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Abstract

The Gold Standard was an asymmetrical system, with different rules of the game for the Center and the Periphery. The periphery was for most of the time off the gold standard system, and effectively in an exchange-gold system. This paper will analyze the main effects of this hybrid system on the balance of payments adjustment mechanism of central and peripheral countries. It will be argued that the conventional wisdom that assumed a smooth and symmetrical adjustment of the balance of payments in the center and periphery is incorrect.

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Introduction

The gold standard prevailed as the dominant international monetary system roughly from the 1870s to 1914.¹ This period corresponds to the dominance of the commodity export model of development in the peripheral countries. In other words, the international division of labor implied center countries exporting manufacturing goods and importing commodities from the periphery. Therefore, an export-led strategy of development in the periphery characterized this period.

In this period few commodities dominated the exports of the periphery to the core industrial countries. For example, in Latin America the main exports by country were meat from Argentina, coffee from Brazil, copper from Chile, tobacco from Colombia, sugar from Cuba, guano from Peru, and cacao from Venezuela. The extreme dependency of the balance of payments on one single commodity implied that these peripheral countries were extremely vulnerable to changes in the terms of trade. Export revenues were essential to service the foreign debts incurred during the period, in general with British Banks, and for importing essential goods to accelerate the development process.

A fall in the terms of trade implied the impossibility to serve the debt, and a forced default, that led to the abandonment of the gold standard. Hence, the periphery was for most of the time off the gold standard system, and effectively in an exchange-gold system.² This paper will analyze the main effects of this hybrid system on the balance of payments adjustment mechanism of central and peripheral countries. It will be argued that the conventional wisdom

¹ A country is said to be under the gold standard, according to De Cecco (1984, p.1) “when gold is used as the ultimate *numeraire* of that country’s monetary system, and/or when other means of payments in use there, Government IOUs or bank’s notes, are readily redeemable in gold at their bearers’s request.” According to Eichengreen (1996, p. 9) the most accurate date to say that the gold standard was the basis of the international monetary system is the last quarter of the nineteenth-century.

² The exchange gold standard differs from the coin gold standard in that domestic currency is convertible into pounds or dollars, which in turn are convertible into gold. This, for example, was the case of India (pound-gold system) and the Philippines (dollar-gold system).

that assumed a smooth and symmetrical adjustment of the balance of payments in the center and periphery is incorrect. Next section discusses alternative views to the price-specie-flow mechanism. The third section deals with the empirical problems of the conventional view of the functioning of the gold standard. The last section puts together an alternative in which the asymmetries between center and periphery are directly connected to both endogenous money and effective demand.

Beyond the Specie-Flow Mechanism

Most economic historians tend to look at the gold standard as an idyllic time in which the stability of the international monetary system led to prosperity. Conventional wisdom tells us that the Gold Standard was a self-adjusting system. David Hume first presented the notion of a stable and self-adjusting balance of payments in his well-known “On the Balance of Trade.” According to Eichengreen (1996, p. 25) “the most influential formalization of the gold-standard is the price-specie flow model of David Hume. Perhaps the most remarkable feature of this model is its durability: developed in the eighteen century, it remains the dominant approach to thinking about the gold standard.”

In the simple model developed by Hume (1752), a country with a trade deficit would pay for the excess of imports over exports in gold specie, generating an outflow of gold. This outflow of gold would reduce the stock of gold in the country, thus reducing the domestic price level, according to the principles of the Quantity Theory of Money (QTM). Finally, deflation at home would restore the international competitiveness of domestic goods, leading to the elimination of the trade deficit. In other words, the balance of payments was self-adjusting.

It is usually assumed that classical political economists in general accepted Hume's specie-flow mechanism. However, a more detailed look at the views of the classical authors show that their views did not always coincide with that of Hume. David Ricardo, and Thomas Tooke were among the authors that were critical of Hume's specie-flow mechanism.

For Ricardo the exchange rate is determined by the supply and demand conditions for bills of exchange. Bills of exchange denominated in pounds were used as means of payment in international trade, even by countries other than Britain. Domestic exports must generate a supply of foreign bills of exchange in the domestic market, whereas domestic imports engender a demand for foreign bills of exchange in the domestic market.

If the demand and supply of bills of exchange is directly connected to the trade activities of the British Empire, then the determinants of the trade flows are the ultimate determinants of the exchange rate. However, according to Marcuzzo and Rosselli (1986, p. 91), from the time of the Napoleonic wars, London displaced Amsterdam and maintained a dominant position not only on international trade, but also in the international capital market. This means that the supply and demand of bills of exchange was also affected by capital flows.

In the case in which the demand and supply of bills of exchange are solely determined by trade flows, one can imagine a simple connection between trade flows, purchasing power and the price-specie-flow mechanism. Trade is determined according to the principle of comparative advantage, as in Ricardo's famous example of wine and cloth trade between England and Portugal.³ However, if a country does have an absolute disadvantage in the production of all commodities, as in the case of England in Ricardo's example, then this country will incur in a temporary trade deficit. This trade deficit will in turn lead to an outflow of gold, which will

³ Brewer (1985) shows that introducing capital mobility would radically change Ricardo's conclusion, bringing about the possibility that absolute advantage rather than comparative advantage determines trade patterns.

reduce prices – following the QTM – rendering the exports of the commodities in which the country is relatively more productive profitable.

The price-specie-flow mechanism not only will allow the principle of comparative advantage to work, balancing trade flows, but also will maintain the stock of gold in each country at a certain level determining the domestic price level, and hence the exchange rate. Clearly, by balancing trade flows, and rendering the exports of the less productive country profitable, the price-specie-flow mechanism determines the demand and supply of bills of exchange. If a country is sold all around, there is no supply of foreign bills in the market, constraining, as a result, the demand for foreign bills. By avoiding this situation the specie-flow mechanism determines the exchange rate, which is proportional to the stock of gold in each country, and hence proportional to the price level.

However, Ricardo's theory is independent of both the QTM and the price-specie-flow mechanism, for he clearly was critical of Hume's theory of balance of payments adjustment.⁴ According to Ricardo exports of gold would not occur if the quantity of gold was at its natural level – that is, when the quantity of gold corresponded to the natural price of gold,⁵ as determined by the conditions of production of gold.

To understand Ricardo's theory of balance of payments adjustment we will analyze the effects of a subsidy on the balance of payments, since this was the example used by Henry Thornton that Ricardo and Malthus also utilized in their debate.⁶ The decision to send a subsidy to a foreign nation created an increase in the demand for bills of exchange denominated in

⁴ According to Marcuzzo and Rosselli (1986, p. 147) “those who still relied on the price-specie-flow mechanism for international adjustment evoked his ironic comments.” In support of their view they quote the following passage from Ricardo: “is it conceivable that money should be sent abroad for the purpose merely of rendering it dear in this country and cheap in another, and by such means ensure its return to us?” (1986, p. 147).

⁵ The natural price is the price that allows the producer to obtain the uniform rate of profit.

⁶ The example is related to the fact that Britain did effectively sent subsidies to their allies during the Napoleonic wars.

foreign currency in the domestic economy. The result is a fall in the exchange rate. The price-specie-flow mechanism assumes that with the fall in the exchange rate it becomes profitable to export gold. The shipment of gold reduces the stock of gold in the domestic country, and raises it in the foreign country, producing the deflationary and inflationary processes that eventually restore equilibrium.

Unlike the defenders of the specie-flow mechanism Ricardo argued that once the exchange rate fell, British exporters would rush to increase the supply of bills of exchange denominated in foreign currency, paying with the proceeds of exports – which would increase as a result of the fall of the exchange rate. This rise in the supply of bills of exchange would move the exchange rate towards parity. In contrast with the specie-flow mechanism, the subsidy was paid in Ricardo's theory by exporting commodities rather than exporting gold. As a result, the exchange rate does not reflect the equalization of the purchasing power of gold in different countries.

In addition, Ricardo assumed that the rise in exports would lead to a fall of domestic transactions, and hence to a redundancy of currency. The redundancy of money would make prices rise, reducing the competitiveness of British exports. This fall in exports would imply that the exchange rate would not rise to par, and might be permanently below the initial level, i.e. before the subsidy.

As it should be clear, there are two main differences between Ricardo's view of balance of payments adjustment and the specie-flow mechanism. The first was already noted, namely: the fact that gold was not exported when other commodities could be exported.⁷ The second

⁷ This question bears on the crucial issue of whether gold flows were really part of the operation of the gold standard. This issue will be discussed in the next section.

difference is that whereas for Hume the devaluation would be followed by domestic deflation, in the Ricardian theory devaluation would lead to domestic inflation.

An even more radical departure from the specie-flow mechanism can be found in the works of Thomas Tooke and the Banking School. According to Tooke (1844, p. 121) “the doctrine by which it is maintained that every export or import of bullion in a metallic circulation must entail a corresponding diminution of, or addition to, the quantity of money in circulation, and thus cause a fall or rise of general prices, is essentially incorrect and unsound.”

The reflux principle, defended by the Banking School, implied that the Bank of England, and banks in general, could not increase or decrease the amount of money in circulation, nor operate through that medium on the prices of commodities. As a result, the only way “they can influence the exchanges, so as to arrest a drain, or to resist an excessive influx ... [is] by a forcible action on securities, [that] is ... a great advance in the rate of interest on the one hand, or a great reduction of it on the other.” Monetary policy, through the control of the rate of interest, is then the crucial instrument to direct capital flows, and to deal with balance of payments disequilibrium.

Both for Ricardo and the Banking School, foreign exchanges were determined by the supply and demand of bills of exchange. However, whereas for Ricardo foreign trade was the dominant, but not unique, cause of the supply and demand of bills of exchange, for Tooke capital flows seem to have a dominant role. The control of capital flows is the only way to control foreign exchanges, that is, “it is only through the rate of interest and the state of credit, that the Bank of England can exercise a direct influence on the foreign exchanges.”

It must be noted that in Tooke's analysis the rate of interest is the exogenous value, determined by the monetary authority (Pivetti, 1991).⁸ A trade deficit can be closed if the interest rate is raised sufficiently to attract capital flows. Tooke seems to believe that the possibility that there might be a situation in which no level of the rate of interest would attract capital inflows is relatively unimportant. This, in turn, appears to reflect the experience of the Bank of England that could actually command capital flows by changing the bank rate. However, if one is open to the possibility that interest rates fail to command the flows of capital, then something else must close the balance of payments.

Most classical authors remained prisoners of Say's Law, and as a result the level of activity was excluded from any role in adjusting macroeconomic disequilibria. It was only with the formal development of the principle of effective demand by John M. Keynes that the possibility of having the level of income as the adjusting variable entered the scene. In Keynes's work the level of income works as the adjusting variable between savings and investment. In an open economy environment the level of income operates as the adjusting variable for a trade deficit (Harrod, 1933). That is, if a country runs a persistent trade deficit, and capital inflows are lacking, then a reduction in the level of income would lead to a contraction of imports, and the adjustment of the balance of payments.

Structuralist authors pointed out later that even exchange rate movements affect the balance of payments not through its impact on price competitiveness, but through its effect on income distribution and the level of activity. Krugman and Taylor (1978), building on the work by Albert Hirschman and Carlos Diaz-Alejandro, show that depreciation leads to a contractionary adjustment if the economy has a trade deficit or if it redistributes income to higher

⁸ Thomas Tooke views would be classified in modern terms as an endogenous money position. For a modern discussion of endogenous money see Rochon and Vernengo (2001).

income groups. In the first case, if the volume of imports is high and the value increases after devaluation, contraction of output may be the only way to reduce the trade deficit. In the second case, if the redistributive effect of depreciation increases the income to low spending groups (higher income groups), then a contraction of output also follows.

The picture that emerges from these alternative views to the still dominant price-specie-flow mechanism is that certain countries could adjust their balance of payments deficits by attracting capital inflows by manipulating the rate of interest. For the countries for which the previous option is not open, only an output contraction would adjust their balance of payments deficit. Before trying to analyze what are the conditions that determine whether a country would fall into the first or second category, we will discuss the operation of the gold standard system in practice.

The Myth of the Gold Standard

One important limitation of Hume's model to characterize the working of the classic gold standard system of the end of nineteenth century is the assumption that only gold coins circulate, and that there are no other capital flows. In reality, the central banks of the countries involved in the gold standard did not allow gold to move freely from one country to another. Richard Sayers (1976, p. 28) argues that "for almost a century before 1914 the Bank [of England] regarded itself as primarily responsible for the protection of the gold reserve ... [and] the Bank had settled to the view that it was by the manipulation of an effective Bank Rate that the Bank could protect its reserve consistently with the least harm to the business of the country."

Arthur Bloomfield (1963, p.2) argues emphatically against the nostalgic references to the "good old days of the international gold standard ... [since] disequilibrating movements of short

term capital, destabilizing exchange speculation, capital flight, threats to the continued maintenance of convertibility, concern as to the adequacy of international reserves and the volume of floating international indebtedness – all these at times were in evidence in the pre-1914 system and in some cases necessitated measures going well beyond routine application of discount-rate policy.” Bloomfield (*ibid.*, pp. 7-19) documents the rise of the official holdings of foreign exchange currencies during the 1880-1914 period. This increase is attributed to the fact that monetary authorities resorted to the sales and purchases of foreign exchange against domestic currency in order to maintain the exchange rate within the limits of the gold points.⁹

Private capital flows were also crucially relevant for the working of the gold standard. So that, in contrast with Hume’s model, the gold standard system was characterized by the limited amount of gold coin circulation. The consensus has been that under the pre-1914 system those capital movements had primarily an equilibrating role in the balance of payments.

The argument goes as follows, suppose that the exchange rate falls below the point that would encourage gold exports. Economic agents would speculate that the exchange could not fall, and that it would rise in the near future. As a result, an inflow of capital would follow, leading to the appreciation of the currency. Conversely, if the exchange rate is above its gold import point, there will be expectations that the exchange rate will fall, leading to capital outflows and the actual depreciation. That is, capital flows benignly substitute for flows of gold specie (Eichengreen, 1996).

⁹ Gold points are defined as the levels of the exchange rate plus transportation costs at which it became profitable to engage in arbitrage because of a deviation between the market and mint prices of gold. According to Bloomfield (*ibid.*, p. 39) “the gold points were not rigidly fixed even in the short run. Apart from the slight changes that might occur in the costs of shipping gold, some of the leading central banks from time to time fractionally altered their selling or buying prices of gold or took other steps that had the effect of slightly displacing the gold points or of causing exchange rate to move somewhat outside the range of those points.”

Bloomfield (1963, p. 91) argues, on the contrary, that capital flows did not have always an equilibrating effect. In fact, for him

Threats to convertibility, at times induced or accentuated by disequilibrating capital flows, on more than one occasion necessitated “extraordinary” defensive measures going well beyond discount-rate increases, which were in any case a rather weak reed for most gold standard countries to lean in normal times. For example, in a number of instances monetary authorities were forced to arrange emergency borrowings of gold and foreign credits in order to cope with dangerous drains on their reserves, and in at least two cases ... resort was had temporarily to limited forms of exchange rate control.

That is, capital flows were controlled through changes in the rate of interest, and at times direct capital controls. As noted by Sayers (1976, p. 29), Bloomfield’s argument means that the determination of the rate of interest was directly connected to the maintenance of the fixed parity, saying “nothing of correcting the balance of payments or the balance of trade.” The existence of destabilizing capital flows leads De Cecco (1984, p. 20) to argue that the automatic stability of the gold standard system is a myth.

The fact remains that the gold standard was relatively stable from 1870 to 1914, even if the stability was somewhat exaggerated by modern economic historians. However, according to the traditional view the stability was the result of stabilizing capital flows, whereas an alternative view, based on Bloomfield’s empirical analysis, would suggest that the system was stable despite the existence of destabilizing capital flows.

Eichengreen (1992; 1996) represents the most accomplished version of the conventional view on the gold standard. According to him (1992, p. 30), “the key to the success of the classical gold standard lay ... in ... credibility and cooperation.” Credibility followed from the unquestionable commitment of the central banks of the gold standard system to maintain the parity of their respective currencies against gold. Because there were no doubts about this

commitment, capital flows moved in the right direction reinforcing the stability of the system, and reducing the need of central bank intervention. In addition, Eichengreen argues – less convincingly – that the Bank of England was not the sole director of an orchestra, as Keynes suggested, but one member, albeit the most important, of a system of central banks that cooperated to maintain the stability of the system.

In this view, the commitment of the central bank to maintain the parity could not have any real effects. The absence of political constraints was an additional blessing. In fact, according to Eichengreen (1992, p. 6) “labor parties, where they existed, rarely exercised significant influence. Those who might have objected that restrictive monetary policy created unemployment were in no position to influence it. Domestic political pressures did not undermine the credibility of the commitment to gold.” Following the modern terminology, Eichengreen argues that central banks were independent to follow their own policy choices.

It must be emphasized that even if political pressures might have existed, they could have only a short run effect. In the long run, flexibility in the labor market would lead the economy to the natural rate of unemployment. Also, the manipulation of the capital flows through the manipulation of the rate of interest can only be admitted as a short run device. In the long run, the natural rate of interest would prevail. So that, the commitment to convertibility, and the credibility attached to it, only meant that equilibrium was reached effortlessly. The rules of the gold standard game, to use the expression coined by Keynes (1925, p. 259), worked automatically.¹⁰

¹⁰ The expression the rules of the game describes the accepted rules governing the pre-1914 gold standard. The rules of the game can be summarized as follows: (a) the central bank fixes the price of gold and is committed to convert freely between domestic money and gold; (b) there are no current or capital account controls, so that exports and imports of gold by private citizens are allowed; (c) the central bank acts as a lender of last resort domestically (Bagehot’s rule).

As a result, the gold standard implied that the fixed parities between currencies corresponded to the fixed parity of each currency with respect to gold. For a given supply of gold in each country corresponded a domestic price level, and this determined the purchasing power of the domestic currency against foreign currencies. Domestically each country would tend to move towards, in modern terminology, the natural rate of unemployment. In the absence of short-term disequilibria, the adjustment of the balance of payments would be painless, that is, it would not lead to changes in output and employment. Only the price level would be affected.

The picture that emerges from the conventional interpretation of the operation of the gold standard implies that although capital flows were unstable, and interest rates hikes and capital controls have to be occasionally used, the credible commitment to convertibility made the system relatively stable. Yet this picture neglects the operation of the gold standard in the peripheral countries. Ford (1962) shows that in the case of Argentina the main adjusting mechanism were changes in the level of income. In fact, for him

Automatic income adjustment forces (provoked by factors causing balance of payments disequilibria in many cases) provided the main adjustment mechanism, whilst the gold standard 'medicine' of higher interest rates in the face of gold losses played a subsidiary role in promoting long-term adjustment. It is true, however, that for some countries (notably, Britain) the quick effects of increases in rediscount rates which were reflected in market rates of discount were of the utmost importance in easing the strain of gold losses (1962, p. 189).

In other words, for most countries, which would include all peripheral countries, the main adjustment variable was the level of activity, with the rate of interest having only a secondary role. This adjusting mechanism implies that the gold standard system enhanced the fluctuations of the external sector in the periphery. In addition, this suggests that the adjustment mechanism in the center and periphery countries was asymmetrical.¹¹

¹¹ Fritsch and Franco (2000) raise the same point with respect to the Brazilian gold standard experience.

In sum, even if one believes that credibility and cooperation rendered the gold standard smooth and self-adjusting in the central countries, this proposition fails to explain the wide fluctuations and instability in the periphery of the system. In those countries, the gold standard tended to work pro-cyclically. Boom years in the center meant capital inflows, and export-led growth. A weakening on either the exports or the capital inflows, both of which depended on the core countries performance, would imply reserve losses, domestic contraction and eventually foreign debt default and abandoning of the gold system. The details of the asymmetries between center and periphery are analyzed below.

Center-Periphery Asymmetries

The theory of hegemonic stability, developed by Kindleberger (1973), suggests that the stability of the gold standard system resulted from the effective management by the leading hegemonic member, i.e., Britain. According to Kindleberger (1973, pp. 289-290) the Bank of England stabilized the system by acting as the lender of last resort, ensuring the coordination of macroeconomic policies, and providing counter-cyclical long term lending.

This suggests that it was the relevance of England's position in world trade and finance that allowed for the stability of the system. De Cecco (1984, p. 20) refers to the idea that "the system was really based on sterling rather than gold." In his own words

Her [England] banks in the Colonies and the City allowed long term international investment to take place; this could continue only if money sent out of England as investment came back to England in payment for English goods exported. England, moreover, as the leading country in international finance, satisfied the demand for gold induced by rising incomes in the new countries, and attracted gold from other European gold standard countries by aggregate changes in the Bank of England's discount rate.

In this view, neither credibility nor cooperation was at the center of the working of the international gold standard. Hegemonic power was instead.

The central role of the City of London as the financial center of the world allowed the Bank of England to manage the international monetary system. The London City could lend long and borrow short, functioning as the banker of the world.¹² Whenever the exchange rate fell to the gold export point, an increase in the bank rate would avoid the outflow of gold. The command over gold flows was asymmetric, since changes in the interest rates of other countries had less effect than the Bank of England's discount rate.

The emphasis on the relative control that the Bank of England had on the balance of payments through the manipulation of the exogenous rate of interest, however, is not extended to all countries, since it depends on its hegemonic role.¹³ Capital flows could be destabilizing, but the capacity of the Bank of England to tame them was crucial for the maintenance of the system.

Selected Countries on the Gold Standard			
Country	Type	Period	GDP per capita (1913) ^a
Center			
Britain	Coin	1774-1797, 1821-1914	4,921
France	Coin	1878-1914	3,485
Germany	Coin	1871-1914	3,684
United States	Coin	1879-1917	5,301
Periphery			
Argentina	Coin	1867-76, 1883-85, 1900-14	3,979
Brazil	Coin	1888-1889, 1906-1914	811
Chile	Coin	1895-1898	2,653
Egypt	Coin	1885-1914	732
India	Exchange	1898-1914	673
Mexico	Coin	1905-1913	1,732
Philippines	Exchange	1903-1914	1,066
Peru	Coin	1901-1914	1,037

Source: EH.Net Encyclopedia, and Maddison, 2001.

^a 1990 dollar values.

¹² See Stallings (1987).

¹³ This means that the Bank of England was able to determine the long-term real rate of interest, regulating the normal rate of profits.

In fact the ability to control capital flows, which is ultimately dependent on the international role of the pound sterling and the role of the City as the main financial center of the world, that allowed Britain to stay on a gold standard for more than a century, a far longer period than any other country (see table above). The average permanence of central countries on the gold standard was fifty-eight years and a quarter. If we exclude Britain, the average permanence is still quite high, at thirty-nine years.

Periphery countries were not as successful, and on average were on a gold standard for approximately fourteen years and a half. If one eliminates the British and American Colonies, which were on an exchange gold system, the average permanence on the system falls even more. Not only the average permanence of periphery countries was much shorter also, some countries experienced great instability. For example, Argentina and Brazil were expelled from the system in peaceful periods, while the only time Britain suspended gold convertibility before World War I was during the Napoleonic wars.

The table above also reports the GDP per capita in 1913 (in 1990 dollars), the end of the gold standard period, when almost all countries were still on the system. It is clear that the gold standard did not lead necessarily to a worse overall economic performance in the periphery. The Southern Cone (Argentina, and Chile) shows that some peripheral countries fared quite well during the period, reaching levels of per capita income that were close or superior to France and Germany.¹⁴ Interestingly enough, both Southern Cone countries, despite the high levels of income per capita show an enormous difficulty in maintaining the gold standard system. Argentina dropped the system three times, and Chile has the shortest permanence of all, with

¹⁴ Of course, one can argue that the Southern Cone is the exception that confirms the rule since most periphery countries had GDP per capita levels that were quite lower than the central countries.

only three years. This clearly indicates that the main difference between central and periphery countries during the gold standard period was related to the way they adjusted to balance of payments disequilibria.

In periods of recession, as in the last quarter of the nineteenth century, peripheral countries would be unable to attract enough capital, or export enough to central countries, in order to pay the interest and principal of their foreign debts, and to maintain the high levels of imports needed for the process of development. As a result, they would be forced out of the gold standard system, and would let their currencies depreciate. Additionally, for the most part a domestic recession would allow them to reduce the volume of imports. In periods of international growth, as in the first decade of the twentieth century, periphery countries would find enough outlets to their exports, and would attract enough capital to serve their debts and to import.

Central countries, on the other hand, would be able to attract funds, and/or export enough in order to keep their external accounts in order even in periods of recession. This asymmetry explains why the average permanence of central countries was higher than in periphery countries, and also why most peripheral countries were off the gold standard in the late nineteenth century and on it in the early period of the following century.

More importantly, the adjustment of the balance of payments was independent of the central and peripheral countries fiscal stances, and the credibility of their commitment to the gold system. The essential difference between center and periphery was the ability to finance balance of payments disequilibria by issuing debt in its own currency. Britain, and to a lesser degree the other central countries, could borrow in international markets in their own currencies. Higher interest rates then actually worked in bringing the needed capital inflows. The lack of

internationally accepted currencies made this sort of solution impossible for peripheral countries.¹⁵ As a result, the only alternative left for the periphery was an income adjustment.

The asymmetry between center and periphery also plays a role on the demise of the gold system. The collapse of the gold standard system can be placed before Great Britain declared war to the central powers (De Cecco, 1984, p. 128).¹⁶ The reason lies in the erosion of the British position in the international monetary system. The period of the gold standard coincides with the so-called second industrial revolution, in which the US and Germany caught up with England.

The capacity of the British economy to control capital flows was constrained by the increasing challenge from rival financial centers¹⁷. The period that goes from the abolition of the Corn Laws to the Great Depression of 1873 was an era of unchallenged dominance of the British economy. The erosion of British competitive position in the next twenty-five years was related to unilateral free trade policies in face of the protectionist policies of competing countries.¹⁸

England was able to maintain its dominant position in face of the international challenge, as noted by Hobsbawm (1968, p. 151) “by exploiting the remaining possibilities of her traditional situation,” that is, by shifting the bulk of their trading relations to the formal and

¹⁵ The argument corresponds to what Eichengreen and Hausmann (1999) denominate the original sin hypothesis, which emphasizes an incompleteness in financial markets that prevents the domestic currency from being used to borrow abroad or to borrow long term even domestically.

¹⁶ Eichengreen (1992) argues, on the other hand, that the collapse of the Gold Standard system is related to the end of the credible commitment on the part of central banks, both as a result from the war and the extension of the franchise in the inter war period, which led, in turn, to an erosion of the political acceptance of the negative short run effects of fixed exchange rates.

¹⁷ According to De Cecco (1984, pp. 127-170) the shift on the center of gravity within the British financial system was also crucial for the collapse of the gold standard. In particular, the role of the joint stock banks that benefited from the City's central role in the international monetary system, without carrying any of the burdens that came with that position, is at the heart of the 1914 crisis.

¹⁸ Hobsbawm (1968, pp. 138-139) argues that the period of British unchallenged dominance is related to the fact that for underdeveloped countries England was the only possible market for their production, whereas for developed countries the demand for capital goods, pushed by the second industrial revolution, made trade with Britain essential. Free trade between Britain and the rest of the world was beneficial for all the participants. However, “after 1873 the situation of the advanced world was one of rivalry between developed countries” (ibid., p. 139).

informal Empire.¹⁹ Britain had trade deficits with Europe and the US, and surpluses with the Empire. Britain was a long-term investor, first in Europe and the US, then in the Empire, and the rest of the world transformed British investment in demand for British exports. However, the increasing competition by Europe and the US started to erode the British position as creditor of the world.

The final blow was caused by the war, but the war ultimately brought down a system that was already doomed. According to Hobsbawm (1968, p. 152)

Britain ceased to be the world's great creditor nation, mainly because she was obliged to liquidate a large part of her investment in the USA ... and in turn became heavily indebted to the USA, which ended the war as the greater creditor nation in its turn.

This means that the gold standard system, based on the capacity of the Bank of England to control capital flows and ensure the fixed parities collapsed. A new system would have to be built around the new hegemonic power, namely: the US. From our perspective what is crucial is that it was the existence of the peripheral countries, with their income adjustment that allowed the gold system to be successful for such a long period, adding a degree of flexibility that would not be possible for central country standards.

In other words, the income adjustment would not have been feasible in central countries, mainly for political reasons. Hence, central countries relied exclusively on their ability to attract capital inflows by managing the real rate of interest. This view is compatible with the views of the classical political economy authors, in particular those of Thomas Tooke and the Banking school, according to which it was the control of the rate of interest that allowed the Bank of England to manage the system. On the other hand, the income adjustment prevailing in

¹⁹ Both Hobsbawm (1968) and De Cecco (1984) emphasize the role of the Empire, in particular India, and what Hobsbawm (1968, p. 148) calls the informal Empire, which includes Latin American countries such as Argentina, Chile and Uruguay, in the maintenance of the stability of the gold standard.

peripheral countries is more in line with the views developed by Keynesian and structuralist authors.

Concluding Remarks

The main point of this paper is to show that the conventional view that assumes that the balance of payments adjustment during the gold standard period was smooth and symmetric in the center and periphery, relying on a credible commitment to the rules of the game, and international cooperation misses an essential element of the actual operation of the system. In fact, central countries scarcely relied on well-behaved capital flows, and they had to manage speculative flows by administrating the rate of interest. On the other hand, peripheral countries ability to manage capital flows was heavily restricted, since capital flows would not respond to changes in their interest rates as effectively. As a result, income adjustment dominated in the periphery, resulting in a higher degree of instability.

In turn, the asymmetric adjustment of center and periphery shows the importance of alternative views on the operation of the balance of payments. Exogenous interest rates (endogenous money) in the center – as noted by classical political economists – and income variation (effective demand) in the periphery – as emphasized by Keynesian and structuralist authors – account for the balance of payment adjustment during the gold standard period.

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