this measure, MSS note 5. On the definition of public debt, MSS note 6 and Appendix Table 1.

\(^7\) Domain revenues include rents from land and houses, seigneurial duties over farmers and some other personal rights, which, in the taxonomy of state revenues proposed by Manuel Severim de Faria in the early 1600s were labelled as próprios. They were mostly received in kind and in 1588 accounted for 6% of total revenue, reason why patrimonial revenues are sometimes claimed as "almost non-existent" in Hespahna, 1986, p. 214. Scandinavian countries also based an important part of their revenue in domain duties or incomes, from land, silver and copper. Prussia, through the acquisition of new territory, which was incorporated in the patrimony of the king, is another example too.
fourth of the total between 1588 and 1619, due to difficulties in the pepper trade and to the low cargoes of gold coming from Eastern Africa.

Indirect taxes were the other main source of state revenues. There were taxes on internal circulation, transactions and consumption, and also custom taxes, which were responsible for over two thirds of revenue in 1588 and three quarters in 1619. Relative shares were reversed between the two years: the excise declined from 40% to 36%, while customs increased from 27% to 39%. In Lisbon, the sales tax real d'água was collected in addition to the excise. Revenues increased to the point that, in 1588, Lisbon accounted for over half of the revenues coming from the excise and other indirect taxes. Most of the duties on foreign trade were also collected at the Lisbon's customs so that the rest of the country became less and less relevant to the treasury.

The financial importance of Lisbon throughout the XVII century is evident in another issue too. During the union with Spain, the municipality of Lisbon served as guarantor of the consolidated debt emissions, with the local taxes over transactions (real d'água and realete), serving as collateral. In 1630, 120 contos were raised through this system, proving the apparent creditworthiness of municipal finances. After the restoration of 1640 and until 1679, the crown kept using this method to finance public expenditures.

2.2. The income tax

The tax burden rose during the last decades of the union with Spain. The end of truce with the Netherlands in 1621 and the Spanish struggle in the international arena influenced Portuguese tax revenues in two ways: first, the Atlantic trade declined and with it revenues coming from customs and monopolies; second, the Spanish treasury needed a more substantial contribution from Portuguese taxpayers.

From 1621 to 1640, several administrative decisions were taken in order to raise taxes. Extraordinary levies (serviços) were imposed on the mercantile community of Lisbon and the municipalities of the kingdom; a new duty on salt was introduced in 1631; the encabeçamentos of the excise were increased in 1635; the real d'água was extended to all the regions in 1635; an income tax on officers and privileged people (meias-anatas) was introduced in 1631. Efforts were also made to require stamped paper (papel selado) on the appeals presented to the administration.

These attempts to increase taxes were responsible for the only tax revolts occurring before the constitutional regime. They eventually led to the overthrow of the Spanish rule and the foundation of a new dynasty (known as restoration) on December 1, 1640. One of the first measures taken by the new government was to repeal any tax increase decided during the union with Spain. Nevertheless, new taxes were needed to pay for the war against Spain and for the claims on overseas possessions brought out by the Dutch and

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18 Taxes on transactions and consumption in Lisbon rose between 1588 and 1619, but kept a share of 12% in both years, whereas the share of taxes collected across mainland Portugal dropped slightly. Unlike other indirect taxes, revenue from the excise declined from 1588 to 1619 (from 204 to 194 contos as shown in Appendix Table 1 in MSS).

19 Hespanha, 1993, p. 224-225 points out that selling padrões de juros continued to be a means to finance public expenditures.

20 References to the broad economic and social background in MSS, note 19.
the English. Selling *padrões de juro* or converting debts into these registered securities was another means to finance the independence effort\(^{21}\).

State revenues are not available for the early 1640s. However, the cost of an army with 20,000 men in infantry and 4,000 in cavalry is 65% higher than total revenue in 1619, when the financial situation was more favourable\(^{22}\). Access to financial resources was thus essential in order to pay for the military effort against Spain.

The creation of the first direct tax - the *décima* (tithe), in 1641 - should be seen in this light. As with the 1387 excise, a deliberation taken in the *Cortes* gave legitimacy to the tithe. The base is far broader than that of direct taxes collected in other European countries: rents from real estate (the preferred form of wealth accumulation at the time), labour income, earnings from professional activities, profits from commercial or industrial activities, and even interest income were taxable.

The second statute of the *décima* (1654) introduced, for the first time, the procedures for a land and house survey, in order to assess its taxable value, as well as the registry of the occupational status for all the people living in each parish. The only exception to the incidence of this tax was the real estate held by the Church or welfare institutions. Nevertheless, land and houses belonging to the members of the clergy as personal property were taxable\(^{23}\).

The revenue of 200 *contos* recorded for 1660 and 1681 suggests that the *decima* accounted for 20% of revenues received, about the same as the excise collected out of Lisbon. The *décima* then overtook the excise as a source of revenue to the crown and ranked right next to customs (366 *contos*). In addition, the excise and similar taxes collected in the city of Lisbon amounted to 144 *contos* in 1660, almost 75% of the revenue coming from the excise across mainland Portugal. Revenue from the excise collected through the *encabeçamentos* paid by the municipalities stagnated through the 1600s.

After the end of the restoration war, the *Cortes* of 1697 asked for the withdrawal or at least a reduction of the tax. Through a decree of 28 March, 1698 the crown chose the second alternative. The participation of Portugal in the war of the Spanish succession resulted in a decree of 26 May, 1704 raising the *décima* from 4.5% to 10%, this time without any consent of the *Cortes*\(^{24}\). Conversely, the end of the war and the period of prosperity opened up by gold mining and commercial dynamism brought the tax rate to its earlier level\(^{25}\). Only the Seven Years War, fifty years later, led to a new reform of the income tax (see 3.2. below).

\(^{21}\) Voluntary donations from the Church and from the mercantile community, together with individual contributions from leading Jewish merchants and financiers of Portuguese origin and living in Amsterdam helped the treasury as well.

\(^{22}\) According to Cardim, 1998, p. 101, the cost was almost 1700 *contos*.

\(^{23}\) Silva, 1988 and 1993 presents the characteristics of this tax, methods of taxation and interest to historical research. See also the references in Hespanha, 1993, 217-8.

\(^{24}\) This is why the period after 1697 has been called “absolutism”.

\(^{25}\) Decree of 25 November 1715 lowered the *décima* to 4.5% but revenues coming from this tax were not included in the 1716 list published by Santarém, see MSS Appendix Table 1.
2. 3. A hidden tax: the debasement of the currency

In the 1500s prices were rising but the currency was fairly stable. Until 1640, the *real* depreciated from 11 to 13 réis per gram (about 20%) in terms of silver and from 107 to 142 réis per gram (about 25%) in terms of gold. The absence of war threats and the discovery of precious metal in Africa and in America helped maintain stability. But there were several devaluations, two of which were in double digits: against gold in 1555 and against silver in 1573. The real price of gold decreased at an average annual rate of 5% from 1555 to 1640, as is also evident from Chart 1 (where the series are from MSS, the same as the ones used in Table 1 above).

Chart 1 about here

Records of the inflows of precious metal by the Lisbon mint suggest that on the eve of the restoration, silver was the predominant specie in domestic circulation. Foreign money was used and accepted in domestic circulation, particularly Castilian *dobróes* (from 1643 to 1646), and *patacas* and *meias patacas* coined in the Spanish mints.

The increase in expenditure financed by the treasury, mainly for the restoration war, was the justification for successive currency debasements. From 1641 to 1688, the nominal price of gold rose from 142 to 487 réis per gram (a price which was not going to be changed until 1822) and the price of silver from 16 to 31 réis per gram. These successive devaluations of the exchange rate had a fiscal objective, increasing revenue through seigniorage, in addition to stemming the outflow of domestic coins.

The resulting real devaluation rate from Table 1 comes to .8% p.a., offsetting in part the real appreciation of the previous period.

There are frequent references to the shortage of coins, especially silver, explicitly acknowledging the outflow of precious metals, both in coins, or as worked metal, to northern European countries. Portuguese coins, especially silver coins, had the best alloy and debasing the currency was supposed to prevent gold and silver from flowing out of Portugal. The different valuation of precious metals among the countries with which Portugal traded was considered to be the primary cause of the monetary outflows but, in the 1680s and 1690s, the trade balance deficit began to be mentioned as a factor in the drainage of precious metals.

3. The golden age

3.1. A bimetallic monetary regime

In 1693, gold was discovered in the Caiét area of Minas Gerais, Brazil. Part of the gold mined there was due to the crown, through the so-called *quinto*, which from 1735 to 1750

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26 This devaluation policy was discussed at the time by the Conselho da Fazenda (Treasury Council), created in 1591 to rationalise and centralise a more archaic system, following the experience of Spain, and which became responsible for monetary affairs with the decree of February 13, 1642. See Péres, 1939. The details of minting operations do not include the precise timing of devaluation and of price rises. If prices rise immediately after the devaluation, there is no revenue gain from debasement as pointed out by Bordo, 1986. Godinho (1978), presents revenue figures for 1681 where the Lisbon mint represents 2,4% of total revenues. However, it was a year with other monetary changes and the revenue comes only from the Lisbon mint and other Stamp Houses were in operation, so that no conclusion can be drawn.
was replaced by the capitulação. Taxes, revenues and services were paid in bullion, coin and even gold dust, in spite of legislative prohibitions registered in some periods, to the treasury of the Conselho Ultramarino (Overseas Council, created in 1642 to deal with Empire questions, except those connected with Africa).

Gold arrived not only in bullion or dust, but also in coins minted in Brazil, as it was the case of the Rio de Janeiro mint (since 1702) and Bafa mint (since 1714). As a result, a significant share of gold was coined in these mints. Its existence must be justified as a way for the state to control precious metal at the source, thus reducing fraud on the journey to Portugal. Table 3 presents the amounts of gold coined, the percentage of coinage accounted for by private persons (as opposed to the crown), the percentage of coins in gold (as opposed to silver and copper) and the percentage of gold coinage in the total arrivals of gold, mostly from Brazil.

Table 3 about here

The correlation coefficient between annual inflows and the amounts coined is quite low. The explanation lies in the great quantity of gold coins exported to Portugal, particularly after 1751. Between 1704 and 1789, gold coined in the Lisbon mint was only 61% of the coinage of the Rio mint, making the gold minted in Brazil decisive in Portuguese monetary circulation.

Looking at the entire period 1699-1788, gold minted in Lisbon was less than one third of the arrivals of Brazilian gold. The coinage ratio rises before 1720 and in the 1740s and 1750s, while arrivals peak in the 1730s and the 1740s. Of course, the activity of Rio and Bafa mints was not exclusively directed to Portugal, but also towards the internal circulation of the colony. The Lisbon mint also coined provincial silver and copper coins, namely for Brazil, adding another overseas monetary connection.

On the fiscal side, the tax revenues included not only seigniorage, but also an additional due equal to 10% when the coinage was provincial. Money was not evenly distributed across regions. Like any economy with strong export-oriented production, Brazil had more coin in circulation in the coastal regions that were directly dependent on international trade. In the mining region the circulation was in gold dust, the only local production, while in agricultural regions cattle served as a means to make transactions.

Because Brazil was running a trade deficit, coins minted there arrived in Portugal together with exports of bullion. When the Rio mint began operations, most of the gold coined coming into Portugal belonged to private individuals. After the 1720s, they resorted less and less to the Lisbon mint to have their gold coined. This in turn implied a rising share of coinage for the crown. Moreover, the creation of Brazilian mints provided the colony with monetary circulation which was not totally dependent on the Lisbon mint. There was accordingly less of a tendency to issue paper-money to carry out

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27 References in MSS, notes 30 and 57.
29 The intention to standardise the currency system throughout the Empire documented in "Papel sobre a moeda por Bernardo Vieira Ravasco" in Manuscritos Originais, Ajuda Library, 1687 never materialized however.
30 References in MSS, note 36.
commercial operations with Brazil and within it than was the case in other new territories 31.

After 1714, however, the Porto mint ceased its activity and the Lisbon mint was the only centre for coining money. As a consequence, individuals had to travel to the Lisbon mint in order to convert bullion into coins and higher transaction costs were associated with the spread of money across the rest of the land. Such centralisation of monetary issue is unusual at the time: the extent to which it implies restrictions on financial freedom depends on the alternatives offered to domestic wealth-owners. In fact, Porto merchants received species through the Brazilian fleets, which transported Portuguese gold, and they used Castilian coins. Overall, this centralised monetary structure hindered the monetary integration of mainland Portugal, when compared with countries like Holland or England.

From the 1688 devaluation to the introduction of fiat money in 1797, gold accounted for most of the coinage at Lisbon mint, despite the increase in silver (in both absolute and relative terms) recorded in the 1770s and thereafter. Nevertheless, Castilian silver currency circulated in Portugal, without being recoined until 1785, so that bimetallism prevailed in practice.

The change in the legal value of silver in 1688 increased the coining of this metal in the 1688-1690 triennium, to about 1200 contos, mainly through reminting. This coinage, whilst continuing into the 1690s, dropped to about 240 contos (1691-99). From 1700 on, no silver was available for daily exchange in Portugal and Spanish patacas remained in circulation (law of 21 August 1702) 32. This shortage changed the market value of silver, which resulted in the alteration of its legal value in 1734 (from 31 to 33 réis per gram) and in 1747 (to 36 réis per gram) 33.

In the meantime patacas dominated circulation along the border with Spain and in the Algarve 34. In the 1770s the external value of the Castilian coins became higher than its internal value and Spanish currency ceased to be legal tender in 1785. The refusal of transactions in Castilian specie explains the increased remintage of Castilian silver coins into national currency.

The state also controlled the destination of silver, especially during wars, because it was used to pay soldiers' wages. At the time of the war of the Spanish succession, silver was delivered to the treasury of the Junta dos Três Estados for this purpose 35. During the

31 There were only some experiences of the use of paper-money for local transactions. Since 1771 bonds had been issued in the Distrito Diamantino de Minas. The bonds of some trading companies circulated as money since the 1750s.
32 The shortage of silver is deduced from data of the Lisbon mint, but the Porto mint was also active between 1688 and 1714. This mint, originally authorised to coin silver, was only granted permission to mint gold coins in 1712. We do not know how much was coined, because the books of the Porto mint disappeared. See Sousa, 1999.
33 The law was passed on 7 August 1747, the first coinage of this period being on 22 August. See Sousa, 1999: 122-129, 306-308. The ratio between the two precious metals remained unchanged until 1822. The revaluation of silver against gold increased silver coinage, but there was no lasting effect since economic agents expected a higher revaluation of the metal, which continued to be in short supply.
34 During the Pombal period, for example, bidding in the Algarve fishing auctions was carried out in pesos rather than in cruzados. See Sousa, 1999: 264.
35 Documentação Avulsa, M. 1703-1750, Lisbon Mint Archive. The Junta dos Três Estados was created in 1640 to supervise taxes used to finance the restoration war. However, after the 1650s, it took over the fiscal
Seven Years War, the Provedor of the mint was to buy all the silver delivered to domestic residents, so that it should be immediately transferred to the treasury. There were three major gold minting periods, from 1703 to 1714, from the early 1720s until 1736 and from 1738 to 1763. Individuals could go directly to the Lisbon mint to coin the precious metal they received. From 1702 to 1724, gold coined for the crown amounted to less than 4% of total arrivals, but the state became the dominant recipient in the 1720s, as shown in Table 3 above. This was due to rising current and extraordinary expenditures and it coincided with the closing of the Porto mint.

The Lisbon mint was the property of the crown, which was also an important customer, making it a state reserve fund. The abundance of gold made the resort to currency debasement unnecessary. Revenues that arrived in bullion or gold dust from Brazil became revenues available to the crown and were transformed into currency, which was especially used to finance war expenditures.

Gold mintage composition suggests that until the 1720s, coins of 4800 réis prevailed, while between the 1720s and 1730s, small value coins (480 and 800 réis) predominated. After 1735, precisely during the period when the state dominated gold mintage, coins of 6400 réis, the highest face value, dominated. The bias of mintage composition towards higher denominations can be seen as another way of curtailing financial freedom. Because with higher amounts to settle, coins of higher quality could be used, agricultural and industrial workers were averse to monthly, let alone daily, payments. The annual amounts of copper coined were small when compared with the coinage of silver and gold. This also supports the higher quality of Portuguese monetary circulation allowed by gold coins of smaller value. This characteristic of mintage composition is probably not unique to the XVIII century. It certainly explains the complaints by monetary authorities about shortages of coin for daily transactions.

 attributions of the Cortes (Cardim, 1998, 102-103).
30 Order sent by Secretaria de Estado das Negocios do Reino, 10th September 1763. See Entregas da prata das Americas no Real Erario (1763-1766), book 1604, Lisbon Mint Archive, which recorded these deliveries.
31 In the Seville Mint, societies of financiers were intermediaries between the individuals and the mint, at least until the 1710s, see Sindicur. 1991: 266-285.
32 Some examples from requests found in the Registo Geral of the Lisbon mint Archive can confirm the role of the Lisbon mint as a state reserve fund. During the Seven Years War, because no silver was being coined and the Rio de Janeiro fleet’s sailing had been cancelled, the crown ordered the Lisbon mint to estimate the amount of gold in reserve and to coin all of it at once. In the 1730s, during a period of conflict in Colônia do Sacramento, several requests were made to the treasurer of the Lisbon mint to transfer currency to the Conselho Ultramarino to pay for uniforms, ammunition, powder and various other war materials, to be sent to Brazil.
33 In terms of domestic circulation, other precious metals and copper were not absent from circulation and credit was a reality in Lisbon, Rocha, 1996. Copper was a metal for small daily transactions, because it could not be used in payments worth more than 100 réis (the law of 25 September 1800 increased the value of transactions to 5000 réis). Considering the behaviour of copper coinage (see Appendix Table 2 in MSS), its continuity and quantity was greater between the 1730s and 1760s. From 1733 to 1766 the copper coinage was almost 275 contos, more than half the total coinage of this metal for the period 1688-1797.
40 In the hinterland of Lisbon in the 1760s, permanent agricultural workers received annual wages of 20,000 réis on average (Silva, 1993, 144). More details in MSS, note 48.
In the discussion of the long cycles of the real exchange rate revealed by Table 1 above, the outflow of gold, coupled with precautionary gold hoarding, exacerbated the shortage of coins in circulation and brought a risk of devaluation which eventually reversed the real appreciation\(^4\). One indication of this pressure may come from the difference between the value of gold and silver coins and their legal price, quite aside from the relative prices of the precious metals in circulation\(^4\).

According to Table 1, nominal income grows at an annual rate of 2.2% throughout the XVIII century. Yet, from 1689 until 1759, money grows at over 3% p.a., but the rate falls to less than 1% p.a. from 1760 until 1797, without any noticeable effect in either output growth or inflation. For convenience, the change is identified with Pombal’s reforms beginning in 1760, a few years after an earthquake destroyed most of the capital city and the country prepared its intervention in the Seven Years War. The consequence is a fall and then a rise in the velocity of circulation of money at a rate of 1.4% p.a. in each periods.

With commerce and trade specialization, monetisation increases, but it is not sufficient to prevent a persistent rise in prices and a sustained loss of competitiveness of Portuguese exports, a very high propensity to import and a gradual loss of specie. When gold arrivals declined in the 1750s and thereafter, the capacity to import was curtailed and the same happened to state revenues. As foreign prices picked up, however, real appreciation was dampened\(^3\).

Gold arrivals contributed to increase Portuguese money supply at a rate six times greater than output in 1689-1759, yet with little effect on prices, certainly compared to the 1555-1640 period. In any event, gold was also applied to the redemption of public debt. A partial conversion of the debt was carried out in the 1740s, precisely the period of greater monetary issue to the state. This redemption included the decrease of interest charges and the reimbursement to creditors, which previously had not accepted a lower rate of interest\(^4\).

3.2. Pombal’s reforms

State revenue almost doubled at constant prices between 1681 and 1716. This rise in the financial capacity of the crown was due mostly to two new sources of earnings for the treasury: the king’s monopolies over the extraction of gold and diamonds, and over the sale of tobacco. Customs revenues also rose, whereas the excise and other consumption taxes paid in Lisbon more than doubled their previous value, following the general

\(^4\) Sousa, 1999: 257-262 claims that it is necessary to allow for substantial hoarding to explain the weak (and sometimes negative) relation between changes in money and prices.

\(^3\) Taking the ratio between the value and the quantity of gold coined and comparing it with the legal price of the gold, a “quality spread” is pictured in Chart 2 and Appendix Table 2 in MSS, together with spreads based on the legal tolerance in the weight of the coins. The upper band assumes that only the smallest currency denominations are available whereas the lower band reflects the opposite case of largest denominations. Except in 1719, 1737 and 1778, the gold spread is within the legal values, confirming the high quality of Portuguese gold coins and explaining the preference of these coins in international payments. Sousa, 1999 also presents spreads on silver coins.

\(^4\) English wholesale price inflation in 1760-97 was 1.2% according to Mitchell (1975), so that the bilateral real appreciation is only .5% p.a.

\(^5\) More details in MSS, note 53.
increase in state revenues and overtaking the revenues coming from the excise paid elsewhere in the mainland.

In the beginning of the 1760s the Portuguese crown was challenged on several fronts. The 1755 earthquake was responsible for serious losses in private properties and wealth, and it demolished the royal palace and public buildings, such as the customs and royal warehouses. In addition, the Atlantic traffic was confronted with a sharp drop in some staples (sugar, tobacco), which were sources of state revenues through monopoly or custom taxes. Moreover, gold mining was already on a downward trend, lowering the revenues associated with the monopoly enjoyed by the crown (Table 4 above). Finally, the participation of Portugal in the Seven Years War became imminent, with the inevitable rise in state expenditures.

The first measures were aimed at revising the regulations over the monopoly of gold mining and the payment of duties associated with it (Decree of 5 December 1750), custom taxation (especially for sugar and tobacco, decrees of 10 April and 20 May 1756) and the prevention of smuggling (Decree of 14 November 1757). The law became particularly severe against smuggling, since tax revenues were seen as crucial in a time of financial stringency. Also, Decree of 22 December 1761 created the Erário Régio (Royal Treasury), so as to centralise in one single department the collection of all taxes and state revenues\footnote{Until then different revenues were directed to distinct offices subjected to a loose and distant control by the Conselho da Fazenda. This practice had been severely blamed by Manuel Severim de Faria a century earlier, when he criticised the existence of different financial departments, each one with certain expenditures associated with the revenues it would receive. Therefore, state revenues involved a variety of small balances, which made the management of the treasury a difficult task. The regulation of the new Royal Treasury also introduced double-entry book-keeping which was already the accounting norm in business practices. In 1591 the modernisation of the accounting was neglected, under the argument that similar practices were good for merchants, but improper for a king (Hespanha, 1993, 204-205).}

Another major initiative dealt with the regulation of the décima\footnote{Decrees of 26 September and 18 October 1762.}. Its rate returned to 10%; all its tax administration was centralised away from local officials; the methods to assess wealth, survey and evaluate real property, and tax profits from loans were improved; the universal character of the tax was reaffirmed. Its role in the Portuguese fiscal system was well understood by reformers\footnote{References in MSS, note 61.}

The importance of the revenues coming from the décima is clear from table 2 above. On average it amounted to 11% of all the revenues for the period 1762-1776, almost the double of the excise collected, except for the city of Lisbon. Even including Lisbon, and especially after 1765, the revenues are equivalent: an annual average of 663 contos for the décima, against 700 contos for the excise\footnote{Before 1765 the revenues coming through the collection of the décima are very low, demonstrating that its fiscal infrastructure was not created yet.}.

The structure of tax revenues did not change with this reform: customs retained their share and that of crown monopolies rose. Between 1716 and the period 1762-1776, revenues from the monopolies over the tobacco and the Brazilian gold and diamonds rose by 60% in constant prices. Yet a country-wide tax administration was necessary in order
to increase the share of the income tax in state revenues. After the difficulties of the 1760s, renewed commercial affluence was reflected in increasing custom revenues and stabilising revenues from royal monopolies, in which tobacco started to become more and more relevant. Therefore, improvements in income tax administration, which would increase the pressure on taxpayers across the country, became less pressing.

3.3. The entrepreneurial domain state

War gave legitimacy to new taxes and to system reform. In 1641 (like in 1387), the creation of a new tax was sanctioned by the Cortes, transforming the decision into that of a national response to the threats to autonomy. In the 1760s, in spite of the absence of the Cortes, the long preambles to the decrees gave an ideological and even historical justification for the reforms, urged by the threat of the Seven Years War.

War was an exceptional situation that required extraordinary expenditures and exceptional means to finance them. Holland and England seemed to deal better with these challenges – and thus were able to assume a great power status in early modern Europe – because they combined political and financial freedom. On the contrary, the Portuguese treasury obtained higher and higher revenues distinct from taxation, making it less dependent from increased contractual relations with other political or social entities. An enquiry on comparative state revenues in Europe, ordered by the French controller-general of finance Bertin, summarised in Table 4, shows Portugal with higher state revenues per capita than France or Spain, but a distant third relative to Netherlands and England.

Table 4 about here.

Aside from gold and other domain revenues, another reason why the pressures for change did not seem to be particularly strong during this period was that Portugal did not play a major role in the European power struggle. Indeed, it severed the union with Spain, which under the Habsburgs did have such ambition.

The relevance of domain revenues was not a reminiscence of medieval times. Rather, they started to matter with overseas expansion and were based on an entrepreneurial attitude towards business opportunities and wealth accumulation. It was the monopoly assumed by the crown over some trades and goods rather than the importance of taxes on overseas trade which set the Portuguese fiscal system aside from other European cases.

This patrimonial relationship had evident advantages. Revenues that were easier to collect and based on the monopoly of a few goods allowed the crown to lower the tax burden on mainland Portugal. As a result, peasant uprisings, as well as remonstrances by local élites, were avoided.

49 Their fiscal constitutions relied on representative institutions, controlling state finance, and allowed an extraordinarily high level of taxation. The ability to maintain high levels of public debt through a credible commitment of the government to uphold property rights is another difference, cited by Hoffmann and Norberg, 1994, pp. 299-310; North and Weingast, 1989. See also references in note 10 above.

50 Godinho, 1978, p. 72 coined the expression merchant-state. Yet this is not what differentiates the Portuguese case from other fiscal systems, but rather the patrimonial appropriation of the revenues from some trades. Indeed, Godinho’s analysis stressed the importance of taxes on overseas trade, but the connection with the label was not immediate.
Moreover, royal control over gold production through the collection of the quintão and capitação, established a close relationship not only between state revenues and monetary emission, but also between state expenditures and gold coinage. As mentioned, the mint served as a state reserve fund: a last resort when extraordinary expenditures found the treasury short of means.

Indirect taxes on commercial transactions appealed to governments because the tax was hidden in the price of the product. Therefore, they were widespread across Europe. In Portugal, the excise had been the first general tax since 1387. It represented the social acceptance that the king could not live from his estate revenues alone, but had a public role and should be supported by the nation.

The contractual basis for taxation regressed in the mid-1500s, with the definition of a fixed amount for the excise to be paid by each municipality. The self-taxation by each community transformed the nature of the excise and represented a retreat in state formation, because tax administration failed to cover the entire country. The fiscal system became more concentrated in Lisbon, where the excise on movable goods maintained the nature of a transactions tax. As a result, the excise shaped power relationships between centre and periphery and indeed developed into a pathology of the Portuguese tax system which lasted well beyond the period.

This concentration in Lisbon of the tax system is also evident in the case of customs. As the capital city was the major port of the country, the national gate to the Atlantic commercial network, it concentrated most of the foreign trade\(^1\). Controlling this commercial gateway minimised the transaction costs to collect taxes, explaining the importance of customs revenues.

Lower tax collection costs also explain efforts to collect the excise in Lisbon and to claim a proprietary relationship towards some trades and goods which were highly valued in European markets. As a result, tax collections in Lisbon in 1766 accounted for 59% of the total\(^2\).

4. From French invasions to British ultimatum

4.1. Political and financial crisis

Portugal’s participation in European wars was a bad omen. French invasions followed and then the opening of Brazilian ports to foreign trade in 1808. A brief respite in the 1820s led to constitutional rule, but the country experienced civil war from 1828 to 1834. The old financial system faced successive crises together with increased war expenditure. The impact of the war in state finance and monetary circulation might not be very different from other European experiences, but the combination of the war and the loss of Brazil is uniquely grave.

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\(^1\) In the early 1800s, 75% of the Portuguese foreign trade was based in Lisbon (Justino, 1989, II, 151).

\(^2\) This is the result of adding custom taxes collected in Lisbon’s Custom, revenues of the Sete Casas (office where excises, real d’água and similar taxes were collected) and the décima collected in Lisbon, and of comparing this total with the revenues coming from mainland Portugal. The share of Lisbon is based on data presented in Tomaz, 1988, for custom and Sete Casas; the “Livro de registo das contas correntes do rendimento da décima”. Arquivo do Tribunal de Contas, Erário Régio, 802, for the décima on the inhabitants of Lisbon. See Appendix Table 1 in MSS.
In spite of new taxation and legislative efforts to overrule the tax immunities enjoyed by the nobility and by the church, the results were insufficient to overcome the financial problems of the state. In 1796 church and nobility were required to pay the excise duties. The church was also taxed in 1800 by ecclesiastic décima and in 1809 was included in the exceptional defence contribution, by an increase of the décima. In 1800 décima was extended to the comendas\textsuperscript{53}. These measures widened the tax base and lessened existing tax inequities, but the results were very modest.

State revenues that increased in 1804 almost 37%, when compared with the average of the previous period, dropped again from 1804 to 1810 (see Appendix Table 1 in MSS). This decrease was explained by the behaviour of the two structural state revenues: customs taxes and royal monopolies. Even though revenues from the décima doubled from 1797 to 1810 and increased 44% from 1804 to 1810, they could not offset the collapse of other state revenues. The behaviour of custom taxes shows a decline of almost 50% from 1804 to 1810, explained by the French invasions and by the drop of colonial revenues as consequence of the opening of the Brazilian ports to foreign trade in 1808. Looking to the revenues from monopolies, they became much more dependent on tobacco.

The rise in the excise and other indirect taxes from the end of the XVIII century to 1804, together with its reduction from 1804 to 1810, are due to the collections in Lisbon, emphasising again the tax concentration there. Economic difficulties, as a consequence of French invasions, explain the drop of 36% in indirect taxes at the end of the 1810s. The weight of a financial structure centralised in Lisbon and fiscally concentrated in custom taxes and monopolies, prevented the extension of the geographical domain of the tax base.

Therefore, the state needed to adopt other means to overcome the financial deficit, by innovations in monetary and debt policy. While the sale of a padrão de juro real required registration through a public deed, an endorseable public debt instruments was offered for the first time in 1796. Then the March 13, 1797 loan increased the capital and the rate of interest, lowered the face value of the bonds and stated that they could be used for some state payments. The lasting difficulties of the treasury eventually led to the issuance of bonds with an even smaller face values than previously, who could circulate as money at their nominal value and were to be accepted in any transactions. These smaller bonds created an inconvertible fiduciary means of payment, paper-money, which, after 1797, was in circulation along with gold and silver coins\textsuperscript{54}.

Other proposals to solve the financial problems through public debt were submitted in the last decade of the XVIII century by authors linked to the Lisbon Academy of Science, created in 1779. Rodrigo de Sousa Coutinho, who had been president of the Erário Régio (1801-1803) and minister, proposed the issue of internal public debt, with tax revenues serving as collateral along the lines of what was happening in England\textsuperscript{55}. Realising that

\textsuperscript{53} It was a benefit given by the King to clergymen and members of military orders.

\textsuperscript{54} More details and references in MSS, notes 70 through 73.

\textsuperscript{55} He distinguished the English experience from the French episode of the assignats and from the paper-money issued during the war of American Independence. On Coutinho’s proposals and their interpretation, MSS notes 74 and 75.
the creation of new tax revenues required a more efficient tax administration, he suggested the creation of a bank capable of managing the public debt and of issuing convertible bank notes. The objective was to place the control of debt and money in the hands of the financial community rather than in those of the crown. The increase in tax revenues and the creation of an efficient public administration would then ensure that the higher volume of public debt would be serviced.

No such bank was created and paper money remained an convertible fiduciary means of payment. Did the commercial and financial élite favour currency inconvertibility instead of the issue of convertible notes by a central bank? As paper money was either exchanged for specie or accepted as a means of payment with a discount, fiduciary circulation may have seemed profitable to wealth-holders. Yet, in 1796 the first public loan was a failure, making the issue of paper money in 1797 almost inevitable.

Wealth holders knew then that the crown was unable to honour its debts due to the absence of an institutional control over financial matters. They understood therefore that Coutinho’s reform proposals were not viable without a change in the fiscal constitution, involving expenditure control and improvements in tax administration, let alone tax design. After 1698 the Cortes had not been assembled to discuss fiscal issues, and were therefore unable to play the role of parliamentary institutions. In a period of bitter financial crisis, this deprived the crown even of this form of traditional representation.

Contemporaries already saw price fluctuations as a consequence of the discount of paper money. The price index in chart 1 above shows that after a period of moderate inflation during the second half of the XVIII century, prices increased after the 1790s. From 1797 to 1813 prices more than doubled, dropping in the following two years. If this inflation can be explained by the devaluation of paper money, this was certainly not the only source. Napoleonic wars had disrupted production and distribution channels, namely of grain. The consequence was scarcity in supply and higher prices across Europe. Table 1 above reports deflation in the period 1798-1834, which, together with a devaluation of the real against gold by 17% in 1822, brings about a slight real devaluation against sterling.

The circulation of paper-money was considered a loss to the state, because it made expenditure in metal coins, namely by the army and navy, higher than it would otherwise have been: discount of paper money reached 60% during the French invasions. Paper-money circulation was also limited to the cities of Porto and Lisbon. Nevertheless, total gold and silver coinage from 1797 to 1807 was 25% of paper-money issues.

57 Due to the linking of two different price indexes, the annual rates before and after 1810 show a real appreciation of .7% and a real depreciation of .2% after (4.1% and -2.5% respectively in Portugal, 3.4% and -2% in England respectively). Sterling was also inconvertible from 1797 to 1821, but it did not devalue. See note 76 below.
58 See this representation in Pinto, 1839, 27-30. It is also interesting to note that the reasons given in this representation to the concentration of paper-money circulation in Lisbon and Porto were the difficulties people outside the two largest Portuguese cities had in understanding that paper-money without precious metal was nevertheless “real” money. Pinto also attributes inflation to paper money. Morrison et al. (1999, p. 52) claim that suspicion about fiat money prevailed in France throughout the XVIII century and well into the XIX, to the point that Banque de France bills reached only 12% of the money stock in 1860.
59 Estimated from Estatística das moedas de ouro, prata, cobre e bronze, que se cunharam na Casa da Moeda de Lisboa desde o 1º de Janeiro de 1752 até 31 de Dezembro de 1871, 1873. The three issues raised
Estimates of public debt increased (gathered in MSS, Appendix Table 1 Panel C) show a consolidated debt of about 6000 contos from 1776 until 1817, plus a floating debt of over 10000 contos beginning in 1801. Current and other debt also began to rise then, which is why the crown decided to sell some of its properties in 1809. Between 1810 and 1820 the crown sold essentially lands, but the result was only 439 contos, a very low amount when compared with public debt. The crown also resorted to external borrowing, but external debts cannot be blamed for the financial difficulties of the period, as they did not draw on internal resources. Foreign loans due to the French wars were paid by the indemnities of the Treaty of Vienna and the foreign loans between 1815 and 1828 became Brazilian debt.

4.2. Revolution, constitutional rule and banking

Various attempts to redeem paper-money were made after the 1820 Revolution. It was in this context that the Bank of Lisbon, the first issuing bank, was created in Portugal in 182160. Only half of the intended capital was raised, thus preventing the redemption of paper-money. Hence, in 1834 a decree tried to extinguish paper-money, but two years later its amount still reached about 3000 contos.

The liberal revolution reflected the difficulties suffered by the Portuguese state since the 1790s. The French invasions, the subsequent war and departure of the crown to Brazil had disruptive effects on a very fragile tax administration concentrated in Lisbon. Following upon the opening to foreign trade of the Brazilian ports, Lisbon became less important as a gateway to the Atlantic commercial network. Colonial trade also dropped and revenues collapsed.

The monopolies of the crown, which had accounted for most of the state’s income were dependent on colonial trade. Revenues from gold were decreasing and losses on the tobacco contract also occurred, even though tobacco remained a major source of revenue. Moreover, from 1811 to 1820, at a time when ordinary revenues were very low, the Portuguese government on the mainland territory incurred in substantial debts, in order to finance public administration and the army (Table 2 above and MSS, Appendix Table 1 Panels B and C).

This period of difficulties made the peculiarities of the state’s income more apparent. Just like the attempts to change the tax system and the resort to public credit from 1790 to 1808 were linked to reformist thought on these topics, reformist proposals resumed with the liberal revolution of 182061. The experience was too short lived to bring about lasting

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60 This was like other banks created in Europe, Lains, 1995. Some months before the creation of the Bank of Lisbon, the Minister of the Treasury estimated that the paper money issued since 1797 amounted to 17,000 contos de réis, from which less than 7,000 contos had been discounted until then. A related measure was the creation of the Committee to retire public debt (Comissão para liquidar a dívida pública) on 27 October 1820, which resulted in the consolidation of the floating debt to officers, soldiers and royal suppliers in 1821 and 1822. The assessment of the contribution of Manuel Fernandes Tomás, who chaired this Committee is in Macedo, Borges de (1995).

61 Nevertheless, it is interesting to note that the petition movement starting in 1820 (similar to the French cahiers de doléances) and lasting until 1822, did not present many petitions against taxes. Only complaints about the excises and their variations among localities were relatively frequent. It may prove that tax
changes. Nevertheless, there were relevant decisions concerning public debt and monetary circulation. Plans were made to privatise properties of the crown in order to pay the debt. The project to create a bank in Lisbon in order to control monetary circulation and to act as a privileged creditor of the state, which had been conceived in the late 1700s, was implemented just after the transfer of the kingdom’s capital to Rio de Janeiro. The first bank with these characteristics emerged there and then.

When the Bank of Lisbon was created in 1821, one of its functions was related to its contract with the state to redeem paper-money, receiving the monopoly of note issuing. Due to this «public» function, the Bank of Lisbon started a long period of financial assistance to the state. The bank also practiced commercial operations, discounting and issuing foreign bills of exchange, discounting government debt titles, accepting interest-paying deposits and providing loans.

Banking operations were not absent before the creation of the Bank of Lisbon, but they were mixed with other activities62. Both the privileges granted to the first bank and the instability following the first liberal revolution certainly the emergence of other banks until 1835. It was then that the note issuing privilege in the northern part of the country was granted to Banco Comercial do Porto, breaking the monopoly enjoyed by the Bank of Lisbon. This rewarded the assistance given to the liberal party by the commercial interests associated in the Associação Comercial do Porto.

Tax administration was disrupted in the 1820s, customs' revenues diminished and the tobacco contract (accounting for almost 20% of state revenues) did not find contractors for the period 1824-1826. At last, the contract was awarded, but with a drop of 28% when compared with the revenue for the period 1821-1823. The 1822 budget presented a deficit of 1,607 contos (22% of the revenues), much higher than the 246 contos deficit (only 3% of the revenues) in the 1821 budget63.

Furthermore, in 1821 and 1822 state revenues were almost 40% lower than in 1817, and almost 15% lower than in 1812, which had been a very difficult year for state finances, just after the end of the French invasions. The restrictions on financial and political freedom that followed the first constitutional experience were not a favourable context for reform.

4.3. Tax and monetary reforms

The excise law of 19 April 1832, decreed by the new Treasury minister, Mouzinho da Silveira, reflects a new tax design. All the tax duties paid on transactions of movable goods were abolished, as well as toll taxes paid in some municipalities. The excise was maintained but only on real property transactions. Therefore, the old tax on consumption was completely transformed into a tax on property sales. The preamble of the decree constitutes a programme of radical changes to the tax system. The enormous variety of taxes surviving from the slow accumulation of duties over centuries of fiscal history was

62 References in MSS, notes 87 and 91.
63 Details on tobacco revenues and the budget in MSS, notes 93 through 96.
to be rationalised and the fiscal system reduced to only two taxes: the custom tax on imports and the direct tax based on the old décima\textsuperscript{64}.

The abolition of the taxes on transactions was not complete. The excise and similar taxes paid in Lisbon were maintained in Silveira's decree. It was the most complete acknowledgement of the importance played by this tax as a source of state revenue. It was also an acknowledgement of the difficulties faced in tax collection across the country. In the mid 1850s, taxes on consumption were reintroduced as local taxes and became important sources of revenues for municipal councils. Municipalities retained the collection of local taxes on consumption, which had been abandoned by the central administration, because they were difficult to impose and unpopular. Lisbon was the only place where the consumption taxes were maintained as central administration tax until 1922. Therefore, the biases displayed by the structure of the revenues since the 1600s continued throughout the 1800s. State revenues remained concentrated in Lisbon (largely based on customs and consumption duties) and revenues from the tobacco contract maintained the past importance trade monopolies to the treasury.

Silveira's project was not implemented and, due to poor administration and the civil war, the revenue tax did not become relevant until much later. With the end of the civil war in 1834, more urgent matters required the attention of the government. In fact, the financial situation of the kingdom had not improved when compared with the 1820s. Public debt almost doubled since the beginning of the civil war in 1832. All this new debt was foreign. It rose from almost 30% of national income in 1832 to more than 55% in 1834\textsuperscript{65}.

From 1834 on, excessive public debt was the primary policy challenge, together with the need to control the chaotic monetary circulation (a heterogeneous collection of paper money issued from 1797 to 1799, convertible notes from the Bank of Lisbon, which later became inconvertible, and a large variety of coins from different countries). Capital markets helped finance the public deficit throughout the period. As the deficit remained particularly high in the 1830s, the pressure attributed to the debt service increased\textsuperscript{66}. Civil servants had their salaries reduced or were paid with bonds. State suppliers had their payments postponed and eventually converted into debt titles\textsuperscript{67}. The violence and the illegitimacy of these means showed that the state was not capable to defend property rights. Suppliers and potential creditors abandoned contracts with the state or assessed them a risk premium. The support of civil servants was also lost.

In order to cope with debt obligations, Church property was first nationalised and then sold to private bidders together with crown estates. The sales were devised as a way to bring extraordinary revenues into the treasury, so as to redeem consolidated debt (either foreign or domestic), or as a way to accept state annuities as payment. The results were mediocre, even though the sale of crown and Church estates did help retire public floating debt and paper money\textsuperscript{68}.

\textsuperscript{64} The law of 30 June, 1832 abolishing the ecclesiastic título gives a critical importance to the décima in the framework of the future tax system.

\textsuperscript{65} Details in MSS, note 99.

\textsuperscript{66} Data on public revenues and expenditures from 1819 to 1847 is available in Reis, 1997, p. 37.

\textsuperscript{67} In 1837, the payment of interest was suspended and substituted by new debt titles which reinforced the lack of the confidence of investors on the Portuguese state. Mata, 1986, p. 8, also Reis, 1997, pp. 49-51.

\textsuperscript{68} This intention is clear from the law of 30 May, 1834. However, only 11% of the amount of this operation
There were no other sources of extraordinary revenues comparable to the nationalised estates. Incompressible budget deficits were financed through a variety of short term debt instruments – bills, contracts or promissory notes – which created a market for public debt titles. Like the paper money issued from 1797 to 1799, these titles were traded at a discount, which reflected the perceived sovereign default risk.

In 1842 a new government was formed, backed by a larger parliamentary majority. Financial stabilization coupled with the modernisation of roads, railroads and ports formed the program of the new administration of the Duke of Terceira, which was effectively led by Costa Cabral. To restore the financial credibility of the state, the new government tried to reduce expenditures, to increase revenue through land tax reform and new taxes and to compress the debt service, through the conversion of the foreign debt to a fixed rate of interest of 4%. Furthermore, it tried to consolidate the floating debt through a long term loan associated with the renewal of the tobacco monopoly in 184499.

In order to give stronger incentives to private investment in the modernisation of infrastructures, the state backed the projects, either by granting rights that would secure amortisation, or by subsidising the investments themselves. Better transportation was supposed to increase wealth and expand the tax base. Financial stabilization, in turn, would avoid the crowding out effects of the public debt on private capital formation.

New banks were created, as the Companhia União Comercial, derived from alliances between Lisbon’s capitalists in order to bid on the auction of the tobacco monopoly70. It participated not only in state finance, but also developed new activities in commercial banking and was a direct competitor to the Bank of Lisbon in the note-issuing business. The Companhia Confiança Nacional was another financial institution, established in 1844 to raise the 4000 contos associated with the tobacco contract, and to finance the business company created to carry out the modernisation of infrastructure71.

But a tax revolt in Northwestern Portugal (known as Maria da Fonte) led to another civil war in 1846. The programs of financial stabilization and infrastructural modernisation promoted by Costa Cabral resulted in the bankruptcy of the financial and public works enterprises used as vehicles for the projects. The lack of legitimacy of taxes was made worse by the absence of a credible monetary and exchange rate regime.

4.4. Gold standard and after

The inconvertible notes of the Bank of Lisbon were gradually withdrawn (together with a multitude of foreign coins), paving the way for monetary reform, which occurred in 1854, when Portugal joined Great Britain on the gold standard. The decision marks the

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99 The winner of the public auction on the tobacco contract would pay an annual rent and would lend 4000 contos to the state in order to redeem the floating debt.

70 The Companhia União Comercial was created in the same year by Joaquim Pedro Quintela and Vicente Gonçalves Rio Tinto, who lost the tobacco contract to another group of capitalists.

71 According to Reis, 1997, 143-151, its major financial innovation consisted in the project to create a network of provincial saving banks, which would form the basis of its lending business: to the state and to finance the Companhia das Obras Públicas.
beginning of a virtuous cycle during which the real achieved nominal stability again. Independently of the output series used, between the 1850s and the early 1890s convergence was observed in terms of output growth and of inflation in relation to the European average, the longest such episode to date under a democratic regime.72

Monetary stability followed the new political era which opened up in 1851 with the Regeneration movement: «a revolution to end all the revolutions», as it was then defined. The different liberal factions reached an agreement about the political regime, which was sanctioned in 1852 by constitutional changes. The political scene was pacified and a broad consensus about economic modernisation and institutional reform emerged. A general awareness of the need to overcome the backwardness of the country led to the introduction of the metric system, new economic legislation and a vast plan of public works.

Another feature of the monetary system established in 1854 was the competitive nature of the note issue for most of the country, with eight joint stock banks issuing convertible paper money. These included the Bank of Portugal, which succeeded the Bank of Lisbon in 1846, and was granted the monopoly in the Lisbon district, which included the largest financial market.73 The north-western part of Portugal, where note issuing banks were concentrated, was also the place of departure for most of the emigrants going to Brazil and other “new world” destinations. Even when they issued notes, banks provided remittance facilities, discounted and issued bills of exchange, or foreign currency exchange, resulting overall in lower concentration and more fragility.74

According to Table 1 above, after the instability cycle 1798-1834, growing demand for money is associated with the acceleration of income growth and with greater monetization across the territory. The accession to the gold standard countered the negative consequences of the payments deficit, to the extent that it brought a “seal of approval” to the policies pursued in Portugal. This generated higher growth and inflation however, whose negative effects on export competitiveness were exacerbated by world deflation.75 In short, the program of public works was unsustainable and difficulties in tax administration made a payments crisis inevitable. The lack of legitimacy of taxes was now associated with non-public expenditures, and political instability re-emerged.

During 1834-54, velocity rose at a rate of 1% per annum. This suggests that before Portugal joined the gold standard interest rates were rising in spite of the real appreciation. The years of the gold standard reflect balance in the money market and goods market while after the gold standard, velocity rose again at a rate of 1.6% p.a.,

72 The acceleration of growth apparent in Table 1 above is also reflected in the data assembled by Maddison, but the rate falls to 1.2%, below in fact the period 1891-1910 when 1.3% is reported. The average is computed with data supplied by Bordo and Schwartz 1996. See also note 9 above.
73 For details on the crisis affecting the Bank of Lisbon in the aftermath of the 1846 revolution see references in MSS, note 107.
74 In 1838 there existed 5 banks in Portugal and in 1865 there were 14, half of them chartered with note issuing facilities. In 1875 its number rose to 51 (Justino, 1988-1989, II, 212). The financial and banking crisis of 1876 meant the demise for some of these new banks, but it was the aftermath of the 1891 financial crisis which led to two important mergers in Porto banking establishments.
75 Using data from 1872 to 1890 reported in Appendix Table 5 of MSS, the rate of real appreciation comes to 1.4% p.a while using only English price data for the entire subperiod brings the rate of appreciation to 1% p.a., less than the 1.8% recorded during the previous subperiod. See, however, note 58 above.
suggested an upward pressure on interest rates, consistent with the expected depreciation of the real.

Chart 276 shows that full convertibility of the real into gold allowed higher debt financing of the government deficit in spite of rampant inflationary tendencies. Financial credibility of government policy was a crucial element to support the program of public works outlined by the new Regeneration governments - whatever the motives invoked for joining the gold standard77. Indeed, the credibility effect of belonging to the gold standard brought about the external reputation which was essential to make Portuguese state securities attractive to foreign investors. The debt would then function as an anticipation of future state revenues, maximised by the positive effects coming from public investment in social overhead capital.

Chart 2 about here

Due to the partial nature of the tax reforms of the mid 1800s, which failed to widen the tax base, however, tax returns did not cope with the substantial increase in the service of the public debt. Customs revenues and the tobacco contract (this latter surviving from the old monopolies) accounted for almost 50% of the state income in 1890. In contrast, the share of direct taxes in total revenue fell throughout the period: in per capita terms they only increased 14% between 1864 and 1890, against 95% in customs taxes.

In territorial terms most of the state revenues continued to originate in Lisbon. Adding the consumption taxes of Lisbon to the part of custom taxes paid over the imports through the port of the capital city, we obtain almost 40% of all state revenues. With the inclusion of direct taxes and other duties paid by the inhabitants of Lisbon the proportion would certainly be greater than 50% of the state revenues78.

These characteristics of the fiscal system are at the root of its structural insufficiency, and represented a threat to future stability, which did not involve war expenditures but rather reflected the lower legitimacy of taxation in a period of civil strife. The return to higher deficits in the public accounts and a deterioration of the domestic political situation, with republican agitation and a frustrated revolution in 1891, suggested a decline in the legitimacy of the monarchy itself.

Three other major events were responsible for putting an end to this period. These were the British ultimatum - enforced by the presence of two warships in the bay of Lisbon - in connection with Portugal's claim of the territories between Angola and Mozambique, the bankruptcy of Baring Brothers, the London banker of the Portuguese crown, and the republican revolution in Brazil.

The suspension of convertibility in 1891 occurred well before the general movement away from the gold standard at the beginning of the First World War. Given the high trade deficit, the decline in emigrants' remittances shocked the external equilibrium and disturbed the expectation of long term exchange rate stability. The structural

76 For the price indices see note 6, for the public debt see MSS and for the exchange rate see Mata and valério, 1994.
77 Thus Reis, 1996, p. 175-176 sees «no grounds for supposing that one of the motives for adopting the gold standard was the desire for easier access to the international capital markets»
78 References in MSS, note 111.
insufficiency of state finance, exacerbated from 1888 to 1891 by exceptionally higher public deficits and the unavailability of external financing, precipitated the crisis. The monetary consequences of the suspension of the gold standard were twofold. First, due to the difficulties of other issuing banks and their bankruptcy in 1891, the Bank of Portugal gained the monopoly of bank notes issue in 1891. Second, the real started a continuous movement of depreciation against sterling until 1898. This movement was reversed with the increase in remittances from Brazil and increased demand for the Portuguese currency. In 1905 the level of the exchange rate prior to the suspension of the gold standard was reached. Throughout the 1891-1910 period, nominal depreciation reached 7% while domestic inflation was slightly lower at 6% but, given foreign deflation, real appreciation continued.

The financial and monetary crisis at the beginning of the 1890s had a strong impact on financial policy. The incentives to public investments in the country's infrastructures ended in the 1890s, leading to a more restrictive policy. In addition, the response to financial difficulties followed the very same paths as they had before adherence to the gold standard. In order to reduce expenditures the payment of foreign public debt amortisation was suspended. The increase in state revenues came from increases in existing taxes, some of them with a temporary character, but which later became permanent.

Domestic and foreign creditors were taxed too. The interest received by the internal creditors was subject to a new tax of 30% after January 1892. Six months later, external creditors were also hit by the budgetary difficulties of the Portuguese state: from June 1892 the Portuguese government suspended the payment of two thirds of its interest payments on the foreign debt. As the real was falling against the pound, payments in foreign currency became a greater burden to the budget. The reputation of the state fell even further and the recourse to foreign loans became impossible until the Portuguese involvement in the First World War. The unilateral character of hidden or overt taxes on the interest on public debt made it clear that the state was unable to support property rights.

On 5 October 1910 a republican revolution ended the constitutional monarchy. Symbols like the flag, the national anthem and the currency were changed by the new regime. On 28 March 1911 the real was replaced by the escudo, which (except for a few months in 1931) remained inconvertible until it joined the Exchange Rate Mechanism of the European Monetary System in 1992.

79 The public deficit increased about two thirds between 1884-1887 and 1888-1891, from, respectively an average of 8,000 contos to 13,500 contos. (Mata, 1993 and Mata and Valério, 1996).
80 There were no tax changes, except for the urban estate tax created in 1899 Mata, 1993.
81 In spite of the increase in revenues coming from patrimonial sources, their share in revenues was much lower than in earlier times. Another interpretation is quoted in MSS, note 114.
82 The move completed a regime change initiated with the repeal of the constitutional ban of privatizations in 1989 but was initially misunderstood by public opinion, as described in Macedo (1995). Further evidence is cited in Macedo (1999, note 22).
5. Conclusion

In spite of growing financial globalisation, the very concept of financial freedom has been ignored in Portugal, and the legacy of financial stability forgotten. The reason may be that the real became inconvertible during the heyday of the gold standard and the move remains associated with politically traumatic experiences. Instead the inheritance of the real degenerated into a myth, which associated fiat money with human rights and, based on the civil wars of the early 1800s, held that democracy is biased towards budget deficits, hidden taxes and an inconvertible currency. This association runs counter to the “contractual” experience of the Cortes, which provided social legitimisation to new taxes - when needed to face war expenditures. After the turmoil of the early 1900s, a twin myth emerged, that only a conservative dictatorship could produce financial stability\textsuperscript{83}.

The paper has shown how the crown had to preserve national sovereignty over borders defined in the XIII century in the face of external military threats. The social contract enforced by the crown until relied on the ability to finance increasingly expensive warfare. The pressure to raise revenue became a motive for fiscal change since medieval times, as war provided social legitimacy for tax reform or currency depreciation. In the XIX century the contract broke down because foreign wars were replaced by domestic wars and revolutions, and the monarchy itself collapsed in 1910.

The political legitimacy of the monarchy influenced the monetary regime, the organisation of expenditures and revenues, the technology of taxation and treasury operations and the patterns of deficit financing. Similarly, different military challenges and responses to national legitimacy influenced the state institution-building strategies and the protection of property rights. Several fiscal and administrative innovations were associated with the effects of war, domain revenues became an obstacle to radical change and modernisation in the tax system.

In 1387, when the main source of revenue was still land properties and seigniorial rights, municipal excises (sisas) were transformed into a universal tax with a comprehensive base. The new tax was supposed to pay for the war with Spain. It had a contractual origin insofar as it was approved by the Cortes, which acted as guarantor of private property rights.

The fiscal and monetary institutions of the XVII century reflect Spanish rule after 1580, and the restoration of independence after 1640. Until 1688, successive debasements of gold and silver coins were required to pay for the restoration war. On the fiscal side, the décima was created in 1641, as a direct tax levied on income coming not only from real estate, as it was the case in the rest of Europe, but also from labour, commercial and industrial activities and interest on loans.

The contrast with England, a country presented as the paradigm of the evolution from the domain state to the tax state, is the continued dependence on revenues that were not primarily based on taxes to secure financial stability. In fact, taxes on domestic residents were lower and more poorly collected because of the importance of domainial or patrimonial revenues.

\textsuperscript{83} The inverse relationship between democracy and budgetary discipline was tested by Gomes and Tavares (1999) for the 1910-26 period.
Financial stability in peacetime was therefore accomplished with revenues coming from monopolies over trades and goods. The tax revenues coming from customs and the concentration of other taxes in Lisbon (as was the case of the excise) contributed to revenue stability. Revenues coming from the foreign trade and from the monopolies on colonial goods, which together represented more than 50% of the total were more sensitive than domestic taxes to fluctuations in foreign trade.

The Portuguese case shows highly centralised fiscal and monetary institutions. Lisbon concentrated around 5% of the population, but more than 50% of the state revenues were collected in the capital city. Also, after 1714, monetary issuing was monopolised by the Lisbon mint, while Brazilian mints remained in operation. This lopsided centralisation of monetary and fiscal institutions was paired with slacker control on fiscal resources across the country, with the abandonment of indirect taxes on internal trade as a major source of state revenues and with the uneven distribution of money. It thus represented a regression in the fiscal constitution of the monarchy.

In contrast with the previous period, after 1688 and during the XVIII century, monetary policy relied on a fixed exchange rate. The two adjustments in the legal price of silver, in 1734 and in 1747, were mere technical adjustments to bring silver to the market. Therefore, seigniorage was not increased to overcome financial problems. Some of the state requests to the mint to coin precious metals was justified by extraordinary public expenditures, namely in war periods.

The importance of domain revenues also explains why institutional reforms did not develop as early as might be expected. The crown was unable to deal with extraordinary expenditures by resorting to higher levels of consolidated public debt. Wealth-holders did not support the modernisation of state finance through the creation of a bank responsible for managing public debt and issuing convertible paper money, because the government’s commitment to uphold property rights was not credible.

In the late 1700s and early 1800s, the structure of state finance remained based on monopolies of overseas trades and on custom taxes. Accordingly, the French invasions and the fall in colonial commerce led to the abrupt contraction of state revenues. Meanwhile, expenditures were increasingly due to the war. The dramatic coincidence of the increase in military expenditures as a result of the French invasions and the end of the trade monopoly with Brazil brought about a very large deficit.

Attempts to reform the tax system and to resort to government borrowing were unsuccessful. The introduction in 1797 of convertible paper money was responsible for a period of raging inflation lasting until the 1820s. This is how monetary disorder reversed one century of currency stability.

The financial crisis appears as a crucial motive for the liberal revolution of 1820. The first constitutional experience coincided with the creation of the Bank of Lisbon, suggesting the importance of broader institutional reforms in order to support sounder guaranties of stability to the wealthy elite and commercial interests. Nevertheless, the period that ended in 1851 did not have the political and constitutional stability needed to sustain financial stability.
The currency only became convertible again in the early 1850s, when money creation was subject to the well defined rules of the gold standard. The constitutional agreement that pacified the country in 1852 and the globalisation in the capital markets associated with the heyday of the classical gold standard helped to sustain this experience of real and nominal convergence under the constitutional monarchy. Monetary stability based on currency convertibility allowed a greater resort to debt, and it was coupled with rates of GDP growth higher than the average European performance, an unusual feat for Portugal.

Foreign held public debt as a way to finance short-term deficits was a development strategy which assumed that in the long term the increase in tax revenues would take care of the debt service. But attempts at increasing tax revenues led to strong social opposition, and several tax revolts during the time when only the threat of war brought legitimacy to taxes. Low tax rates hindered the sustainability of government budget accounts and the solvency of the country. At the end of the 1880s, budget deficits increased again and the political scene began to show signs of instability. In 1891, currency convertibility was suspended. It was not going to be restored until the escudo became part of euro, more than one hundred years later.
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### Table 1: Income and Price Indicators

**XVI-XIX Centuries (% p.a)**

<table>
<thead>
<tr>
<th></th>
<th>% t=356</th>
<th>popn</th>
<th>gdp</th>
<th>deflator</th>
<th>money</th>
<th>gold price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1555-1640</td>
<td>24%</td>
<td>0.3%</td>
<td>0.5%</td>
<td>5.3%</td>
<td>n.a</td>
<td>0.2%</td>
</tr>
<tr>
<td>1641-1688</td>
<td>13%</td>
<td>0.6%</td>
<td>0.7%</td>
<td>1.3%</td>
<td>n.a</td>
<td>2.1%</td>
</tr>
<tr>
<td>1689-1759</td>
<td>20%</td>
<td>0.4%</td>
<td>0.6%</td>
<td>1.6%</td>
<td>3.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>1760-1797</td>
<td>11%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>1.7%</td>
<td>0.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>1798-1834</td>
<td>10%</td>
<td>0.5%</td>
<td>0.4%</td>
<td>-0.2%</td>
<td>n.a</td>
<td>0.5%</td>
</tr>
<tr>
<td>1835-1854</td>
<td>6%</td>
<td>0.6%</td>
<td>-0.5%</td>
<td>2.0%</td>
<td>0.5%</td>
<td>0.3%</td>
</tr>
<tr>
<td>1855-1890</td>
<td>10%</td>
<td>0.7%</td>
<td>2.6%</td>
<td>1.1%</td>
<td>3.5%</td>
<td>-</td>
</tr>
<tr>
<td>1891-1910</td>
<td>6%</td>
<td>0.8%</td>
<td>1.7%</td>
<td>0.6%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>average</td>
<td>100%</td>
<td>0.5%</td>
<td>0.8%</td>
<td>2.2%</td>
<td>n.a</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Sources: listed in notes 4-7.

### Table 2: Summary Fiscal Indicators

**XVII-XIX Centuries**

<table>
<thead>
<tr>
<th></th>
<th>1588</th>
<th>1619</th>
<th>1716</th>
<th>1762-1776&lt;sup&gt;1&lt;/sup&gt;</th>
<th>1801-1803&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Military % Total Expenditures</strong></td>
<td>26</td>
<td></td>
<td></td>
<td>52</td>
<td>70&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Total Revenues % Debt</strong></td>
<td>56</td>
<td></td>
<td></td>
<td>87</td>
<td>61</td>
</tr>
<tr>
<td><strong>Total Revenues in 1750 1000 contos</strong></td>
<td>1.3</td>
<td>1.8</td>
<td>5.1</td>
<td>4.9</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>Déclima (% total)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td><strong>Customs and excises (% total)</strong></td>
<td>68</td>
<td>75</td>
<td>58</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>(% from Lisbon)</td>
<td>(54)</td>
<td>-</td>
<td>(60)</td>
<td>(68)</td>
<td>(76)</td>
</tr>
<tr>
<td><strong>Domain revenues (% total)</strong></td>
<td>32</td>
<td>25</td>
<td>42</td>
<td>49</td>
<td>38</td>
</tr>
</tbody>
</table>

<sup>1</sup> Annual average  
<sup>*</sup>1801  
Sources: MSS, Appendix table 1.
### Table 3
Coinage of specie in the Lisbon mint

<table>
<thead>
<tr>
<th>Year</th>
<th>Gold (1000c)</th>
<th>% private</th>
<th>% total</th>
<th>% arrival</th>
</tr>
</thead>
<tbody>
<tr>
<td>1688-1700</td>
<td>3.9</td>
<td>n.a.</td>
<td>73%</td>
<td>n.a.</td>
</tr>
<tr>
<td>1701-1710</td>
<td>9.5</td>
<td>95%</td>
<td>84%</td>
<td>106%</td>
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<tr>
<td>1711-1720</td>
<td>11.1</td>
<td>89%</td>
<td>100%</td>
<td>31%</td>
</tr>
<tr>
<td>1721-1730</td>
<td>12.8</td>
<td>49%</td>
<td>100%</td>
<td>19%</td>
</tr>
<tr>
<td>1731-1740</td>
<td>15.6</td>
<td>29%</td>
<td>100%</td>
<td>23%</td>
</tr>
<tr>
<td>1741-1750</td>
<td>20.9</td>
<td>52%</td>
<td>97%</td>
<td>34%</td>
</tr>
<tr>
<td>1751-1760</td>
<td>14.2</td>
<td>21%</td>
<td>99%</td>
<td>32%</td>
</tr>
<tr>
<td>1761-1770</td>
<td>9.4</td>
<td>14%</td>
<td>91%</td>
<td>26%</td>
</tr>
<tr>
<td>1771-1780</td>
<td>4.7</td>
<td>11%</td>
<td>92%</td>
<td>16%</td>
</tr>
<tr>
<td>1781-1790</td>
<td>2.2</td>
<td>18%</td>
<td>66%</td>
<td>20%</td>
</tr>
<tr>
<td>1791-1797</td>
<td>.9</td>
<td>49%</td>
<td>37%</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Source: Computed from annual data in Appendix Table 2 in MSS

### Table 4: Comparative tax burden in 1763

<table>
<thead>
<tr>
<th>Countries</th>
<th>state revenues (thousand réis per person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>7.2</td>
</tr>
<tr>
<td>England and Wales</td>
<td>5.9</td>
</tr>
<tr>
<td>Portugal</td>
<td>3.5</td>
</tr>
<tr>
<td>France</td>
<td>2.4</td>
</tr>
<tr>
<td>Spain</td>
<td>2.4</td>
</tr>
<tr>
<td>Prussia</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Sources: Described in MSS, Table 3
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