# Goodbye, Mr. Portugal: Fiscal crisis, constitutional revolution, and the independence of Brazil (1808-22) 

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#### Abstract

This article provides a new interpretation of Brazil's independence that relates the process of political emancipation to the Portuguese empire's fiscal crisis at the beginning of the nineteenth century. We discuss the origins and impact of the fiscal crisis that followed the Napoleonic invasion of Portugal in 1807 and the transfer of the government to Rio de Janeiro. Quantitative evidence shows that expenditures with the palace and the army in Brazil were higher than those discussed in the previous literature. Moreover, the government was only able to finance itself by increasing loans via paper money issuances from the Bank of Brazil. Real wages show that the inflationary policy in the 1810s led to a rapid decline in living standards, fuelling dissatisfaction with the government. Our findings are consistent with views expressed in contemporary official correspondence and parliamentary debates.


## KEYWORDS

Brazil, fiscal crisis, independence, wages

JEL CLASSIFICATION
N16, N26, N36

Why did Brazil break ties with Portugal in 1822? The question is not easy to answer, especially when one considers the specificities of Portuguese America's independence: by the time Brazilian elites decided to separate from Portugal, their country had not been a colony for almost 15 years. As a result of the invasion of Portugal by Napoleonic troops in 1807, not only were the king and the royal family forced to flee to Brazil, but the entire Portuguese state apparatus was moved with them to Rio de Janeiro. From 1808 onward, the Portuguese Empire was ruled from the Southern

Hemisphere. The transfer of power was accompanied by the abolishment of the former colonial relationship's central aspect: the obligation of merchants in Brazil to trade exclusively with Portugal. As soon as the government set foot in South America, trade was free with any 'friendly nation' from every Brazilian port. Since import taxes were the main source of state revenue at the time, a good share of fiscal capacity had been transferred along with the royal family across the Atlantic. Then, after the Napoleonic Wars came to an end in 1815, king João VI decided to stay in Brazil and to rule the newly founded United Kingdom of Portugal, Brazil, and Algarves from its former colony instead of moving back to Europe. It should be clear, then, that independence in 1822 did not intend to break long inexistent colonial ties.

Back in Portugal, while D. João VI was in Brazil, dissatisfaction with the anomalous condition of a European kingdom suddenly downgraded to the position of 'a colony's colony' had been simmering since the French troops had been expelled from the country in $1811 .{ }^{1}$ It was only in 1820, however, that a general revolt emerged in Portugal. Why did it take 5 years after the end of the Napoleonic Wars for the Portuguese to rebel and to exact the royal family's return? By then, urban uprisings backed by the army had begun to spread simultaneously in both Portugal and Brazil. It was in the context of generalized political turmoil on both sides of the Atlantic that a Constitutional revolution put an end to D. João's absolutist powers in $1821 .{ }^{2}$ Traditional explanations for the independence of Brazil point, correctly, to the conflicts that arose between Portuguese and Brazilian representatives in the Parliament assembled in Lisbon to rule the new transcontinental polity immediately after the liberal revolution. However, they fail to explain why a revolution that mobilized urban middle classes and political leaders from both sides of the Atlantic happened in the first place. ${ }^{3}$ They also fail to explain some of the central reasons for the conflicts that emerged between Brazilian and Portuguese representatives in the Assembly, which eventually led to Brazil's political emancipation. Why could politicians from both Europe and Portuguese America, recently united and victorious against a despotic king, not come to an agreement that would preserve the political union between Portugal and Brazil?

In this paper we provide a new interpretation for Brazil's complex emancipation process by presenting evidence of D. João's government's deep fiscal crisis at the beginning of the nineteenth century, whose disturbing economic and social consequences - inflation and arrears of military and civil servants' payments - reached its climax, not coincidentally, in 1820. Generalized dissatisfaction with D. João's rule, caused by the decline in living standards in Portuguese America as well as in Europe, underpinned the political revolution that brought the Portuguese absolutist monarchy to an end. The shortcomings of revenues to face large expenditures in both Brazil and Portugal could not be resolved immediately after the Constitutional revolution. Disagreements over how to spend revenue, on what to cut in the budget, and over who should have a stronger hand in those decisions fuelled conflicts in the Constitutional Assembly in Lisbon - promoting, in the end, incentives for Brazil's independence. By establishing the relationship between the fiscal crisis and political revolution in Brazil and Portugal, we address two fundamental questions: not only why change happened, but also why it happened when it did. We are particularly concerned with two distinct and equally important time references in this paper: 1820, when political dissatisfaction reached its climax and the Constitutional revolution started, and 1822, when deep parliamentary disagreements on the fiscal and political structure of the new Constitutional monarchy led Brazilian representatives to separate from Portugal.

[^0]So many specificities make Brazil's independence seem an anomalous case in Latin America. The idea that Brazil 'had secured its independence relatively peacefully and had remained united under a monarchy' was used by both Portuguese- and Spanish-speaking intellectuals since the nineteenth century to stress historical and institutional differences between Brazil and the rest of Latin America. ${ }^{4}$ While its neighbours were politically troubled republics, Brazil regarded itself as a stable polity, with a well-organized State and strong monarchs to lead the country. The first of them, D. Pedro, the legitimate heir to the Portuguese throne, was left behind in Rio in 1821 when D. João, his father, was called back to Lisbon after the Constitutional Revolution. In the following months, after conflict with Portuguese representatives in the Luso-Brazilian parliament erupted, Brazilian elites would manage to set up an independent government by co-opting D. Pedro to their cause.

However, the apparent historical divide between Brazil and the rest of Latin America can only be sustained if attention is not paid to the deeper causal relationship between the royal finances' distress and the political upheaval that ignited the region's emancipation processes. The revolt against absolutism that spread both in Brazil and in Portugal in 1820 and 1821, respectively, was in fact typical of the Atlantic countries' revolutions between the 1770s and the 1820s. Matters of taxation and representation were of course at the heart of the American Revolution, following England's victory in the Seven Years War and the need for resources to effectively control vast newly conquered areas in North America. ${ }^{5}$ A few years later, across the Atlantic, 'the immediate cause of the French Revolution was the fiscal crisis of 1788', a direct consequence of France's Ancien Régime cumulative financial troubles, as it was proposed by Thomas Sargent and François Velde. ${ }^{6}$ Spain was also affected by deep fiscal troubles at the beginning of the nineteenth century that eventually led to the demise of its American empire. ${ }^{7}$

Philip Hoffman and Kathryn Norberg have defined fiscal crises as 'a jump in expenses beyond both revenues and the ability to borrow'. Suppose, they say,
that a prince goes off to war and spends more than he collects in taxes. If he borrows to make up the difference, there is no fiscal crisis. But if he cannot borrow enough, or if he is forced to default on old loans, then a crisis has erupted. The same is true if he resorts to measures of desperation, such as seizing his subjects' property or withholding payment from his troops. ${ }^{8}$

This definition perfectly fits D. João's troubles by the end of the 1810s. We use new budgetary data to analyse contemporary expenditures and revenues to show that, forced to establish a new Court in Rio while military expenses reached unprecedented levels at the same time, the LusoBrazilian regime struggled and finally failed to make ends meet. Revenues rose, mainly by taxing exports from the northern provinces of Brazil, but not enough to afford rising expenditures. ${ }^{9}$ From 1815 onward, complaints about arrears of payment mounted. Without enough means from

[^1]taxation, loans from the Bank of Brazil - established in 1808, after the king's arrival in Rio accounted for 34 per cent of government revenue between 1817 and 1820. Those were loans that would not be paid, and that in the end represented an expansion of the monetary base. We present evidence that in its final and critical years, one-third of Brazil's Old Regime's expenses were financed by paper money issuance.

Inflation followed. Manioc flour and jerky beef, staple food for Brazilians at the time, doubled and tripled in price, respectively, between 1815 and $1819 .{ }^{10}$ The urban middle classes, including troops and the state's bureaucracy, were specially affected. Correspondence between officials at the time show that they were particularly concerned with growing dissatisfaction among army ranks. ${ }^{11}$ Rural landlords, who had to buy food for their enslaved persons at the market, also faced increasing costs to produce export commodities.

Fiscal crises such as the one produced by D. João's government were typical of absolutist regimes. Rulers' strong control over spending, associated with weak fiscal capacity, led to recurrent financial and political crisis in Old Regime polities. ${ }^{12}$ Stronger parliaments, such as the one first established in England by the end of the seventeenth century, represented an institutional solution to that problem, since they could simultaneously increase fiscal capacity and contain the Crown's ability to take unilateral decisions on spending. ${ }^{13}$ The first explicit analogy between the establishment of a Constitutional monarchy in Brazil and the Glorious Revolution was made by William Summerhill. In his book on Brazil's nineteenth-century finances, he managed to show how Imperial Brazil was able, through a shift of fiscal authority toward its parliament, to keep 'public finances on an even keel' after independence. Brazil's 'formal political institutions constrained and ultimately eliminated the monarch's ability to unilaterally tax, spend, and debase the currency,. ${ }^{14}$

Although we can rely on Summerhill for a description of how Brazilian elites solved early nineteenth-century financial and political troubles, there has not been yet a rigorous assessment of the problem itself. How big was the budget deficit under D. João? How much monetary issuance was necessary to finance public spending? How big was inflation's impact on living conditions? Not only we do not know the answers to those questions, but fiscal matters have seldom been considered a factor in Brazilian independence. ${ }^{15}$ In the last two decades, 'political culture' has been one of the main explanations for Brazil's emancipation from Portugal. ${ }^{16}$ Although liberal ideas and constitutional values were essential to mobilizing social groups dissatisfied with D. João's regime, material conditions were also decisive, especially if we want to understand the revolt's timing. Earlier, traditional nationalist interpretations of independence went as far as denying any crisis whatsoever (not only fiscal crisis), stressing continuity over political change and praising the royal family for their shrewd leadership in a process of peaceful 'divorce'. ${ }^{17}$ The Marxist historiography, which was the most accepted explanation for Brazilian independence in the second half

[^2]of the twentieth century, presented Brazil's emancipation as a conflict that opposed landowners in Brazil to merchants and the state in Portugal. ${ }^{18}$

What could account for that strange lack of attention to fiscal matters? In the next section we discuss, as a probable explanation, how previous analyses of Rio's budget misinterpreted its magnitudes and underestimated the crisis by not separating monetary transactions with Spanish pesos - essential to facilitating trade after the transfer of the Court to Rio - from traditional expenditure and revenue records. In section II we present new series of real wages, exchange rates, and prices for tradable and non-tradable goods in early nineteenth-century Brazil. Those data are used to show how the excessive issuance of paper money to finance the government had an impact on living conditions and growing political dissatisfaction in Brazil by the end of the 1810s, leading to the Constitutional Revolution of 1821 . Section III presents evidence that fiscal matters were also behind the central disagreements between Portuguese and Brazilians in the Constitutional Assembly in 1821 and 1822 - disagreements that finally led to Brazil's independence. Section IV concludes.

## I | BUDGET PROBLEMS

Throughout the eighteenth century, while France and Spain struggled to maintain their budgets in order, Portugal had kept an enviously good fiscal balance. First remittance of gold, and then the increase in commodity exports (sugar, cotton) from Brazil, helped to raise revenues in Lisbon, while Portugal's caution in not getting involved in wars gave some leeway in its expenses. ${ }^{19}$ However, the conflict that engulfed Europe after the French Revolution changed everything. Suddenly faced with the menace of being invaded by France and Spain, 'the Portuguese state was forced to spend enormous sums on maintaining a standing army, ${ }^{20}$ Between 1802 and 1812, military expenditures rose from 60 per cent to 78 per cent of the budget. Already before the transfer of the Crown to Brazil, between 1800 and 1807, the Portuguese state produced regular deficits, a situation that did not change after 1808.

What did change was the accounting of the deficits, since the Portuguese Empire would have two distinct budgets after D. João moved to Brazil: one in Lisbon; the other in Rio. The Lisbon budget had to pay enormous sums for the war against the French, but even after the end of the Napoleonic Wars, military expenditure was kept high, above 68 per cent of total spending, to pay for the British allied army occupying the country. ${ }^{21}$ Understandably, given the conflict in Europe, Rio de Janeiro's budget could not count on significant remittances from Lisbon, and had to face the establishment of a new royal court in Brazil. To offset this increase in spending, Rio began to withhold important fiscal revenues previously remitted to Portugal, such as the surplus from captaincies (other regions of Brazil) and the quinto (a 20 per cent tax on gold). In addition, the government created new taxes on property (real estate and enslaved persons) and exports. ${ }^{22}$ As the main exports during this period, such as cotton, sugar, and tobacco, came from the northern

[^3]provinces, the new taxes resulted in a significant increase in regional transfers, fuelling animosity and complaints against the fiscal demands from the court. For a while, these new revenues seemed sufficient to pay for the growing expenses of the government in Brazil. But not for long. Already in 1811, D. João's most important minister wrote a report to his majesty informing him that 'the entire fiscal edifice of the regime is at risk. ${ }^{23}$ By 1815 , there were widespread complaints of arrears of payment from the government. ${ }^{24}$ To solve that problem, the government increasingly borrowed from the Bank of Brazil, an institution that had been created as soon as the Crown arrived in Rio with the explicit function of providing funds for the government. ${ }^{25}$

Exactly how much Rio's budget was in disarray was almost impossible to know at the time. Uncertainties about the composition of expenditures and sources of government funding in Rio's budget between 1808 and 1820 arise mainly from the fact that fiscal data for Brazil before independence were notoriously scarce. The Italian geographer Adrien Balbi, who collected statistical information for Portugal in 1820, was among those who decried the 'mystery [that] has always involved everything related to Portugal's finances'. ${ }^{26}$ Since there was no public information about government finances, fiscal studies for the period of D. João in Brazil usually rely on Adrian Balbi (1822) and Louis de Freycinet (1823), a French traveller who visited Brazil in the 1820s. These sources present relatively detailed data on Rio de Janeiro's budget from 1808 to 1820. There is, however, one important problem with those reports. Both Balbi and Freycinet included large quantities of Spanish coins amassed by the government in exchange for Brazilian currency essentially a monetary transaction - in the budget, an accounting decision that would lead to significant misunderstandings about its composition. The problem disappears once we understand why the government needed all those silver pesos, and the necessary adjustments can be made.

Back in 1808, when D. João put an end to mercantilist restrictions and opened Brazil's commerce to every 'friendly nation', gold was in large supply in Rio, but silver was not, which was a problem, as the government wanted to facilitate and increase transactions that could be taxed. Being much more valuable than silver, gold was suitable for transatlantic commerce, controlled by a relatively small group of traders in colonial times, but not for the growing number of traders and increasing day-to-day transactions in multiple ports. Lower denomination coins made of silver were better suited for it. To mitigate the silver shortage problem, D. João's government decided to buy and restamp Spanish pesos used in the neighbouring region of the River Plate basin, allowing the new coins to circulate in Brazil. ${ }^{27}$ As silver was overvalued in Brazil, Rio de Janeiro quickly became a port of currency arbitrage in South America. ${ }^{28}$ Until the end of the 1810s, large amounts of silver coins would be brought to Brazil, exchanged for local currency by the government, restamped with a small seigniorage gain, and transferred to the public.

The problem in government accounting came from the fact that Balbi, Freycinet, and all subsequent literature included in the budget the gross, not net, value of those transactions (see the Appendix for a detailed explanation). This implies that a transaction whose fiscal result was a small profit appears to account, in their reports, for more than 30 per cent of total expenses and

[^4]TABLE 1 Expenditures in the Rio de Janeiro budget (contos de réis).

| Main categories | 1808 | 1816 | 1817 | 1818 | 1819 | 1820 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Royal house | 20\% | 26\% | 26\% | 28\% | 28\% | 29\% |
| Freycinet | 456 | 1173 | 1458 | 1513 | 1659 | 1706 |
| Vilanova Portugal |  | - | 1374 | 1579 | 1629 | 1758 |
| Army | 20\% | 22\% | 24\% | 21\% | 22\% | 25\% |
| Freycinet | 454 | 965 | 1131 | 939 | 1384 | 1671 |
| Vilanova Portugal |  | - | 1468 | 1356 | 1261 | 1306 |
| Navy | 27\% | 19\% | 16\% | 15\% | 16\% | 16\% |
| Freycinet | 603 | 825 | 856 | 895 | 1166 | 1035 |
| Vilanova Portugal |  | - | 846 | 721 | 958 | 827 |
| Treasury |  |  |  |  |  |  |
| Freycinet | 633 | 620 | 632 | 648 | 819 | 693 |
| Vilanova Portugal |  | - | 902 | 1235 | 1284 | 1338 |
| Total (original) |  |  |  |  |  |  |
| Freycinet | 2234 | 5924 | 7170 | 7924 | 8661 | 9763 |
| Vilanova Portugal |  | - | 6720 | 8059 | 8712 | 9677 |
| Pesos, transactions |  |  |  |  |  |  |
| Freycinet | 0 | 1478 | 1319 | 2422 | - | 3704 |
| V. Portugal | 0 | - | 1692 | 2563 | 2879 | 3797 |
| Total (corrected) |  |  |  |  |  |  |
| Freycinet | 2234 | 4446 | 5851 | 5501 | - | 6059 |
| V. Portugal |  | - | 5028 | 5565 | 5833 | 5880 |

Sources: Freycinet, Voyage Autour Du Monde; Vilanova Portugal (n.d); Carrara, 'Fiscalidade e Finanças'.
revenues. ${ }^{29}$ As a result of those incorrect numbers, the relative importance of expenses with the military and the palace (royal house, in the budget) were underestimated. That is probably why latter economists and historians that knew Balbi and Freycinet's numbers, but not the effects of the fiscal crisis, could not identify any reckless growth in expenses. The significance and impact of loans with the Bank of Brazil ended up being downplayed as well. For example, in 1820 the government borrowed 1155 contos from the Bank, according to Freycinet, to cover the difference between expenses and revenues. The inflationary effect of that amount of paper issuance would be large enough already, if we accepted the original total spending of almost 10000 contos in 1820. However, it is even more impressive after subtracting the Spanish pesos from the budget and finding that the total spending of the government in that year amounted to no more than 6059 contos.

Table 1 presents the total expenditures of the Portuguese government in Rio with and without purchases of Spanish pesos, which results in more reliable measures of the composition of the Crown's expenses. To make this adjustment, we use two additional sources that detail the values of coin transactions between 1816 and 1819, as Freycinet's original report presents this information only for $1820 .{ }^{30}$ The first is a manuscript also by Freycinet with information that is not in his book,

[^5]while the other is from Tomás Antonio Vilanova Portugal, who amassed multiple offices at D. João's court and effectively ruled Brazil and the Portuguese empire by the end of the 1810s.

Without the Spanish pesos, total expenditures are 42 per cent lower than Freycinet reported between 1816 and 1820. This reduction, in turn, increases the relative weights of all the remaining categories in the budget. If we use the average values reported by Freycinet and Vilanova Portugal (after correcting them for the monetary double entry), we find that between 1816 and 1820, 28 per cent of all expenses were made with the royal house, while 39 per cent were destined for the army and the navy.

As shown in table1, the numbers reported by Freycinet and Vilanova Portugal were very similar, with the treasury as the only significant difference (see the Appendix for a detailed discussion of the budget composition). The data from both sources clearly show that with the budget division after 1808, the royal house became too large for Brazil's fiscal resources, reaching an unusual proportion of expenditures even for absolutist standards. If we combine the budgets of Lisbon and Rio, the royal house represented 8 per cent of total expenses in 1817, a cost similar to that of the royal house in Spain. ${ }^{31}$ However, the cost of the royal house - approximately a quarter of total expenses in Brazil - ended up being financed exclusively from the local budget, a fact that is consistent with reports of widespread discontent in Rio de Janeiro with the privileges of the Portuguese nobility.

Revenues increased as well. Transfers from the northern captaincies grew with the new taxes on exports created in 1808. From the amount Bahia's Royal Board of Finance (Real Junta da Fazenda) collected in 1810, 17.6 per cent came from the new tax for the court, that is, the subsidio on tobacco, sugar, and cotton. Regarding expenses, 25 per cent were for the military payroll and 35 per cent for 'remittances to the royal treasury' in Rio. Pernambuco was similar, with 21.3 per cent of revenue coming from the new export tax. For expenses, 17 per cent were for the military payroll and a staggering 52 per cent for Rio de Janeiro. After the end of the Napoleonic Wars, in 1815, when cotton prices rose again, Pernambuco transferred 32 per cent of its revenues to the government in Rio. ${ }^{32}$ There is ample qualitative evidence that increased fiscal extraction generated widespread discontent. As historian Maria Odila Silva Dias famously noted, 'notwithstanding [Brazil's] rise to United Kingdom', from the perspective of 'Bahia and the Northeast' the change in Rio's political status amounted to 'no more than a deepening of Portuguese colonial practices of a previous century'. ${ }^{33}$ Not surprisingly, cotton regions had direct connections with the 1817 revolution in Pernambuco, and participants also took part in previous protests against the government in Rio. ${ }^{34}$ In fact, one of the first acts of the revolutionaries in Pernambuco was to abolish the new taxes. When cotton prices fell and export taxes increased (the most important tax was specific, not ad valorem) in 1821, several regions in the northeast stopped transferring revenues to Rio, sending the Crown's finances over the edge. ${ }^{35}$

Another important source of revenue between 1808 and 1820 was custom duties collected in Rio. As table 2 presents, they increased 104 per cent in that period, but were nonetheless insufficient to cover the costs of D. João's government, especially after 1818. In the end, 34 per cent of

[^6]TABLE 2 Revenues from the Rio de Janeiro budget (contos de réis).

| Main categories | 1808 | 1816 | 1817 | 1818 | 1819 | 1820 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customs duties | 35\% | 24\% | 21\% | 28\% | 35\% | 29\% |
| Freycinet | 785 | 1067 | 1095 | 1549 | 1977 | 1720 |
| Vilanova Portugal |  | - | 1094 | 1549 | 1916 | 1650 |
| Mint |  | 5\% | 4\% | 5\% | 4\% | 4\% |
| Freycinet |  | 215 | 217 | 224 | 165 | 148 |
| Vilanova Portugal |  | - | 258 | 286 | 256 | 326 |
| Captaincies surplus | 8\% | 20\% | 16\% | 18\% | 27\% | 13\% |
| Freycinet | 184 | 1778 | 1659 | 1957 | 1514 | 1551 |
| Northern captaincies |  | 97\% | 94\% | 95\% |  | 94\% |
| Vilanova Portugal |  | - | 1130 | 1012 | 635 | 830 |
| Bank |  | 9\% | 17\% | 20\% | 36\% | 26\% |
| Freycinet (suprimento) | 0 | 400 | 1120 | 450 | - | 1155 |
| Vilanova Portugal |  | - | 1739 | 1743 | 1980 | 1929 |
| Total (original) |  |  |  |  |  |  |
| Freycinet | 2258 | 5950 | 7140 | 7949 | 8673 | 9716 |
| Vilanova Portugal |  | - | 6791 | 8140 | 8214 | 9566 |
| Pesos, transactions |  | 25\% | 24\% | 31\% | 32\% | 39\% |
| Freycinet | 0 | 1498 | 1593 | 2432 | - | 3704 |
| Vilanova Portugal |  | - | 1704 | 2568 | 2660 | 3769 |
| Total (corrected) |  |  |  |  |  |  |
| Freycinet | 2258 | 4452 | 5547 | 5517 | - | 6012 |
| Vilanova Portugal |  |  | 5087 | 5572 | 5555 | 5797 |

Sources: Freycinet, Voyage Autour Du Monde; Villanova Portugal (n.d.); Carrara ‘Fiscalidade e Finanças, (Anexo 5-1, sobras das juntas de Fazenda).
Note: Northern captaincies share include surplus from Bahia, Ceará, Maranhão, Paraíba, Pernambuco, and Piauí. Relative shares are the averages between Freycinet and Vilanova Portugal. For pesos, the comparison is with the original estimates.
government revenue between 1817 and 1820 came not from regular taxes, but from the issuance of money. Table 2 also presents that revenues from seigniorage, included in the 'mint' category, were negligible. These numbers are consistent with the description from Vilanova Portugal that the royal court 'did not fit' into the revenues generated by the Brazilian captaincies. ${ }^{36}$

The government's growing need for resources generated common discontent among different classes and in various parts of Brazil. For most colonial elites, dissatisfaction stemmed from an increase in local taxation. For those who were not part of the elite, political dissatisfaction was due to the rise in food prices and fall in income. As the Prussian consul Johann Sturz rightly mentioned, even if the Bank was the nominal creditor of the government, the public was the 'real one, ${ }^{37}{ }^{37}$ The next section thus explores the effects of monetary issuance from the Bank of Brazil, which brought the Portuguese Old Regime's economic and political crisis to its capital, Rio de Janeiro.

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## II | INFLATION AND REVOLUTION

The Bank of Brazil's founding charter was explicit in that the institution's central role was to provide resources for the State. ${ }^{38}$ The Bank also had the function of easing economic transactions by allowing the use of tickets 'payable to the bearer in cash', that is, banknotes convertible into gold and silver. The credibility of banknotes came from their acceptance by the government for payment of taxes. Their collateral came from deposits of gold and silver and from the initial capital fund, raised from the sale of shares. The number of shareholders, however, was never sufficient to produce the reserves necessary to back banknotes issued, which generated increasing distrust among merchants. ${ }^{39}$

Notwithstanding the increase in silver coins, the Bank was responsible for the biggest change in Rio de Janeiro's monetary market in the 1810s: the rapid expansion of paper money. Its significance can be better understood if we remember that the use of paper money was something recent even in Portugal. The first issuance of paper money by the Portuguese government occurred in 1797 to finance war expenses. Despite its novelty, paper money seems to have been well received in Rio, at first. The distrust of banknotes in Brazil only began when the government had problems paying its civil and military payroll in 1814. According to O Portuguez, the 'ruinous administration' of public revenues had left Rio's treasury empty in that year. ${ }^{40}$ Afterwards, the credibility of paper money decreased again when the government tried to restrict the volume of redemption of the banknotes. According to Horace Say, who had lived in Brazil since 1815, the first signs of devaluation appeared in 1818, which led to the 'disappearance of silver pieces from circulation'. ${ }^{41}$ The government made the outflow of Rio's provincial coins illegal, but to no avail. ${ }^{42}$

Figure 1 shows that the increase in issuance after 1818 reinforced the expectation that reserves were insufficient to redeem the banknotes, generating a growing premium on metallic coins. There were already 8500 contos of banknotes in circulation in 1820 . To understand how much this amount represented, we can compare it with the supply of paper money in the United States, where in 1808 notes in circulation were less than USD one per capita. ${ }^{43}$ It is staggering, therefore, to realize that the amount of paper money issued by the Bank of Brazil, circulating mainly in the province of Rio de Janeiro, increased from USD 4.2 in 1817 to USD 15.5 per capita in $1820 .{ }^{44}$

The right panel of figure 1 shows the effect of the paper money issue. The agio (the premium of bank deposits over circulating coins) after 1818 indicated an increased probability that the Bank would not be able to sustain convertibility and would have to default on the holders of the banknotes. ${ }^{46}$ The unusual behaviour of the exchange rate in 1814 is due to the devaluation of the pound during the last days of the Napoleonic Wars. Moreover, the fact that England did not return to the gold standard until 1821 may explain part of the variation in the Brazilian exchange rate. A devaluation in the Brazilian currency could be an effect of the appreciation of

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FIGURE 1 Banknote issuance and agio rate for the exchange rate in Rio de Janeiro. Sources: Relatório da Comissão de Inquérito (1859, anexo B), Diário do Rio de Janeiro (Hemeroteca Digital, Biblioteca Nacional), Cavalcanti, ${ }^{45}$ BNA FO 97-302.
the pound, which began after the end of the Napoleonic Wars. To isolate the effect of banknote issuance on the exchange rate, we compare the Brazilian currency with Cadiz, Genoa, and Malta, three ports often listed in British newspapers that did not undergo changes in their monetary standards during this period. Figure 2 presents information after the end of the Napoleonic blockade, which generated great trade volatility in several countries, with exchange rates quoted in the London market. The figure shows that the Brazilian exchange rate first broke from the common trend after 1818 and then diverged from the Lisbon rate after D. João's return to Portugal in 1821.

Public debates at the time made it clear that a good monetary system required trust in the government. Changes in the value, or imprint, of the currency discredited the monetary standard, and inflation ensued. The Portuguese government in Brazil, according to an anonymous text in the newspaper O Portuguez, through 'ignorance or contempt of these principles', only created distrust in the currency by increasing the value of silver and doubling that of copper. ${ }^{47}$ The increase in prices in Brazil after 1808 appears in several contemporary accounts. Travelers such as John Luccock and Augustin Saint-Hilaire noted an increase in the cost of living from 1814 and its effects on labour costs. ${ }^{48}$ With the increase in food prices in 1819, contemporaries claimed that Rio de Janeiro was experiencing the 'greatest supply crisis in living memory'. ${ }^{49}$ According to documents

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FIGURE 2 Exchange rate against the pound rates in the London market. Sources: Wetenhall Course of Exchange. British National Archives (ADM 114). Notes: The light-grey line is an average for the Cadiz, Genoa, and Malta exchange rates. A lower index number represents devaluation of the exchange rate.
of the time, inflation and supply problems with food that had price controls, such as raw meat, fuelled revolt in the population. ${ }^{50}$

Political dissatisfaction caused by inflation was felt even in places where Bank of Brazil's banknotes circulation was limited, such as Pernambuco. The rise in prices in the northern rich captaincy was nonetheless also the result of Rio's fiscal troubles. As reported by Sturz, 'the court at Rio' while João VI was in Brazil 'had frequent and pressing wants for money', not rarely drawing 'in anticipation on the treasuries of the Northern provinces, without caring whether they could pay such drafts or not'. One of these requests was behind the desperate, 'fatal resolution' by local authorities in Pernambuco 'of calling in all the copper currency', the regional alternative to paper money, 'then in circulation in the province, in order to re-issue it with a new stamp of double the value it had previously borne'. Inflation ensued, and the French general consul at the time informed his government that the rising price of manioc flour was among the reasons for the local military garrison to start the 1817 Revolution in Pernambuco. ${ }^{51}$ As far as we know, there are no organized data on the amount of copper money in Brazil in the late 1810s and early 1820s, but Sturz, writing a few years after that, insists that Rio, at the request of local governments, flooded the captaincies with new copper coins by the end of D. João's reign in Brazil. ${ }^{52}$

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FIGURE 3 Price of a consumption basket, Salvador and Rio de Janeiro. Sources: Mattoso, 'Au Nouveau Monde'; Johnson, 'A preliminary inquiry'. Note: For details on the construction of the consumption basket, see Appendix.

Despite the contemporary reports of inflation, there are almost no quantitative measures to assess the effect of price instability on population income. ${ }^{53}$ To evaluate whether money issued by the Bank of Brazil affected prices and the population's standard of living, we estimated real wages using nominal wages and price data for Rio and Salvador. ${ }^{54}$ In addition to being two of the main ports in Brazil, these cities were the regions with the greatest number of banknotes. Figure 3 shows the price index based on a food consumption basket that uses the well-known method from Robert Allen (see the Appendix for details). ${ }^{55}$ Despite short-term fluctuations, the trend is clear: after a slight increase between 1780 and 1807, food prices increased faster during the period of D. João in Brazil, especially after 1815. This is the period when the number of banknotes issued increased and revolts started to break out in the northeast. Moreover, since some products, such as raw meat, had price controls, the price index underestimates the increase in food costs because it does not capture the increasing food scarcity during this period.

Figure 4 shows that inflation eroded real wages (welfare ratios) during the 1810s. We have added data for almost the entire nineteenth century to show the magnitude of the fall in real wages during the period that D. João was in Brazil. ${ }^{56}$ In no other decade did wages fall so much. There is also

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FIGURE 4 Welfare ratios for carpenters and masons in Salvador (Bahia) and Rio de Janeiro. Sources: Johnson, 'A preliminary inquiry'; Lobo, Historia do Rio de Janeiro; Mattoso, 'au Nouveau Monde'.
quantitative and qualitative evidence for other professions that confirms the results for carpenters and masons, which represent our skilled workers in the figure. Welfare ratios for chaplains, who made a representation with the government asking for salary readjustments during the 1810s, dropped from four in 1806-07 to 2.7 in 1818-19. ${ }^{57}$

Even with evidence linking the fiscal situation to a decrease in living conditions, we need to check whether inflation was not a result of persistent effects from the Napoleonic Wars (180315). For Rio de Janeiro, import prices (see figure A4 in the Appendix) increased only during the Napoleonic blockade (1807-13) and not after. To ensure that the effect on food prices is associated with the issuance of money, we collected monthly data for Salvador published in the main newspaper of the period, A Idade D'Ouro. Local foodstuffs are the average price of black beans, corn, and manioc flour, three products that were not traded from and to other captaincies. We compare foodstuffs with export prices for the main commodities (cotton, sugar, and rice) and import food prices (butter, codfish, and Portuguese wine). Unfortunately, we do not have newspaper editions after June 1819, so we cannot observe the impact of exchange devaluation on import prices. Figure 5 shows that the price increase did not result from imports or locally produced tradable goods. Rather, inflation came mainly from foodstuffs produced and consumed in the captaincies, reinforcing the argument that worsening living conditions after 1815 were not due to external factors.

Even though studies show that real wages were falling in Latin America during the Napoleonic Wars, our results for Brazil are not comparable because those estimates do not analyse the period

[^12]

FIGURE 5 Prices in Salvador, Bahia (1813-19). Source: A Idade D'Ouro. Biblioteca Nacional Digital.

1815-22. Mexico is an exception that reinforces our findings: after the end of the continental system, prices stop rising, and wages begin to increase. ${ }^{58}$ In Brazil, however, the issuance of paper money in Rio and the debasement of copper coins in the northeast continued to pressure food prices, generating growing dissatisfaction.

That dissatisfaction was expressed through calls for regime change and the establishment of a representative government. Liberal ideas had been circulating in Brazil since at least the end of the eighteenth century, but there was a quantifiable increase in the use of constitution-related concepts and terms by 1820 and $1821 .{ }^{59}$ 'Constitution' and the end of 'despotism' was what was called for in those years - not 'independence', at least not until $1822 .{ }^{60}$ Not rarely, the political argument was explicitly related to economic problems. In a public letter to the king, published in Bahia in 1820, an anonymous informant advised D. João that that captaincy was 'about to start a revolution': 'There is talk everywhere of revolution as something necessary to stop the hunger and the lack of payments. ${ }^{61}$ In Rio, a detailed description of the relationship between economic troubles and political dissatisfaction was provided. In October 1820, the highest police authority in the country received a report on the capital's 'public opinion'. In it, the political informant warned Luso-Brazilian authorities about the recent growth of a 'revolutionary spirit' in Rio, linked to 'feelings of hatred and blind disgust against the government of His Majesty'. This 'blind disgust' against

[^13]the government had its roots in current economic problems, the informant said. The merchant class blamed the king's ministers for its troubles, according to the report, because the excess in taxes 'tied and stifled' their businesses. Moreover, there was widespread conviction that the Treasury and the Bank of Brazil were being robbed 'daringly and with impunity'. ${ }^{62}$ Complaints that Rio's high bureaucracy and aristocracy were responsible for the economic troubles of the time also appeared on pamphlets and posters spread in the city in $1820 .{ }^{63}$

Whereas in Brazil inflation was the main cause of public discontent resulting from the government's financial crisis, in Portugal, where the local representatives of the Crown could not resort to money issuance, lack of payments to the civil servants and military personnel fuelled the 'revolutionary spirit'. Without much of the revenue that came from taxes on Brazilian exports before 1808, and having to spend most of its resources with the military, even after the end of the Napoleonic Wars, the Lisbon budget was also in a dire situation. At the beginning of 1820, the British military commander of the Portuguese army, Lord Beresford, lacking the necessary resources to pay for his troops, decided to travel to Brazil to request it directly from the king. Before leaving for Rio, Beresford recognized, in an open letter to the military, that payments were in arrears and that he expected His Majesty 'to take decisive measures' to correct that situation. ${ }^{64}$ With the lack of payments to military troops and officials in Portugal, the highest authorities in Europe warned D. João that the situation in 1820 could have throne-shattering repercussions. ${ }^{65}$ The 'revolutionaries', they said, were taking advantage of such a dire situation to seduce the Portuguese people 'as a mean to destroy the admirable foundations of the monarchy'. The main risk was in the army. Whispers of discontentment could already be heard among soldiers and officials, who were dissatisfied with the continuous lack of payments. ${ }^{66}$ The government in Rio, nonetheless, was bankrupt and could not help Lisbon, even if it wanted to.

Not surprisingly, revolutionary movements asking for a new 'constitutional' government erupted in major cities of the former Portuguese Empire, on both sides of the Atlantic. In August 1820, while Beresford was absent, still making his trip back from Brazil, the liberal movement took hold of Oporto. A few months later, in February 1821, a civil and military uprising in Rio forced D. João to swear allegiance to the new constitutional regime. ${ }^{67}$

## III | CONSTITUTIONAL CRISIS AND INDEPENDENCE

While the revolution against absolutism that started in 1820 was the result of the military, civil servants, and urban groups' discontent with inflation (in Brazil) and arrears of payment (in Portugal), the political process that ensued and finally led to Brazil's emancipation in 1822 was mainly a parliamentary one, though still fuelled by unresolved fiscal matters. There is virtually no information for the Rio budget in 1821 and 1822, but we know that fiscal problems persisted, since Brazil's total public debt increased by more than 20 per cent between the end of 1821 and June of 1823, moving

[^14]from 9870 contos to 12055 contos. ${ }^{68}$ By the end of 1821, D. Pedro, left in charge of Rio's government, wrote a letter to his father admitting that there was 'no money left' in Brazil to pay for the judiciary, the army, and other bureaucratic structures. ${ }^{69}$ In Portugal, the Constitutional Assembly approved a Lisbon budget that recognized more expenditures ( 8519 contos) than revenues ( 7677 contos) for $1821 .{ }^{70}$ In the end, revenues fell just short of expenses, a deficit much smaller than the 10 per cent difference that the Assembly had projected. ${ }^{71}$ All in all, Portuguese and Brazilian representatives debated in 1821 and 1822 knowing that there was a lack of resources and an excess of expenditures to be dealt with. Disputes over the state's revenues (which groups and regions should pay and how much) and its expenditures (which regional elites should have power to decide where and how much to spend) opposed European Portuguese America's centre-south region (around Rio) and Brazil's northern captaincies' representatives in the Assembly.

Whereas Rio and Lisbon fought for control over every region in Portuguese America, the most important and rich captaincies in the North - Pernambuco and Bahia - had different and specific political values. Captaincies' elites used to have relative independence in local fiscal matters since administrative reforms in the Empire in the eighteenth century. ${ }^{72}$ Now, in the beginning of the nineteenth century, their representatives in the Constitutional Assembly explicitly advocated 'federative' values, which in Brazil at the time meant the opposite of the concept's definition in North America: in Pernambuco and Bahia, 'federalism' meant as much self-government as possible. ${ }^{73}$ Those values informed not only the rich northern captaincies' actions and votes in the Assembly, but also centre-south (Rio and São Paulo) representatives' tactics when opposing Portuguese 'centralism. ${ }^{74}$

Conflicts started immediately after the triumph of the liberal movement in Rio and the establishment of the Constitutional Assembly in Lisbon in the beginning of 1821 when the royal family was called back to Portugal. The very announcement of the king's departure worsened the economic situation in Rio de Janeiro. Most of the entourage who was returning with him - between 3000 and 4000 people - had money saved in the bank. ${ }^{75}$ Immediately before the return journey, the demand for hard currency reached 40 contos per day. ${ }^{76}$ John Armitage reported that 'the entire suit accompanying his Majesty to Portugal, having sent all the Bank paper in their hands to be exchanged for bullion' produced a panic. ${ }^{77}$ Facing a bank run, the Bank suspended the full convertibility of its notes on 23 July 1821, limiting redemption to only 15 per cent of the value in gold and silver. ${ }^{78}$

Among the Bank of Brazil's main shareowners were Rio's merchants, including slave traffickers. Before leaving the country for Portugal, the king tried to appease them by publishing a decree asking the Constitutional Assembly for a loan of 2400 contos to refund half of the unpaid Crown

[^15]debts to the Bank. According to D. Pedro's inquiry commission into budget matters, the treasure had a debt of 4800 contos with the Bank in $1821 .{ }^{79}$ However, the loan requested by João VI created outrage among the Portuguese deputies in the assembly. ${ }^{80}$ The most vocal European leader against it was Manuel Borges Carneiro: 'They now want no more than 6 million from Portugal', he told his fellow deputies, with irony. 'And when do they want it? When, for not having enough money, we have to let the retired Army officials suffer from hunger. ${ }^{81}$ It was clear that Brazilian and Portuguese elites' economic interests clashed in a context of fiscal crisis and lack of resources. The rescuing of the Bank of Brazil was so central to Rio's economic elite that when Brazil finally decided to secede, in 1822, the way the Bank had been dealt with by Portuguese representatives was mentioned as one of the reasons for independence in the pro-emancipation documents. ${ }^{82}$

The Portuguese outnumbered the Brazilians two-to-one in the assembly, and they used that political advantage to try to cut spending in Portuguese America. By the end of September 1821, the assembly decided to terminate almost every administrative position created in Rio since 1808. 'The public servants in Rio are uncountable', said Borges Carneiro again, one of the leaders of the majority. 'They went to Rio poor and, without dealing in any kind of commerce, [...] now they have millions to themselves'. ${ }^{83}$ Not surprisingly, the threat of cutting jobs and expenses united Rio's bureaucracy around D. Pedro in defence of Brazil's independence.

After trying to get rid of hundreds of bureaucratic jobs in Rio, the Portuguese representatives moved to approve new rules for the commerce between Portugal and the American parts of the kingdom. Through different tariff rates, smaller in Europe than in Brazil, the bill created incentives for foreign merchants to sell their products in Lisbon or Oporto, instead of crossing the Atlantic. If approved, it would concentrate taxes and resources in Portugal, reversing the fiscal capacity transfer of 1808, while making every Brazilian region politically and economically dependent on Lisbon. ${ }^{84}$ The bill's possible effects created an incentive for northern elites to side with Rio against Portuguese representatives in the assembly. In the middle of 1822, D. Pedro removed important obstacles for the political alliance of the northern provinces with Rio by offering local elites an exclusively Brazilian Constitutional government, in which they could take part in decisions regarding the new country's budget. The strong budget powers conferred to the Brazilian assembly in the following decades, which made regional elites capable of constantly avoiding raising taxes, would prove that siding with Rio was in their best political and economic interest. ${ }^{85}$

At the height of the crisis in September 1822, Cipriano Barata, a representative for the northern Brazilian province of Bahia, defied the angry Portuguese mob gathered in the parliament in Lisbon, telling them that the former union between Portugal and Brazil was now broken and that it was finally time for the Brazilian representatives to bid farewell to Europe, and to say 'goodbye, Mr. Portugal. ${ }^{86}$ By then, political agreement between the elites across the Atlantic seemed impossible, and Brazil seceded.

[^16]
## IV | CONCLUSION

This paper provides new quantitative evidence that spending between 1808 and 1820 on the Portuguese royal house and various military conflicts became too costly for a former colony without fiscal capacity to rapidly increase its revenues. The government financed itself during the 1810s through loans from the Bank of Brazil that were not paid in full, as well as transfers, at a high fiscal cost, from the northern provinces. The fiscal crisis led to increased monetary issuance, which had a negative impact on living conditions, especially after 1818. Another consequence of the fiscal crisis was the lack of resources to pay civil and military personnel, leading to the inability to politically sustain the regime. These findings are consistent with descriptions of the growing political turmoil at the end of D. João's period in Brazil. They also help to make clear that the main divisive matters between Portuguese and Brazilian representatives in the constitutional assembly in Lisbon were, at their heart, fiscal matters.

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## SUPPORTING INFORMATION

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[^0]:    ${ }^{1}$ Ramos et al., História de Portugal, p. 484.
    ${ }^{2}$ Barman, Brazil, pp. 67-72.
    ${ }^{3}$ Varnhagen, História Da Independência Do Brasil; Lima, O movimento da independência.

[^1]:    ${ }^{4}$ Bethell, 'Brazil and "Latin America"', p. 461.
    ${ }^{5}$ Middlekauff, The Glorious Cause, pp. 60-1; Wood, The American Revolution, pp. 33-4.
    ${ }^{6}$ Sargent and Velde, 'Macroeconomic features of the French Revolution', p. 477; Norberg, 'The French fiscal crisis of 1788'.
    ${ }^{7}$ Marichal, Bankruptcy of empire.
    ${ }^{8}$ Hoffman and Norberg, eds., Fiscal crises, liberty, and representative government, p. 2.
    ${ }^{9}$ Zamberlan Pereira, 'Taxation and the stagnation', p. 531.

[^2]:    ${ }^{10}$ Arquivo Nacional, Junta do Comércio, caixa 448, pacote 1.
    ${ }^{11}$ Pereira, D. João VI Príncipe e Rei, vol. III, pp. 304-15.
    ${ }^{12}$ Dincecco, Political transformations.
    ${ }^{13}$ North and Weingast, 'Constitutions and commitment'; Cox, 'War, moral hazard'.
    ${ }^{14}$ Summerhill, Inglorious revolution, pp. 7-8.
    ${ }^{15}$ Adelman is a remarkable exception, providing qualitative evidence of fiscal crisis in the Portuguese empire in the 1810s. See Adelman, Sovereignty and revolution (2006).
    ${ }^{16}$ Jancsó, Brasil; Lustosa, Insultos impressos; Pereira das Neves, Corcundas e Constitucionais.
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