SPAIN'S INTERNATIONAL POSITION, 1850-1913 [*],[†]

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ABSTRACT

Spain's financial position during the late 19th and early 20th centuries has usually been presented as one of persistent deficit on current account, which resulted from her integration into international commodity and factor markets and this, in turn, slowed down the growth of the economy. In this essay a preliminary reconstruction of the balance of payments on current account allows us to reject this view. In fact, a net capital inflow made possible to meet the demand for investment-boosting economic performance. Current account reversals in a context of macroeconomic domestic imperfections help to explain the economic slowdown at the turn of the century.

Keywords: balance of payments, sudden stops, current account reversals, saving, investment, growth, Spain

JEL Code: F21, F32, F43, N13, N73

RESUMEN

La posición financiera de España durante la segunda mitad del siglo XIX y primer tercio del XX se caracterizó, a juicio de algunos historiadores, por un déficit persistente de la balanza de pagos por cuenta corriente, resultado de la integración española en los mercados internacionales de bienes y factores que, a su vez, contribuyó a frenar el crecimiento. En este ensayo, una reconstrucción preliminar de la balanza de pagos por cuenta corriente permite rechazar dicha interpretación. En efecto, la entrada neta de capital hizo posible satisfacer la demanda de inversión y estimular, así, la actividad económica. La reversión de la cuenta corriente en un contexto de imperfecciones macroeconómicas internas contribuye a explicar la desaceleración económica de fines del siglo XIX.

Palabras clave: balanza de pagos, sudden stops, reversiones de la cuenta corriente, ahorro, inversion, crecimiento, España

1. INTRODUCTION

Spain's financial position during the late 19th and early 20th centuries has been frequently described as one of the persistent deficits on current account. It is also widely accepted that this situation was a result of her integration into international commodity and factor markets that contributed, in turn, to slowing down Spanish economic growth and deepening the country's backwardness. Such a depiction is not grounded in sound quantitative evidence, but provides a set of challenging hypotheses for research and testing. In this paper, a preliminary reconstruction of the balance of payments on current account allows the rejection of the pessimistic view that Spain's international integration hindered the growth of the economy. On the contrary, the sustained deficit on current account over 1850-1890 highlights the fact that net inflows of foreign capital made possible to meet the demand for domestic investment and, thus, boosted Spanish economic performance, while current account reversals help to explain the economic slowdown at the turn of the century. The paper is organized as follows: Section 2 presents current assessments of Spain's international position. Section 3 describes briefly the sources and procedures employed in the reconstruction of the balance of payments on current account. Section 4 examines its main trends and determinants from a «sudden stop» perspective[1]. In Section 5, the implications for the growth of Spain's financial position are discussed and Section 6 is the conclusion.

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[1] A «sudden stop» can be defined as an unexpected and significant reduction in a country's net capital inflow.

2. ASSESSMENTS OF SPAIN'S INTERNATIONAL POSITION

For most historians, Spain's position in the international economy during the 19th and early 20th centuries is characterized by a chronic deficit on current account[2]. This diagnosis stems from the official trade figures (*Estadística del comercio exterior*), which show a sustained negative commodity trade balance, and from the scattered evidence about the gross inflow of foreign capital into Spain[3].

Spain's trade balance experienced, according to Juan Sardá Dexeus (1948, p. 277), a sustained deficit for long periods, while Gabriel Tortella (1974a, p. 122) stressed that the trade balance was negative through the late 19th century. The persistent deficit represented, in Jaime Vicens Vives's (1959, p. 631) view, a heavy burden that contributed to the economic failure of the Restoration (1876-1923).

The view that a chronic trade balance deficit hindered the economic growth still prevails in Spain's historical literature. Supposedly, the current account deficit would have set a limit on the growth of demand to which supply had to adjust, leading to slower growth[4]. The acceptance of an external constraint on growth caused by a structural balance of payments deficit has major economic policy implications, as it would require protective measures to limit imports and a floating exchange rate. Alfonso Herranz-Loncán and Daniel Tirado (1996, p. 24) observed that the values of income elasticities for imports and exports suggest the existence of a constraint on Spain's economic growth resulting from the trade balance[5]. José María Serrano Sanz (1997) estimated the theoretical growth rate for the Spanish economy, which was compatible with the current account

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[2] Among the most recent references to the recurrent external deficit; cf. Tortella (1994); Herranz-Loncán and Tirado (1996); Serrano Sanz (1997); Gutiérrez *et al*. (1998); Cubel *et al*. (1998).

[3] Since Sardá Dexeus's (1948) classical study, the only estimate of the total volume of foreign capital invested in Spain during the 19th century is that of Broder (1976). Foreign investment in railways and mining have been estimated by Tedde (1978) and Harvey and Taylor (1987), respectively. Stone (1999) has published figures for British portfolio investment in Spain between 1865 and 1914.

[4] In the «external constraint to growth» argument proposed by Thirlwall (1979), under the assumptions of international stability of relative prices and the absence of capital flows, the potential growth — that is, the one compatible with balance of payments equilibrium — is defined by the ratio of the growth rate of real exports to the income elasticity of imports.

[5] It should be noted, however, that the elasticities estimated by Herranz-Loncán and Tirado (1996) are seriously questionable due to the fact that, in line with Tena (1989), they use the volume indices for imports and exports obtained from the official trade figures (Prados de la Escosura 1982) instead of deflating the series at current prices (revised both for the under-registration of quantities, including smuggled goods, and for errors in the official unit values) in Prados de la Escosura (1986, 1988). These authors also use Tena's (1989) foreign trade price indices, which were obtained dividing the corrected current values in index form (Prados de la Escosura 1986) by the volume indices for imports and exports derived from the official trade statistics (Prados de la Escosura 1982). Thus, the implicit price (unit value) indices used are totally meaningless (especially in the case of imports), as they include adjustments in the quantities traded in the numerator, but not in the denominator.

equilibrium[6]. As long as the theoretical rate is above the actual one, there is no problem. This would have been the case of Spain over 1869-1891. However, if it is below, as it would have happened during 1892-1935, the external sector would have hindered the long-run growth[7]. Recently, Oscar Bajo-Rubio (2009), in a long-run view of Spain's external sector, reaches quite a different conclusion — an external restriction on growth, resulting from a potentially unsustainable trade deficit, would only appear in phases of exceptionally high growth.

Thirlwall's (1979) «external constraint on growth» is, however, predicated under the assumption that the terms of trade are stable and international capital flows are negligible. In the context of the early globalization (1850-1913), such an assumption is far fetched. Intense international commodity and factor flows took place while the terms of trade suffered dramatic changes (O'Rourke and Williamson 1999; Obstfeld and Taylor 2004; Blattman *et al.* 2007). In fact, the proponents of the «external constraint on growth» view accept that in the presence of a sustained current account deficit financed through capital inflows, their prediction of the long-term growth rate is inadequate and the restriction on growth would result from the pace and size of foreign investment (Thirlwall and Hussain 1982, p. 501). Thus, before jumping to the conclusions about a potential external constraint on growth, it seems necessary to examine the current account of evolution over time.

To complicate the situation further, Spanish foreign trade statistics have been questioned by Jordi Maluquer de Motes (1999, pp. 110-111, 189) who argues that exports to Cuba and the Philippines were overexaggerated during the years 1895-1898, as they included supplies for the Spanish troops (military equipment but also foodstuffs, clothing, etc.) that did not involve a commercial transaction[8]. Were this the case, military supplies should be removed from exports and considered as current Government transfers[9].

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[6] Serrano Sanz (1997) departs from Thirlwall as he takes the evolution of relative prices into account. If, alternatively, Herranz-Loncán and Tirado (1996) elasticities are used in Serrano Sanz estimates, the results are not very different. It should be noted that since Serrano Sanz (1997) employed the same data set as Herranz-Loncán and Tirado (1996), so his results are as questionable as theirs (see footnote 5).

[7] This would be the case because, in Serrano Sanz's view (1997, p. 320), the alternative option of financing the deficit through a surplus in other, smaller and more volatile components of the balance of payments, such as services or unilateral transfers, was unlikely.

[8] Maluquer de Motes (1999) accepts the argument put forward by a distinguished representative of the protectionist Basque lobby, Pablo de Alzola y Minondo (1903, pp. 34-35 and 89), who claimed that the commodity trade surplus over 1896-1898 was fictitious and pointed out that, in 1897, 130 million pesetas in specie and substantial quantities of foodstuffs, clothing and weaponry sent to supply colonial troops during the Cuban War of Independence were included as exports. Unfortunately, the author does not provide any evidence to prove his assertion. In any case, it should be noted that specie flows are excluded from my estimates of the commodity trade balance (see section 3).

[9] In a private communication, Francisco Comín informs me that it is highly unlikely that they were Government transfers, as the cost of military supplies was assumed by Cuba's colonial public

Previously, however, one should prove that no commercial transaction had taken place and military supplies were sent to the colonies by the Government. If, alternatively, supplies for troops were provided by private firms, they would represent exports. Furthermore, it could be simply the case that, as a result of the increasing number of Spanish troops in the colonies, the demand for foodstuffs and clothing increased. Another important reason to explain the increase in exports to the colonies (and to the rest of the world) during the late 1890s is the (real effective) depreciation of the Peseta (Figure 9), which improved the competitiveness of Spanish exports. In fact, the estimated values of the price elasticity of exports suggest that, other things being equal, the depreciation would have triggered a significant rise in the volume of exports[10]. Moreover, an examination of the official trade statistics for 1897 indicates that there were no «State trade» separate records for exports[11]. Therefore, I have not corrected official export figures to allow for the hypothetical inclusion of the Government supplies to colonial troops.

Another objection to the revised figures for the 19th century Spanish foreign trade has been raised by Tortella (1994)[12]. A contradiction between the corrected trade balance figures — which reduce the commodity trade deficit in the 1850s and 1860s and provide a surplus after 1870 — and the inflow of foreign capital is highlighted by this author[13]. Tortella (1994, p. 132) argues that, at the end of the 19th century, with a positive inflow of capital and emigrant remittances, it would be hard to explain the peseta's depreciation if there was also a trade surplus. This assertion, which seems logical at first sight, is, however, the result of identifying the commodity trade balance with the current account balance, in other words, with the overall balance for goods, services (which includes net income from abroad) and current transfers (including emigrant remittances). Such identification would be only warranted if the balances of services and current transfers were close to equilibrium, or if they canceled each other. In the case of the balance of services, such an assumption is inconsistent with the size of both

budget. As before, during the Ten Years' War (1868-1878), the Cuban War of Independence was not financed by Spain's Government budget, but by Cuba's colonial budget. Only after the Treaty of Paris, Spain was forced to assume the cost of colonial debts (see Comín 2004).

[10] The value of own price elasticity of demand ranged between −1.1 and −1.3 according to Herranz-Loncán and Tirado (1996, pp. 23-24) and Serrano Sanz (1997, p. 123). A detailed analysis of the trade between Spain and Cuba over 1878-1898 can be found in Piqueras Arenas (1998) in which increasing Spanish exports are attributed to the competitiveness of Spanish goods, only partly as a result of the depreciation of the peseta.

[11] In fact, strictly military supplies (weapons and ammunition) represent a small share of «general» exports. For example, firearms only amounted to 3.5 million pesetas in 1897.

[12] cf. Prados de la Escosura (1986) for the revision of foreign trade figures between 1850 and 1913 in which official valuation of goods were corrected by using market prices and under-registration of imports was revised upwards to allow for smuggling.

[13] Tortella (1994) combines the official figures for the commodity trade balance with Broder's (1976) estimates for gross foreign investment to assess the current account balance.

external public debt and foreign investment in the private sector, which involved large interest and dividend payments. What is more, the assimilation of gross foreign investment with the (negative of the) current account balance is not validated as the latter only records net foreign investment into Spain. Furthermore, migrant remittances, the main component of the balance of current transfers, only became significant at the very end of the period under consideration as Spanish mass emigration was a comparatively late phenomenon in European perspective (Sánchez-Alonso 2000).

Tortella's argument throws up questions worthy of careful consideration. When did emigrant remittances become significant? Why did the depreciation not take place in 1883, as soon as the convertibility of the peseta was suspended? What were the causes behind the delayed, post-1891 depreciation of the peseta? Sardá Dexeus (1948, p. 219) offered an early diagnosis: «the economic causes of this depreciation may be linked to the possible existence of domestic inflation caused by the increase in the quantity of silver and bank notes, with repercussions on prices and the trade balance», while adding, «it is better to seek the immediate cause in the evolution of the balance of payments.» It is Sardá's second interpretation, focused on the balance of payments, the one that has found support in recent literature (Gutiérrez *et al*. 1998; Cubel *et al*. 1998; Sudrià and Tirado 2001).

Alternative interpretations to Sardá's have been offered. Pablo Martín Aceña (1993, pp. 140-141) underlined the association between macroeconomic stability and a stable exchange rate of the peseta. Tortella (1994) identified the financial problems of the Government as the main cause of the nominal depreciation of the Spanish currency between 1891 and 1905. More recently, Marcela Sabaté *et al*. (2006) concluded that the treasury-financing needs led to money creation and, hence, to sacrificing a fixed exchange rate.

Unfortunately, the debate is seriously constraint by the lack of quantitative evidence about Spain's international position. The first step requires the reconstruction of the balance of payments on current account, a task to which the section 3 of the paper is devoted.

3. A PRELIMINARY RECONSTRUCTION OF THE BALANCE OF PAYMENTS ON CURRENT ACCOUNT

The balance of payments systematically summarizes the economic transactions of an economy with the rest of the world. These are the transactions involving goods, services and income, financial claims on and liabilities to the rest of the world and transfers (IMF 1993, p. 6). I have estimated every item of the balance of payments on current account (commodity and service trade and current transfers). The procedure and sources used in the reconstruction of the main components of balance of payments

on current account are summarily discussed in this section, although enough detail is provided for the reader who wants to replicate the computations. Needless to say, these computations are highly tentative, and only further research will eliminate the errors that fraught my estimates.

3.1. Commodity Trade Balance

3.1.1. *Exports and imports of goods*

Free on board (f.o.b.) value of goods exported and imported needs to be computed. Estimates on the basis of Spanish official trade statistics and corrected for quantity underestimation, including an estimate of smuggling through Gibraltar and Portugal, and for price biases by Prados de la Escosura (1986) have been used[14]. Cost, insurance and freight (c.i.f.) imports were converted into f.o.b. imports to comply with the balance of payment conventions.

3.1.2. *Gold and silver*

Quantities of gold and silver recorded in Spanish trade statistics (coins, bars and paste) are considered as monetary gold and silver and, therefore, not included in the estimates of net exports of goods and services[15].

3.2. Service Trade Balance

Three main categories are considered under the following labels: (a) freight and insurance services, (b) tourism, emigrants' funds, passenger services and other services and (c) net income from abroad.

3.2.1. *Freight and insurance*

Freight income received for exports carried in Spanish ships minus freight expenses paid for imports transported in foreign vessels constitute the

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[14] Official imports for 1850-1913 have now been corrected with a coefficient derived from a sample of Spain's main trading partners instead of with coefficients obtained from commodity and country samples for primary products and manufactures, respectively, as in Prados de la Escosura (1986). This change has been introduced to maintain consistency with Tena (1992) and Martínez Ruíz (2003, 2006) estimates for 1914-1958. The new results are, nonetheless, very close to the earlier ones.

[15] There are serious doubts about the way in which gold and silver exports and imports were recorded in official trade statistics (Tortella 1974, pp. 121-122). It could be argued that, since Spain never was part of the Gold Standard, trade in gold and silver should be treated as non-monetary. The fact that Spanish monetary authorities often shadowed the gold parity has led me to consider gold and silver exports and imports as monetary.

first item to be computed under this label. Following Douglass North and Alan Heston (1960), the freight-value method, or freight factor, was preferred to the earnings per ton method[16]. Total freight revenues on exports and imports were first computed by applying freight factors to the f.o.b. value of exports and imports and, then, in order to ascertain the freight income on exports (a credit for Spain), the share of tonnage exported carried under Spanish flag was used, while the share of imported tonnage in foreign ships was employed to compute freight expenses on imports[17]. In addition, freight income from carrying trade between foreign ports was assumed, following North and Matthew Simon, to represent a percentage of freight earnings and a 10 per cent of freight income on exports was accepted[18]. Port outlays by Spanish ships in foreign ports and by foreign ships in Spain's harbors as payments for port dues, loading and unloading expenses and coal are assumed to represent a fixed share of shipping earnings and expenses[19]. Foreign ships transported more tonnage than in Spanish vessels as they exhibited, according to Jesús Valdaliso (1991, p. 71), a more efficient transport capacity ratio. I assumed that more fully loaded vessels made smaller outlays per ship and, hence, port outlays by Spanish ships abroad (a debit) were established at 30 per cent of the freight income on exports while port outlays by foreign ships in Spain (a credit) were fixed at 20 per cent of freight expenses on imports[20]. Finally, marine insurance income and expenses were computed under the widely shared assumption that underwriting follows the flag and exports in Spanish ships were, hence, usually insured by Spanish companies while imports in foreign vessels were insured by foreign companies[21]. I arbitrarily assumed that the insurance rates were identical by Spanish and foreign companies and accepted those used by Prados de la Escosura (1986), to which I added an extra 2 per cent to include shipping commissions and brokerage.

3.2.2. *Tourism, emigrants' funds, passenger services and other services*

Yearly income from tourist services was derived on the basis of expenses per visitor (net of Spanish tourist expenses abroad) calculated by Francisco

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[16] cf. Simon (1960) to whom I tried to follow as closely as the data permitted. Freight factor is the ratio of freight costs to the current value of traded commodities.

[17] Freight factors are taken from Prados de la Escosura (1986). The distribution of tons exported and imported between Spanish and foreign ships comes from Valdaliso (1991).

[18] cf. North (1960) and Simon (1960) who assumed a 20 per cent. Given the less efficient Spanish merchant shipping, I arbitrarily adopted a 10 per cent.

[19] For similar assumptions for the United States and the Netherlands, cf. Simon (1960) and Smits *et al*. (2000).

[20] The idea that more fully loaded ships made smaller outlays is taken from Simon (1960). These figures roughly correspond to those accepted by Smits *et al*. (2000).

[21] This assumption is borrowed from Simon (1960). It could, however, overexaggerate Spain's earnings from marine insurance, as it was rather common for Spanish ships to be underwritten by foreign companies (Lloyd's, for example)

Jáinaga for 1931, times the annual number of tourists and, then, reflated with a cost of living index to obtain the current price estimates (Jáinaga 1932)[22]. Unfortunately, the total number of tourists is only known since 1929 and was backward projected to 1882 with the rate of variation of passengers arriving by sea, while no tourism was assumed to exist over 1850-1881[23].

Spain was a net emigration country over the late 19th and early 20th centuries (cf. Sánchez-Alonso 1995). Emigrants carried small sums with them to cover their arrival expenses. It can be reckoned that, by 1931, emigrant funds to America represented, on average, 200 gold pesetas, that is, 400 current pesetas, including the fare and small amounts to cover arrival expenses[24]. If the fare represented around 340 current pesetas, 60 pesetas would correspond to the emigrant's funds[25]. However, Jáinaga only added «a small amount for unavoidable expenses» to the cost of the passage, and this sum is most likely an underestimation[26]. I, therefore, accepted a higher estimate of 100 pesetas for those emigrating to America, and one-tenth, ten pesetas, for those to Algeria (and to France) in the eve of the World War I[27]. These average sums times the number of emigrants to America, Algeria and France cast an yearly series of emmigrants' funds that was reflated with a wage index[28].

In addition, revenues and expenses from passenger transport have to be taken into account. Fares paid by tourists carried by Spanish ships and by returning immigrants by Spanish vessels are included on the credit side, while fares paid by emmigrants to foreign shipping companies represented a debit. The number of migrants provided by Blanca Sánchez-Alonso (1995) for 1882-1913 has been completed with an estimate of migration for the years 1850-1881 on the basis of the scattered foreign evidence[29]. The share of

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[22] The implicit assumption here is that the real expenses per tourist remained constant over time. The cost of living index has resulted from splicing Ojeda's (1988) index for 1909-1913 with Reher and Ballesteros (1993) for the previous years. The alternative use of Maluquer de Motes (2006) consumer price index does not change the results significantly.

[23] For passengers arriving by ship, cf. Nicolau (2005, p. 139). The low numbers in the early 1880s allows the presumption that tourism was not economically significant until the late 19th century.

[24] Figure computed from Jáinaga (1932).

[25] Vázquez (1988) provides third class fares to Cuba (325 pesetas), Argentina and Brazil (356 pesetas) in 1930 that yield an average of 340 pesetas.

[26] This figure, sixty pesetas, corresponds to a lower bound estimate of the average funds brought by Italian immigrants into the United States in 1892, according to Simon (1960, pp. 676-677).

[27] The one-to-ten ratio was derived by comparing fares to America (Vázquez (1988)) with those to Algeria (Ministerio de Trabajo, 1942) in 1934. These are roughly similar to the lower-bound figures produced by Marolla and Roccas (1992, p. 252) for Italian emigrants to America and Europe in 1911. Llordén (1988, p. 62), on the other hand, provides a larger sum for Spanish emigrants' funds in the 1860s, 125-200 pesetas, once the fare is deducted.

[28] Unskilled wages come from Reher and Ballesteros (1993).

[29] For 1850-1881, figures of Spanish immigration in Argentina, Uruguay, Brazil and the United States, provided by the recipient countries' official statistics were completed with emigration to Cuba in 1860-1861 from *Anuario(s) Estadístico(s)* that was assumed to remain constant over the

arrivals and departures in Spanish and foreign ships is provided by official migration statistics from 1911 onwards and shows a stable pattern, roughly one-third of the emmigrants returned home under Spanish flag and three-fourths left in foreign ships[30]. These shares were accepted for the 19th and early 20th centuries. The fares for trips to Argentina, Cuba and Algeria are derived from Alejandro Vázquez, Moisés Llordén and official emigration statistics[31].

Finally, Government transactions (credits and debits) were, in turn, taken from official sources (Díaz García 1976).

3.2.3. Net income from abroad

Ascertaining the amount of and the returns to each type of capital asset invested abroad and of foreign capital invested at home is fraught with so many difficulties that has often discouraged the direct estimate of net incomes of foreign capital in historical studies[32].

The alternative indirect approach starts from a benchmark estimate of a country's international indebtedness at the beginning of the considered period that is yearly updated with the net inflow of capital. Such a convenient approach produces, however, a very crude estimate, as the initial amount of a country's international indebtedness is not accurately computed and, especially, the interest rate used does not capture the average returns of a wide and changing variety of capital assets. Any alteration in the interest

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(F'note continued)

period. Emmigration to Algeria was derived from Spanish arrivals in Alger and Oran for the years 1872-1881, while the figures for 1850-1871 were estimated under the arbitrary assumption that the share of emigrants who remained in Algeria after 1 year of residence was similar to the one over the period 1872-1881 (25 per cent). Estimates for returned migration was computed by assuming that the average returns from America for 1869-1873 were acceptable for 1850-1868, while 92 per cent of emmigrants to Algeria returned home within the first year. A consistency check of the yearly migration data was performed using the migration balances from the population censuses along the lines described in Sánchez-Alonso (1995). Data for returned migration from America, 1869-1881,

[30] Consejo Superior de Emigración (1916) offers evidence for 1911-1915. The actual percentages used were 0.354 for returned migration under Spanish flag and 0.764 for immigrants in foreign ships.

[31] cf. Llordén (1988) for fares to Havana over the period 1862-1876; Vázquez (1988) provides the lowest fares to Cuba, Brazil and Argentina over the period 1880-1913 at 1913 prices that I have reflated to obtain the current price fares using the same Sardá Dexeus (1948) wholesale price index that he employed to derive constant price fares. Missing years were interpolated (1862 fares to Cuba were accepted for 1850-1861; fares to Argentina before 1880 were assumed to moved along fares to Cuba). I assumed that fares to Algeria moved along the fares to America and that the fare ratio of Algeria/Argentina in 1934 (Ministerio de Trabajo, 1942) was stable over the considered period. I also assumed that the tourist fares from Europe were moved along the migrants' fares.

[32] This is why, in their pioneering research on Britain and the United States in the 19th century, Imlah (1958), North (1960) and Simon (1960) employed an indirect approach. Later, Lévy-Leboyer (1977) and Brezis (1995) followed the same approach for 19th century France and 18th century Britain, respectively.

rate applied and/or in the initial estimate of international indebtedness provokes large differences in absolute terms in the long run (North 1960, pp. 574-575).

Therefore, in spite of its shortcomings, I have preferred to use a direct approach. Because of the dearth of data, only very crude estimates of foreign capital incomes (dividends and interest payments to private foreign capital and external debt service), on the debit side, and of Spanish labor returns abroad (wages and salaries), on the credit side, have been carried out. These are the main components of net income from abroad, as neither foreign labor in Spain nor Spanish investments abroad were significant over the period considered.

On the debit side, three main items are distinguished: (1) the external debt service; (2) dividends and interests paid to railway shares and debentures owned by foreigners; and (3) returns to foreign factors in mining[33].

Service payments on the external debt have been computed by applying specific interest rates to each class of the Government bonds[34]. Some caveats are needed about the volume of external public debt in foreign hands. After the sovereign debt rescheduling in 1882, which exchanged existing foreign debt for new bonds (at 43.75 per cent of its nominal value), and simultaneously with the abandonment of gold convertibility of Spanish currency in 1883, debt repatriation started as Spaniards found more secure to invest in bonds serviced in gold pesetas as a shelter against currency depreciation[35]. Since 1891, when the peseta started depreciating, Spanish citizens purchased external debt bonds while foreign bondholders tried to get rid of them. The Government reacted by introducing the so called «affidavit» in 1898, which implied that only non-resident bondholders would continue receiving their interest payments in gold pesetas (or in French francs), while the rest would be paid in current pesetas (and offered to convert their external debt bonds into internal debt). As a result, the external public debt fell, in 1903, to 52.7 per cent of its volume in 1898, which implies that Spanish residents had purchased almost half of the Spain's external public debt between 1891 and 1898. Hence, only half of the interests paid (52.7 per cent) on external debt should be computed as payments to foreign capital invested in external debt over 1891-1898. I have, then, assumed that the interest payments effectively paid to foreign bondholders over 1891-1902 should be computed on the

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[33] According to Stone (1999, p. 251), public debt, railways and mining represented, on average, 24.3, 25.3 and 31.2 per cent, respectively, of total British portfolio investment in Spain over the period of 1865-1913.

[34] External debt figures and the interest rates applied are provided in Fernández Acha (1976).

[35] This appears to be a case of «original sin», to use Eichengreen and Hausmann (1999) expression to describe external debt denominated in gold or in foreign currency. For this paragraph, I draw on Sardá Dexeus (1948) who provides a detailed evaluation of Spain's external public debt in the late 19th and early 20th century.

volume of external debt in existence in 1903[36]. Moreover, in so far, the external debt was serviced in gold pesetas, and the amount of interests paid (obtained by applying the interest rate to foreign debt in non residents' hands) has to be increased by the depreciation rate of the current peseta with respect to the gold peseta over 1891-1914[37].

Railway companies were highly concentrated and the detailed research by Pedro Tedde de Lorca (1978, 1980) provides enough evidence to estimate dividends on share capital and interests on debentures paid to non-residents[38]. Dividends paid to shareholders and interest payments on debentures issued by the three major railway companies are available from the mid-19th century onwards (Tedde de Lorca 1978)[39]. Both the percentage represented by the three main companies in total capital invested in railways and the proportion of railways' capital in foreign hands have to be ascertained to compute the returns to foreign capital invested in Spanish railways. Tedde de Lorca provides total capital shares and bonds held by the three major companies and its proportion in total investment, and, on the basis of Albert Broder's research (Broder 1976), also the participation of French capital in total capital invested in 1867, at the time of network construction, and over the 19th century[40]. Broder's (1976, p. 62) estimates of foreign investment in railways allowed, in turn, to rescale French railways' capital to cover all foreign capital[41].

Foreign capital in mining was mainly British. On the basis of the effective capital invested by British companies and cumulated total foreign investment in mining, it can be suggested that, over 1870-1913, more than half of all foreign capital in Spanish mining came from the United Kingdom[42].

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[36] An alternative hypothesis is to assume that the external public debt gradually passed into Spanish hands. The results of this alternative computation, although provide higher interest payments, do not change the trend of the estimates used here.

[37] This is the usual result of the so-called «original sin». The depreciation rate of the peseta against the French franc provided by Martín Aceña and Pons (2005) has been used.

[38] See Tedde de Lorca (1978, 1980) for research on Norte, MZA and Andaluces, the three main railway companies. Evidence on foreign investment in railways has been gathered in Broder (1976, 1981).

[39] Appendices IV-9 and IV-18 provides the data on dividends and interests paid by Norte and MZA, whereas Tedde de Lorca (1980, pp. 44-45) presents the same evidence for Andaluces.

[40] cf. Tedde de Lorca (1978, pp. 243-244, 248-251, 256-257; 1980: 37, 40). Thus, I have estimated, first, the dividend and interest payments corresponding to French citizens by applying the share of French capital in total capital for the three big railway companies. Then, I have rescaled the resulting sum by the share of French capital invested in these three companies over total French investment in Spanish railways. The latter share is only available for the years 1867 and 1890; hence, I have used that one for 1867 for the pre-1867 years, and the 1890 share for the post-1890 period, while I interpolated log-linearly 1867 and 1890 shares over 1868-1889.

[41] I rescaled interest and dividend payments to French capital by its share in total foreign capital invested in Spanish railways using the decennial shares provided over 1850-1913 by Broder (1976).

[42] cf. Harvey and Taylor (1987, p. 197) for British capital (effective share capital and debentures and mortgage bonds). Cumulated total foreign investment (excluding railways) and cumulated French investment in mining were derived from Broder (1976, 1981). When only French and British capital in mining are considered (the large majority of it), the British share ranged from 63 to 73 per

Decadal averages of dividend and interest payments to British companies are provided by Charles Harvey and Peter Taylor (1987) that were rescaled to include all payments to foreign capital in Spanish mining for 1851-1913, assuming similar rates of return in non-British foreign investment, and using the estimated British participation in total foreign capital[43]. Estimates of foreign capital returns in mining derived through this procedure were, then, distributed annually with an index of non-retained value in Spanish mineral exports[44].

Assessing returns to Spanish labor employed abroad is a complex task as labor incomes (wages and salaries), which belong to the balance of services, have to be distinguished from emmigrants' remittances, which belong to the balance of unilateral transfers. Actually, the distinction can only be made since 1917, and I accepted that only 5 per cent of those emmigrating to America and 60 per cent of those migrating to Algeria returned within the year over 1850-1913[45]. The next step was to assess the amount that, on average, was brought home by Spanish workers returning after 1 year, or less, away from home. I computed an average sum that was taken home by the temporary emmigrant or sent annually by the long-term emmigrant to their relatives and friends. Estimates of total sums sent home by emmigrants

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cent over 1870-1900, the mining boom years (and only 22-41 per cent in the earlier period 1851-70). If, alternatively, Broder's estimates of non-railway investment from other countries are cumulated, British capital represented from 52 to 61 per cent over 1870-1900 (22–31 per cent in 1851-1870). Evidence in Muñoz *et al*. (1976) indicates that British capital was above 50 per cent in the years 1900-13 (53 per cent on average for 1900 and 1912).

[43] Unfortunately, Chastagnaret (2000) does not carry out a similar estimate to that of Harvey and Taylor (1987) for the British capital invested in mining that would have precluded this crude estimate. Thus, British participation in total foreign capital was assumed to be 30 per cent in 1850-70, 60 per cent in 1870-1890 and 50 per cent in 1890-1913 (see the previous footnote).

[44] Non-retained exports represent the value of exports receipts that accrued to foreign productive factors used in mining production and, therefore, were not kept in Spain. Non-retained values over total mineral export proceeds represent 0.35 for iron ore, 0.40 for lead, 0.49 and 0.625 for copper pyrites (before and after 1896), 0.54 for mercury, according to Prados de la Escosura (1988) who took them from González Portilla (1981), Broder (1981), Harvey (1981) and Nadal (1975), respectively. The revisionist work by Escudero (1996) suggests that these shares should be revised upwards and Témime, Broder and Chastagneret (1982) pointed out that 70-75 per cent of export proceeds were not retained in Spain. Escudero (1998) has estimated that the share of foreign returns in Basque iron ore mining represented 39.5 per cent (204 million pesetas) of its total over 1876-1913, to which should be added the differential between market prices and much lower preferential prices (that foreign mining companies charged their matrix firms abroad) times the quantities sold at preferential prices, approximately 200 million pesetas, so the share of non-retained exports would be over half of the total export proceeds. I have used, then, non-retained shares of 0.55 for iron ore, 0.90 for lead and 0.73 for pyrites.

[45] Evidence on transatlantic immigrants returned after less than a year abroad is presented in Yáñez (1994) for 1917-1921 and 1925-1930 and in Ministerio de Trabajo (1942, p. 14), for 1926-1934. It represents between 3.5 and 6.2 per cent of total immigration to America, averaging 5 per cent. I have accepted 5 per cent for the period 1850-1913. For the share of immigrants to Algeria returning within a year, Bonmatí (1989, p. 135) points to 59 per cent of total emmigrants.

have been gathered in recent historical research for the early 20th century[46]. José Ramón García López (1992) presents the most comprehensive estimates for the years before the World War I — 250-300 million pesetas as an annual average over 1906-1910 that amounts around 340-400 pesetas per emmigrant (either returning home or sending remittances). I accepted 400 pesetas per emmigrant as a benchmark that was, then, projected backwards and forward with a nominal wage index constructed for the destination countries and adjusted for the exchange rate between the peseta and each destination country's currency over 1850-1913[47]. Finally, returns to Spanish labor abroad were obtained by multiplying the annual sum per head with the number of emigrants returning home within their first year abroad.

3.3.   Current Transfers Balance

Emmigrants' remittances constituted its main historical component in Spain before 1913. Not all emmigrants sent money home while being abroad. In historical estimates, it is usually accepted that most of those who established themselves abroad stopped sending money after 5 or 6 years either because they have already paid for their debts or because they planned to invest in the receiving country. I arbitrarily assumed that emmigrants only sent money home within their first 5 years and computed the emmigrants' remittances by multiplying the estimated average sum per emmigrant with the cumulative figure of emmigrants arrived in the last 5 years, after deducting those migrants who returned home within 1 year[48].

3.4.   The Balance of Payments on Current Account and the Net Inflow of Capital

Adding up the balances of goods, services — including net payments to foreign factors — and unilateral transfers, the balance of payments on current account is obtained.

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[46] Unfortunately, no distinction can be made between short- and long-term migrants. Contemporary estimates are collected in Chamorro (1976), for 1899, 1900 and 1904; Vázquez (1988) for 1906, 1908-1913 and 1920-1922; and García López (1992), averages for 1906-1910 and 1920-1921.

[47] Nominal wages for Argentina are collected in Williamson (1995). Zanetti and García (1977) provide nominal wages for Cuba from 1903 onwards. French nominal wages from Williamson (1995) are used for emmigrants to France and Algeria. The trading exchange rates of the peseta against the peso, the French franc and the US dollar are computed on the basis of Cortés Conde (1979), Della Paolera (1988) and Martín Aceña and Pons (2005).

[48] As explained in the previous section, because of the lack of data, no distinction has been made between the sum brought back home by the emmigrant who returned home within his/her first year abroad and the average remittances sent during the first 5 years abroad by the rest of emmigrants. Following Simon (1960), I have attributed double weight to the last one of each 5-year period considered.

The net inflow of capital — that is, the capital account balance — has been derived, in turn, by adding the negative of the current account balance to the increase in foreign reserves, computed from yearly estimates of the stock of gold and silver[49]. An alternative estimate of annual variation in reserves is provided by net exports of gold and silver in the official trade statistics. However, its lack of coverage of total specie flows, due to smuggling, did not advice its use (Tortella 1974, pp. 121-122)[50].

Finally, annual series of Spain's international indebtedness can be obtained by adding up the net inflow of capital to the level of indebtedness at the beginning of each year. The level of international indebtedness at the beginning of 1850 is, at best, an informed guess and has been assumed to be equivalent to the nominal value of external public debt, 1505 million pesetas (Comín 1996, p. 131), since private foreign investment has been considered negligible until mid-19th century (Sardá Dexeus 1948, p. 262). Needless to say, the resulting estimates are very tentative and should be taken with a grain of salt.

4. TRENDS IN SPAIN'S INTERNATIONAL POSITION

Clearly defined periods can be distinguished in the commodity trade balance: one of the deficits — but for 3 years, 1854-1856 — from 1850 to the 1866 crisis, followed by one of the surpluses — but for 1 year, 1876, — up to the eve of the World War I (Figure 1). When we turn to the balance of services, a persistent deficit is observed. Transport, tourism and intergovernmental transactions show a negative sign (Figure 2), and, more important, its main item, net income from abroad, too (Figure 3). The service of the public debt dominated the net income from abroad until the beginning of the Restoration (1876). After the sovereign debt rescheduling (1882) and, especially, from 1890 onwards, this situation changed with net returns to foreign capital in railways and mining

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[49] The stock of gold and silver for 1850-1873 comes from Tortella (1982) and is reproduced in Martín Aceña and Pons (2005, pp. 678-679). The gold stock derives, for 1874-1900, from Tortella (1974, pp. 128–132) — who, for the years 1874-1896, linearly interpolated contemporary estimates of the stock of gold — and for 1901-1913, from Martín Aceña (1985, pp. 93-97; gold reserves). The stock of silver for 1874-1913 has been obtained from Anes (1974, pp. 111-112). A similar approach was used for the 19th century United States by North (1960, p. 599).

[50] I have checked the figures on net gold exports in the Spanish official statistics against those provided by the statistics of two main trading partners of Spain, the United Kingdom and the United States. The comparison suggests that Spain was a net gold importer and whenever she became an exporter, the size of the surplus was small. Net coinage of gold and silver — that is, excluding coinage of already existing currency — a proxy for net gold and silver imports, continued during the last quarter of the nineteenth century although interruptions took place (Tortella 1974; Anes 1974). These findings are at odds with the historical literature surveyed by Tortella (1974) in which claims of large illegal gold exports during the 1880s are frequent. For example, Barthe (1905) reckoned a gold outflow of 630 million pesetas over 1883-1891. Sardá Dexeus (1948, p. 202) suggests, in turn, a figure of 1,000 million over 1881-1891. A possible alternative explanation would be that gold hoarding — another reason for gold disappearance in Tortella's view — prevailed over illegal gold exports.

FIGURE 1
COMMODITY TRADE BALANCE (MILLION PESETAS)
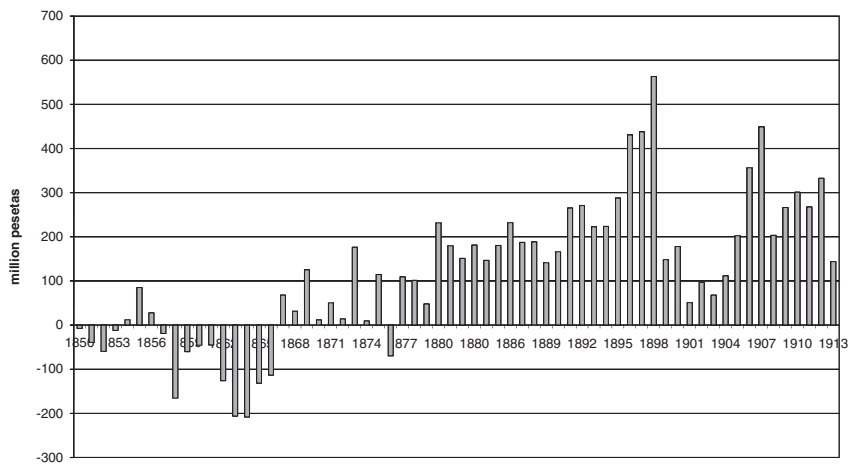
Source: See text.

FIGURE 2
SERVICES TRADE BALANCE (EXCLUDING NET INCOME FROM ABROAD)
(MILLION PESETAS)
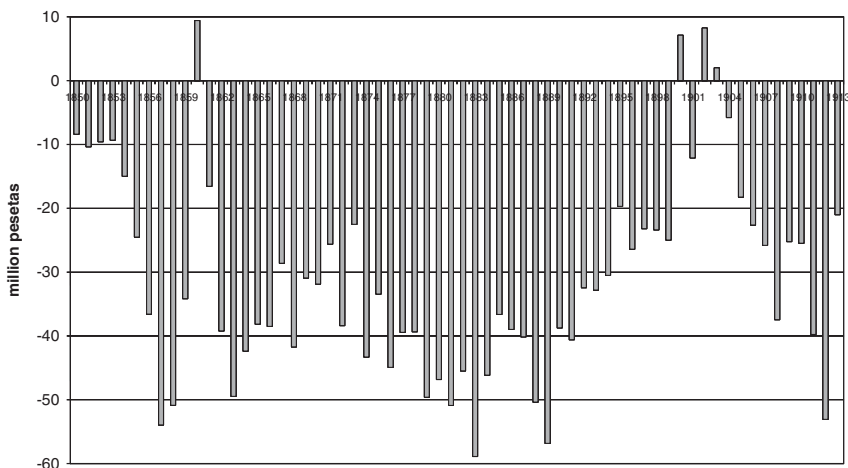
Source: See text.

FIGURE 3
SERVICES TRADE BALANCE: NET INCOME FROM ABROAD (MILLION PESETAS)

Source: See text.

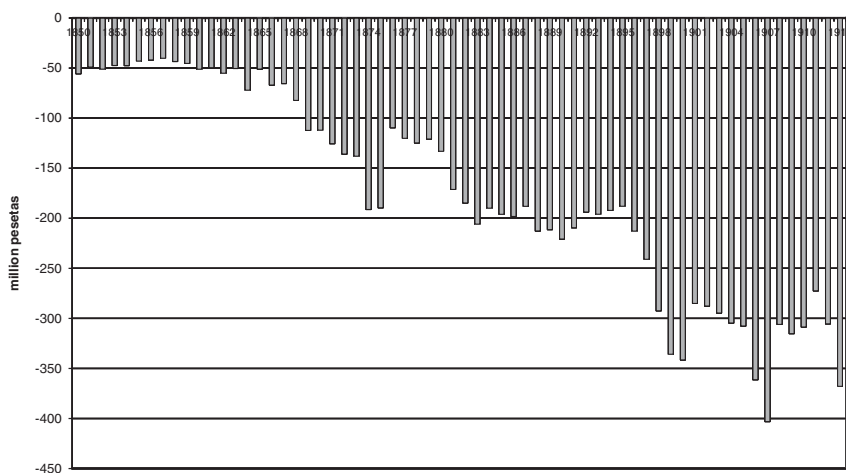gaining weight. Emmigrant remittances became increasingly important from the late 1880s and increased dramatically since 1904 offsetting, at least in part, the net payments to foreign factors (Figure 4).

Adding up the commodity, services and current transfer balances results in the current account balance. Two distinctive phases with 1891 as a turning point can be distinguished. A sustained current account deficit was in place throughout 1850-1890 — except for 4 years. Then, from 1891 up to the World War I, a surplus prevailed with the years 1899-1904 as the only exception (Figure 5)[51]. The highly tentative estimates of the net inflow of capital match the inverse pattern of the current account balance, although they exhibit a higher level over 1859-1873 and, especially, a lower one during the years 1883-1890 (Figure 6). Finally, crude estimates of the annual balance of Spain's international indebtedness are presented in Figure 7. It appears that international indebtedness grew up to 1879, stabilized, then, until 1890, and exhibited a steady decline thereafter, but for a short reversal over 1899-1904[52].

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[51] The finding of a current account surplus from 1891 onwards confirms contemporary quantitative assessments of Spain's International position. cf. Prados de la Escosura (1988, p. 196).

[52] These results confirm Sardá Dexeus (1948, p. 274) upward trend up to 1881 (4,200 million pesetas), but do not correspond to the slightly higher level he estimated for 1913 (4,500 million). Sardá's lower levels stem from the fact that he uses the so-called «effective» external debt on the grounds that external public debt was never traded above 50 per cent of its nominal value Sardá Dexeus (1948, p. 257), and assumed that only represented 800 million pesetas by mid-19th century.

FIGURE 4
CURRENT TRANSFERS BALANCE (MILLION PESETAS)
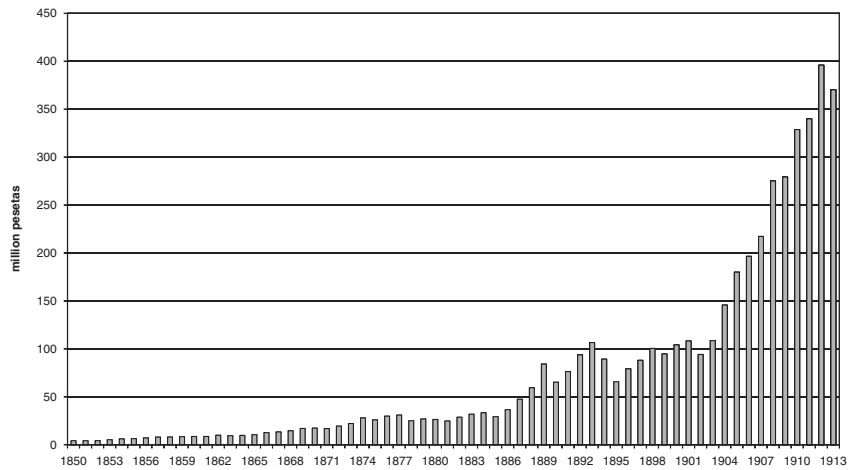
Source: See text.

FIGURE 5
CURRENT ACCOUNT BALANCE (MILLION PESETAS)
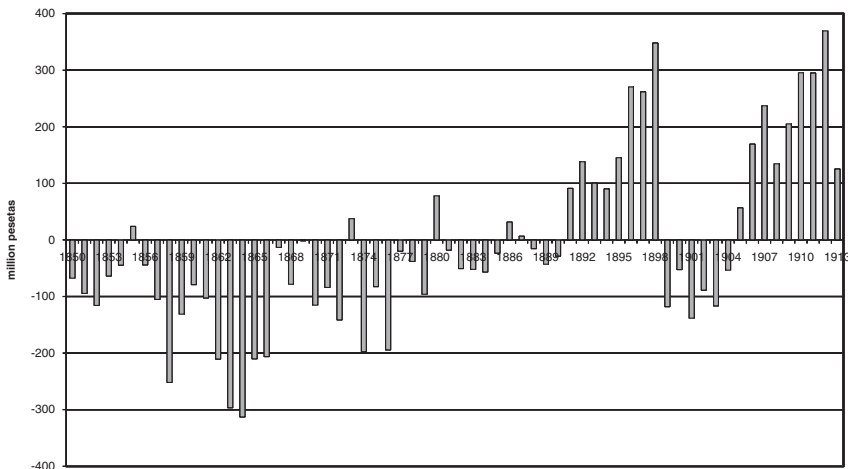
Source: See text.

FIGURE 6
NET CAPITAL INFLOW (MILLION PESETAS)
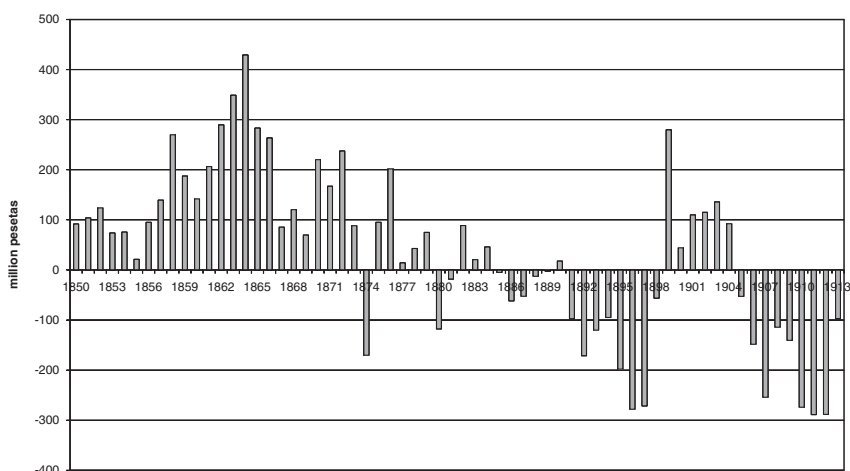
Source: See text.

FIGURE 7
SPAIN'S INTERNATIONAL INDEBTEDNESS (MILLION PESETAS)
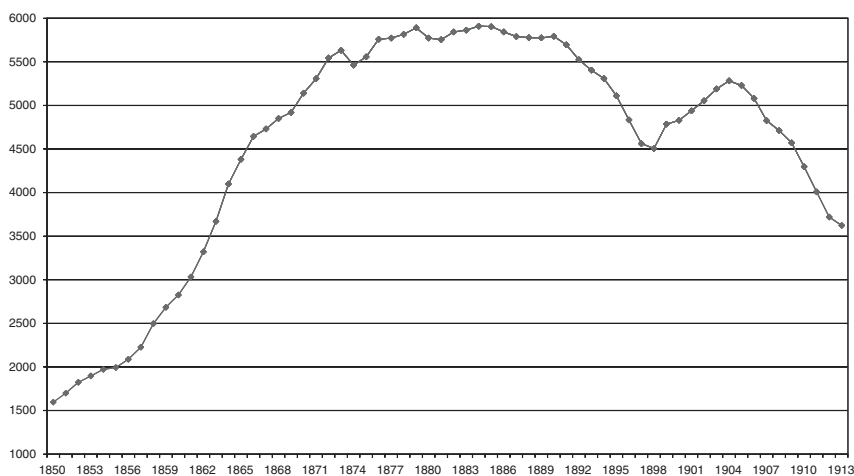
The sharp contrast between the commodity and current account balances is clearly a most striking result. The commodity trade balance is positive in 50 out of the 64 years, with deficit concentrated in the years 1858-1866 — in which large imports associated to railway construction took place; meanwhile

the current account was in deficit for most of the time except for 1891-1898 and 1905-1913. These two periods and 1858-1866 are the only ones in which the signs of the two balances match each other.

The divergent evolution of the various components of the balance of payments allow us to reconcile the positions of those who maintained that, from 1870 onwards, the commodity trade deficit resulting from the official figures was implausible (Prados de la Escosura 1986) and those who stressed that Spain's international position was one of the deficits (Sardá Dexeus 1948; Tortella 1994). The explanation for the apparent contradiction between the two balances is to be found in the growing role played by net income from abroad that was not counterbalanced by current transfers, as emmigrant remittances only became significant from 1904 onwards. Thus, the current account deficit appears to be associated to the costs of investing in new infrastructures and exploiting natural resources.

How could the current account surplus over the years 1891-1898 and 1905-1913 be explained? The reasons behind the change from a current account deficit to a surplus can be explored in the light of the phenomenon known as «sudden stops.» Sebastian Edwards (2004, p. 19) has defined a sudden stop episode as «an abrupt and major reduction in capital inflow to a country that up to that time had been receiving large volumes of foreign capital.» Sudden stops are, thus, sharp reversals in capital inflows that constrict domestic consumption smoothing[53]. During the first wave of financial globalization that took place in the late 19th and early 20th centuries, two main effects are associated to sudden stops: drops in the exchange rate and deceleration of economic activity[54].

Exogenous forces conditioned sudden stops. Monetary tightening in core countries (e.g. increases in the central bank discount rates) represented a significant exogenous element in the reversal of capital inflows. Also international crisis irradiating from capital importer countries, such as Argentina during the Baring crisis in the early 1890s, constituted an exogenous force to be taken on board. However, the fact that not all capital importers suffered to the same extent a given sudden stop suggests that endogenous factors mattered.

Let us examine the Spanish experience in the light of sudden stops (SS, hereafter). In Figure 8, international capital flows, proxied by British-, French- and German-aggregated current account (excluding all gold flows), are confronted with the net capital inflow in Spain, both expressed in Sterling[55].

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[53] Interestingly, this approach has been a neglected in the Spanish historical literature. This is, perhaps, attributable to the isolated consideration of Spain's experience.

[54] The contraction in external financing implies that the current account has to improve through currency depreciation and GDP contraction unless international reserves absorb the shock. cf. Catao's (2007) excellent study on which I draw for the next paragraphs. Also see, Bordo *et al*. (2010).

[55] Data for net capital exports from the United Kingdom, France and Germany come from Jones and Obstfeld (1997).

FIGURE 8
INTERNATIONAL NET CAPITAL FLOW AND SPAIN'S NET CAPITAL INFLOW
(MILLION STERLING)
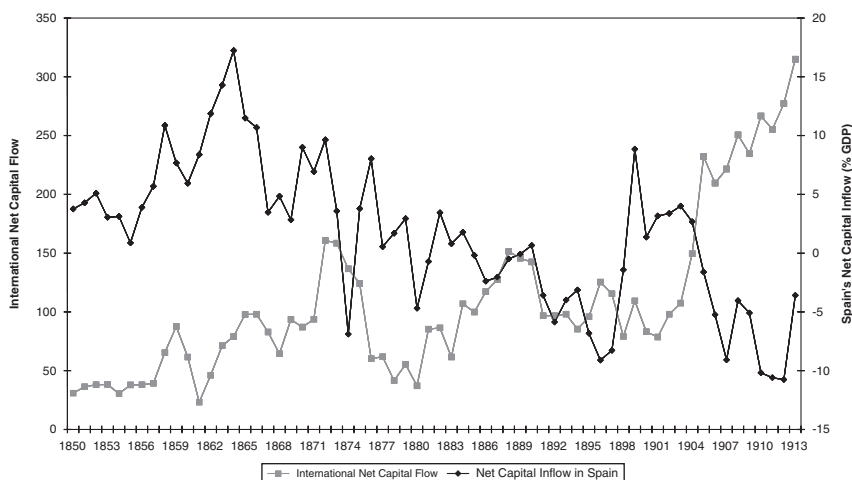
Sources: Obstfeld and Jones (1997), and see text for Spain's net capital inflow.

Several slowdown episodes in international capital flows are observed starting in 1866, 1873, 1890 and 1896, of which those of 1873 and 1890 appear to have special intensity. In Spain, sudden stops can be observed in 1866-1869, 1876-1880, 1890-1896 and 1904-1907, with especial intensity in the last two episodes. Interestingly, the last sudden stop, at odds with the previous ones, occurred while international capital exports were accelerating during the decade before the World War I.

Which of the predicted effects of the SS are found in the Spanish experience? To begin with, currency crashes occurred during 1891-1893 and 1896-1898, but not in earlier SS, or in 1904-1907 — when the opposite happened and the peseta returned to its previous position in 1891 — (Figure 9)[56]. Why such an uneven response to different SS? The consequences of two exogenous events, the Baring crisis (1890) and the Cuban War of Independence (1896-1898) are, no doubt, part of the explanation. According to Luis Catao (2007,

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[56] The 1890s sudden stops conform with Calvo *et al.* (2003) model in which an abrupt interruption of foreign capital inflow leads to a deep current account reversal and a substantial depreciation of the real exchange rate (measured as domestic currency per unit of foreign currency). The multilateral nominal effective exchange rate has been computed using Spain's bilateral trade weights for most of its trading partners (Prados de la Escosura and Tena (1994). The real effective exchange rate is a multilateral rate index calculated using consumer price indices (CPIs) for the main trading partners and the private consumption deflator for Spain (Prados de la Escosura 2003).

FIGURE 9

SPAIN'S CURRENT ACCOUNT BALANCE (% GDP) AND NOMINAL AND REAL
EFFECTIVE EXCHANGE RATE (1913 = 100), 1870-1913
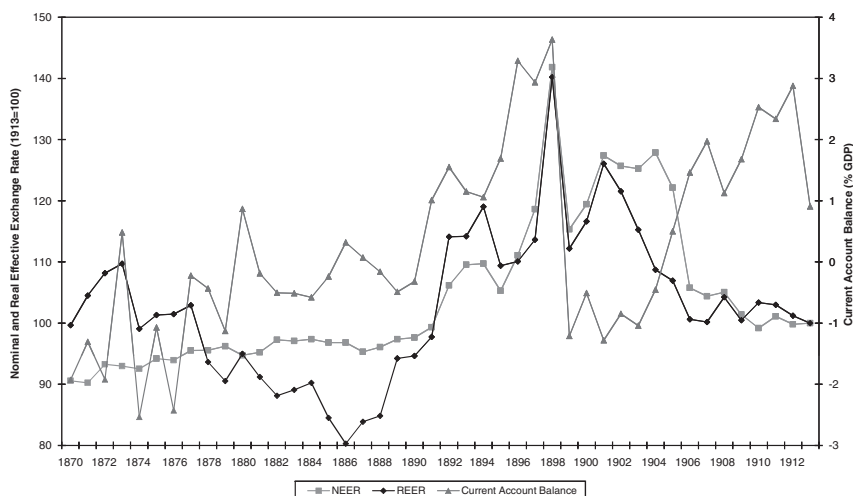
Source: See the text.

pp. 266-269), during the first wave of financial globalization, countries that experienced rapid monetary expansion and had a lax fiscal behavior were more prone to currency crashes[57]. In fact, money supply (M2) appears to have grown above GDP in Spain during the cyclical upswings 1885-1889 and 1896-1898 (Figure 10). Meanwhile, the public debt/GDP ratio, sharply reduced as a result of the sovereign debt rescheduling in 1882, experienced a sustained increase over 1893-1896 and went further up in the aftermath of Cuban War of Independence, 1899-1903 (Figure 11)[58].

The simultaneity of sudden stops and exchange rate drops during the 1890s tends to play down the role of the suspension of the gold convertibility of the peseta (1883) suggesting that, during the 1880s, as long as an inflow of foreign capital continued, the Spanish currency remained stable, regardless of whether the exchange rate floated or not (Figure 9).

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[57] In addition, Edwards (2004, p. 33) points out that the probability of experiencing a current account reversal is higher for a country with a large current account deficit, a high external debt ratio and a rapid rate of growth of domestic credit.

[58] Interestingly, although Cuban War of independence (1896-1898) does not seem to have had a major direct negative effect on Spain's economy, the macroeconomic instability brought about by the financing of the military conflict was to have significant effects on Spain's position of international isolation. cf. Fraile and Escribano (1998). On the financing of the war, cf. Maluquer de Motes (1996) and Tedde de Lorca (1999).

FIGURE 10
RATIO M2/GDP (1874-1913)
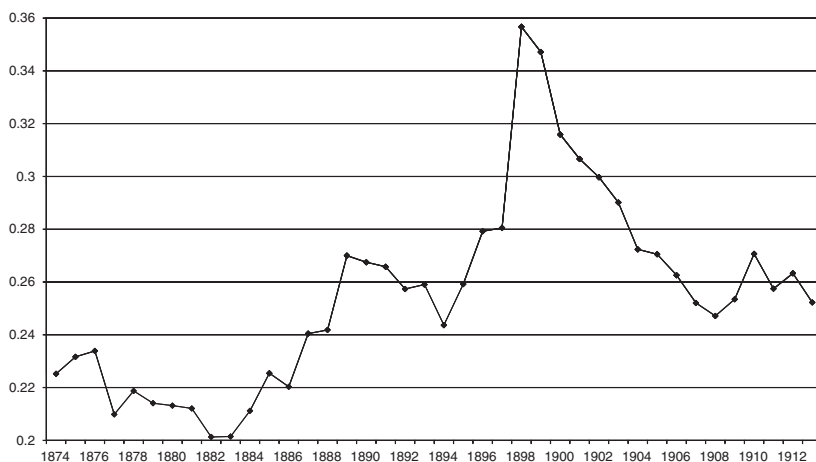
Sources: M2, Martín Aceña and Pons (2005); GDP, Prados de la Escosura (2003).

FIGURE 11
PUBLIC DEBT/GDP (1884-1913)
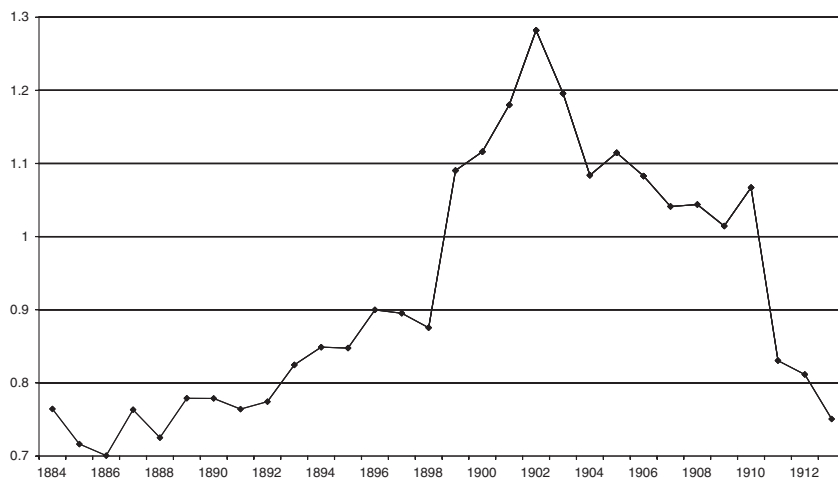
Sources: Public debt, Comín and Díaz Fuentes (2005); GDP, Prados de la Escosura (2003).

This result has implications for the debate between those who emphasize the advantages of a floating exchange rate for a developing economy due to the high opportunity cost of maintaining gold reserves as well as the shock

FIGURE 12
RATE OF INFLATION (1883-1913)
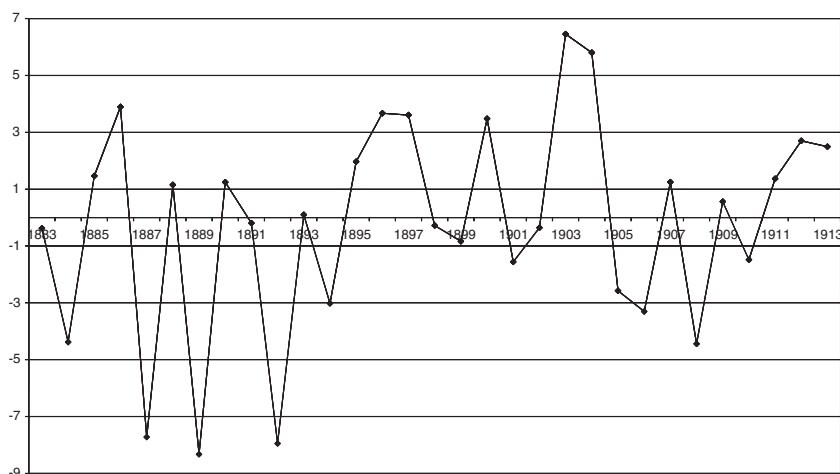
Source: GDP deflator from Prados de la Escosura (2003).

absorber role of the exchange rate (Sardá Dexeus 1948; Tortella 1974; Flandreau and Zumer 2004), and those who stress that belonging to the Gold Standard sent the right signal of compliance with orthodox financial practice to capital markets (Martín Aceña 1993; Bordo and Rockoff 1996). To the extent that it could be factored out, macroeconomic stability rather than belonging to the Gold Standard seems to have been the relevant signal for international investors.

When macroeconomic discipline was abandoned at the time of the Baring crisis and, then, again, by the need to financing the Cuban War of Independence, the control mechanism that stopped the peseta from falling disappeared[59]. Macroeconomic instability, especially inflation, which soared over 1895-1904 (Figure 12), had negative effects on the reputation of Spain's economy making it less attractive to international capital, as suggested by the

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[59] For those who favour the importance of being part of the Gold Standard, the argument would be that, as long as the belief in the authorities' commitment to restoring convertibility at the pre-1883 parity existed in the markets, the peseta would remain unaltered. Then, when macro-economic instability occurred, economic agents realized that the suspension of convertibility was not a temporary measure and that the authorities had no intention of restoring convertibility. This situation led to an outflow of capital which dragged the peseta down (cf. Bordo and Kydland 1995). Martín Aceña (1993, pp. 140-145) notes that the hopes of a rapid return to the parity of 1883, together with the government's restrictive policies, would have contributed to the peseta's stability.

FIGURE 13
INTEREST RATE SPREAD IN SPAIN (1884-1913): DIFFERENTIAL WITH ENGLAND,
FRANCE, AND GERMANY
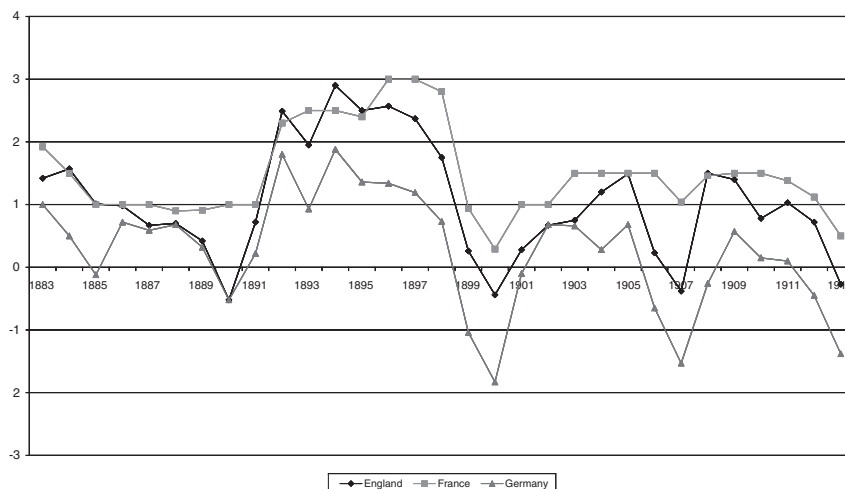
Sources: Central banks' discount rates for Spain Martín Aceña and Pons (2005), Britain, France and Germany Homer and Sylla (1991).

spread between the discount rate of the Bank of Spain and those of the central banks in the main capital-investing countries (Figure 13)[60].

After the independence of Cuba, Puerto Rico and the Philippines, a current account deficit reappeared between 1899 and 1906 that could be associated to the repatriation of capital from the former colonies in the sound economic environment provided by Fernández-Villaverde's stabilization plan (Comín 1999).

Why, then, the sudden stop of 1904-1907, at the time of an international expansion of capital flows, and why the current account reversal was accompanied by an improvement in the exchange rate of the peseta? There are good reasons to explain why the exchange rate did not drop. The fact that, for most of the period up to the World War I, inflation remained moderate and the debt/GDP and M2/GDP ratios were continued falling, as opposed to what had happened in the 1890s, help explain why a currency crash was avoided. Furthermore, no exogenous events such as the Cuban War of Independence took place while emmigrant remittances played an important offsetting role in the current account balance (Figure 4). But, why was Spain left aside from the

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[60] Bordo and Rockoff's (1996, p. 414) claim that Spain had a 3 per cent risk premium as a non-gold standard country is confirmed by the evidence presented in Figure 13.

international wave of investment before the World War I? It is noteworthy that Italian and the Portuguese current account balances also experienced a surplus during this period (Bordo *et al*. 2010; Catao 2007). Meanwhile, Argentina, Brazil, Canada and Russia became the main capital importers. Why were South–Western European countries excluded? Was it because investment opportunities had dried up, or because the opportunity cost was too high? It would be worth investigating the extent to which the decline in a sustainable current account deficit results from a reduction in foreigners' demand of an emerging country's assets (Edwards 2004). In Spain, by the end of the 19th century, those sectors that had attracted most foreign capital were already developed; the railways network was completed and mining resources were fully exploited. Perhaps this fact helps explain why, in the absence of new investment opportunities, international capital inflow into Spain slowed down[61]. This is, no doubt, an avenue for further research.

To sum up, the idea that the suspension of the convertibility of the peseta in 1883 and its delayed effect in terms of a currency crash in the 1890s was the result of endemic balance of payment problems is not supported by the evidence presented here. On the contrary, it is the alternative view that sudden stops, in a context of domestic financial imperfections, are to be blamed.

5. DID INTERNATIONAL INTEGRATION HOLD BACK GROWTH?

The traditional view among Spanish economic historians, reinforced by those who argue in terms of the «external constraint on growth» approach, associates a current account deficit to a deterioration of the economic situation or a threat to growth. Conversely, a current account reversal — that is, a surplus on current account — will imply, according to the sudden stop literature, a decline in investment and, thus, in economic growth that tends to intensify if the country is less opened (Edwards 2004; Bordo *et al*. 2010).

No consensus has been reached on the importance of a large and resilient current account deficit for growth. The optimistic view emphasizes the intertemporal nature of the current account arguing that to the extent they reflect a rise in investment there is no reason for concern (Sachs 1981; Corden 1994). The opposite, pessimistic view, epitomized in Thirlwall's approach (1979), has a more recent expression in Fischer (1988) to whom the first sign of a crisis is the current account deficit. In this context of uncertainty, historical research can make a useful contribution.

How did the interruption of foreign capital inflow affect economic growth in Spain?

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[61] As from the beginning of the 20th century, investments in public utilities (electricity and gas) and, later, financial investments (Sardá Dexeus 1948, p. 268) were to become more significant. See the British investments in these sectors for the period up to 1914 in Stone (1999).

FIGURE 14
GROSS INVESTMENT AND SAVING (% GDP)
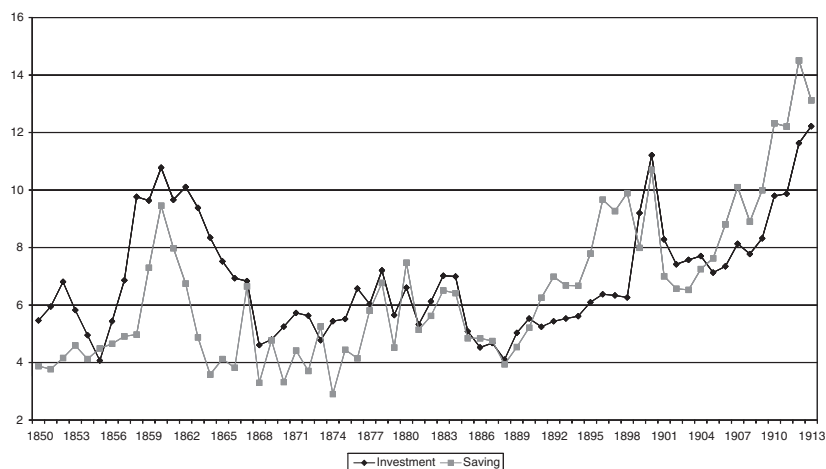
Sources: Investment, Prados de la Escosura (2003); saving, see the text.

Let us begin with the current account identity:

$$CAB = X - M + NCT + NY = S - I, \qquad (1)$$

where CAB is the current account balance; X and M are exports and imports of goods and services, respectively; NCT is the net current transfers; and NY is the net income from abroad, while CAB equals the difference between gross domestic saving (S) and investment (I)[62]. Here, we can normalize regarding GDP (Y), to provide an idea of the relative size of each item,

$$CAB/Y = S/Y - I/Y \qquad (2)$$

Two distinctive phases can be observed in the relationship between investment and saving with 1890 as the turning point (Figure 14). Domestic investment was above saving between 1850 and 1890, which means that the foreign capital supplemented the domestic saving to meet investment demand. The gap between investment and saving was particularly noticeable from 1850 to 1866. This upsurge of investment that reached 10 per cent of GDP in the early 1860s was associated to the construction of the railways network in which foreign

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[62] If we start from the basic national account identity, GDP = C + G + I + X − M, where C and G are private and Government consumptions; I, gross domestic investment and X and M are exports and import of goods and services, respectively. We, then, define the current account balance (CAB) as, CAB = X − M + NCT + NY, and the Gross National Product as GNP = C + G + I + CAB. We can derive gross domestic saving as S = GNP − C − G. Thus, S = I + CAB, so CAB = S − I.

FIGURE 15
DECOMPOSING GROSS INVESTMENT: PRIVATE AND GOVERNMENT SAVING
AND THE (NEGATIVE OF THE) CURRENT ACCOUNT BALANCE (% GDP)
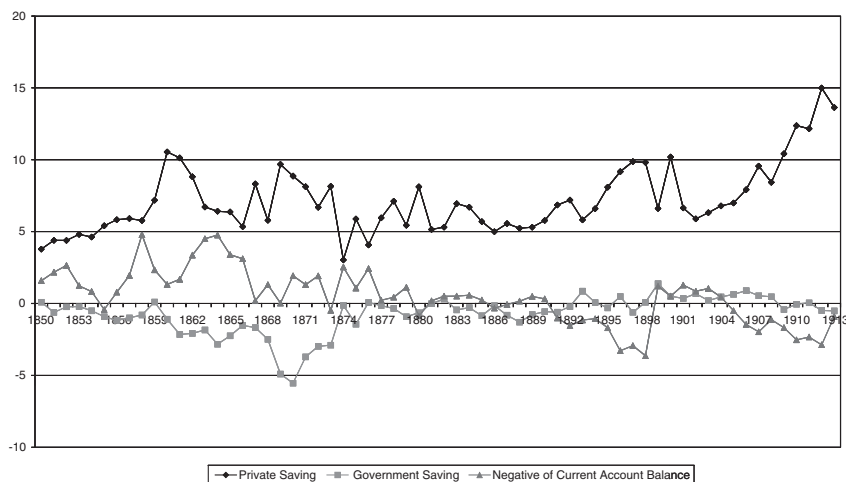
Sources: Government Saving, Comín and Díaz Fuentes (2005); for the rest, see the text.

capital played a non-negligible role. From 1890 up to the eve of the World War I, investment depended almost exclusively on domestic saving as a current account surplus prevailed (exception made of the years 1899-1904). All in all, investment and saving followed the same trend with investment remaining below 8 per cent of GDP up to 1898, but for the years of the railway construction boom.

The small size of investment and saving, in terms of GDP, hides the relative importance of foreign investment within the gross domestic capital formation in Spain. Starting from expression (2), we can decompose gross domestic investment into gross domestic saving (private, Sp/Y, and Government, Sg/Y, saving) and the (negative of the) current account balance (Figure 15).

$$I/Y = S/Y - CAB/Y = Sp/Y + Sg/Y - CAB/Y \qquad (3)$$

Government saving was negative up to 1891, especially between 1861 and 1873, and was not counterbalanced by a rise in private saving but by a current account deficit financed through a net inflow of foreign capital. This way, the decrease in government saving did not imply a constraint to the investment ratio. An implication is that a decline of investment derived from a decrease in government saving — the crowding-out hypothesis sometimes discussed in the literature — is not confirmed by the evidence.

FIGURE 16
NET CAPITAL INFLOW AS A PROPORTION OF GROSS INVESTMENT (%)
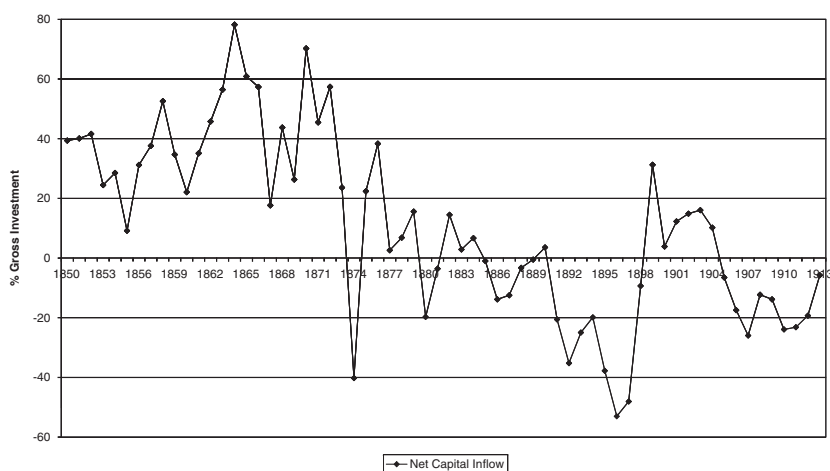
Source: see the text.

The relative importance of the net capital inflow contribution to capital formation is captured by its share of gross investment (Figure 16). Between 1850 and 1890, foreign capital financed the one-fifth of the domestic investment, reaching, on average, almost the two-fifths of it during the third quarter of the 19th century. Conversely, in the years 1891-1913, the net outflow of capital implied a contraction of domestic investment (13 per cent) that reached nearly the one-third over 1891-1898, but experienced a reversal episode over 1899-1904, in which the net inflow of foreign capital represented 15 per cent of the gross capital formation.

These are far from negligible figures, but how large was the impact of net capital inflow on economic growth? I have used a growth-accounting framework to investigate how much would the capital stock have varied, if investment demand had been met exclusively through domestic saving, and, then, how much would have the GDP per head differed[63].

The absence of net inflow of foreign capital is simulated by replacing actual investment with saving in the estimates of capital stock[64]. It could be argued that foreign capital was invested in non-residential structures,

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[63] I have used the same database and accounting framework employed in Prados de la Escosura and Rosés (2009, 2010).

[64] In the simulations, I distributed the difference between investment and saving proportionally among the different type of assets.

FIGURE 17
ACTUAL AND COUNTERFACTUAL CAPITAL STOCK, 1850-1913 (1850 = 100)
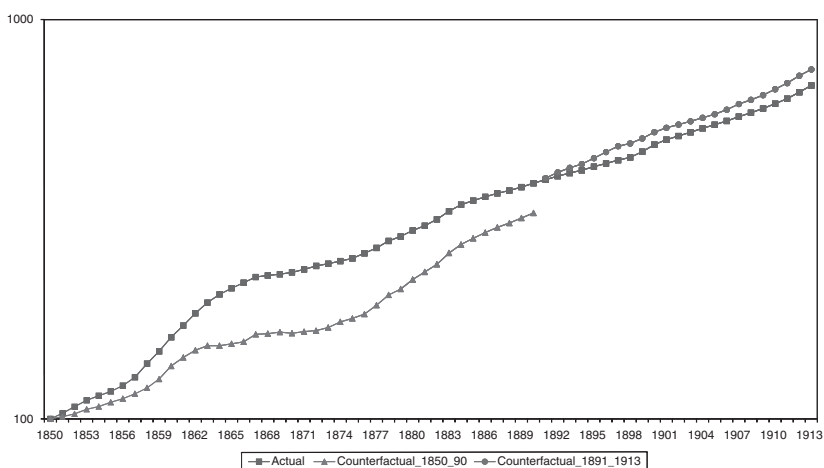
Source: see the text.

machinery and transport equipment to larger extent than in residential structures. This option has not been explored here, but it can be presumed that the results from this counterfactual exercise provide only a lower-bound estimate. Furthermore, we could speculate that the investment by nationals would have been lower without the stimulus of foreign investment, and the employment would have been lower without this increase in capital formation.

A comparison between actual and counterfactual capital stock is provided in Figure 17. Over the period 1850-1890, the counterfactual level of capital stock is lower and its pace of growth milder than the actual one (3.1 against 3.4 per cent), especially during years of intensive capital inflow such as those of the railway construction (2.9 vs. 4.9 per cent). As regards the years 1891-1913, the question is how larger the capital stock would have been, if all saving would have been invested domestically, that is, without a net *outflow* of capital. In such a scenario, the actual capital stock would be smaller and its growth is slower than the counterfactual one (2.5 vs. 2.8 per cent), and even more during the sudden stops of the 1890s (1.9 vs. 2.9 per cent).

Next, the impact on the growth of GDP per head has been assessed by comparing the actual and counterfactual scenarios. The simulation exercise provides once again the lower-bound estimates, as foreign capital inflow is assumed to have an impact on capital accumulation, but not on the efficiency in the use of production factors. Nonetheless, the new technology embodied in machinery and transport equipment financed by foreign investment would have improved efficiency and, thus, increased the total factor productivity.

TABLE 1
ACTUAL AND COUNTERFACTUAL GROWTH (%)

	Capital stock		GDP per head	
	Actual	Counterfactual	Actual	Counterfactual
Simulation 1				
1850-1883	3.6	3.0	1.4	1.3
1850-1866	4.9	2.9	1.1	0.8
1850-1873	3.9	2.5	1.7	1.4
Simulation 2				
1884-1913	2.4	2.7	0.6	0.7
1891-1898	1.9	2.9	0.9	1.1
1906-1913	2.8	3.2	1.8	2.0

Sources: Prados de la Escosura and Rosés (2009, 2010), and see the text.

This would be especially the case during the railway construction and the mining boom of the third quarter of the 19th century[65].

Actual and counterfactual growth rates of GDP per head over distinctive phases of the economic performance are offered in Table 1[66]. Two different phases are considered that correspond to the long swings in Spanish economic growth, 1850-1883 and 1884-1913 (Prados de la Escosura 2007)[67]. In the first one, per capita GDP would have grown at a slightly lower rate in the counterfactual scenario of the lack of a net inflow of foreign capital. The differential increases during the railway construction. In the post-1884 years, the counterfactual scenario of the absence of a net outflow of capital produces a faster pace of growth. This is more intense during sudden stops, particularly in those of the 1890s.

The results of this highly tentative and speculative exercise help to highlight the significance of Spain's openness and integration in the international capital market. Economic growth intensified during the late 19th century, as foreign capital complemented domestic saving to meet a growing investment demand and, although difficult to quantify, improvements in the quality of capital and embodied technology in new capital goods, whose acquisition was funded by foreign capital, most probably made the economy more efficient. Conversely,

[65] See Herranz-Loncán's (2006) important contribution on the impact of railways on capital accumulation and total factor productivity (TFP) growth.

[66] In the simulation, I should have previously adjusted the share of capital in national income resulting from a lower capital stock in the growth-accounting exercise, with the subsequent reduction in the growth rate of GDP. However, as I am trying to obtain a lower-bound estimate, I have not considered this option.

[67] Alternative simulations for 1850-1890 and 1891-1913 cast similar results with counterfactual per capita GDP growth being lower than actual growth in the first period (0.9 vs. 1.0 per cent) and higher in the second (1.2 vs. 1.0).

the sudden stops at the turn of the century slowed down the growth, as the increase in capital accumulation decelerated, and presumably the efficiency of the economy. Thus, sudden stops by causing current account reversals and currency drops in a context of domestic macroeconomic imperfections had a clear negative effect on the long-run growth of Spain.

6. CONCLUDING REMARKS

In 1850-1890, the economic expansion coincided with a significant current account deficit, whereas in 1891-1913, the growth slowed down at the time of positive current account balances. This inverse correlation between current account surplus and economic growth throws serious doubts on the widespread view of an external restriction to Spain's growth during the 19th century. It suggests, in fact, an alternative interpretation — the balance of payments reacted to changes in the equilibrium between saving and investment. Thus, the current account deficit resulted from an inflow of capital that allowed the rate of investment to rise and, in turn, to contribute to more rapid growth. Only when isolation from the international economy increased, since 1891, investment demand had to rely on domestic saving. In the context of globalization that characterized the classical gold standard era, there was no reason why an open economy should not enjoy sustained access to international capital markets and break the link between investment and domestic saving. From this perspective, the persistence of the current account deficit between 1850 and 1890 is better understood.

At the turn of the century, domestic macroeconomic imperfections strengthened the current account reversals that had been provoked by sudden stops, undermining the confidence of foreign investors in the Spanish economy and helping the flight of foreign capital. Furthermore, as Blanca Sánchez-Alonso (2000) has shown, the migration push of the 1891 protectionist tariff was largely offset by the microeconomic consequences of the currency crash preventing individuals from migrating for one and a half decades.

The view that Spanish integration in international markets contributed to a slowing down of economic growth appears to be wrong. It can be suggested that without the current account deficit — that is, without an inflow of foreign capital — Spain would have grown at a slower speed during the second half the 19th century. As the inflow of capital dried up, investment had to rely exclusively on domestic savings' slowing down capital accumulation and economic growth.

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APPENDIX 1

THE BALANCE OF PAYMENTS ON CURRENT ACCOUNT, NET CAPITAL INFLOW AND INTERNATIONAL INDEBTEDNESS, 1850-1913 (MILLION PESETAS)

	Export goods f.o.b.	Export services*	Payments to domestic Labor	Current transfers	Imports goods f.o.b.	Imports services*	Payments to Foreign Capital	Commodity balance	Balance of services*	Net income from abroad	Net current transfers	Current account balance	Variation in reserves	Net Capital inflow	International indebtedness
1850	161.9	8.2	0.2	4.2	169.5	16.6	55.9	−7.6	−8.4	−55.7	4.2	−67.4	24.0	91.4	1596.4
1851	142.8	8.4	0.2	4.2	182.1	18.8	49.2	−39.3	−10.3	−49.0	4.2	−94.5	9.0	103.5	1699.9
1852	134.6	8.8	0.2	4.3	194.1	18.3	51.3	−59.5	−9.5	−51.0	4.3	−115.8	8.0	123.8	1823.7
1853	185.9	12.8	0.3	5.3	198.0	22.1	47.7	−12.1	−9.3	−47.4	5.3	−63.6	10.0	73.6	1897.3
1854	229.5	16.4	0.3	6.1	217.5	31.4	47.8	12.0	−15.0	−47.5	6.1	−44.4	31.0	75.4	1972.6
1855	322.0	16.4	0.3	6.4	237.0	40.9	43.3	85.0	−24.5	−43.0	6.4	24.0	45.0	21.0	1993.7
1856	319.4	20.4	0.4	7.1	291.9	57.0	42.2	27.5	−36.6	−41.8	7.1	−43.9	51.0	94.9	2088.6
1857	318.1	22.5	0.5	8.0	337.0	76.5	40.7	−19.0	−53.9	−40.2	8.0	−105.2	34.0	139.2	2227.7
1858	179.9	18.9	0.5	8.0	345.4	69.8	43.9	−165.5	−50.9	−43.4	8.0	−251.8	18.0	269.8	2497.5
1859	236.9	15.3	0.5	8.4	297.0	49.5	45.8	−60.1	−34.2	−45.3	8.4	−131.1	56.0	187.1	2684.6
1860	262.9	61.7	0.5	8.6	308.5	52.2	51.6	−45.7	9.4	−51.1	8.6	−78.8	63.0	141.8	2826.4
1861	281.0	35.1	0.5	8.6	325.8	51.7	50.1	−44.8	−16.5	−49.6	8.6	−102.4	104.0	206.4	3032.8
1862	235.0	20.0	0.8	9.9	360.9	59.2	55.9	−125.9	−39.2	−55.1	9.9	−210.3	79.0	289.3	3322.1
1863	236.9	21.9	0.7	9.5	443.0	71.3	51.2	−206.1	−49.5	−50.4	9.5	−296.5	52.0	348.5	3670.6
1864	219.9	33.1	0.8	9.8	427.9	75.4	72.8	−208.0	−42.4	−72.1	9.8	−312.7	116.0	428.7	4099.3
1865	250.2	22.4	0.8	10.5	381.5	60.5	51.8	−131.3	−38.1	−51.0	10.5	−210.0	73.0	283.0	4382.2
1866	267.0	21.1	0.9	12.7	380.3	59.6	67.9	−113.4	−38.5	−66.9	12.7	−206.1	57.0	263.1	4645.3
1867	367.4	19.9	1.0	13.4	299.9	48.5	66.4	67.5	−28.6	−65.4	13.4	−13.1	72.0	85.1	4730.5
1868	374.4	23.7	1.0	14.6	343.3	65.4	83.3	31.1	−41.7	−82.3	14.6	−78.3	42.0	120.3	4850.8
1869	429.3	21.9	1.2	16.9	304.5	52.8	113.5	124.8	−30.9	−112.3	16.9	−1.4	68.0	69.4	4920.2
1870	334.2	21.1	1.2	17.3	322.7	53.0	113.2	11.5	−31.9	−112.1	17.3	−115.1	105.0	220.1	5140.3
1871	433.1	32.3	1.1	16.9	382.8	57.9	126.6	50.3	−25.6	−125.5	16.9	−83.9	83.0	166.9	5307.2
1872	493.2	29.8	1.7	19.4	479.5	68.1	137.6	13.7	−38.4	−135.9	19.4	−141.1	96.0	237.1	5544.3
1873	582.5	33.4	2.1	22.1	406.5	55.9	140.1	176.0	−22.5	−138.0	22.1	37.7	126.0	88.3	5632.6
1874	506.7	28.6	2.6	28.0	497.5	71.8	193.9	9.2	−43.3	−191.3	28.0	−197.3	−367.6	−170.3	5462.4

1875	537.9	26.6	2.4	25.9	423.4	60.0	191.9	114.6	−33.4	−189.5	25.9	−82.4	12.6	95.0	5557.4
1876	451.7	28.2	3.4	29.8	521.2	73.1	112.9	−69.5	−44.9	−109.5	29.8	−194.2	7.5	201.7	5759.0
1877	566.4	29.5	3.5	31.0	457.5	68.9	123.7	109.0	−39.4	−120.2	31.0	−19.7	−5.8	13.9	5772.9
1878	534.2	29.6	1.6	25.1	433.1	69.0	126.4	101.1	−39.3	−124.8	25.1	−37.9	4.9	42.8	5815.7
1879	540.7	31.6	2.9	26.9	493.1	81.2	123.8	47.6	−49.6	−120.9	26.9	−96.0	−21.2	74.8	5890.5
1880	734.5	39.5	3.1	26.3	502.9	86.3	136.2	231.6	−46.8	−133.1	26.3	78.0	−39.5	−117.5	5773.0
1881	755.6	42.8	1.7	24.7	575.9	93.7	173.0	179.7	−50.9	−171.3	24.7	−17.8	−35.8	−18.0	5754.9
1882	764.0	47.1	2.9	28.7	613.1	92.6	187.5	150.9	−45.5	−184.6	28.7	−50.5	38.1	88.6	5843.6
1883	831.1	31.7	2.8	31.8	650.2	90.6	208.7	181.0	−58.9	−205.9	31.8	−52.0	−31.5	20.5	5864.1
1884	718.4	32.3	2.7	33.3	572.1	78.5	192.6	146.3	−46.1	−189.9	33.3	−56.4	−10.8	45.6	5909.6
1885	760.0	35.6	3.1	29.3	579.6	72.2	199.2	180.4	−36.6	−196.1	29.3	−23.0	−27.9	−4.9	5904.8
1886	817.9	41.1	4.9	36.6	586.0	80.0	203.1	232.0	−39.0	−198.2	36.6	31.4	−30.2	−61.6	5843.2
1887	753.2	44.1	5.0	47.5	565.9	84.2	193.1	187.2	−40.1	−188.1	47.5	6.5	−46.0	−52.5	5790.7
1888	810.1	49.2	5.4	59.5	621.7	99.6	218.0	188.4	−50.4	−212.7	59.5	−15.2	−27.8	−12.6	5778.0
1889	834.3	57.0	5.9	84.1	693.0	113.8	217.3	141.2	−56.8	−211.3	84.1	−42.8	−45.1	−2.3	5775.8
1890	867.2	53.5	3.5	65.2	701.3	92.2	224.2	166.0	−38.7	−220.8	65.2	−28.3	−11.0	17.3	5793.1
1891	933.7	50.6	4.6	76.3	669.0	91.2	214.0	264.8	−40.6	−209.4	76.3	91.1	−6.1	−97.2	5695.9
1892	931.9	51.7	5.2	93.7	661.1	84.1	198.9	270.8	−32.4	−193.7	93.7	138.4	−32.7	−171.1	5524.9
1893	881.3	52.5	5.3	106.6	658.9	85.3	201.3	222.5	−32.8	−196.0	106.6	100.3	−19.9	−120.2	5404.7
1894	899.0	55.0	7.2	89.2	675.5	85.5	199.3	223.5	−30.5	−192.1	89.2	90.1	−4.9	−95.0	5309.7
1895	861.8	47.8	3.9	65.7	574.3	67.5	191.9	287.4	−19.7	−188.0	65.7	145.4	−52.6	−198.0	5111.7
1896	1067.7	63.0	5.4	79.1	637.1	89.4	218.2	430.6	−26.4	−212.8	79.1	270.5	−7.6	−278.1	4833.6
1897	1127.0	72.4	5.2	88.1	689.4	95.6	246.2	437.6	−23.2	−241.0	88.1	261.5	−9.8	−271.3	4562.3
1898	1272.3	69.2	5.6	100.4	709.2	92.5	298.0	563.2	−23.4	−292.4	100.4	347.8	291.8	−56.0	4506.2
1899	1058.3	89.9	6.4	94.7	910.0	114.9	342.2	148.2	−25.0	−335.8	94.7	−117.9	161.5	279.4	4785.6
1900	1181.1	129.4	6.9	104.2	1003.2	122.3	348.3	177.9	7.1	−341.4	104.2	−52.2	−8.1	44.1	4829.7
1901	1104.5	87.5	6.6	108.2	1053.6	99.6	291.7	50.9	−12.1	−285.1	108.2	−138.2	−28.6	109.6	4939.3
1902	1103.5	97.0	7.4	94.1	1006.7	88.7	295.1	96.7	8.2	−287.7	94.1	−88.5	26.4	114.9	5054.2
1903	1152.0	103.9	8.0	108.7	1084.3	101.9	302.7	67.6	2.0	−294.7	108.7	−116.4	19.1	135.5	5189.7
1904	1202.0	104.7	11.2	145.7	1090.6	110.5	315.8	111.4	−5.8	−304.6	145.7	−53.3	39.0	92.3	5282.0

	Export goods f.o.b.	Export services*	Payments to domestic Labor	Current transfers	Imports goods f.o.b.	Imports services*	Payments to Foreign Capital	Commodity balance	Balance of services*	Net income from abroad	Net current transfers	Current account balance	Variation in reserves	Net Capital inflow	International indebtedness
1905	1318.5	125.1	12.5	180.0	1116.1	143.4	320.1	202.4	−18.2	−307.6	180.0	56.5	3.7	−52.8	5229.2
1906	1323.5	94.7	9.9	196.5	967.0	117.3	371.2	356.5	−22.6	−361.2	196.5	169.2	20.8	−148.4	5080.8
1907	1405.1	86.7	9.3	217.2	956.2	112.5	412.4	448.9	−25.8	−403.1	217.2	237.2	−17.0	−254.2	4826.6
1908	1140.6	77.8	11.8	275.0	937.5	115.3	317.8	203.1	−37.4	−306.0	275.0	134.7	20.3	−114.4	4712.2
1909	1120.8	78.2	9.7	279.2	854.5	103.4	324.9	266.3	−25.2	−315.3	279.2	205.0	64.5	−140.5	4571.7
1910	1237.6	97.7	12.8	328.8	936.8	123.1	321.4	300.8	−25.5	−308.6	328.8	295.5	21.4	−274.1	4297.6
1911	1377.8	104.4	12.7	339.9	1110.6	144.1	285.2	267.1	−39.8	−272.4	339.9	294.8	6.1	−288.7	4008.9
1912	1490.7	129.3	17.2	395.8	1158.5	182.4	322.6	332.2	−53.1	−305.4	395.8	369.5	81.1	−288.4	3720.5
1913	1524.3	135.4	15.9	370.3	1380.6	156.4	383.8	143.7	−21.0	−367.9	370.3	125.1	28.0	−97.1	3623.4

* Excluding factor payments.
Source: See text.

APPENDIX 2
INVESTMENT AND SAVING, 1850-1913 (MILLION PESETAS AND % GDP)

	(Million Pesetas)						(% GDP)						(% Gross Investment)	
	Gross investment	Current account balance	Gross saving	Govern-ment saving	Private saving	Net Capital inflow	Gross investment	Current account balance	Gross saving	Government saving	Private saving	Net Capital inflow	Current Account Balance (negative)	Net Capital inflow
1850	232.3	−67.4	164.8	4.0	160.8	91.4	5.5	−1.6	3.9	0.1	3.8	2.2	29.0	39.4
1851	258.3	−94.5	163.8	−27.0	190.8	103.5	5.9	−2.2	3.8	−0.6	4.4	2.4	36.6	40.1
1852	297.7	−115.8	181.9	−10.0	191.9	123.8	6.8	−2.6	4.2	−0.2	4.4	2.8	38.9	41.6
1853	300.8	−63.6	237.2	−11.0	248.2	73.6	5.8	−1.2	4.6	−0.2	4.8	1.4	21.1	24.5
1854	264.3	−44.4	220.0	−27.0	247.0	75.4	5.0	−0.8	4.1	−0.5	4.6	1.4	16.8	28.5
1855	230.4	24.0	254.4	−52.0	306.4	21.0	4.1	0.4	4.5	−0.9	5.4	0.4	−10.4	9.1
1856	304.3	−43.9	260.4	−66.0	326.4	94.9	5.4	−0.8	4.7	−1.2	5.8	1.7	14.4	31.2
1857	370.1	−105.2	264.9	−54.0	318.9	139.2	6.9	−1.9	4.9	−1.0	5.9	2.6	28.4	37.6
1858	513.2	−251.8	261.4	−42.0	303.4	269.8	9.8	−4.8	5.0	−0.8	5.8	5.1	49.1	52.6
1859	539.9	−131.1	408.8	6.0	402.8	187.1	9.6	−2.3	7.3	0.1	7.2	3.3	24.3	34.7
1860	642.2	−78.8	563.4	−65.0	628.4	141.8	10.8	−1.3	9.5	−1.1	10.5	2.4	12.3	22.1
1861	588.0	−102.4	485.7	−131.0	616.7	206.4	9.7	−1.7	8.0	−2.2	10.1	3.4	17.4	35.1
1862	632.1	−210.3	421.8	−130.0	551.8	289.3	10.1	−3.4	6.7	−2.1	8.8	4.6	33.3	45.8
1863	617.4	−296.5	320.9	−121.0	441.9	348.5	9.4	−4.5	4.9	−1.8	6.7	5.3	48.0	56.4
1864	548.2	−312.7	235.5	−186.0	421.5	428.7	8.3	−4.8	3.6	−2.8	6.4	6.5	57.0	78.2
1865	464.9	−210.0	255.0	−139.0	394.0	283.0	7.5	−3.4	4.1	−2.2	6.4	4.6	45.2	60.9
1866	458.9	−206.1	252.8	−101.0	353.8	263.1	6.9	−3.1	3.8	−1.5	5.3	4.0	44.9	57.3
1867	482.6	−13.1	469.5	−118.0	587.5	85.1	6.8	−0.2	6.6	−1.7	8.3	1.2	2.7	17.6
1868	275.1	−78.3	196.8	−149.0	345.8	120.3	4.6	−1.3	3.3	−2.5	5.8	2.0	28.5	43.7
1869	264.0	−1.4	262.6	−270.0	532.6	69.4	4.8	0.0	4.8	−4.9	9.7	1.3	0.5	26.3
1870	313.4	−115.1	198.3	−331.0	529.3	220.1	5.2	−1.9	3.3	−5.5	8.9	3.7	36.7	70.2
1871	367.1	−83.9	283.2	−238.0	521.2	166.9	5.7	−1.3	4.4	−3.7	8.1	2.6	22.9	45.5
1872	413.4	−141.1	272.3	−219.0	491.3	237.1	5.6	−1.9	3.7	−3.0	6.7	3.2	34.1	57.4

	(Million Pesetas)						(% GDP)						(% Gross Investment)	
	Gross investment	Current account balance	Gross saving	Govern-ment saving	Private saving	Net Capital inflow	Gross investment	Current account balance	Gross saving	Government saving	Private saving	Net Capital inflow	Current Account Balance (negative)	Net Capital inflow
1873	374.3	37.7	411.9	−227.0	638.9	88.3	4.8	0.5	5.3	−2.9	8.2	1.1	−10.1	23.6
1874	423.2	−197.3	225.9	−10.0	235.9	−170.3	5.4	−2.5	2.9	−0.1	3.0	−2.2	46.6	−40.2
1875	424.6	−82.4	342.2	−111.0	453.2	95.0	5.5	−1.1	4.4	−1.4	5.9	1.2	19.4	22.4
1876	526.2	−194.2	332.0	6.0	326.0	201.7	6.6	−2.4	4.1	0.1	4.1	2.5	36.9	38.3
1877	532.0	−19.7	512.3	−13.0	525.3	13.9	6.0	−0.2	5.8	−0.1	6.0	0.2	3.7	2.6
1878	628.4	−37.9	590.5	−30.0	620.5	42.8	7.2	−0.4	6.8	−0.3	7.1	0.5	6.0	6.8
1879	479.9	−96.0	383.9	−78.0	461.9	74.8	5.6	−1.1	4.5	−0.9	5.4	0.9	20.0	15.6
1880	595.2	78.0	673.2	−58.0	731.2	−117.5	6.6	0.9	7.5	−0.6	8.1	−1.3	−13.1	−19.7
1881	503.7	−17.8	486.0	−1.0	487.0	−18.0	5.3	−0.2	5.1	0.0	5.2	−0.2	3.5	−3.6
1882	612.7	−50.5	562.1	31.0	531.1	88.6	6.1	−0.5	5.6	0.3	5.3	0.9	8.2	14.5
1883	712.9	−52.0	660.8	−45.0	705.8	20.5	7.0	−0.5	6.5	−0.4	6.9	0.2	7.3	2.9
1884	682.0	−56.4	625.7	−28.0	653.7	45.6	7.0	−0.6	6.4	−0.3	6.7	0.5	8.3	6.7
1885	490.5	−23.0	467.5	−82.0	549.5	−4.9	5.1	−0.2	4.8	−0.9	5.7	−0.1	4.7	−1.0
1886	444.2	31.4	475.6	−15.0	490.6	−61.6	4.5	0.3	4.8	−0.2	5.0	−0.6	−7.1	−13.9
1887	420.8	6.5	427.3	−73.0	500.3	−52.5	4.7	0.1	4.8	−0.8	5.6	−0.6	−1.5	−12.5
1888	386.0	−15.2	370.8	−122.0	492.8	−12.6	4.1	−0.2	3.9	−1.3	5.2	−0.1	3.9	−3.3
1889	438.4	−42.8	395.6	−67.0	462.6	−2.3	5.0	−0.5	4.5	−0.8	5.3	0.0	9.8	−0.5
1890	488.8	−28.3	460.5	−50.0	510.5	17.3	5.5	−0.3	5.2	−0.6	5.8	0.2	5.8	3.5
1891	472.6	91.1	563.7	−54.0	617.7	−97.2	5.2	1.0	6.3	−0.6	6.9	−1.1	−19.3	−20.6
1892	485.7	138.4	624.1	−19.0	643.1	−171.1	5.4	1.5	7.0	−0.2	7.2	−1.9	−28.5	−35.2
1893	481.3	100.3	581.5	75.0	506.5	−120.2	5.5	1.2	6.7	0.9	5.8	−1.4	−20.8	−25.0
1894	477.9	90.1	567.9	6.0	561.9	−95.0	5.6	1.1	6.7	0.1	6.6	−1.1	−18.8	−19.9
1895	523.9	145.4	669.3	−26.0	695.3	−198.0	6.1	1.7	7.8	−0.3	8.1	−2.3	−27.8	−37.8
1896	524.3	270.5	794.8	40.0	754.8	−278.1	6.4	3.3	9.7	0.5	9.2	−3.4	−51.6	−53.0

1897	564.5	261.5	826.0	−54.0	880.0	−271.3	6.3	2.9	9.3	−0.6	9.9	−3.0	−46.3	−48.1
1898	599.4	347.8	947.2	8.0	939.2	−56.0	6.3	3.6	9.9	0.1	9.8	−0.6	−58.0	−9.3
1899	894.1	−117.9	776.2	134.0	642.2	279.4	9.2	−1.2	8.0	1.4	6.6	2.9	13.2	31.2
1900	1150.2	−52.2	1098.0	52.0	1046.0	44.1	11.2	−0.5	10.7	0.5	10.2	0.4	4.5	3.8
1901	893.5	−138.2	755.3	38.0	717.3	109.6	8.3	−1.3	7.0	0.4	6.7	1.0	15.5	12.3
1902	773.1	−88.5	684.6	71.0	613.6	114.9	7.4	−0.8	6.6	0.7	5.9	1.1	11.5	14.9
1903	844.3	−116.4	728.0	23.0	705.0	135.5	7.6	−1.0	6.5	0.2	6.3	1.2	13.8	16.0
1904	905.9	−53.3	852.6	54.0	798.6	92.3	7.7	−0.5	7.3	0.5	6.8	0.8	5.9	10.2
1905	808.4	56.5	864.9	72.0	792.9	−52.8	7.1	0.5	7.6	0.6	7.0	−0.5	−7.0	−6.5
1906	849.4	169.2	1018.6	103.0	915.6	−148.4	7.3	1.5	8.8	0.9	7.9	−1.3	−19.9	−17.5
1907	978.8	237.2	1216.0	65.0	1151.0	−254.2	8.1	2.0	10.1	0.5	9.6	−2.1	−24.2	−26.0
1908	929.3	134.7	1063.9	56.0	1007.9	−114.4	7.8	1.1	8.9	0.5	8.4	−1.0	−14.5	−12.3
1909	1015.9	205.0	1220.9	−51.0	1271.9	−140.5	8.3	1.7	10.0	−0.4	10.4	−1.2	−20.2	−13.8
1910	1145.1	295.5	1440.7	−6.0	1446.7	−274.1	9.8	2.5	12.3	−0.1	12.4	−2.3	−25.8	−23.9
1911	1245.7	294.8	1540.5	6.0	1534.5	−288.7	9.9	2.3	12.2	0.0	12.2	−2.3	−23.7	−23.2
1912	1493.7	369.5	1863.2	−62.0	1925.2	−288.4	11.6	2.9	14.5	−0.5	15.0	−2.2	−24.7	−19.3
1913	1685.0	125.1	1810.1	−71.0	1881.1	−97.1	12.2	0.9	13.1	−0.5	13.6	−0.7	−7.4	−5.8

Sources: See the text and Appendix 1. GDP and Investment, Prados de la Escosura (2003); Public Saving, Comín and Díaz Fuentes (2005).