Balance of Payments

Matias Vernengo

Entry from International Encyclopedia Of Public Policy Volume 2—Economic Policy
Editor: Phillip Anthony O’Hara, Gperu, Pert, Australia 2009

Introduction
The Balance of Payments summarizes all the transactions between a country and the rest of the world. The BP is usually divided into two main accounts, namely: the Current Account (CA) and the Capital Account (KA).
The current account includes the exports and imports of goods and services, the former appearing as credit items and the latter as debit components. Exports of commodities give rise to a claim on the rest of the world that foreigners must discharge by making payments to the domestic producers, and vice versa in the case of imports of commodities. Exports and imports of services—such as travels, interest and dividends of investments, and unilateral transfers—imply analogous transactions. It is important to note that interest payments on outstanding debt are part of the current account, and in several cases this is the most important component of the balance of payments. The transactions in the CA generate income flows, and the CA is in equilibrium, surplus or deficit, if payments equal, fall behind or exceed receipts, respectively.
The capital account includes foreign direct investment (FDI) and portfolio investments, in which the latter constitute the so-called hot capital flows, that is, the purchase of financial assets rather than equipment, machines or installations. When a domestic firm, or household, purchases foreign assets—e.g. a productive plant, real state, or a financial instrument—an outflow of capital is generated. Capital outflows are accounted as debits, since the domestic buyer has to pay to the foreign seller, in the same way that an importer of goods and services would do. By symmetry capital inflows appear as a credit item. The transactions in the KA generate asset flows, and the KA is in equilibrium, surplus or deficit, if payments equal, fall behind or exceed receipts, respectively.
The overall BP is given by the net result of the CA and KA. So that, if a CA surplus is matched by a deficit in the KA, then the BP is in equilibrium. In a fixed exchange rate system—when the monetary authority stands ready to buy and sell the major currencies on a continuous basis, at specified bid and ask prices—an overall BP surplus or deficit may occur. When there is a balance of payments surplus the official exchange reserve holdings of the central bank will increase, and they will decrease in the case of a BP deficit. In formal terms

\[ BP = CA + KA = \Delta R \]

where \( \Delta R \) stands for the variation in official reserve holdings. For example, if a CA surplus exceeds a KA deficit, there will be an excess demand for the domestic currency.
To avoid the appreciation of the domestic currency the central bank will sell domestic currency, and accumulate foreign reserves.
Under a flexible exchange rate regime—in which the exchange rate is free to float without intervention from the central bank—the overall BP must be in equilibrium, since deficits and surpluses will be eliminated by exchange rate changes, rather than changes in reserve holdings. A surplus in the CA implies that the domestic currency will appreciate, leading to a rise in the price of imports and a fall in the price of exports, that will stimulate exports and discourage imports, eliminating the CA surplus.
The remainder of this entry will discuss briefly the main theories, and their limitations, explaining the process of balance of payments adjustment, and the literature on the causes of balance of payments crises. It will also analyse the contention that the balance of payments is the main constraint to economic growth. The last section discusses the policy lessons associated with the recent balance of payments experience.
Balance of Payments Adjustment

The theory of balance of payments adjustment has gone in full circle, from the automatic adjustment views of David Hume’s specie-flow mechanism, to the Keynesian interventionism of the neoclassical synthesis, to the revival of hands off views within the intertemporal approach.

David Hume (1752) developed the price-specie-flow mechanism not only as an interpretation of the BP adjustment process, but also as an argument against the mercantilist defence of government intervention. According to the price-specie-flow mechanism the BP is self-adjusting. If a country runs a trade deficit, then there will be an outflow of capital, which will lead to deflation in the deficit country, and to inflation in the surplus country. As a result of the fall of prices in the deficit country, its exports will become more competitive, thus restoring the trade balance equilibrium. In other words, capital (gold) flows eliminate any trade imbalance.

The balance of payments adjustment is a purely monetary phenomenon, and all the adjustment is done by changes in relative prices (one must not that Hume himself admitted short run changes in the level of activity). This was the standard model for balance of payments adjustment by the time of the final collapse of the Gold Standard in the 1930s—and still is in a sense (Eichengreen 1996).

Hume’s specie-flow was thought for a world with fixed exchange rates. In the 1930s that assumption became considerably less relevant, and new ideas had to be developed. The elasticities approach was for a while the dominant model, and emphasized the role of substitution effects in bringing the balance of payments to equilibrium.

Most authors at that point 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. As correctly pointed out by Taylor (1990:73), “this [Keynesian] revolution fundamentally attacked Say’s Law, and hence the specie flow mechanism.”

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. This came to be known as the absorption approach to the balance of payments. The absorption approach also meant that there was a great degree of elasticity pessimism, that is, the idea that depreciation would have a minor effect in adjusting 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 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 Mundell-Fleming model—a great synthesis of the absorption, elasticities and monetary approaches to the balance of payments developed during the 1950s and 1960s that started with James Meade’s (1952) classic The Balance of Payments—remained for a long while the dominant view on balance of payment adjustment. In this view, then the adjustment is partially done by changes in the relative prices and partially done by variations in the level of activity. However, to the extent that economists relied more on the concept of a natural rate of
unemployment—associated to some optimal level of output—it became evident that in the long run, variations in the level of output cannot be central for balance of payments adjustment.

More importantly, in monetarist criticism of Keynesian models of balance of payments adjustment noted that the latter analysis did not take into consideration the accumulation of stocks. In other words, Keynesians analyzed the flows of goods, services and capital, but not the accumulated stocks of debt in the form of assets that resulted from balance of payments disequilibria. The monetary approach to the balance of payments and the intertemporal approach that finally came to dominate were designed to solve that problem. In both cases, a central part of the analysis consists on the fact that a country’s ability to spend more than it earns is limited by a budget constraint. In the monetary approach the emphasis is on the control of the domestic money supply stock, while the intertemporal approach emphasizes the possibility to smooth out spending patterns over long periods of time. The main conclusion from the intertemporal approach to the balance of payments is that if a country runs a current account deficit in the early periods – for example because it has fiscal deficit and the output level is above the natural level – then it must run a surplus in the future in order to pay the debt that is accumulated in the initial periods (Sachs 1981; Obstfeld and Rogoff 1995). In fact, the intertemporal approach brought about an analogy between the budget constraint and the external constraint that was only implicit in previous conventional analysis (Currie 1976).

Hence, in a world with developed financial markets a country may choose to smooth out spending patterns and delay the adjustment of the balance of payments for several periods. The conventional wisdom is that economies tend to be at the output level that corresponds to the natural rate of unemployment in the long run, and as a result in the long run the adjustment is done by variations of relative prices, either a deflation or a depreciation of the currency. In both cases, monetary policy is seen as the main instrument to achieve the balance of payments equilibrium.

There are several limitations to this analysis. A crucial problem is the idea of a natural level of unemployment, which subtracts any relevance to changes in the level of activity in the balance of payments adjustment process. The natural rate of unemployment corresponds to the full employment level. It is worth noticing, however, that the natural rate has been conspicuous for its absence in the 1990s.

In the early 1990s in the US most macroeconomist agreed that the natural rate was around 6 per cent. If unemployment fell below that rate, then the economy would overheat and inflation would follow. Yet, by the mid-1990s unemployment had fallen to around 4 per cent and inflation was nowhere to be seen. The Federal Reserve Board was praised by the market for not hiking interest rates when unemployment rates started falling. Some economists argued then that the natural rate had fallen to around 4 per cent.

In fact, to understand the importance of adjustments in the level of activity one does not need to make a big effort. All balance of payments crises (e.g. the Latin American debt crisis of 1982, the Asian Crisis of 1997, Argentinian crisis of the early 2000s) were followed by severe contractions of the level of activity and increasing levels of unemployment. Further, as the contraction helps to reduce trade imbalances by reducing the level of imports, patterns of trade are also affected. Usually countries cut the imports of superfluous goods, and maintain imports of intermediary goods essential for production. These changes are seldom—if ever—determined by changes in relative prices.

In sum, a crucial element in the conventional view about balance of payments adjustment depends on a proposition that is—to say the least—difficult to defend in theory, and that has scant evidence in its support. Full employment or tendencies towards it are not a common feature of modern economies. So one could ask what would be the consequences of abandoning that assumption, and assuming a more pragmatic
macroeconomic theory for the theory of balance of payments adjustment. A second and interrelated critique of the dominant approach is the notion that the balance of payments is self-adjusting, and that led to themselves markets would adjust towards equilibrium. Intervention on the balance of payments is, however, pervasive, since markets have indeed a tendency to lead to balance of payments crises. Calvo and Reinhart (2000) have noted that even countries that claim to pursue flexible exchange rate policies tend to intervene in foreign exchange markets, showing signs of what they refer to as fear floating. The reason behind fear floating is the perception that the balance of payments will not adjust by itself. The recent experience with balance of payments liberalization is a good illustration of this point. Some of the problems of the dominant view become clearer in light of a discussion of the causes of balance of payments crises.

**Balance of Payments Crises**

The canonical model of balance of payments crises was developed by Krugman (1979), based on the work of Girton and Henderson (1976). According to this view the main cause of a balance of payments crisis is overspending. Governments tend to run 20 fiscal deficits, which in turn are financed by money emission, leading through the simple Quantity Theory of Money to inflationary pressures. The inflationary pressures imply that domestic goods become more expensive, leading to current account deficits (twin deficits) and, hence, to pressures for depreciation. Depreciation and the substitution effects that it provokes adjust the balance of payments, but a new crisis can only be avoided by fiscal adjustment. Several authors extended the conventional story. In particular, it was noted that governments not only had to be fiscally responsible, but they had to be perceived to be fiscally responsible. In other words, credibility is the key to avoid balance of payments crisis, so creating a reputation for fiscal responsibility should be the main task of financial ministers around the world. In that case, it is not impossible to imagine a situation where a country suffers a balance of payments crisis even though it pursues market-friendly policies. Obstfeld (1986) shows, using a model that is in essence the same as the one developed by Krugman, that countries with pegged exchange rates are particularly vulnerable even if they pursuit responsible fiscal and monetary policies. To illustrate alternative views on balance of payments crises, one could concentrate on some specific episodes, and adequacy of the conventional approach. The German balance of payments crisis of the early 1920s, the collapse of Bretton Woods, the Latin American Debt Crisis of the 1980s, and the more recent Asian Crisis provide rich periods for analysis. The conventional view that the balance of payments crisis was caused by fiscal irresponsibility was for example the interpretation of the balance of payments crisis and the hyperinflation in Germany during the 1920s put forward by most economists (Bresciani-Turroni 1931). The German officials that had to deal with the day-to-day problems of running an economy under hyperinflationary conditions saw the problem, not surprisingly, from a different perspective. The most notorious defender of the so-called balance of payments theory was Karl Helfferich (Câmara and Vernengo, 2001).

For Helfferich the main cause of hyperinflation was to be found in the reparations of the Versailles Treaty. Helfferich argued that the permanent unfavourable trade balance, caused by the war and the impositions of Versailles, led to depreciation. This was the root of German problems. This idea that at the root of the balance of payments crisis is a terms of trade problem, or some other real cause that reduces the ability of the country to enter international markets in a competitive position would be taken again by Latin American structuralists (Prebisch 1959). In this view, then, the conventional story is put upside down. A term of trade shock—or a reparations problem as in the case of Germany—imposes a financial burden on the
balance of payments that cannot be paid out of the current account surpluses (when they exist). Hence, the country is forced to depreciate to generate the current account surpluses, leading to higher prices of imported goods and to inflation. Further, contraction of the domestic output level is also needed to cut imports to the minimum.

Depreciation, one should add, in typical structuralist fashion, works by redistributing income to exporters—usually capitalists with higher propensities to save—and reinforcing the contractionary effects.

Hence, the balance of payments is adjusted by output contraction, and the income effects rather than the substitution effects are the one that count, as in the Keynesian interpretation of balance of payments adjustment. The Latin American Debt crisis—that followed the Mexican default of August 1982—was also seen by conventional authors as the result of government overspending. Latin American neo-structuralists, on the other hand, saw it as the result of a combined terms of trade cum interest rate shock that made the foreign debt unserviceable, leading to depreciation and contraction (a lost decade was the nickname for the 1980s), as the only way to adjust the balance of payments. The similarity with the German balance of payments crisis of the 1920s, which also was associated to hyperinflation, was well noted by several Latin American authors (Câmara & Vernengo 2001).

The alternative view then would emphasize the role of terms of trade shock—prices of commodities, including oil fell considerably in the 1980s—and the interest rate shock caused by the hike of American rates by Paul Volcker, the then chairman of the Federal Reserve Board, as the two main causes for the debt crises. Faced with an increasing debt servicing bill and with reduced resources, Latin American countries were forced to contract the level of activity to reduce imports, and devalue their currencies—with both contractionary and inflationary effects—to adjust the balance of payments. The collapse of the Bretton Woods system also provides an interesting contrast between the conventional and alternative interpretations of balance of payments crises. For the conventional neoclassical analysis the main cause of the demise of Bretton Woods is associated to the inflationary pressures brought about by the expansionary fiscal policies in the U.S., and the propagation of these inflationary pressures through the international system. The increasingly expansionary fiscal policies of the 1960s—resulting both from the Vietnam War and the Great Society experiment of the Kennedy-Johnson administrations—led to growing balance of payments deficits. The U.S. deficits were initially considered instrumental for the working of the international monetary system that was desperately in need of dollars to obtain the essential imports of capital goods needed for reconstruction.

However, by the late 1960s the accumulation of idle dollar balances started to put pressure on the money supply of the rest of world, leading to inflation. That is, according to the neoclassical logic, inflation was caused by the U.S. fiscal and monetary policies, and transmitted to the world as a result of the system of fixed parities. The collapse of Bretton Woods is then related to the unwillingness of foreign countries to import U.S. inflation. That eventually broke the credibility of the fixed exchange rate commitments, and the willingness of the several central banks to cooperate in order to maintain the fixed parities. In other words, the Bretton Woods system failed because the fixed parity commitment was not credible in the face of accelerating inflation. An alternative explanation for the inflationary pressures of the 1960s is possible though. This alternative explanation would minimize the effects of the U.S. expansionary fiscal policy in the demise of Bretton Woods. The Golden Age regime implied a commitment to full employment and the creation of a safety net for unemployed workers. Additionally, the imposition of capital controls and the cheap money policies—which led to low real rates of interest—implied a favourable environment for workers. Parties with strong ties with the labour movement were in power.
in several Western countries, and this was tolerated, to a great extent, since it was considered a form of reducing the dangers of the Soviet menace. Further, full employment tends to increase the bargaining power of the working class.

In this environment, workers pressures for higher nominal wages would be usually accommodated. For a given real rate of interest, and a fixed nominal exchange rate, the only effect of rising wages would be higher prices. In sum, inflation was the result of wage pressures (cost-push) rather than the expansionary fiscal and monetary policies (demand-pull). In that sense, the abandonment of the fixed parities is not connected to the loss of credibility in the face of higher inflation, since the causes of inflation lay somewhere else (Vernengo 2004).

The alternative view emphasizes the role of financial liberalization in the collapse of the Bretton Woods regime. Davidson (1982) argues that the U.S. dollar represents the asset of ultimate redemption, and hence is used as the measure of international liquidity. As a result the U.S. benefits from a more liberal financial system, since the centrality of U.S. financial market allows it to attract funds to finance persistent current account deficits. For that reason, beginning in the 1960s the U.S. adopted a more self-centred financial policy, promoting financial openness in order to be able to face the growing current account deficits. It is the increasing financial openness of the 1960s, built into the American support for the Euromarket that ultimately made the Bretton Woods system untenable.

Similar debates regarding causes of the Asian Crisis in 1997 resurfaced. The conventional view could not blame excessive fiscal spending as the main cause of the crises, since it was clear that most Asian countries had kept their budgets in surplus, as noted by Stiglitz (2002). On the other hand, the heavily interventionist policies that led to the so-called Asian Miracle—that is, the exceptional rates of growth of South East Asian economies—were to blame. The Asian values that have been considered essential for development were now seen as signs of crony capitalism.

McKinnon and Pill (1998) for example argued that overregulation led to perverse incentives, and misallocation of resources. Hence, the process of development was illusory and financial markets would have to discount the actual costs of the oversized governments. In fact, Krugman (1994) in a widely acclaimed paper compared the Asian Tigers to the Soviet Union, and forecasted their collapse.

Several critiques of the conventional interpretation were raised, in which the role of financial liberalization and the lack of proper regulation on capital flows is seen as the main culprit for the balance of payments crisis. Chang (1998) argues that corruption and mismanagement only increased after the crisis leading to more lax regulation in the case of South Korea. The liberalization of the capital account of the balance of payments required for entry into the OECD group, and in general promoted by the IMF, is seen as the main cause for the balance of payments crisis.

Taylor (1998) provides a general overview of the effects of capital account liberalization around the developing world during the 1990s, one in which the Keynesian view that international financial markets may very well be unstable and prone to crises is at the centre of stage. For example, a country may receive inflows of capital as a result of the increasing confidence of international financial markets on its ability to grow—say, for example, that the main reason is a recent history of fast growth. The inflows of capital lead to an increase of imports, and also to an appreciation of the domestic currency. Both effects tend to lead to a worsening of the trade account. The trade deficit is not necessarily bad. If these inflows were used to buy machines and equipment and lead to higher investment, and higher productivity, one would expect that exports in the future would more than compensate the initial deficits. In this case, the inflows would be sustainable and there is nothing to worry about.

On the other hand, if the inflows are used for consumption, and there are no prospects of higher exports, then one might be in trouble. Also, the appreciation of the currency, caused by the capital inflows, may force competitive
firms out of business. This has hardly anything to do with lack of comparative advantage, since the only reason for failure is an appreciated exchange rate. Often countries in this situation would hike interest rates to attract capital flows and allow the trade deficits to continue for a while. This only makes things worse, since continuous inflows keep the exchange rate appreciated, and the high interest rates compress domestic investment. A trap of low growth and an unsustainable balance of payments are the results. The final crisis is usually triggered by some outside event that leads to capital flight and depreciation of the domestic currency. Depreciation, however, is also contractionary, as we already saw. The depreciation means that those with debts in foreign currency (and usually revenues in domestic currency) have a prospect of a higher debt-servicing burden. Also, it is not uncommon to encounter that international debts were contracted short, while revenues are long. Hence, the currency and term mismatches mean that debtors are bankrupted, leading to lower levels of activity, lower growth and higher unemployment. It is the contraction of output, and the consequent fall in imports that helps adjust the balance of payments. Debt restructuring, unemployment and lower rates of growth for long periods tend to follow.

In other words, international financial markets can make the balance of payments adjustment process quite painful. That was the reason why Keynes advocated capital controls during the Bretton Woods conference. It is also behind the argument put forward by Stiglitz (2002) that the two countries that escaped the Asian Financial Crisis were China and India, the two countries with more comprehensive foreign exchange controls. Or more dramatically, this is also the reason why The Economist—a bastion for defenders of free trade in goods, services and capital flows for decades—has finally admitted that regarding liberalization of capital flows “the anti-globalists are on to something,” and that in this light “for some countries, imposing certain kinds of control on capital will be wiser than making no preparations at all” (Crook 2003). Even Krugman (1998) has advocated capital controls in the face of severe balance of payments crises.

The International Monetary Fund (IMF) — which was originally devised to support countries with balance of payments problems—has also admitted recently that the experience with balance of payments liberalization has been less forthcoming than expected (Prasad et al 2003). The recent negative perception regarding financial liberalization and the renewed defence of capital controls—as for example the discussion of Tobin taxes—is directly related to a resurgence of exchange-rate pessimism (Lane 2001; Obstfeld 2002; Obstfeld and Rogoff 1995). In recent years, many countries have suffered severe financial crises, producing a staggering toll on their economies, particularly in emerging markets. In Latin America there was a second Mexican crisis in December 1994, the so-called Tequila Crisis, the Brazilian crisis of January 1999 and the Argentinean meltdown of December 2001. Also, East Asia that survived the 1980s unscathed by financial crises, producing at miracle rates was hit by a crisis which spread from Thailand to other countries in the region during the second half of 1997, with contagion effects in Latin America as well as in Russia. As noted by Pieper and Taylor (1998) the revival of the liberal creed has made balance of payments adjustment more painful for developing countries. The severity and frequency of the crises brought again the preoccupation with the negative effects of balance of payments disequilibria to long run growth to the centre of the debates.

**Balance of Payments Constrained Growth**

The idea that the balance of payments constitutes a constraint to economic development can be traced back to Raúl Prebisch and other Latin American authors of the United Nations Economic Commission for Latin America (ECLAC). Kaldor (1970) articulated a simple demand driven model of accumulation in which the balance of payments—foreign demand—had
a crucial role. The development of his ideas dates back to the introduction of his technical progress function at the end of the fifties, and his interpretation of the slow rate of growth of Great Britain in the mid sixties, in which he developed the so-called Kaldor-Verdoorn Law, which states that productivity growth depends on demand stimulus.

Dixon and Thirlwall (1975:203) have correctly emphasized, “the main thrust of Kaldor’s argument is Hicks’s view that it is the growth of autonomous demand which governs the long run rate of growth of output.” In particular, the long run rate of growth is assumed to depend fundamentally on the growth of demand for exports. The growth of exports leads to higher rates of growth, which in turn force the system to generate innovations to keep pace with demand growth. The Kaldor-Verdoorn Law implies higher productivity and higher levels of income per capita, which generate a renewed increase in demand. Hence, a cumulative process of growth is put into motion.

Thirlwall (1979) showed that if a country is forced to keep its balance of payments in equilibrium, then the Kaldorian model implies that rates of growth should be proportional to the ratio of export growth to the income-elasticity of demand – also know as Thirlwall’s Law. In other words, if export growth is the main cause of GDP growth, and GDP growth leads to increasing imports, exports have to grow in tandem with imports to keep the balance of payments adjusted.

McCombie and Thirlwall (1994) show that Thirlwall’s Law fits the data for most countries relatively well. Dooley et al. (2003) also argue that export-led growth has been a staple source of growth in the periphery of the capitalist system. For them, the economic emergence of a fixed exchange rate periphery in Asia has re-established the United States as the centre country in a revived Bretton Woods international monetary system. They argue that the normal evolution of the international monetary system involves the emergence of a periphery for which the development strategy is export-led growth supported by undervalued exchange rates, capital controls and official capital outflows in the form of accumulation of reserve asset claims on the centre country. The success of this strategy in fostering economic growth allows some countries in the periphery to graduate to the centre.

If periods in which export-led growth are feasible in the periphery show that the balance of payments is central for development, its also true that periods of financial liberalization show that the balance of payments is the main constraint.

**Lessons and Policy Alternatives**

One important lesson from the last wave of balance of payments crises is that fundamentals do not seem to be the unique or even the main cause of them. Most countries in East Asia, for example, had fiscal surpluses, high private saving rates, and low inflation; and in most cases their exchange rates did not seem out of line. It should be then painfully obvious that the traditional measures recommended by the IMF—contraction and depreciation—will not solve the current set of problems (Stiglitz 2002).

It is not clear what will emerge from the general sense of inadequacy regarding the international financial architecture, but it is clear that it will change. The Meltzer Report in the US wants to reduce the role of the IMF in the process of balance of payments adjustment to reduce the problems of moral hazard. That is, it is expected that free markets will impose discipline on economic agents. The crowds of people protesting against globalization in the World Bank-IMF annual meetings also want to eliminate the IMF, or at least their policies. Stanley Fisher, the ex-deputy director at the IMF recognized that the IMF would have to step in more frequently as a lender of last resort in order to make the balance of payments adjustment smoother. The world economy seems to be at a decisive juncture.


**Selected References**


