

Foreign savings, insufficiency of demand, and low growth

Abstract: There is a problem of insufficiency of demand for countries that accept to grow with foreign savings. Although medium-income countries are capital-poor countries, current account deficits (foreign savings) will increase consumption rather than the rate of capital accumulation and aggregate demand. In consequence, the rate of substitution of foreign for domestic savings will be relatively high, and the country will become indebted to consume, not to invest and grow. Only when there are large investment opportunities, stimulated by a sizable difference between the expected profit rate and the long-term interest rate, will the marginal propensity to consume be low enough for the additional income originated from foreign capital flows to be used for investment rather than consumption. With this paper, the authors intend to contribute to the development macroeconomics approach to economic growth which emphasizes the need for a competitive exchange rate to promote growth, instead of an overappreciated one—an exchange rate that assures the sustained character growth of aggregate demand.

Key words: domestic savings, foreign savings, insufficiency of demand, low growth.

Economic development relies, on the supply side, on existing natural resources, on the available stock of physical capital, and on the human ability to produce. On the demand side, it relies on capital accumulation, consumption, and exports. Supply and demand should grow in a balanced way, but a universal characteristic of capitalist economies, and mostly of developing ones, is that supply usually exceeds demand, there is a widespread unemployment of human resources, a high level of emigration of

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educated people to rich countries, and low growth rates. Keynes criticized Say's law, which presupposes an automatic equilibrium between supply and demand, based on the possibility of hoarding and due to the liquidity preference. In this paper, even if we know that there are other factors determining the underutilization of resources in developing countries, we argue that the central problem is the insufficiency of demand. We also argue that this is mainly due to the existence of a tendency to exchange rate overvaluation in those countries, which discourages investments destined to the production of tradables. This overvaluation stimulates imports and discourages exports, thus limiting new investments that are essential for a sustained domestic aggregate demand. Economic development theorists usually emphasize the limitations on the supply side, such as the lack of education, health care, and technical competence, as well as the lack of available capital to hire individuals. However, when human resources are idle, it is evident that we need to search, mainly on the demand side, for the causes, the bottlenecks of economic growth.¹

In this paper, we show that a fundamental origin of the insufficiency of demand in developing countries is the exchange rate overvaluation caused by the growth with foreign savings policy—that is, by the rich countries' insistence on recommending growth with foreign savings, and by the populist temptation existing in developing countries of accepting this proposal and incurring in current account deficits, consistent with artificial increases in domestic wages. As a consequence of this policy, developing countries frequently go through three consecutive stages leading to near stagnation—exchange rate appreciation, international financial fragility, and balance-of-payment crisis. There is no need to stress the damages resulting from the two latter stages, as they are evident. We will just point out that those damages have been systematically underestimated by the economic policy recommended to developing countries, under the assumption that capital-rich countries should transfer their capital to capital-poor countries—an assumption that is in line with common sense, but that, as we will see, is incorrect. It is not “natural” for capital to be transferred to developing countries, and it is also not true that financial fragility is inevitable in countries that “need” foreign capital. Developing countries that succeed in *catching up* are exactly those that do not incur in those mistakes, those that do not accept economic dependency as inevitable.

¹ A significant empirical contribution to this kind of analysis was recently made by Oreiro et al. (2007).

In this paper, we set aside the two final stages, because their criticism is obvious, and we limit ourselves to analyze the first one: the stage of the exchange rate appreciation caused by capital flows that enter the countries to finance their current account deficit—that is, foreign savings received by them. If it remains clear that the growth with foreign savings policy implies an exchange rate appreciation, that it causes a huge substitution of foreign for domestic savings with little or no net gain for the country, and, therefore, that it limits the investments destined to exports, it will become clear that the fundamental strategy that conventional orthodoxy offers to developing countries for their development should be abandoned. It is true that the overvalued exchange rate stimulates another component of aggregate demand—domestic consumption—but this incentive results from the artificial increase in real wages caused by the overvaluation and is served by an increase in imports. Unlike Keynes's criticism of the market's inability to ensure the equilibrium between supply and aggregate demand—a criticism that is inherent to macroeconomic dynamics regardless of any policy—our analysis of the insufficiency of demand, which is to be added to Keynes's analysis, depends on the acceptance by the developing country of the growth with foreign savings strategy or of incurring chronic current account; if the country rejects this proposal, there will be no point in referring to the insufficiency of demand. Although, in some brief moments, foreign savings could promote economic development, historical experience shows that all developed countries achieved development thanks to their domestic savings. Yet this empirical observation lacked a theoretical explanation. It is this explanation that we intend to offer in this paper. Therefore, we will criticize conventional orthodoxy's assumption that economic growth is nothing but a huge competition between developing countries to obtain rich countries' foreign savings; instead, it will become clear that economic development should be essentially financed by domestic savings.

Although foreign indebtedness is an ancient problem, the growth with foreign savings policy, which implies financial or patrimonial indebtedness,² took on a deliberate strategy quality and became dominant in the 1990s. It was then followed by developing countries' financial opening, and by a huge increase in capital flows toward them. But this strategy was not challenged, because it was assumed that capital-rich countries

² We understand financial indebtedness as that which occurs when financing received from abroad exceeds domestic financing, and patrimonial indebtedness as that which derives from the fact that direct investments on the country exceed those made by the country abroad.

should transfer their capital to poor countries. Economic literature just stressed the problems related to the opening of the capital account, such as the high volatility of this kind of capital, or problems related to foreign indebtedness, such as the concept of “original sin”—that is, the fact that those countries cannot, as do rich countries, borrow in their own currency.³ On the other hand, in economic literature, foreign savings are usually confused with direct investments. It is not made clear that direct investments do not necessarily finance current account deficits that are foreign savings; they may even finance the increase in international reserves of the receiving country or direct investments made by this country abroad.⁴

The consequences of the growth with foreign savings policy on the exchange rate, contributing to its appreciation, have not been challenged in economic literature for another reason, besides the assumption that it is natural for capital-rich countries to transfer their capital to capital-poor countries: because conventional orthodoxy presupposes that the exchange rate cannot be managed in the long run. According to this theory, the only thing that economic policymakers could do is to decide for the fixed exchange rate regime or for the floating exchange rate regime. We see it differently: the “fix or float” alternative is false, as is the idea that in the long run the real exchange rate cannot be managed; in practice, within certain limits, and in a reasonable amount of time,⁵ countries manage their exchange rate more or less conscious of what they are doing. In the model that we present in this paper, this management unconsciously begins by deciding to adopt the growth with foreign savings policy. When a country accepts this policy, it manages downward (appreciating) the exchange rate, because the current account deficit it implies results necessarily in a more appreciated exchange rate than the one that would exist in the absence of such a deficit and in the presence of a current account equilibrium. On the opposite side, when a country grows with foreign

³ Among this vast literature, we only mention here Calvo et al. (1995), Eichengreen (2003), Eichengreen and Leblang (2002), and Rodrik (1998).

⁴ This is the case of Asian dynamic countries that grow with current account surpluses: direct investments entering the country are offset by direct investments that this country’s companies make abroad or by an increase in their international reserves.

⁵ The idea that the real exchange rate cannot be managed in the long run is only true if the time interval implicit in this “long run” is very large—more than 20 years—but then the restriction becomes irrelevant. What is important is to manage the exchange rate in a reasonable amount of time that would be relatively under the control of the economic policymaker.

dissavings—that is, with current account surplus—it will be managing its exchange rate so as to keep it relatively depreciated. It is certain that, in many cases, countries that accept the growth with foreign savings policy do not realize that it implies an appreciated exchange rate, but this lack of consciousness does not change the fact that they are managing downward their exchange rates, whether by keeping high interest rates or by accepting capital flows without restriction.

In order to demonstrate the lack of demand for exports caused by the exchange rate overvaluation, we summarize below the criticism of the growth with foreign savings that we developed in other papers (Bresser-Pereira, 2002, 2004, 2007; Bresser-Pereira and Nakano, 2003), showing that the growth with foreign savings policy usually leads to a high rate of substitution of foreign for domestic savings, so that what becomes investment, not consumption, is only a small part, disproportionate to the costs of interest and profit remittances caused by the transfer of resources. We then present a series of previous empirical research, proving the existence of relatively high rates of substitution of foreign for domestic savings.

Exchange rate, wages, and profits

We begin our argument with the relations of national accounts in a stateless economy, in which the output is the sum of investment and consumption, and exports minus imports; gross income is the sum of workers' wages, salaries of the professional middle class, and profits; and the national income is the gross income minus the returns on capital sent abroad. Investment is equal to savings—investment determining savings on the demand side, savings financing investment *ex post*. The income level is determined by the expenses in consumption, investment, and exports. Foreign savings—that is, savings that a country receives from abroad—are equal to the current account deficit, which, in turn, corresponds to the trade balance plus net returns sent abroad that depend on the real exchange rate. The more it is appreciated, the smaller the exports and the bigger the imports, and, therefore, the bigger the current account deficit or foreign savings. Domestic savings are equal to returns on labor and on capital minus consumption.

As a strategic macroeconomic price, the exchange rate does not fully determine foreign savings or current account deficit only because this deficit also depends on the amount of net income sent abroad or received from abroad, as well as on the level of the country's economic activity and exchange relations terms of trade (which, in our model, are considered as constant). We understand that the “equilibrium” exchange rate or, more

precisely, the “reference” exchange rate is the one that, intertemporally, assures the closing of the current account for a given level of terms of exchange trade and income level.⁶ It varies around this point in view of capital inflows and outflows. If we assume the country’s international reserves as constant, the exchange rate depends on the balance or deficit of the current account, determining it at the same time. It results therefrom a fundamental consequence to developing economies and to the criticism we develop here: when a country adopts the growth with foreign savings policy—that is, with current account deficits—and finances them with loans or with direct investments, the exchange rate will be appreciated (or overvalued) as compared to the one that would prevail should it have a strategy of keeping the current account balance around zero.⁷

But the exchange rate has another less discussed consequence. The higher it is appreciated, the higher will be the real wages (of workers) and salaries (of the professional middle class), as long as the price of internationally tradable consumer goods (commodities) decreases with the appreciation of the local currency. As a trade-off, capitalists’ profits will fall, whether because, on the income side, wages and salaries grow, or because, on the demand side, national capitalists would be exporting and investing less. Each economy will have a variation in wages and salaries in connection with the exchange rate that will be higher for each household the higher the consumption of tradables and the higher the sensitivity of exports and imports to the exchange rate. In any case, it will be a relatively stable variation, which will only be altered in the long run. Therefore, profits, wages, and salaries, besides substantially depending on the economy’s productivity level and on its income distribution pattern, depend on the exchange rate.

How does this relation occur? The profit rate is the opposite of the wage rate. Assuming that workers receive a nominal wage, and acquire tradables and nontradables, we will have that workers’ cost of living will depend on the nominal exchange rate and on the portion of tradables

⁶ This definition will have to be modified when we deal with the Dutch disease, because, in this case, the equilibrium exchange rate, which makes it possible to transfer labor to sectors with a higher technological content, is more depreciated than the one that balances the country’s current account (Bresser-Pereira, 2007; 2008).

⁷ The existence of a current account deficit is associated with the relative exchange rate appreciation and, therefore, could involve a market pressure to depreciate it and to close the deficit. However, because we are talking here of a “strategy,” this means that economic authorities are satisfied with the deficit and, especially through a high interest rate policy, try to keep the exchange rate at a relatively appreciated level, consistent with the deficit.

in their consumer basket. Assuming also that prices are formed in the economy according to the known Kaleckian rule that relates price level to nominal wage to the level of productivity and to the *markup*, we will have that the real wage will be a function of productivity, of the real exchange rate, and of the *markup* or pattern of distribution of income (Bhaduri and Marglin, 1990; Simonsen and Cysne, 1995, p. 452). A devaluation of the real exchange rate with an increase in the price of tradables in relation to the nominal wage will mean a decrease in the real wage, because the worker's consumer basket will become more expensive. The fundamental restriction to a real devaluation is that a possible rise in nominal wages resulting from nominal devaluation should not exceed the increase in the nominal exchange rate, given the price level. This will happen only if the prices of nontradables, especially nominal wages, remain constant or change less than proportionally to the exchange rate variation. Therefore, we are assuming here a relative rigidity of nominal wages and a flexibility of real wages, rather than a flexibility of nominal wages and a rigidity of real wages (Corden, 1981, pp. 31–32).

As for aggregate profits, we know that they depend on investments, which, in turn, besides depending on the expected profit rate given the interest rate, depend on exports. Profits decline, therefore, when the exchange rate appreciates and exports drop, the decrease in capitalists' profits being complementary to the increase in wages and salaries of both workers and the professional middle class. Consumption, for its part, depends on real wages and salaries as well as on profits—that is, it depends on income, and on the differential between the interest rate and the profit rate. Consumption varies in line with the variation of wages and salaries and the variation of profits, and varies negatively in relation to the differential between the expected profit rate and the interest rate. When the growth with foreign savings policy prevails, and thus the policy of current account deficits, the exchange rate will remain at a relatively appreciated level. This causes wages and salaries to rise (regarding the position associated with the reference exchange rate) and the amount of wages and salaries to remain at an artificially high level—that is, incompatible with their productivity or with the satisfactory profit rate that keeps the economy growing—whereas profits decline. Assuming that the effect of the first movement on consumption is higher than the effect of the second one, because the propensity to consume of both workers and the middle class is much higher than capitalists' propensity to consume, consumption will increase and will remain high with the relative currency appreciation, reducing domestic savings. Domestic savings are, therefore, a function of the exchange rate.

It could be argued that the increase in workers' wages in medium-development income economies in which a high concentration of income prevails is not something negative, and that it will not necessarily reduce the profit rate in case of an insufficiency of demand. First, however, we must stress that wage increases resulting from a decrease in interests, rents, and speculative profits are always welcome; we do not believe, however, that an artificial increase in wages through the overvaluation of the exchange rate could be included among desirable wage increases. Second, we stress that we are reasoning, for the moment, in terms of supply, and, therefore, we are not presuming an insufficiency of demand. When examining overvaluation on the demand side, we notice that the insufficiency of demand resulting from the currency's excessive appreciation will cause an increase in unemployment. The artificial wage increase will provoke a decrease in employment and income, because the production necessary to supply this demand will come from abroad as imports. On this side, the decrease in exports will cause a decrease in investment opportunities or in profit expectations, in investments, and, consequently, according to Kalecki, in profits and domestic savings. At the same time, on the supply side, the increase in the amount of wages and salaries caused by the exchange rate appreciation will lead, by increasing consumption and decreasing the amount of profits, to a decline in the investment financed by domestic savings. Both movements therefore ratify one another, and result in a reduction in investments. However, because there is an inflow of foreign savings and of investments financed by them, the total investment and the rate of investment may increase, remain constant, or decrease, depending on the rate of substitution of foreign for domestic savings.

Substitution of foreign for domestic savings

Foreign savings may or may not result in economic growth, depending on the rate of substitution of foreign for domestic savings. If it is high—and we notice that it usually is—the portion of the current account deficit that becomes investment and not consumption is small, disproportionate to the costs of interest and profit remittances made possible by the transfer of resources. We define this rate z as the variation of the domestic saving rate in relation to gross domestic product (GDP), S_i , in relation to the variation of the rate of foreign savings in relation to GDP, S_x :

$$z = \partial S_i / \partial S_x$$

Let us observe now the variables determining the rate of substitution of foreign for domestic savings. For the criticism developed here, although

we work with variations of the exchange rate, we are more interested in its level. We are only secondarily interested in the moment of appreciation or depreciation of the exchange rate. What matters most is the level of the exchange rate and of the corresponding foreign savings. Let us assume two periods: t , when foreign savings are zero and the exchange rate is the reference exchange rate or the "equilibrium" exchange rate, and a period $t + 1$, in which appears a current account deficit (surplus), and the exchange rate is low (high) or appreciated (depreciated). Given this change, the new exchange rate shall necessarily be more appreciated. What will be the consequence of this appreciation with regard to investment? On the supply side, the key variable that will influence the amount of the increase in foreign savings that will go to consumption instead of investment, due to the exchange rate appreciation and the corresponding increase in wages, is the propensity to consume; the higher this propensity, the higher the portion that will go to consumption and the lower the portion that will go to investment. It will also depend on the expected profit rate–interest rate differential; the higher this differential, the lower the portion of the additional foreign savings that will go to consumption. On the demand side, the key variable is the elasticity of exports to the variation of the exchange rate, and, next, the elasticity of the investment rate in relation to exports, or, more directly, of the variation of investment in relation to the exchange rate.

What will be the variation of domestic savings due to the appreciation of the currency of the country receiving foreign savings? Or, in other words, on what will depend the rate of substitution of foreign for domestic savings? We have here a trade-off: an increase in the first tends to entail a decrease in the second. An appreciation of the local currency may draw down domestic savings to the same amount or even to less than the amount represented by the increase in foreign savings, thus a domestic savings displacement occurs. If the decrease in domestic savings is higher than the increase in foreign savings, total savings drop, total investment drops, total consumption increases, and income remains stable. On what does this substitution depend? This rate depends on the variation of wages and salaries in relation to the exchange rate appreciation (the higher the variation, the higher the substitution will tend to be), on the variation of expected profits from investments to exports in relation to the exchange rate, on the propensity to consume, and on the interest rate–expected profit rate differential—that is, on investment opportunities. Among these variations, the most relevant is the variation of investment opportunities, because, unlike the others, it varies strongly. If there are large profit opportunities, the capitalist class will use a larger portion of its expected and earned income to invest, increasing its marginal propensity

to invest. In addition, the increases in working-class wages and mostly in middle-class salaries will also increase their marginal propensity to invest, possibly offsetting the incentives to increase consumption arising from increases in real wages. On the demand side, the higher the rate of substitution of foreign for domestic savings, the higher will be the elasticity of exports in relation to the variation of the exchange rate and the higher the elasticity of investments to exports, and, therefore, the higher the reaction of investments to the variation of the exchange rate. Demand and supply operate, therefore, in the same direction: on the demand side, the exchange rate appreciation successively provokes a decrease in exports, in the investments destined to exports, and in savings as a residue of the investment; on the supply side, the decrease in investments is sanctioned by the direct decrease in domestic savings caused by the increase in real wages and by the increased consumption caused by the same exchange rate appreciation.

What is the meaning, in practice, of the rate of substitution of foreign for domestic savings? Ignoring the sign, if the rate is equal to 1 or to 100 percent, it means that the increase in foreign savings corresponded to a similar decrease in domestic savings—in this case, there is total substitution. If it is 0, there was no substitution of savings. In the first case, the additional foreign savings did not cause any increase in the rate of investment; in the second case, all of it was transformed into an increase in investment and, therefore, in the rate of investment. In the intermediate cases, part of the foreign savings will be channeled to consumption and part to investment. The rate of substitution of foreign for domestic savings will be particularly higher the lower the differential between the expected rate of profit and the interest rate—that is, the lower the investments opportunities. In this case, in addition to the fact that workers show a high propensity to consume, the middle class, receiving salaries, will also tend to consume nearly all of the increase in its gain, and not even the capitalists who face falling profits will significantly reduce their consumption. Therefore, if the differential between interest rates and profit is small, we will have “normal” investment opportunities, which will not stimulate the middle class to transfer part of its salary increase to investment or convince capitalists to consume less. Consequently, the inflow of foreign savings will be strongly offset by decreased domestic savings resulting from increased consumption. In addition, profits and their reinvestment will be modest. The outcome of both facts is that there will be no new investments, in spite of the inflow of foreign savings. At the other end, if the profit rate–interest rate differential is high and the variation of consumption is low, a big part of the increase in wages and salaries will be directed not to consumption, but to investment.

In this paper, our assumption is that, under normal conditions, the rate of substitution of foreign for domestic savings tends to be high, above 50 percent; it will near 100 percent when current account deficits occur without an actual connection with investments and a slow growth process, as occurred in Latin America in the 1990s. However, historically or empirically, we know that, under certain circumstances, countries have developed with foreign savings. What is the condition for this to occur—that is, for the substitution of foreign for domestic savings to remain close to 0? For the rate to remain closer to 0 than to 100 percent, it would be necessary that a favorable combination of externalities and increased demand give rise to a situation of large investment opportunities, which are expressed by high expected profit rates, always combined with high GDP growth rates. It is important to remark that, in much the same way as there is a substitution of foreign for domestic savings when the current account deficit increases, the opposite may happen—that is, the substitution of domestic for foreign savings—when current account deficit or foreign savings are diminishing. In this case, on the supply side, wages and salaries will fall; on the demand side, exports and investments will rise, causing the reverse substitution.

Empirical evidence

Many empirical studies intend to measure the relationship between the use of foreign savings and levels of domestic savings. Most of them show a substitution of foreign for domestic savings, in what seems to be almost a consensus in the literature. Curiously enough, the exchange rate issue is set aside. Most studies in that field are not concerned with the role of the exchange rate in determining the level of domestic or foreign savings, and they do not present an explanatory theory on the rate of substitution of domestic for foreign savings. They just present the results of their research, which are significant, without, however, offering an explanatory theory.

Before the classic research of Feldstein and Horioka (1980) regarding rich OECD countries,⁸ Fry (1978) was one of the pioneers in econometric studies designed to measure the possible determinants of domestic savings. Although he was not primarily concerned with the relationship

⁸ A large number of further studies confirmed the findings of Feldstein and Horioka. Surprised economists, however, insisted on talking about the “Feldstein–Horioka puzzle.” In the past few years, however, econometric studies showed that it was essentially a solvency constraint of those countries (Coakley et al., 1996; Rocha and Zerbini, 2002; Sinn, 1992).

between domestic and foreign savings, in his empirical analyses, Fry provides indirect results on the degree of substitution between the two. He starts from a formulation that tries to explain the levels of domestic savings as a function of the growth rate and the level of GDP per capita, real interest rate, and level of foreign savings. The analyses are made with regressions with *dummies* for the different countries. Data include seven Asian countries in the 1962–72 period: India (1962–72), South Korea (1962–72), Burma (1962–69), Malaysia (1963–72), Philippines (1962–72), Singapore (1965–72), and Taiwan (1962–72), and the results point to a coefficient of roughly -0.5 connected to foreign savings. That is, 50 percent of the use of foreign savings would be neutralized by a decrease in domestic savings.

Edwards (1995) performs an extensive analysis on the determinants of private domestic savings. In addition to discussing a few theoretical aspects concerning several explanations for different levels of domestic savings, he presents an extensive empirical analysis of developed and developing countries. He makes estimations with a panel of data from 1970 to 1992 for 25 developing countries and 11 developed countries. He uses an extensive list of independent variables and, therefore, of possible candidates in the determination of the private domestic savings rate: demographic dependency rate (population under age 15 plus population over age 65 divided by population between ages 15 and 65), urban population, government savings, growth rates, GDP per capita, money supply/GDP, credit to the private sector, public expenditure on social security and welfare, real interest rate, foreign savings, inflation, income distribution, and political stability. In several estimated models, he finds once again a negative value around 0.5 for the coefficient of foreign savings (minimum 0.38, maximum 0.625), showing a substantial substitution between private domestic savings and foreign savings.

Schmidt-Hebbel et al. (1992) study the behavior of domestic savings from a household perspective. Instead of focusing on aggregate savings, Schmidt-Hebbel et al. base their empirical analysis on household savings as related to the available income. Among the independent variables used for estimation, they select, for instance, levels of household per capita income, rates and trend, real interest rates, rates of inflation, and foreign savings. Calculations are made for 10 developing economies between 1970 and 1985 with panel data, using a model of fixed and random effects. The coefficients related to foreign savings point to values around -0.2 , showing some degree of substitution between foreign savings and domestic savings. Schmidt-Hebbel et al. call attention to this fact: “foreign saving, which acts as an external liquidity constraint, boosts

private consumption, as shown by its significantly negative influence on saving" (*ibid.*, p. 543).

Still along these lines, Reinhart and Talvi (1998) make a comparison between Asia and Latin America concerning the relationships between foreign savings and domestic savings. They argue that the high levels of savings in Asia are related to historical trends rather than to the behavior of capital flows. The authors find empirical results that are in line with those of Edwards (1995) and Schmidt-Hebbel et al. (1992), in the sense that there is a reasonable degree of substitution between the two. The use of foreign savings correlates negatively with the level of domestic savings for both regions. Using a specification close to Fry's (1978), in which domestic savings are defined as a function of foreign savings, and a vector of other determinants, Uthoff and Titelman (1998) equally find a negative relationship between levels of domestic and foreign savings, which stays around -0.5 . They specify a model in which domestic savings rely on the trend, growth, and deviations of GDP per capita; on the inflation rate; on the demographic dependency rate, as in Edwards (1995); and on the trend and deviation of foreign savings and of real interest rate. The estimates cover 15 Latin American and Caribbean countries between 1972 and 1993, totaling 330 observations, and the results regarding foreign savings indicate a highly significant negative coefficient of -0.47 .

Uthoff and Titelman also estimate the effect of foreign savings on domestic savings, from a separation between foreign savings trend and deviation from trend. Again, the results point to a negative coefficient around -0.48 , with values between -0.31 and -0.46 for the effect of the trend increase, and between -0.48 and -0.49 for deviations from trend. The Mexican case stands out. From 1983–90 to 1992–94, the use of foreign savings in Mexico increased by 7.4 percentage points of GDP, but the investment rate increased by only 4.4 percentage points of GDP. A large portion of the foreign resources was used to finance increased consumption, and domestic savings declined. For the average of Latin America, foreign savings increased by 2 percentage points between 1983–90 and 1992–94, whereas the investment rate increased by 0.3 percentage points of GDP, and domestic savings dropped by 1.7 percentage points (Uthoff and Titelman, 1998, p. 36).

Although Uthoff and Titelman do not use the exchange rate directly in the econometric measurements, those studies supply, however indirectly, favorable empirical evidence to the theoretical arguments presented in this paper. Assuming that situations of current account deficit are accompanied by some degree of exchange rate appreciation, we conclude

that the empirical studies presented above are in line with the argument that, in general, the use of foreign savings is connected to a decrease in domestic savings and to an increase in the aggregate level of consumption. On the other hand, the observed substitution of foreign for domestic savings, depending on the country and the moment that data are collected, probably derives from the existence or not, in each given moment, of very high profit rate expectations, or, in other words, of large investment opportunities transformed into high growth rates.

The Brazilian case in the 1990s

In the original studies by Bresser-Pereira individually or with Nakano (Bresser-Pereira and Nakano, 2003) or Varela (Bresser-Pereira and Varela, 2004–5) that criticized the growth with foreign savings policy, there were already several other empirical confirmations, especially those related to the 1990s in Brazil and Latin America. Using the methodology developed here, Bresser-Pereira (2007) estimated the rate of substitution of foreign for domestic savings in Brazil between 1994 and 1999, when the country's current account deficit increased strongly, and found a substitution rate of 115.8 percent; on the other hand, Bresser-Pereira estimated the rate of substitution of domestic for foreign savings between 2000 and 2005, when the reverse movement of the current account deficit took place, and found a rate of substitution of domestic for foreign savings of 121.9 percent.⁹ As a consequence, the investment rate did not increase during the first period, when foreign savings increased, and practically did not decrease in the second period, when domestic savings received by the country declined.¹⁰

As we can see in Table 1, the current account deficit or foreign savings received by the country firmly increased in Brazil between 1993 and 1999: Brazil had a surplus in 1992, and in 1999, foreign savings received by the country reached 4.73 percent of GDP. Notwithstanding, as indicated by the theory that supports the criticism of the growth with foreign savings

⁹ The variations were calculated on the basis of the average of the variables in the three years before each of the two periods. Those data already take into consideration the change in the GDP calculation method announced by the IBGE (Brazilian Institute of Geography and Statistics) in March 2007.

¹⁰ The positive structural shock suffered by the Brazilian economy changed the current account deficit of 4.33 percent of GDP in 1999 into a surplus of 1.49 percent in 2005, corresponding to an external adjustment of 5.81 percent of GDP.

Table 1
Rate of substitution of foreign for domestic savings (1993–1999) and of domestic for foreign savings (2000–2005);
basis: average rate of three previous years

Period	Foreign savings, S_x (percent of GDP)	Domestic savings, S_i (percent of GDP)	Investment (percent of GDP)	$\Delta S_x / \Delta S_x$ (percent)	$\Delta S_x / \Delta S_i$ (percent)
1990–1992	0.44	18.62	19.06	—	—
1993–1999	2.78	15.91	18.69	115.8	—
1997–1999	4.07	13.96	18.03	—	—
2000–2005	0.90	16.56	17.46	—	121.9

Source: Ipeadata; data on foreign savings, domestic savings, and investment are from Bresser-Pereira (2007, table 10).

policy, the rate of investment did not increase; it rather declined slightly if we take those same two years as a reference—1993 (19.28 percent) and 1999 (18.9 percent). On the other hand, the current account deficits in the period (1995–2002) had two kinds of financing—loans and direct investments. Direct investments grew extraordinarily. Even so, as we see in Table 1, the economy's total investment rate did not increase in the period; it was the net income sent abroad that did it.

Between 1994 and 1999, there was a strong increase in the current account deficit and, thus, in foreign savings received by Brazil, whereas the rate of investment remained practically constant. At this point, as we discussed, the substitution of foreign for domestic savings takes place. From 2000 on, or more precisely, from the devaluation of the real in 1999, the reverse process began: a structural shock took place and the current account deficit of 4.73 percent of GDP in 1999 became, in 2005, a surplus of 1.65 percent. We have, therefore, an external adjustment of 6.4 percent of GDP. Those data are in Table 1. In Table 1, we can also see that, in much the same way as the rate of investment did not increase in the former period, when foreign savings were increasing, investment equally does not fall when foreign savings decline: actually, if we compare the average rate of investment of 2004–5 with the average rate of 1999–2000, there is an increase by 3.7 percent or 0.7 percentage points in the rate of investment.

In this second period, therefore, there is a substitution of domestic for foreign savings. This happens because, as we argued before, wages decline as well as consumption, thus increasing domestic savings on the supply side, whereas, on the demand side, exports increase (they almost doubled between 2002 and 2005), leading to increased investments in tradables and, therefore, to an increase in domestic savings. In the Brazilian case, this reverse process of substitution was fueled during that period by the fiscal adjustment beginning in 1999, which reduced public dissavings, and by the improvement of exchange relations from 2003 on. If the arguments we present are correct, we should have had, during the first period, a high rate of substitution of foreign for domestic savings and, in the second period, an equally high or even higher rate of substitution of domestic for foreign savings.

As we saw in the previous section, other researchers, although without a theory to explain the phenomenon, have measured the displacement of domestic savings caused by foreign savings in several countries and periods, and most of the results are around 50 percent. Therefore, in the 1990s in Brazil, the rate was substantially higher than this already very high average rate. In turn, the reverse process of substitution of domestic

for foreign savings, which began in 2000, could seem surprising, but is equally foreseen by the model. It is only the rate of substitution of 114 percent found in the 2000–5 period that was surprising. It means that, instead of declining, the rate of investment increased in the period, in spite of the significant decrease in foreign savings, which, in a few years' time, turned into foreign dissavings—that is, into current account surplus. This was not only a result of the decline in real wages but also of the government's fiscal adjustment beginning in 1999¹¹ and of the increase in exports from 2002 on. This increase in exports is explained not only by a more favorable exchange rate but mostly by the improvement in the price of goods exported by Brazil, which increased by 30 percent between 2002 and 2005.¹²

Conclusions

Briefly, this paper shows the negative effects of a nation's acceptance of the growth with foreign savings proposal, largely existing in economic literature and particularly among those intellectuals related to conventional orthodoxy. Choosing this path, the country will face the problem of insufficiency of demand resulting from the lack of appropriate incentives to investments destined to export, because the currency will tend to become overvalued. This exchange rate appreciation takes place in relation to the reference exchange rate which, intertemporally, balances the country's current account. As we discussed, the exchange rate defines not only exports and imports and, therefore, foreign savings, but also real wages and salaries as well as profits and, therefore, consumption and domestic savings. Given the assumption of a stable relation between exchange rate and wages, salaries, and profits, the fundamental variable in this case is the propensity to consume, which will vary depending on the existence of normal or large investment opportunities. On the demand side, investment and, therefore, savings depend on the elasticity of exports to the exchange rate, and on the elasticity of investments to export, or, more directly, on the elasticity of investments to the exchange rate. Therefore, the exchange rate level also defines the investment.

¹¹ Whereas between 1995 and 1998 the primary surplus was around 0 percent, in the 1999–2002 period, it hovered around 3.5 percent and, in the following four-year period, around 4.5 percent of GDP.

¹² Funcex (Fundação Centro de Estudos do Comércio Exterior, www.funcex.com.br).

The inflow of capital or foreign savings tends to produce an exchange rate appreciation, as well as an increase in real wages and imports, because the variation of consumption with regard to the remuneration of workers and the middle class is generally higher than zero. On the demand side, it also tends to reduce exports and investments oriented to exports. As a consequence, we have a significant substitution of foreign for domestic savings that, according to research, hovers around 50 percent in normal circumstances, but may be higher or lower depending on the economic situation. When, however, the economy experiences a moment of high growth rates, in which there is a high differential between the expected profit rate and the long-term interest rate, the increase in consumption may be small, because the middle class in particular may direct its real increase in salaries to investment, now much more attractive. This is the reason, in certain moments such as in the United States in the second half of the nineteenth century or in South Korea and in Brazil in the first half of the 1970s, there was growth with foreign savings.

In most cases, however, our assumption is that, as happened during the 1990s, this exceptional condition is not present, and foreign savings will merely turn into increased consumption and into increased financial or patrimonial indebtedness of the country, both implying a heavy burden of remittances of income abroad without an increase in investment and in the growth rate. This also explains why Asian countries have so strongly defended their exchange rate, keeping it competitive, through the growth with foreign dissavings policy—that is, with current account surpluses and an increase in reserves or in investments abroad. This criticism contradicts conventional economics' assumption that capital-rich countries transfer (and should transfer) their resources to capital-poor countries. We know, however, that the development of science, in any domain, lies in challenging several forms of conventional wisdom—a wisdom that, being often merely hypothetical-deductive, easily contradicts the countries' historical experience, which was always that capital is made at home.¹³ With this paper, we hope to contribute to a theory that may explain this experience and the low growth rates of countries that resort to foreign savings. We also hope to contribute to strengthen a development macroeconomics perspective that emphasizes the importance of the aggregate demand and the need of a competitive exchange rate that ensures the sustainability of that demand.

¹³ The expression is from Barbosa Lima Sobrinho (1973), in his classical work on the development of Japan.

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