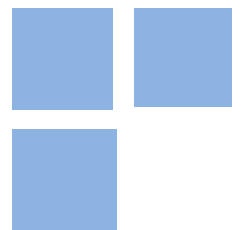


# Industrial policy and exchange rate skepticism

**LUIZ CARLOS BRESSER-PEREIRA**

**FERNANDO RUGITSKY**



## **Industrial policy and exchange rate skepticism**

Luiz Carlos Bresser-Pereira ([bresserpereira@gmail.com](mailto:bresserpereira@gmail.com))

Fernando Rugitsky ([rugitsky@usp.br](mailto:rugitsky@usp.br))

### **Abstract:**

The aim of the present paper is to put in historical perspective the development thinking on the relationship between industrial and exchange rate policies. The first section focuses on the thought of the so-called pioneers of development economics, specifically their preference for protectionism and their belated recognition that an exchange-rate policy could act as a substitute to it. In the second one, we analyze the exchange rate skepticism that arises out of the theories that identify a foreign constraint to growth, in addition to the one revealed by the pioneers. The third section briefly complements the previous discussion with reference to macroeconomic formulations that allow for short-run contractionary effects of a devaluation, reinforcing the skepticism in question. In the fourth section, we discuss the revival of development thinking in the 1980s and its discussion about East Asian trajectories, a literature that placed great emphasis on industrial policy. Finally, in the fifth section we discuss the new historical facts and the new development macroeconomics' models that are putting an end to exchange rate skepticism.

**Keywords:** exchange rate, industrial policy, protectionism, East Asian countries

**JEL Codes:** B20, O24, O25

## **Industrial policy and exchange rate skepticism**

Luiz Carlos Bresser-Pereira

Fernando Rugitsky

**Abstract:** The aim of the present paper is to put in historical perspective the development thinking on the relationship between industrial and exchange rate policies. The first section focuses on the thought of the so-called pioneers of development economics, specifically their preference for protectionism and their belated recognition that an exchange-rate policy could act as a substitute to it. In the second one, we analyze the exchange rate skepticism that arises out of the theories that identify a foreign constraint to growth, in addition to the one revealed by the pioneers. The third section briefly complements the previous discussion with reference to macroeconomic formulations that allow for short-run contractionary effects of a devaluation, reinforcing the skepticism in question. In the fourth section, we discuss the revival of development thinking in the 1980s and its discussion about East Asian trajectories, a literature that placed great emphasis on industrial policy. Finally, in the fifth section we discuss the new historical facts and the new development macroeconomics' models that are putting an end to exchange rate skepticism.

**JEL Codes:** O24, O25, B20

**Key words:** Exchange rate, industrial policy, protectionism, East Asian countries

---

Since the beginning of the current crisis, in 2008, the level of exchange rates has received a lot of attention, amidst growing concerns about “currency wars” and the revival of “beggar-thy-neighbor” policies. This debate is welcome, given that the exchange rate is a crucial element in a development strategy for any peripheral country. This was true even in the times when the fixed exchange rate regime prevailed. One could think that a fixed exchange rate regime prevents using a policy of devaluation, but things are more complicated.

First, countries that establish a fixed exchange rate regime have to decide the level in which the exchange rate is going to be fixed. The controversy surrounding the return of Britain and France to the gold standard in the interwar years is a good example of the far-reaching implications of this decision. It is generally argued that the economic difficulties faced by Britain in the run-up to the Great Depression are partly due to the fact that it returned to the gold standard with an excessively overvalued pound, whereas France's devaluation before reestablishing the convertibility to gold explains why the effects of the Great Depression hit its economy only a few years later (Kindleberger, 1973/1986: 27-39; Eichengreen, 1996: 57-60)<sup>1</sup>. But it is true that once the fixed exchange rate is put in place it is harder to adjust the value of the currency, to implement a devaluation. Second, a truly floating exchange rate regime would be no less an impediment to resorting to an exchange rate policy, since the government is not supposed to target a level of the currency in this regime. In practice, however, such a regime is never pursued and, to some degree, governments manage all floating exchange rate regimes.

In any case, it is necessary to examine more carefully the role played by exchange rate policies and, in particular, their relations with investment and growth rates. Several theoretical frameworks could be used to examine these relations. It has been argued, for instance, that there is a tendency to the cyclical and chronic (in the long-term) overvaluation of the exchange rate in developing countries, which could curtail the entrepreneurs' access to the existing demand and reduce investment.<sup>2</sup> This problem could be solved by resorting to an exchange rate policy, which would entail a once-and-for-all devaluation followed by policies that neutralize the tendency to the cyclical and chronic overvaluation of the exchange rate, and, in so doing, keeps it at a competitive level, floating around the "industrial equilibrium".<sup>3</sup> This approach has been recently backed by an increasing number of empirical works that identified a connection between the exchange rate and growth.<sup>4</sup>

The present paper, however, is not focused on this theoretical question. Rather, in light of the emphasis that developmental economists give to industrial policy (including protectionism, import substitution industrialization, and the like), it will be argued that it is highly unlikely that it can compensate for an uncompetitive exchange

rate. Our aim is to provide a historical reconstruction of the thinking about this alternative, between exchange rate and industrial policies, since the 1950s.<sup>5</sup>

The argument is divided in five sections, besides this short introduction. In the following one, the focus will be the thought of the so-called pioneers of development economics, specifically their preference for protectionism and their belated recognition that an exchange-rate policy could act as a substitute to it. In the next section, we analyze the exchange rate skepticism that arises out of the theories that identify a foreign constraint to growth, in addition to the one revealed by the pioneers. The third section briefly complements the previous discussion with reference to macroeconomic formulations that allow for short-run contractionary effects of devaluation, reinforcing the skepticism in question. In the fourth section, we discuss the revival of development thinking in the 1980s and its discussion about East Asian trajectories, a literature that placed great emphasis on industrial policy. Finally, in the fifth section we discuss the new historical facts and the new development macroeconomics' models that are putting an end to exchange rate skepticism. Concretely, we refer, on one side, to the change from fixed to floating exchange rate regimes, major changes that peripheral countries experienced in the last 50 years, and the new international constraints to industrial policy, and, on the other side, to the advancements of developmental macroeconomics. Industrial policy remains an essential development tool, but should not be used to compensate for currency disequilibrium; instead, it should build on the exchange rate industrial equilibrium.

### **Industrialization and protectionism**

In the two decades immediately following World War II, a group of economists focused on understanding the specificity of the economic problems concerning countries outside the center of the capitalist world economy. Their formulations were not merely theoretical, but were intended to solve practical problems of economic policy of specific countries. They became known as the pioneers of a field of research called Development Economics or Classical Developmentalism.<sup>6</sup>

This paper does not aim to summarize their views, but has a much more limited scope. It intends to briefly survey the role played by policies that are now grouped under the rubric of industrial policy in the development strategies that these authors

devised and the theoretical grounding they offered for such policies. Moreover, it will examine the controversy on whether an exchange-rate policy could be understood as a substitute for industrial policy. Although there was vast common ground shared by most of the pioneers, the focus will be placed on the disagreements related to this specific issue.

Despite showing concern for the development of agricultural activities, these early development economists equated to a large degree development with industrialization, understood as a “structural change” from the production to low value added to high value added goods. This needs to be understood in the context of the social struggle that took place in several peripheral countries between a landowning class and social groups favoring the development of manufacturing industries. In the founding article of a branch of this literature called Latin American structuralism, Raúl Prebisch (1950: 2) claimed that “industrialization is not an end in itself, but the principal means at the disposal of those countries [at the periphery] of obtaining a share of the benefits of technical progress and of progressively raising the standard of living of the masses.”<sup>7</sup> And its implications should not be understood in narrow terms, as Hans Singer (1950: 476) argued:

The most important contribution of an industry is not its immediate product (...) not even its effects on other industries and immediate social benefits (...) but perhaps further its effect on the general level of education, skill, way of life, inventiveness, habits, store of technology, creation of new demand, etc. And this is perhaps precisely the reason why manufacturing industries are so universally desired by underdeveloped countries; namely, that they provide the growing points for increased technical knowledge, urban education, the dynamism and resilience that goes with urban civilization, as well as the direct Marshallian external economies.

Development was conceived as rising productivity obtained through giving access to modern technology to an increasing share of the workers, who would be employed at industrial firms instead of at subsistence agriculture<sup>8</sup>. And industrialization was also an instrument to keep the fruits of such productivity increase in the peripheral economies themselves, not letting them being transferred abroad. This transference was identified, by Prebisch (1950) and Singer (1950), as one of the main causes of the growing disparity between rich and poor countries and resulted from a tendency to the deterioration of the periphery’s terms of trade.<sup>9</sup>

Industrialization was not seen as an easy process, however. From early on, it was argued that the process of development itself aggravated the balance of payments

problems that were so widespread in peripheral countries, since a growing economy tended to demand continuously increasing quantities of imported raw materials, capital goods and consumer goods, whereas its exports tended to grow at a slower pace (Prebisch, 1959, Furtado, 1961/2009: chap. 5, and, for a summary, Boianovsky and Solis, 2014) This connection between industrialization and persistent external disequilibrium posed an additional challenge to development policies. They needed not only to stimulate industrialization or productive sophistication, but also to guide it in such a direction as to avoid the problems posed by external disequilibrium.

In the view most common at the time, the goal of a development strategy was, then, promoting industrialization through the accumulation of capital and this involved several tasks, such as increasing aggregate savings, making investment opportunities attractive and channeling foreign exchange to capital imports. While part of the literature was concerned with demand-side issues, most of it focused on the supply of savings and of foreign exchanges. Trade protectionism was considered by many an adequate mean to address some of these issues. If, for instance, it meant restrictions on imports of luxury products, it could solve what was identified as one of the main obstacles to industrialization, the tendency of the rich to attempt to keep up with consumption standards of the elites of the rich countries.<sup>10</sup> This tendency not only reduced aggregate savings, but also meant that the scarce foreign exchange available was put to unproductive uses.

Ragnar Nurkse – one of the pioneers of classical developmentalism – who agreed with the goal of industrialization and also identified the insufficient supply of savings as one of the main obstacles to this end, was a dissenting voice when it came to commercial policy. In his view, those that favored protectionism tended to disregard its effects on the consumption and saving decisions of the individuals (Nurkse, 1953: 109-116) They assumed that the income that was used to import (luxury) consumption products would simply be saved if trade barriers were put in the way of this consumption. In this manner, the capital imports that would be allowed by this policy, using the foreign exchange that was previously channeled to consumption, would be financed by a corresponding increase in savings. But this was extremely unlikely, according to Nurkse. It was much more probable that, at least part of, the income previously used to import consumption products would be, in the presence of protectionism, shifted to the

consumption of domestic production. Especially if protectionism were not perceived as temporary. Hence, if the economy were originally in equilibrium, an increase in investment larger than the increase in savings would lead to a “disruption of monetary equilibrium – an inflationary pressure on money cost and prices.” (1953: 112)<sup>11</sup>

The crucial problem, in Nurkse’s view, was to generate enough savings to finance the needed amount of capital formation. Protectionism dealt only with the surface of the problem and would not do the trick. “[L]et us not be dazzled by the sight of more machines being landed in the ports. The crucial question to ask is whether the spikes erected against luxury imports result in a net increase in saving. If the answer is in the negative, an increase in capital formation is not possible.” (1953: 119) A related issue that concerned him was the potential impact of protectionism on the “pattern of investment”. (1953: 116-117) If an obstacle were put to the imports of luxury products, it would not be surprising if investment headed to luxury industries, instead of to what he considered “essential public installations”, like railways and ports. In this case, even if investment is being increased by the commercial policy and development through capital formation is unraveling, “it is [still] taking a needlessly painful and contorted form.” (1953: 117)

Nurkse was not very straightforward in terms of alternatives. He questioned the effectiveness of the preferred solution, but was hesitant in defending different policies. His main point was that the goal should be increased savings and so he tended to see favorably both foreign aid and progressive taxation, which represented, respectively, foreign and compulsory savings. But he was relatively skeptical about the viability of these solutions, claiming that commercial policy “is the line of least resistance (...) perhaps the best that can be done; the root of the problem may be insoluble.” (1953: 119)

It is important to note that Nurkse was arguing against protectionism essentially as a means to restrain the consumption of the rich and, in this way, increase savings. That is the reason why the alternatives he conceives are foreign aid and progressive taxation. His strict adherence to Say’s law made him focus on the potential short-term distortions associated with protectionism, such as inflation and the reduced quality of investment. But its longer-run impact on the productive structure, through shifting the relative prices between industrial production and the other domestic (non-tradable)



sectors, was considered secondary. He was explicit about that when he critically examined the argument for infant industry protection (1953: 104-109). According to him, this policy tended to be ineffective because before protecting an infant industry, one needed to be created. In other words, the binding restriction was, again, the amount of savings needed to fund the industrial activity. Even if protection raised the profitability of investment in industrial production, it would only be capable of increasing capital formation if it increased savings. And he was skeptical that rising profitability would make people save more, especially in poor countries: "It is conceivable that domestic saving is increased in response to the rise in the prospective rate of return, but it is not likely on general grounds, and particularly unlikely in poor countries that live fairly close to the subsistence level." (1953: 107)

So far, the debate was restricted to defending or opposing infant industry protectionism as a development strategy. The consideration of the exchange rate as an alternative instrument had not come to the fore. To the best of our knowledge, Prebisch (1959) was the first among the pioneers of development to explicitly consider protectionism and exchange rate policy as alternatives, in a paper published by the end of the 1950s, but he didn't hesitate in opting for the first strategy. The focus of his discussion is precisely the issues of the productive structure and relative prices, no longer the availability of savings. The problem he deals with, in this paper, is what came to be defined as the "foreign constraint" to economic growth: the limit to the periphery's growth imposed by the different income-elasticities of imports and exports. Since most peripheral countries faced an income-elasticity of the demand for its exports that was smaller than the income-elasticity of its demand for imported goods, there were only two alternatives (besides, of course, changing the elasticities themselves): either the periphery would have to grow at a slower pace than the center, in order to keep balanced its current account, increasing thus international income disparities, or there would be a tendency for external disequilibrium in the peripheral countries.<sup>12</sup>

Prebisch considered that the solution to this dilemma brought forward by the "free play of market forces" (1959: 255) was suboptimal. Concretely, Prebisch argued that current account deficits would lead to exchange-rate depreciation, which, in its turn, would both stimulate the production of primary products for exports, by increasing profits, and the production of industrial products to the domestic market, made more competitive due

to higher import prices for these products. He attempted to show, in a graphical formulation presented in the appendix (1959: 269-273), that this would lead to a higher level of export production and a lower level of industrial production than would be optimal<sup>13</sup>.

### **Two causes of exchange rate skepticism**

Classical developmentalists' skepticism in relation to the exchange rate had two main causes: the assumed inability of depreciation in producing change or industrialization, and the foreign constraint argument. Prebisch's preferred solution to the mentioned dilemma was, then, import substitution or protectionism. He argues that depreciation, in contrast to a protectionist policy of establishing a uniform protective duty, "leaves private initiative rather than government agencies to decide which branches of industry will be profitable substitutes for imports." (1959: 257), But dismisses this argument, claiming "this could also be achieved through a uniform protective duty" (1959: 257). He maintains, nevertheless, that a very selective protection policy (not a uniform duty) would be less distortive to the price system than devaluation: "Protection (or subsidies) seems a more direct and simple solution, as it limits the adjustment to those new branches of industries that should be developed within a given period of time. To obtain the same result, depreciation forces the adjustment of the whole price system." (1959: 257) The case for protectionism and against devaluation was complemented by his well-known argument on the tendency to the deterioration of the terms of trade according to which the former could allow for industrialization and, so, for keeping the fruits of increased productivity at home, whereas devaluation tended to transfer above at least part of them. For him devaluation should only be used in case of an overvalued currency. When such overvaluation is not present his preference was unambiguous:

In my view, a policy of depreciation or devaluation should be used only to correct an externally overvalued currency and not as an instrument for effecting structural changes in the economy. A selective protection policy is a preferable instrument, notwithstanding the obstacles that have to be overcome in practice; and if it is applied gradually, higher import prices, affecting a relatively small proportion of imports each time, could be absorbed by general increments of productivity without affecting the price level of the entire economy, provided that protection has not been exaggerated to shelter inefficiency. (1959: 257)

Interestingly, these comments can be read, at least in part, as a reaction to a dispute that took place within the Economic Commission for Latin America and the Caribbean, which Prebisch headed, surrounding a 1957 report on the Mexican economy that was never published (Boianovsky and Solís, 2014: 49-52). Its main author, Celso Furtado, was even more averse to a devaluation policy than Prebisch and emphasized in the report the limited effect of relative prices on the balance of payments: “there appears to be little likelihood that future devaluations will serve to attenuate the disequilibria” (apud Boianovsky and Solís, 2014: 50)<sup>14</sup>. In order to back his case, an attempt was made to calculate an index of the undervaluation of the Mexican exchange rate, claiming that it was not overvalued<sup>15</sup>. Prebisch seems to have disagreed with the emphasis and might have had questions about the conclusion, blocking its publication. A few years before, he had advised the Argentinian government to implement currency devaluation, arguing that its exchange rate was overvalued, but he shared Furtado’s skepticism that it should not be used “for effecting structural changes in the economy”. It is clear, then, that the exchange rate waited a long time before being considered as an alternative policy to protectionism. It would have to wait even longer to be seen as the preferred instrument. When economists realized that a non-neutralized Dutch disease caused a long-term overvaluation of the exchange rate, an important step was taken in that direction.

Another origin of exchange rate skepticism is the literature on balance-of-payments-constrained growth associated with H. Chenery and M. Bruno’s (1962) two gaps model and with the work of Anthony Thirlwall (1979)<sup>16</sup>. As already mentioned, Prebisch’s 1959 piece anticipates much of that approach. Prebisch deduced from it industrialization; Chenery and Bruno, the “need” of foreign borrowing; Thirlwall was not clear on the matter, but current account deficits and additional foreign indebtedness was one of the way-out possibilities.<sup>17</sup> This is a common deduction from the foreign constraint problem, which ignores the high rate of substitution of foreign for domestic savings that is usually present when peripheral countries engage in current account deficits and foreign indebtedness.<sup>18</sup> For the purposes of the present paper, it is interesting to note that, in order to make empirical estimations of what would come to be called Thirlwall’s law, Thirlwall had to simplify the model and that generally meant assuming away real exchange-rate movements in the long run. He justified that procedure by claiming that “[m]any models (...), and the empirical evidence, suggest that over the long period there can be little movement in relative international prices

measured in a common currency, either because of arbitrage (the law of one price) or because exchange depreciation forces up domestic prices.” (1979: 50) Thirlwall’s conclusion is that, in the long run, countries’ growth rates are limited by their foreign trade elasticities and the only way to raise that ceiling is to change these elasticities. However, one struggles to find a passage in his work that is clear about the policy he thinks would be most effective to bring this change about. In 1979, for instance, he says:

The deeper question lies in why the balance of payments equilibrium growth rate differs between countries. This must be primarily associated with the characteristics of goods produced, which determine the income elasticity of demand for the country’s exports and the country’s propensity to import. For countries with a slow rate of growth of exports, combined with a relatively high income elasticity of demand for imports the message is plain: the goods produced by the country are relatively unattractive at both home and abroad. (1979: 52-53)

The need to change the productive structure is clear, but Thirlwall does not manifest any preference for industrial or exchange-rate policies. In one passage, he claims “a once-for-all depreciation of the currency cannot raise the balance of payments equilibrium growth rate permanently. (...) To raise the balance of payments equilibrium permanently would require continual depreciation” (1979: 48-49). He is clear that, historically, such continual depreciation was not common: “Data for several countries in the post-war period do not suggest that relative price movements in international trade are an efficient mechanism for relieving countries of a balance of payments constraint on growth (...)” (1983: 261) But that does not mean that a once-for-all depreciation toward the competitive or industrial equilibrium, *if maintained*, could not bring about changes in the productive structure that could, in its turn, change the foreign trade elasticities. This medium-term impact of currency depreciation on the balance-of-payments-constrained growth rate cannot be ruled out *a priori*. But one comes out of Thirlwall’s papers with the impression that, when he mentions the need to change the foreign trade elasticities, he is referring to industrial policy<sup>19</sup>.

Before moving on to the 1980s literature, however, it is interesting to mention that the skepticism about exchange-rate devaluation also had a subsidiary basis on macroeconomic arguments about potential contractionary effect of currency devaluation.

## **Devaluation's short-term negative effect**

While it was (and still is) generally accepted that exchange-rate devaluation has a positive effect on output by making exports more competitive and imports less, some authors had long claimed that the opposite effect could hold under some circumstances. Albert Hirschman (1949), himself one of the pioneers of development, published a short note in the late 1940s deriving this possibility when the current account is initially not balanced. In 1963, Carlos Díaz Alejandro argued that this negative result could also be caused by the redistributive effects of a devaluation, that is, by the increase in the profit share of income. Given different saving propensities of workers and capitalists, this redistribution pushed aggregate demand down. The positive effect of devaluation on net exports might or might not compensate this negative one.<sup>20</sup>

Fifteen years later, Paul Krugman and Lance Taylor (1978) built on these two results and pointed a third possible reason why devaluation could have a contractionary effect: the increase of government revenues resulting from a devaluation redistributes income from the private sector to the government<sup>21</sup>. All these negative short-run effects, however, would not be contradictory to the potential positive effect of a devaluation on the productive structure, within a development strategy. But this effect would probably take a longer time to be felt. Krugman and Taylor (1978: 454-455) themselves, while discussing ways to solve balance of payments problems, bring forward this issue of the time dimension of the policy effects. It might be useful to quote them at length:

Devaluation is a costly cure [to balance of payments problems], and a devaluation big enough to reduce the balance of payments deficit substantially in the short run may be unacceptable. In such a case, the government should beg and borrow to meet the short-term deficit and work toward eliminating its structural difficulties by expansion of traded goods production in the medium run. The question is how one goes about correcting structural problems. In economies which are closely tied to the world market, direct government investment is not likely to be too helpful. Governments can build and manage roads, dams, and even steel plants; but there are few countries where they can effectively produce wigs, or false teeth, or cosmetics, or peasant agricultural products; yet these may be precisely the goods that the country has much chance of exporting or substituting for imports. So a policy designed to expand the capacity of the traded goods sector will probably have to rely on encouragement of private investment. This can be accomplished with a variety of tools: subsidies, tariffs, preferential credit, multiple exchange rates. It can also be accomplished, without the microeconomic distortions that these measures create, by devaluation, which increases profitability in traded goods production. Perhaps, then, one should think of devaluation as a measure designed to rectify balance of payments difficulties in the medium rather than the short run.

Here, several industrial policy instruments (subsidies, tariffs, preferential credit, multiple exchange rate) are put alongside devaluation as alternative ways to correct “structural problems”, reminding one of Prebisch’s 1959 article. Nevertheless, the declining optimism on the planning abilities of the government can be felt, when Krugman and Taylor maintain that the expansion of traded goods may have to rely on private investment and when they suggest, hesitantly, that devaluation might be a superior alternative to industrial policy because it does not create microeconomic distortions. If Prebisch’s work reflects the state-centric mood of the 1950s, Krugman and Taylor’s conclusion anticipate, in part, the neoliberal backlash that would characterize the 1980s<sup>22</sup>. It would be an exaggeration, however, to suggest that their paper signal a break with the long-standing preference for industrial over exchange-rate policies, only because of this final remark. Their main objective, after all, was to warn about the potential negative short-run effects of devaluation.<sup>23</sup>

It is notable that there also is a political economy explanation behind the classical developmentalists preference for industrial policy. They had clear that industrialization would only be successful if a developmental class coalition, putting together industrialists, urban workers and the public bureaucracy, replaced a liberal class coalition associating landowners and foreign interests. Thus, they rejected devaluations that would increase the revenues of their political adversaries, not realizing that a plausible alternative would be to impose an export tax on the commodities that originate the Dutch disease, thus keeping the exchange rate competitive not only for the commodity producers but also to the manufacturing industry.<sup>24</sup> They used instead complicated industrial policies that did the job that could be done by a simple exchange rate policy: they either established a multiple exchange rate system, or a system of high import duties combined with subsidies to manufactured goods exports. The disadvantage of these courses of action in comparison with a competitive exchange rate was pointed out, as early as 1968, by Hirschman (1968: 26-27), who argued precisely that the political economy of industrialization in Latin America tended to lead to this inferior economic policy.

## **East Asian trajectories and industrial policy**

For several reasons that are beyond the scope of this paper to examine, the literature on development economics declined during the 1960s. Since the late 1960s classical developmentalism ceased to offer new contributions. The 1970s was characterized by several critiques, from a neoclassical standpoint, of the import-substitution industrialization, which aimed not only at the policies implemented but also at the theories that allegedly justified them. In his 1981 essay, “The rise and decline of development economics”, Hirschman acknowledged the exhaustion of classical developmentalism. Later, Krugman (1993) referred to the neoclassical critiques as the “counterrevolution in development theory”.

Much attention was given at the time to the contrast between the performance of Latin American and East Asian economies. In the neoclassical reading, but against all evidence, the success of the latter was due to the fact that their policies were closer to *laissez-faire* than the ones adopted in Latin America. The contrast was often cast in terms of an opposition between export-promoting and import-substituting policies, the former understood as adherence to free trade and the latter, as protectionism<sup>25</sup>.

A certain revival of classical developmentalism would have to wait until the 1980s, and it is not surprising that it began with the formulation of an alternative interpretation for the unambiguously successful trajectories of the East Asian economies, one that suggested that this success should be attributed to industrial policy, instead of to the operation of a free market. Three major works provided that alternative: Chalmers Johnson’s (1982) book on Japan, Alice Amsden’s (1989) book on South Korea, and Robert Wade’s (1990) book on Taiwan.

Johnson’s book focuses on Japan’s Ministry of International Trade and Industry (MITI), the core of the Japanese state economic bureaucracy. His argument, simply put, is that MITI’s industrial policy was crucial to shift the “industrial structure” and that this shift, in its turn, “was the operative mechanism of the [Japanese] economic miracle” (1982: 31) In his words, his work “stresses the role of the developmental state in the economic miracle” (1982: 17). For the purposes of the present paper, it is relevant to note that this description of the Japanese policies in terms of a “developmental state” makes the contrast with the neoclassical approaches clear. But, most importantly, it does so by placing the emphasis on a specific development policy, the industrial policy.

The title of his book, after all, is *MITI and the Japanese Miracle: the growth of industrial policy, 1925-1975*.

Although Johnson mentions, in several passages of the book, Japan's policies regarding foreign exchanges, the alternative between devaluation and industrial policy does not appear as such in it. The focus is on industrial policy, and exchange-rate policies play, at most, a subsidiary role in his narrative. In Amsden (1989), however, one finds a more detailed examination of exchange-rate policies, in which she recognizes that it can have similar effects as subsidies. But she mentions downsides of resorting to devaluation and unambiguously favors direct subsidies. She discusses these policies as means to getting relative prices "wrong", as a fundamental strategy toward development, in contrast to the neoclassical emphasis on getting them "right":

"As for the foreign exchange rate, another key relative price in economic expansion, it has also been deliberately distorted by late industrializers, which need a high rate to export and a low rate to repay foreign debt and to import raw materials and producer goods that cannot yet be produced domestically. In Korea, exchange rates were not grossly distorted, but they did succeed in stimulating exports only when they operated in conjunction with other policies. Exports have been heavily subsidized and coerced, so inside the range of reasonableness, the relative price of foreign exchange has been altogether irrelevant." (1989: 144)

Amsden's (1989: 64-67) analysis of the devaluations of the won, the Korean currency, in the early 1960s allows a clearer understanding of her argument. She maintains that these devaluations were "disastrous", its "major effect (...) was worsening of the business climate by the increase in price of imported inputs, which fueled inflation." (1989: 65) Nevertheless, we read in her book that the 1961 devaluation was of 100% (the exchange rate went from 65 to 130 per dollar) and, in her table 3.1, we learn that this was an once-and-for-all devaluation in so far that in the next 23 years the won kept its acquisitive power relatively unchanged, around 110 won per dollar (1989: 56 and 65). She maintains that the devaluations that took place in 1961 were not able to stimulate exports immediately, but she acknowledges that, in 1963 and 1964, exports started to rise sharply.



Wade's (1990) interpretation of the Taiwanese case is somewhat more nuanced. Even though he chooses to emphasize "sectorial policies", he does not disregard the role played by the exchange rate and mentions it again and again. In broad terms, his interpretation is similar to Amsden's. He argues that the

superiority of East Asian economic performance (...) [is] the result, in important degree, of a set of government economic policies. Using incentives, controls, and mechanisms to spread risk, these policies enabled the government to guide – or govern – market processes of resource allocation so as to produce different production and investment outcomes than would have occurred with either free market or simulated free market policies. (1990: 26-27)

This "governed market process" is similar to Amsden's "wrong relative prices". Among the policies he mention, one finds several that could be considered forms of industrial policy – like "assisting particular industries", "building a national technology system", "prioritizing the use of scarce foreign exchange" – but also "maintaining the stability in some of the main economic parameters that affect the viability of long-term investment, especially the exchange rate, the interest rate, and the general price level" (1990: 27-28). In any case, in his analysis of Taiwan, Wade claims that its international performance cannot be attributed to the fact that its exchange rate was relatively "undistorted", as the neoclassical tend to do. Despite recognizing this fact, that "Taiwan's real exchange rate has been (...) (prior to the mid-1980s) neither much overvalued or undervalued" and that it remained "remarkably stable" (1990: 60), he goes to great pains to document the detailed way in which the Taiwanese government managed its foreign trade resorting to tariffs, subsidies and numerous nontariff instruments (1990: chap. 5). It should be pointed out, nevertheless, that the exchange rate skepticism that was noticeable in the many authors discussed is less clear in Wade's work. Examining the 1980s, he argues that "the real exchange rate became increasingly undervalued (...). This of course has given a powerful spur to exports." (1990: 148).

While neoliberal ideology and neoclassical economics turned dominant, classical developmentalism or development economics had come to a theoretical standstill. But these three well-documented books showed definitely that the industrial policy had worked in countries having successfully caught up. A little later, Ha-Joon Chang (2002) and Erik Reinert (2007) demonstrated the same thing from a historical viewpoint. With these five books classical developmentalism experienced a revival. But few realize that keeping the exchange rate competitive was particularly important for East-Asian

policymakers, as Sang-Woo Nam (1988: 73) remarks at a time that Japan, South Korea and Taiwan grew very fast: “since the exchange rate directly affects export profitability, maintaining an adequate and stable real exchange rate is critical for the smooth and sufficient allocation of resources into the export sector.”

### **Ending exchange rate skepticism?**

Exchange rate skepticism has been rather a Latin American than an East Asian problem, but some new facts and ideas are contributing to its end also in Latin America. The relationship between ideas and policies is a complex one. While this long-standing preference for industrial policy may have influenced development strategies in practice, it is also plausible that the actual constraints on policies, in specific historical periods, influenced the theoretical formulations. One major historical transition or new historical fact that took place in the second half of the 20th century and plausibly influenced development thinking was the gradual abandonment of fixed exchange rate regimes (Eichengreen, 1996: chap. 5). The international monetary system negotiated in Bretton Woods, in the end of World War II, partly broke down in the early 1970s, when Richard Nixon famously ended the dollar-gold convertibility. In the two decades that followed, most countries, especially in the periphery, tried to preserve the stability of their exchange rates by enforcing some kind of pegged exchange rate regime. But this proved increasingly untenable, given the pressures imposed by liberalized capital flows. According to Barry Eichengreen (1996: 138), in 1984 more than 70 per cent of the developing countries still had pegged currencies. By 1994, this percentage had fallen to about 45 per cent. More than half of these countries had transitioned to a floating exchange rate regime. Thus, the adoption of (managed) floating regimes in the last two decades may have eased the way to overcoming the long-standing exchange rate skepticism.

This could also be brought about by the fact that the productive structure of the peripheral countries is much different today of what it was in the first postwar decades. Then, the industrial sectors were still very limited, in most countries, and relatively isolated from the rest of the economy, which gave credence to the argument that the balance of payments structure was price-inelastic. That was the main thrust of the 1957 Mexico report, for instance. Nowadays, however, at least in the larger Latin American

and Asian countries the manufacturing sector has achieved a certain degree of sophistication that makes it plausible to argue that relative prices (that is, the exchange rate) can have a large impact in the productive structure, even if not in the short run<sup>26</sup>. In this way, one could maintain that another argument behind the preference for industrial policy has become obsolete.

While the transformation of the international monetary system and the shift towards floating exchange rate could have made the use of exchange-rate policies easier, the parallel opening of international trade and the regulations imposed by the World Trade Organization limited industrial policies. This is another historical transition that changed the conditions in which governments decided development strategies and opted for industrial or exchange rate policies. Rodrik (2010: 91) has argued that this was precisely what made China shift from a deep reliance on industrial policy to a more active management of the yuan:

WTO membership made it difficult, if not impossible, for China to promote its industries with the type of explicit industrial policies that the country had been relying on. Prior to the late 1990s, China's manufacturing industries were promoted by a wide variety of inducements, including high tariff barriers, investment incentives, export subsidies, and domestic content requirements on foreign firms. As a condition of membership, China had to phase out these policies. From levels that were among the highest in the world as late as the early 1990s, China's import tariffs fell to single-digit levels by the end of the decade. Local content requirements and export subsidies were eliminated. Currency undervaluation, or protection through the exchange rate, became the de facto substitute.

The case of China allows us to examine briefly the contrasting trajectories of Latin America and East Asia in the last few decades. It is a well-known fact that, since the 1980s, the former region has endured economic stagnation (only briefly interrupted by the recent boom in primary commodities), whereas the latter has gone on catching up with the rich countries. The usual explanation for such divergence, in line with the works of Amsden and Wade, for instance, is that policies in general and industrial policies in particular were better designed in East Asia than in Latin America (see, for instance, Palma, 2011) While this might be partly true, it seems that the role played by the exchange rate has been unduly neglected. The industrial policies in East Asia were continually supported by a competitive exchange rate, whereas in Latin America they unsuccessfully attempted to compensate for currency overvaluation (Bresser-Pereira, 2008b). The fact that currency appreciation was eventually imposed, during some periods, on the East Asian countries, particularly on Japan, and led

them to crisis, further suggests that their ordinary policy was one of competitive exchange rate<sup>27</sup>. Additionally, the fact that South Korea faced a currency crisis in 1997 together with three other Asian countries and had to depreciate is explained by its abandonment, in the 1990s, of its determination to keeping the exchange rate competitive and its embarking into growth with foreign borrowing (see Robert Wade and Frank Veneroso 1998).

Besides the new facts, we have the new ideas or new economic models. One of the reasons behind currency overvaluation in Latin America might be its endowment of natural resources causing the Dutch disease, something that was originally modeled by Corden and Neary (1982) and later by Bresser-Pereira (2008a, 2010), who suggested a method for neutralizing this structural competitive disadvantage. East Asia, in its turn, is mostly a resource-scarce region in comparison to Latin America. Another reason for the diverging trajectories of Latin American and East Asia might be the fact that inflation took longer to be controlled in Latin America and, when it was, it generally entailed an overvalued currency to act as a nominal anchor for prices (Bresser-Pereira, 2009).

These new facts and ideas are contributing to finally overcome such skepticism. The world economy today is different from the one of half a century ago and the obstacles to exchange rate policy are not as great as they were. The lessons from the long history of debates about development policies, briefly recounted above, should not be neglected, at the same time that one should be cautious about the potential problems of a currency devaluation. Short-run contractionary and inflationary effects, increasing inequality due to a falling wage share and short-term exchange-rate-inelasticity of the current account are real problems that cannot be dismissed. That is the reason why a devaluation should be a once and for all devaluation, and why the country should adopt, following it, the required policies that neutralize the tendency to the cyclical and chronic overvaluation of the exchange rate. In addition, trusting on a competitive exchange rate to do the entire trick by itself would imply an untenable confidence in market mechanisms. So, overcoming exchange rate skepticism should not imply neglecting industrial policy. The task of development requires combining the two instruments. The challenge, thus, is to think of a policy mix that compensates for the short-run problems of currency devaluation and opens the way for its medium to long-term benefits on the productive structure to be reaped, with the aid of the industrial policy.



## References

- ABREU, Marcelo de Paiva (ed.) (1990) *A Ordem do Progresso*. Rio de Janeiro: Elsevier.
- AMSDEN, Alice (1989) *Asia's Next Giant: South Korea and Late Industrialization*. Oxford: Oxford University Press.
- ARAÚJO, Ricardo, LIMA, Gilberto Tadeu (2007) "A structural economic dynamics approach to balance-of-payments-constrained growth." *Cambridge Journal of Economics*, Vol. 31 (5), pp. 755-774.
- ARNDT, H. W. (1987) *Economic Development: The History of an Idea*. Chicago: University of Chicago Press.
- BLECKER, Robert (2011) "Open economy models of distribution and growth." In HEIN, Eckhard, STOCKHAMMER, Engelbert (eds.), *A Modern Guide to Keynesian Macroeconomics and Economic Policies*. Cheltenham, UK: Edward Elgar, pp. 215-239.
- (2015) "Wage-led versus profit-led demand regimes: the long and the short of it." Paper presented at the Eastern Economic Association, New York, NY. Available at: [http://nw08.american.edu/~blecker/research/Blecker\\_LRvsSR\\_EEA2015.pdf](http://nw08.american.edu/~blecker/research/Blecker_LRvsSR_EEA2015.pdf)
- BOINAVOSKY Mauro, Ricardo SOLÍS (2014) "The origins and development of the Latin American structuralist approach to the balance of payments." *Review of Political Economy*, Vol. 26 (1), pp. 23-59.
- BRENNER, Robert (2002) *The Boom and the Bubble: the US in the World Economy*. London: Verso.
- BRESSER-PEREIRA, Luiz Carlos (2008a) "The Dutch disease and its neutralization: a Ricardian approach." *Brazilian Journal of Political Economy*, Vol. 28 (1), pp. 47-71.
- (2008b) "Globalization, nation-state and catching up." *Brazilian Journal of Political Economy*, Vol. 28 (4), pp. 557-577.
- (2009) "A tendência à sobreapreciação da taxa de câmbio." *Econômica*, Vol. 11 (1), pp. 7-30.
- (2010) *Globalization and Competition*. Cambridge: Cambridge University Press.
- BRESSER-PEREIRA, Luiz Carlos, Yoshiaki NAKANO (2003) "Economic growth with foreign savings?" *Brazilian Journal of Political Economy* 22(2) April 2003: 3-27 (in the website edition, [www.rep.org.br](http://www.rep.org.br); in Portuguese, in the printed edition)
- BRESSER-PEREIRA, Luiz Carlos, José Luis OREIRO, Nelson MARCONI (2015) *Developmental Macroeconomics*. London: Routledge.
- CHANG, Ha-Joon (2002) *Kicking Away the Ladder*. London: Anthem Press.
- CHENERY, Hollis, Michael BRUNO (1962) "Development alternatives in an open economy: The case of Israel", *Economic Journal*, May 1962: 79-103.
- DÍAZ-ALEJANDRO, Carlos F. (1963) "A note on the impact of devaluation and the redistributive effect." *Journal of Political Economy*, Vol. 71 (6), pp. 577-580.
- DOS SANTOS, Cláudio Hamilton, André G. CIEPLINSKI, Débora PIMENTEL, Gustavo BHERING (2015) "Por que a elasticidade-câmbio das importações é baixa no Brasil? Evidências a partir da desagregação das importações por categorias de uso." Texto para Discussão IPEA, n. 2046.
- EICHENGREEN, Barry (1996) *Globalizing Capital: a history of the international monetary system*. Princeton: Princeton University Press.
- ELLIS, Howard, Henry WALLICH, (eds.) (1963) *Economic Development for Latin America*. London: MacMillan.

- FLANDERS, M. June (1964) "Prebisch on protectionism: an evaluation." *Economic Journal*, Vol. 74 (294), pp. 305-326.
- FURTADO, Celso (1952) "Formação de capital e desenvolvimento econômico". *Revista de Economia Brasileira*, Vol. 6 (3), pp. 7-35.
- (1961/2009) *Desenvolvimento e Subdesenvolvimento*. Rio de Janeiro: Contraponto.
- (1985/1997) "A fantasia organizada." In Celso FURTADO, *Obra Autobiográfica de Celso Furtado*. Tomo I. Rio de Janeiro: Paz e Terra, pp. 87-359.
- GALA, Paulo (2008) "Real exchange rate levels and economic development: theoretical analysis and econometric evidence", *Cambridge Journal of Economics*, 32 March: 273 – 288.
- HIRSCHMAN, Albert O. (1949) "Devaluation and the trade balance: a note." *Review of Economics and Statistics*, Vol. 31 (1), pp. 50-53.
- (1968). "The political economy of import-substituting industrialization in Latin America." *Quarterly Journal of Economics*, Vol. 82 (1), pp. 1-32.
- (1981) "The rise and decline of development economics." In: Albert O. HIRSCHMAN, *Essays in Trespassing*. Cambridge: Cambridge University Press, pp. 1-24.
- JOHNSON, Chalmers (1982) *MITI and the Japanese Miracle*. Stanford: Stanford University Press.
- KEYNES, John Maynard (1925/1967) *Essays in Persuasion*. London: W.W. Norton.
- KINDLEBERGER, Charles P. (1973/1986) *The World in Depression, 1929-1939*. Berkeley: University of California Press.
- KRUGMAN, Paul (1989) "Differences in income elasticities and trends in real exchange rates." *European Economic Review*, Vol. 33 (5), pp. 1031-1046.
- (1993) "Toward a counter-counterrevolution in development theory." *Proceedings of the World Bank Annual Conference on Development Economics 1992*, pp. 15-38.
- KRUGMAN, Paul, Lance TAYLOR (1978) "Contractionary effects of devaluation." *Journal of International Economics*, Vol. 8 (3), pp. 445-456.
- LEWIS, W. Arthur (1954) "Economic development with unlimited supplies of labour." *Manchester School of Economic and Social Studies*, Vol. 22 (2), pp. 139-191.
- LIMA, Gilberto Tadeu e Verdiana Ramos CARVALHO (2006) "Crescimento econômico sob restrição externa: a experiência brasileira no período 1930-2004". Trabalho apresentado ao XI Encontro Nacional de Economia Política, Vitória (ES), 2006: 9 a 11
- MEIER, Gerald M., SEERS, Dudley (eds.) (1984) *Pioneers in Development*. Oxford: Oxford University Press.
- MISSIO, Fabrício, Frederico G. JAYME JR. e José Luís OREIRO (2015) "The structuralist tradition in economics: Methodological and macroeconomic aspects". *Brazilian Journal of Political Economy* 35 (2): 247-266.
- NAM, Sang-Woo (1988) "Alternative growth and adjustment strategies of Newly Industrializing Countries in Southeast Asia", in Paul STREETEN ed. *Beyond Adjustment: The Asian Experience*. Washington, DC: International Monetary Fund.
- NURKSE, Ragnar (1953) *Problems of Capital Formation in Underdeveloped Countries*. New York: Oxford University Press.
- PALMA, J. Gabriel (2011) "Why has productivity growth stagnated in most Latin American countries since the neo-liberal reforms?" *Cambridge Working Papers in Economics*, n. 1030.
- PREBISCH, Raúl (1950) "The economic development of Latin America and its principal problems," Economic Commission for Latin America and the Caribbean, New York.

- (1959) "Commercial policy in the underdeveloped countries." *American Economic Review*, Vol. 49 (2), pp. 251-273.
- RAZMI, Arslan (2007) "The contractionary short-run effects of nominal devaluation in developing countries: some neglected nuances." *International Review of Applied Economics*, Vol. 21 (5), pp. 577-602.
- RAZIN, Ofair, Susan COLLINS (1997) "Real exchange rate misalignments and growth," NBER Working Paper N° 6174.
- REINERT, Erik S. (2007) *How Rich Countries got Rich... and Why Poor Countries Stay Poor*. New York: Carroll & Craf.
- RODRIK, Dani (2008) "The real exchange rate and economic growth." *Brookings Papers on Economic Activity*, Fall, pp. 365-412.
- (2010) "Making room for China in the world economy." *American Economic Review*, Vol. 100 (2), pp. 89-93.
- SCHETTINI, Bernardo P., Gabriel C. SQUEFF, Raphael R. GOUVÊA (2012) "Estimativas da função exportações brasileiras agregadas com dados das Contas Nacionais Trimestrais, 1995-2009." *Economia Aplicada*, Vol. 16 (1), pp. 167-196.
- SHAPIRO, Helen, Lance TAYLOR (1990) "The state and industrial strategy." *World Development*, Vol. 18 (6), pp. 861-878.
- SINGER, Hans (1950) "The distribution of gains between investing and borrowing countries." *American Economic Review*, Vol. 40 (2), pp. 473-485.
- TAYLOR, Lance (2004) *Reconstructing Macroeconomics*. Cambridge, Mass.: Harvard University Press.
- THIRLWALL, Anthony P. (1979) "The balance of payments constraint as an explanation of international growth rate differences." *Banca Nazionale del Lavoro Quarterly Review*, Vol. 32 (128), pp. 45-53.
- (1983) "Foreign trade elasticities in centre-periphery models of growth and development." *Banca Nazionale del Lavoro Quarterly Review*, Vol. 36 (146), pp. 249-261.
- (1991) "Professor Krugman's 45-degree rule." *Journal of Post Keynesian Economics*, Vol. 14 (1), pp. 23-28.
- THIRLWALL, Anthony P., M HUSSAIN (1982) "The balance of payments constraint, capital flows and growth rates differences between developing countries", *Oxford Economic Papers*, Vol. 34: 498-510.
- TOYE, John, Richard TOYE (2003) "The origins and interpretation of the Prebisch-Singer thesis." *History of Political Economy*, Vol. 35 (3), pp. 437-467.
- WADE, Robert (1990) *Governing the Market*. Princeton: Princeton University Press.
- Wade, Robert and Frank Veneroso (1998) "Asian crisis: the high debt model versus the Wall Street-Treasury-IMF complex". *New Left Review* 228, March: 3-22.

---

<sup>1</sup> Keynes was one of the most prominent critics of the decision to reestablish the gold standard at the prewar level of the pound. *The Economics Consequences of Mr. Churchill* (Keynes, 1925/1963: 244-270) was about this decision (Churchill was the Chancellor of the Exchequer at the time it was taken).



---

<sup>2</sup> See Bresser-Pereira & Nakano (2002), Bresser-Pereira (2009) and Bresser-Pereira, Oreiro and Marconi (2015).

<sup>3</sup> We understand by “industrial equilibrium” the exchange rate that makes competitive the business enterprises utilizing technology in world state of the art. The causes for the chronic overvaluation of the exchange rate in developing countries are the Dutch disease and three habitual policies that they adopt: the growth with current account deficits or “foreign savings” policy, the policy of defining a high level interest rate around which monetary policy is supposed to be conducted, and the use of “exchange rate anchor” to control inflation.

<sup>4</sup> See Razin & Collins (1997), Paulo Gala (2008), Dani Rodrik (2008), Missio, Jaime Jr. & Oreiro (2015)

<sup>5</sup> As suggested below, this alternative first appears in the late 1950s, but its discussion is still common nowadays. Rodrik (2008: 397), for example, remarks that “undervaluation is in effect a substitute to industrial policy.”

<sup>6</sup> See Meier and Seers (1984), Hirschman (1981), Arndt (1987: chap. 3), and Krugman (1993) for panoramas of this literature from different perspectives. Given that “development economics” is too broad a denomination, an alternative is to call it Classical Developmentalism.

<sup>7</sup> He would reaffirm this position later (1959: 251): “industrialization is an inescapable part of the process of change accompanying a gradual improvement in per capita income.”

<sup>8</sup> The idea of a dual economy divided between industrial and agricultural sectors was widespread in this literature and would be examined specifically by W. Arthur Lewis (1954) This duality had several versions: industrial/agricultural, capitalist/subsistence, modern/traditional, formal/informal.

<sup>9</sup> On the Prebisch-Singer thesis, see Toye and Toye (2003).

<sup>10</sup> This was usually explained by resorting to James Duesenberry’s “demonstration effect”. See, for instance, Nurkse (1953: chap. 3) and Furtado (1952: 21-27).

<sup>11</sup> The interpretation of the causes of inflation was a matter of great controversy at the time. Celso Furtado (1952: 34-35) debated explicitly with Nurkse on this point, claiming that inflation was a symptom of the tendency to external disequilibrium.

<sup>12</sup> This formulation by Prebisch anticipates the literature on balance-of-payments-constrained growth, initiated by H. Chenery and M. Bruno’s (1962) and by Anthony Thirlwall’s (1979) works. See, on this connection, Thirlwall (1983) and Boianovsky and Solis (2014: 35-39).

<sup>13</sup> See Flanders (1964: 316-321) for an attempt to interpret the ambiguities of Prebisch’s formulation.

<sup>14</sup> For Furtado’s own view on the dispute, see Furtado (1985/1997: chap. 12).

<sup>15</sup> The issue of the equilibrium level of the exchange rate has been, conceptually and empirically, a vexing question for a long time. See, on that, Taylor (2004: chap. 10) and Bresser-Pereira et al. (2015: chap. 5).

<sup>16</sup> The empirical regularity that motivates Thirlwall’s work is also the starting point for a theoretical elaboration by Krugman (1989). While the former gives a demand-side explanation to it, the latter focus on supply-side considerations. See Thirlwall (1991), for his comparison of their theories.

<sup>17</sup> Thirlwall and Hussain (1982), quoted by Lima and Carvalho (2006), develop a model where the rate of growth is equal to the weighted sum of the rate of growth of exports and the rate of growth of the capital flows, divided by the income-elasticity of the demand for imports.

---

<sup>18</sup> The assumption here is that to each level of current account deficit there is, in the medium term, an exchange rate.

<sup>19</sup> Ricardo Araújo and Gilberto Tadeu Lima (2007) derived the multi-sectorial Thirlwall's Law, which, by its own nature, brings closer together the balance-of-payments-constrained growth literature and sectoral (that is, industrial) policies.

<sup>20</sup> Even if the overall effect was expansionary, however, currency devaluation could still be questioned because of its deleterious effects on income inequality. For economists that do not admit a development strategy that leads to rising inequality this is a real problem. But there are compensating policies that can be conceived, see for instance Bresser-Pereira et al. (2015: chaps. 12 and 16).

<sup>21</sup> A recent extension of this literature can be found in Razmi (2007).

<sup>22</sup> Recently, Rodrik (2008: 409) showed a similar concern about the viability of industrial policies: "[I]t goes without saying that production subsidies have their own problems. Fine-tuning them to address the perceived distortions would amount to a highly intricate form of industrial policy, with all the attendant informational and rent-seeking difficulties. (...) There is, it appears, no easy alternative to exchange rate policy."

<sup>23</sup> This issue, the short-run output effect of a devaluation, would be picked up by the neo-Kaleckian growth and distribution literature, which would point out that the impact of a devaluation on output depends on the demand regime (wage-led or profit-led). See, for instance, Blecker (2011). Recently, Blecker (2015) explicitly examined the different short and long-run effects of a devaluation, but considered only in passing its effects on the productive structure.

<sup>24</sup> For the commodity producers the policy would be neutral, because they would receive back on the form of depreciation what they paid in export tax. The costs of the depreciation would be distributed among all members of the national society as all tradable goods became more costly.

<sup>25</sup> For a discussion of these neoclassical critiques, see Wade (1990: chap. 1) and Shapiro and Taylor (1990: 863-865).

<sup>26</sup> Recent analyses of the Brazilian exports and imports, however, suggest that exchange-rate-elasticity is low. See, for instance, Schettini et al. (2012) and Dos Santos et al. (2015) Even if that were true, a longer-term policy designed to transform the productive structure and the structure of the current account cannot be helped by an overvalued exchange rate.

<sup>27</sup> This was the case for Japan, following the Plaza Accord, which devalued the dollar against the yen and the German mark. And, a decade later, the so-called "reverse Plaza accord" resulted in appreciation and crisis in the East Asian tigers, given that their currencies were pegged to the dollar, which appreciated against the yen. See Brenner (2002: 59-79, 96-118, 128-133) and Eichengreen (1996: 186-191).