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Articles

Número temático em homenagem aos 70 anos do Manifesto da CEPAL

GROWTH AND TECHNOLOGICAL-FINANCIAL DEPENDENCE CYCLES: FOLLOWING THE PREBISCH FOOTPRINT

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ABSTRACT: This text rereads the contribution of Prebisch in the era of deregulated financial flows, interpreted in a more general context of demand-driven growth, with the incorporation of capital flows as significant components of external dynamics. Given that the largest economies in Latin America cannot grow driven solely by exports, then the growth of these economies will present a trend towards the trade and current account deficit that will require a net influx of capital. Under certain conditions, this dynamic can be sustainable or not, with various implications for growth. The long-term balance between imports and exports will remain crucial, as in the original Prebisch vision. However, contrary to conventional views, the effects of capital flows can be very important for a strategy to promote structural change.

KEYWORDS: Prebisch; Latin America; capital flows; growth; balance of payments.

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CICLOS DE CRESCIMENTO E DEPENDÊNCIA TECNOLÓGICO-FINANCEIRA: SEGUINDO A PEGADA PREBISCH

RESUMO: Este texto traz uma releitura da contribuição de Prebisch na era dos fluxos financeiros desregulados, reinterpretada em um contexto mais geral de crescimento impulsionado pela demanda, com a incorporação dos fluxos de capital como componentes significativos da dinâmica externa. Dado que as maiores economias da América Latina não podem crescer impulsionadas apenas pelas exportações, o crescimento dessas economias apresentará uma tendência ao *deficit* comercial e em conta corrente que exigirá um influxo líquido de capital. Sob certas condições, essa dinâmica pode ser sustentável ou não, com várias implicações para o crescimento. O equilíbrio de longo prazo entre importações e exportações permanecerá crucial, como na visão original de Prebisch. Contudo, contrariamente às visões convencionais, os efeitos dos fluxos de capital podem ser muito importantes para uma estratégia de promover mudanças estruturais.

PALAVRAS-CHAVE: Prebisch; América Latina; fluxo de capitais; crescimento; balança de pagamentos.

INTRODUCTION

This text is a preliminary attempt to reread some aspects of Prebisch's thinking in the era of deregulated financial flows under the hegemony of the flexible dollar pattern as key elements that define the current external position of the periphery.

In this context, the focus will be placed on identifying some of the fundamental elements of Prebisch in its initial phase around the 1940s and its development in the 1949 Manifesto regarding the current relationship between financial flows and specialization in primary commodities. A discussion will be held on the role of external capitals and the exchange rate, with the main postulates held by Prebisch in the Manisfesto (1949) and in some subsequent work as a backdrop.

As Medeiros (2008) observed, the recent Latin American boom was characterized not only by a boom in commodity prices (improved terms of trade) and its international demand but also by a strong influx of capital into the periphery. So the integration, similar to the 'first globalization', is not only primary but primary (exporter) and financial. Thus, some of the implications and possibilities of this integration on Latin American growth will be discussed.

This paper contains four sections in addition to this introduction. Section 1 identifies some of the fundamental elements of Prebisch's conception of the development of the region and its main problems. Section 2 analyzes some extensions of the Prebisch growth model, incorporating other autonomous expenditures (in addition to exports) and capital flows, and their possible effects on long-term growth. The following section analyzes the connection between terms of trade and exchange rates in the periphery, taking into consideration the close link between changes in production costs and income distribution. Section 4 concludes with a schematic summary of the main conclusions.

1. FOREIGN INVESTMENT AND EXPORTS IN PREBISCH'S THINKING

1.1. THE EARLY ANALYSIS OF THE ARGENTINE CYCLE

Medeiros (2008) suggested the existence of great similarities between the external cycle of the 1990s and the economic dynamics before 1930 in Latin America. He also observed some similarities with the growth phase in the 2000s.

The common feature is that the economies of the 'first globalization' (1870-1929) and those of the 'second globalization' (1975 onwards), are open to the flow of capital, strongly integrated into the international financial system, and not merely oriented strategies to the export of commodities. Thus, the mode of international integration of

the Latin American economies would not only be a type of primary integration but, rather, a primary-financial integration.

In this context, and as an initial interpretation of the Argentine economic cycle, Prebisch (1939) argued that, given the currency board system that ruled in Argentina during the 1920s, increases in export prices and foreign investment (both factors governed by forces outside the country) set in motion the expansion of the level of activity and imports that, after an internal multiplication process, adjusted to the new supply of foreign exchange. Later, with the reversal of the cycle, the excess of importation and the decrease in foreign investment depressed domestic credit and the level of activity until a new cycle started from abroad.

According to this analysis, external investment (foreign direct investment – FDI) drives growth through a monetary transmission mechanism very similar to exports. The increase in the value of exports (or the increase in the flow of FDI, or both at the same time) causes an increase in the availability of foreign currency that has an immediate impact on the internal monetary situation. Basically, the positive balance of the external current account implies an equivalent extension of the internal means of payment. This increase in the means of payment expands the purchasing power of exporters (or external investors) by the same magnitude, which leads to an increase in aggregate demand and imports.

Prebisch uses a particular version of the foreign trade multiplier here (which he called 'expansion coefficient').[1] According to him, the 'expansion coefficient' measured the intensity with which an increase in income, caused by an increase in exports or financial flows, produces a greater expansion of domestic economic activity (PÉREZ CALDENTEY and VERNENGO, 2012, p. 181). Thus, starting from an equilibrium position, it explains the operation of a single increase in exports as follows:

> If, for example, the volume of Argentine exports increases – whether due to the growth of the amount exported or the increase in prices – the agricultural sector will receive correlatively greater revenues that will allow it to increase its demand for the goods and services produced in the others. sectors and also of imported items. There will be a greater demand for industrial items; more activity in commerce and transport; greater use of professional services [...] and greater imports. In turn, those sectors that will have received higher incomes will increase their demand for items and services produced within the same sector and in other sectors, and so on the influence or effect of the initial income growth of the agricultural sector, produced by the increase of its exports. (PREBISCH, 1991, vol. iii, p. 250, our translation)

[1] Prebisch (1991).

In very simple terms, the level of product would seem explained by an autonomous component (exports) given a propensity to import (m), such that:

$$Y = X / m \tag{1}$$

An increase in exports leads to a process of internal expansion that stops when the new equilibrium is reached, given by expression (1). In other words, the system returns to its equilibrium position when the increase in national income, caused by the increase in exports, expands to the rest of the world through a greater volume of imports and other payments.

In the example of Prebisch (1991, chap. 89), income is spent entirely in the country or abroad with imports. This assumes that the marginal propensity to save is ultimately equal to zero and the effect of a change in exports on spending is reduced to the inverse of the marginal propensity to import. Therefore, the increase in income is determined by the increase in exports given the foreign trade multiplier (PÉREZ CALDENTEY and VERNENGO, 2012).

In that early approach of Prebisch, there seems to be no place for an autonomous dimension of capital flow. Thus, we can conclude preliminarily that in this analysis there is no possible dissociation between capital flow and growth. However, it should be noted that the flow of capital does not enter the scene to finance a growth that is taking place driven by another force, but that the same growth is automatically driven by that flow of capital (in a manner analogous to exports). Thus, the connection between capital flow and activity level is automatic and is established through a money transmission channel.

1.2. THE MANIFEST

Prebisch's countercyclical considerations are – among others – one of the most characteristic ideas of his thinking embodied in the 1949 Manifesto. Persistently he returns to the idea that cyclic fluctuations of the center propagate towards the periphery. Based on these arguments, Prebisch defines the set of 'problems' that hinder the road to the development of the region.

One of the crucial problems is the tendency to deteriorate the terms of trade, and its background would be the fact that the center retained the fruits of technical progress, while the periphery did not. Therefore, industrialization would increase productivity and wages, making the price of primary products in the periphery more expensive. In this sense, "industrialization is not an end but a means to capture the

fruits of technical progress" (PREBISCH, 2012[1949], p. 6), and for that same reason it is not incompatible with the development of primary production and export.

In that context, the change in the international monetary pattern is decisive. While the British cyclical center (1870-1914) 'pushed out' gold, the new cyclical center (United States) 'retained' gold. This change of hegemony determines a phase of 'shortage of dollars' and gives the cyclic movement certain specific characteristics. Before the crisis of 1930, in its phase of decline, the center tended to spread the contraction to the rest of the world. If the periphery did not reduce its income with the same intensity, a balance of payments imbalance appeared and gold flowed towards the center.

When the crisis of 1929 broke out, the United States could have attracted the gold expelled in the previous phase but, unlike England, now the new cyclical center has reduced its import coefficient. This decrease accentuated the accumulation of gold in the center and demanded an even greater adjustment in the periphery. The forced reaction of Latin America was the reduction of its own import coefficient. Instruments such as tariffs, devaluations, import quotas and exchange control appear on the Latin American political scene.

Prebisch is known to have rejected the Keynesian logic according to which investment generates savings through changes in income. He explicitly postulated that saving was a *precondition* for investment,[2] and since he considered the savings rate in Latin America to be very low, this required the assistance of foreign capital, at least in a transitional phase. But, that 'aid' of foreign capital required government policies, since:

> While the fundamental problem of foreign trade is not resolved, it will be necessary to take care that capital investments in dollars, if it is not possible to apply them to the development of exports in the same currency, are applied to reduce, directly or indirectly, imports in said currency, in order to facilitate the future payment of the corresponding services. (PREBICH, 2012[1949], p. 45, our translation)

At this point Prebisch's countercyclical considerations become important. While in the center the countercyclical policy focuses on the stimulus to investment (variable to which the central role in cyclical dynamics is attributed), on the periphery that role would correspond to exports. But obviously it is not within the possibilities of the periphery to influence exports in a way analogous to what the center could influence on investment.

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[2] "I am convinced that stopping consumption is essential to capitalize investments. In this, I agree with the reasons given by the classical school and disagree with Keynes" (PREBISCH, 1993, vol. IV, p. 299, our translation).

At the same time, Prebisch considers exports 'autonomous' simply because it considers imports as a function of the output (or income). Therefore, periphery exports are a function of the level of activity of the central countries (PREBISCH, 2012[1949], p. 48). This is the basis of the 'pessimism of elasticities' that is present in Prebisch and other development theorists. Variables like price and therefore the real exchange rate do not have a relevant role. To see this point, we shall look at some basic definitions:

$$\Delta R = (M - M) - RLEE + FK \tag{2}$$

In (2) the commercial balance $(X - M)$ minus net payments for investment income sent abroad plus capital flows (FK) are equal to the variation in international reserves (ΔR). Of course, $\Delta R - FK$ may be greater or less than the result of the current account $(CC = X - M - RLEE)$, where $RLEE$ is the net income sent abroad.

If it is assumed that there are no capital flows (and that $RLEE = 0$) and $X = M$ is assumed as an equilibrium condition of the balance of payments we have:

$$P_M Q_M = P_X Q_X \tag{3}$$

In (3) P and Q are prices and quantities of imports (M) and exports (X) respectively, or what is the same:

$$P_X / P_M = Q_M / Q_X \tag{4}$$

This is the world to which the Manifesto refers. The main characteristics of the international conditions faced by Latin America during the postwar period remained virtually unchanged until the late 1960s. The Bretton Woods rule system established that countries had to maintain fixed exchange rates against the dollar. These parities could adjust to fundamental imbalances. The only substantial source of external financing for the region came from the IMF, so countries had to negotiate their exchange rate policy with the institution.

In this context, returning to the expression (1), if the terms of trade deteriorate, a greater volume of exports was necessary to pay the same level of imports (or external purchases would have to be reduced in a manner compatible with the level of exports). In turn, export and import growth can be represented as follows:

$$x = e^X g^W \tag{5}$$

$$m = e^M g^D \tag{6}$$

In (5) the growth rate of exports $\left(x\right)$ depends on the income elasticity of exports $\left(e^X\right)$ and world growth $\left(g^W\right)$ (or trade partners) and that of imports depends on the income elasticity of external purchases $\left(e^M\right)$ and domestic growth $\left(g^D\right)$.

At this point, Prebisch's assumption was that $e^X < e^M$. This single condition caused the periphery to grow in the long term at lower rates than the center given the need to maintain external balance, even in the presence of *constant* terms of trade.[3] In any case, the deterioration of the terms of trade – if it occurred – aggravated this structural situation.

As Medeiros and Serrano (1999) argue, this unfavorable structure of elasticities was the central and sufficient argument for Prebisch to support his argument in favor of the industrialization of the periphery as a way to increase the elasticity of exports and allow higher growth rates to be compatible with external balance.

Two fundamental points arise. On the one hand, the deterioration of the terms of trade requires a faster growth of the exported quantities to maintain the external balance. On the other hand, with given terms of trade, a country with an unfavorable elasticity structure must necessarily grow less than its trading partners do to maintain balance in its trade balance. These relationships allow us to understand how the unfavorable structure of elasticities may not only require a change in the level of the terms of trade, but also a continuous growth rate (LARA, 2012) or a persistent flow of capital.

However, among the structuralist economists, the role of capital flows was not taken into account. Or to be more precise: they did not acknowledge any *autonomous* role regarding the balance of payments and the determination of the external constraint (MEDEIROS, 2008). One of the reasons for this omission is without a doubt historical. In the time of Bretton Woods, capital flows were reduced to direct investment and were scarce and highly regulated. Financial flows originated from bank loans and were insignificant. Therefore, the traditional approach focused almost entirely on trade flows.

Notwithstanding, since financial liberalization, it has become increasingly evident not only that trade flows do not tend towards any equilibrium, but also that capital flows have acquired a significant autonomous dimension, gaining an enormous influence on foreign exchange markets. This is reflected in the fact that when the increase in net foreign liabilities exceeds the current account deficit, there is an excess

[3] "It is a universal characteristic of economic development that, as per capita income rises above certain minimums, the demand for primary products grows with less intensity than that of industrial goods and services" (PREBISCH, 1981[1976]).

of financial flows in relation to the needs of the 'real' economy. Therefore, there is a purely financial demand for foreign exchange.[4]

Nevertheless, when one takes into consideration that trade (or current account) deficits can be financed by capital inflows, this can compensate for an unfavorable structure of elasticities for a given level of terms of trade and eventually allow greater growth than arises from the balance between exports and imports (as will be discussed in the next section).

It should be noted, however, that more than two decades later, Prebisch opined that substitute industrialization had engendered an economy without the advantages of specialization and without sufficient scale. Based on this conclusion, he suggested reducing tariffs to stimulate industry through foreign competition and thus reducing its productivity gap with developed countries (PREBISCH, 1977).

The problem was how to reach an export-oriented industry when the internal cost and price structure was higher than in most advanced countries. Prebisch suggests a devaluation of the exchange rate to compensate for the reduction of tariffs, combined with a tax on traditional exports (which do not require the stimulus of devaluation).[5]

However, few years later, different studies highlighted that, despite continuing protectionist policies "it is notable that in the recent past manufacturing exports have grown at remarkably high rates in the semi-industrialized countries of Latin America, particularly in Argentina and Brazil" (TEITEL and THOUMI, 1986, p. 455, our translation). In the 1967-1974 stage, Brazil's GDP grew 10% per year on average, while total exports increased to an annual average of 22% (MEDEIROS and SERRANO, 2001). In the case of Argentina, in the early 1970s, structuralist economists (such as Marcelo Diamand or Adolfo Canitrot) were perplexed to the significant increase in industrial exports (AMICO, 2011).

The explanation of how the industry came to export in an environment close to autarchy seems to lie in the fact that the prolonged phase of the import substitution industrializartion (ISI), rather than engender supposedly unremovable distortions, was a long process of 'learning by doing', in which production and substitution of

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[4] Medeiros (2008) speaks of "a financial demand for foreign exchange that does not arise out of real need, but because of 'financial fragility'".

[5] This point contrasts with Kaldor's "late" vision. Initially, Kaldor believed that variations in exchange rates and terms of trade would significantly affect exports and imports. (KALDOR, 1978[1970], 1978 [1971]). After the experience with the end of Bretton Woods, Kaldor changed radically. His point of view is consistent with the hypothesis that exports and imports depend fundamentally on the level of income and factors not associated with price and cost competition (KALDOR, 1989a[1986b], p.37).

goods were instances of preparation for the production of other more complex goods and sectors, which ultimately encouraged export production (PAZOS, 1986, p. 61).

In the cases of Argentina and Brazil, both Pazos (1986) and Teitel and Thoumi (1986) highlight a positive association between the growth of domestic production and the increase in exports. The reason for this could be twofold. On the one hand, an increase in exports allows relief of balance of payments restrictions, which increases the 'import capacity' and allows the expansion of other autonomous components of domestic demand. In turn, the increase in domestic production, which implies an increase in economies of scale and cost reduction, could lead to increases in productivity and lower domestic relative prices, improving the external competitiveness of industrial exports.

These results contrast with Prebisch's more pessimistic (or 'late') view that the ISI would have produced a reduction in competition and efficiency. The idea that specialization towards industrial exports can lead to increased productivity, due to the stimulating effect on the quality and cost demands of international markets, is still very common even today. But it involves a reversal of causality (MORENO-BRID and ROS, 2009, p. 227).

Empirical studies at the firm level suggest that causality seems to go from productivity to exports (and not vice versa). In other words, efficient companies seem to be *self-selected* for export markets, instead of obtaining technological benefits from exports.[6] Empirical evidence seems to suggest that the precondition for increasing exports is a more diversified economy, an idea analogous to Amsden's claim that "import substitution was the mother of export growth" (AMSDEN, 2004, p.171). In addition, the promotion systems of the early 1970s had a clear anti-export bias, which made it more attractive for the producer to sell in the domestic market (BERLINSKI and SCHYDLOWSKY, 1982, p. 103).[7]

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[6] See, for example, Bernard and Jensen (1999) and Clerides, Lach and Tybout (1998).

[7] Some authors stated that industrial exports were stimulated by a crawling peg policy in the late 1960s of exchange (FRENKEL and RAPETTI, 2010). But there is simply no evidence that that is true. According to Teitel and Thoumi (1986), the crawling peg system in force in Brazil in those years, for example, prevented the real exchange rate from undergoing major changes, but it was not enough to maintain its real value, which led to a valuation of the cruzeiro during the seventies. Therefore, if it had any effect, the overvalued exchange rate should have negatively affected exports.

2. GROWTH WITH CAPITAL FLOWS

If we assume a more general model than the one related to the foreign trade multiplier and consider a supermultiplier type model,[8] then exports are no longer the only autonomous expenditure, and private investments that affect aggregate productive capacity should be considered basically induced (FREITAS and SERRANO, 2015).

The introduction of the supermultiplier model allows *separating* the theory that explains the output level (and its growth rate) from a theory that explains the external *constraint* since there is no mechanism that justifies that the output level that balances the external accounts is determinant of an identical level of effective output (BHERING and SERRANO, 2016; FREITAS, 2003). Likewise, the precise evaluation of the external constraint, as a limit of a *financial* nature, requires taking into account the possibility of financial flows and the conditions of sustainability of the indebtedness, in order to evaluate the possibilities of growth with capital flows.

As an external *constraint* to growth, the main conclusion of these analyses is that the so-called 'Thirlwall law' remains relevant even when the existence of long-term capital flows is taken into account (BHERING and SERRANO, 2016). A more adequate treatment of the conditions of sustainability of the external indebtedness with credit limits shows that the recourse to external financing actually increases the output *level* that leads to the balance of payments in case the interest rate paid on the external liability is *lower* than the export growth rate. However, the possibility of external indebtedness does not alter the *growth rate* of the product that balances the balance of payments, given the need for, in trend, exports to grow at the same rate as imports.

In the Kaldor-Thirlwall (KT) model *without capital flows*, different growth paths are not explained by the evolution of autonomous expenditures, but by changes in the structural parameters captured by the marginal propensities to import and export (Prebisch seems to assume the same). As the periphery had a high-income elasticity of imports and low-income elasticity of exports, the strategy to remove the balance of payments constraint was to reduce the proportion of imported goods through import substitution (and promote, as far as possible, higher-income elasticity exports).

Thus, countries with an income elasticity *greater than one* would be those in which increases in the level of income would generate increases in demand for imports, which leads to a growth in the *marginal propensity to import* along the development

[8] For a critical analysis of the foreign trade multiplier model see Freitas (2003)

trajectory. This aspect makes the external constraint the main obstacle to achieving sustained growth. In addition, as the cyclical center decreased its own import coefficient (the United States since the 1930s), that put extra pressure on the external accounts of the periphery and forced an import substitution process (reduction of m) to the least maintain the same growth rate as the center.

Unlike the KT models, in the super multiplier model, the crucial sustainability relationship is not debt/GDP but debt/exports. The fundamental point in the trajectory of the debt/export ratio is that the level of this indicator cannot grow unlimitedly. The limit is given because, from a certain *maximum* level, international creditors *cut* (credit rationing) the financing of the current account deficit. In this context, Bhering and Serrano (2016) develop an analytical model that reaches a synthetic expression:

$$Y_{BP} = X\left(1+b\right)/m \tag{7}$$

Note that this expression only differs from the KT model by the factor (1 + *b*). Thus,

$$b = fMAX\left(1-\left(1+r\right)/\left(1+gX\right)\right) \tag{8}$$

Thus, $fMAX$ represents the maximum level of net external liabilities/exports $\left(f = D/X\right)$ that creditors are willing to finance, r r represents the cost of external liabilities, and gX is the growth rate of exports.[9] In the expression (7), Y_{BP} represents the output level compatible with the external constraint, but that level is now different from the KT (and Prebisch) model, which we will call Y_{KT}.

Basically, *b* represents the debt financing conditions and their limits, that is, the ceiling imposed by international creditors and the relationship between the cost of the liability and the export growth rate. Thus, the KT model $\left(Y_{KT} = X/m\right)$ would be a particular case of this model, with $b = 0$ (that is, f *MAX* = 0). In addition, the long-term output with capital flows may be greater or less than the output that balances the trade balance depending on the sign of b. That is to say,

$$\text{if } r < gX \text{, hence } b > 0 \text{ and } Y_{BP} > Y_{KT}$$

Similarly,

$$\text{if } r > gX \text{, thus } b < 0 \text{ and } Y_{BP} < Y_{KT}$$

[9] See Bhering and Serrano (2016) for complete analytical development.

In the second case $(r > gX)$ the debt/export ratio becomes unstable and grows explosively, exceeding at some point the maximum 'ceiling'. In this context, for $b < 0$, the presence of external debt *keeps down* the output level even more than in the original model (that is, *without* capital flows).

This means that if the stock of a country's net external liability increases above the export growth rate, the external debt will become unsustainable and will end up limiting the output even more. Conversely, if the cost of external liabilities evolves below the growth rate of exports, external indebtedness can have a *positive* effect on the long-term output.

Interestingly, the result is that although the KT growth model does not seem an adequate model to represent a demand-driven growth process, the 'Thirlwall law' (understood as a constraint and not as a *determinant* of the effective growth rate retains general validity, since even incorporating the possibility of a *sustainable* process of external indebtedness, the effect of external credit on the output that balances the balance of payments is a level effect, while still considering a demand-led model such as the supermultiplier, the import growth rate cannot be systematically higher in the long term than the export growth rate (as in the conventional 'Thirlwall Law'). However, it should be retained that this *level* effect can be significant in the context of development strategy, as we will see below.

3. TERMS OF TRADE, EXCHANGE RATE, AND STRUCTURAL CHANGE

An important aspect of Prebisch's contribution is the relationship between the terms of trade and income distribution. As Serrano observed, of the recent analysis of the trend in commodity prices has focused on the demand side, to the detriment of supply conditions (production costs) and, in particular, the narrow connection between changes in production costs and distributive conditions (SERRANO, 2013, p. 197). This forgetfulness of cost conditions and income distribution contrasts with Prebisch's precursory analyses (as well as Singer's and Lewis') that focused on this interaction between costs and distribution to study long-term trends in terms of trade.

Prebisch understood that the tendency to deteriorate the terms of trade was associated with the fact that the center retained the fruits of technical progress. There was an 'inequality' in the price cycle (the primaries rose in the boom relatively less than they fell in the declining phase). The compression of wages and benefits in the periphery was easier than it was in the center (1949, p. 20). Industrialization would thus increase productivity and wages, raising the price of peripheral products relatively.

A crucial aspect was the differences in productivity between the center and the periphery. Protection, says Prebisch, could be eliminated (in abstract terms) if it were compensated by a reduction in wages. But this, in addition to "being impracticable due to political and social issues", would result in a reduction in export prices and a *worsening of the terms of trade* "with adverse effects on capitalization and the pace of development of the country" (PREBISCH, 1977, p. 16). We will return soon to this crucial point.

Note that in the analysis of the preceding section the real exchange rate is considered given. However, different economists defend the idea that competitive and stable real exchange rate policies are important for growth with external equilibrium. It is assumed that a competitive and stable real exchange rate promotes economic diversification (OCAMPO, RADA and TAYLOR, 2009) and stimulates economic growth (RODRIK, 2008). In particular, China is cited as an example, where "the co-movement between the degree of undervaluation on the one hand, and output growth and accumulation on the other is quite clear" (RAZMI, RAPETTI and SKOTT, 2009, p. 5).[10]

Thus, economies dependent on natural resources would have a bias towards exchange rate appreciation that would hamper diversification and could even lead to 'premature deindustrialization' (RODRIK, 2016). The competitive and stable real exchange rate would also be the appropriate instrument to, in turn, manage the capital account and prevent procyclical changes in external financing towards emerging economies, as well as fluctuations in terms of trade in countries commodity exporters (GUZMAN, OCAMPO and STIGLITZ, 2019).

However, a set of arguments severely questions the approach described. First, the price elasticity of exports (and imports) are extremely low. The real exchange rate has no statistical significance on the quantities exported in nine South American economies (although they do on imports), and in particular, they have no effect on industrial branches based on engineering and high technological intensity (BERNAT, 2015). The impact of the real exchange rate on external trade is very limited, particularly in relation to exports. This reinforces the need for an industrial and technological policy that modifies the elasticity-income parameters of foreign trade, which implies the full validity of the Prebisch approach at this point.

[10] Incidentally, although a correlation does not imply a causal relationship, Rodrik (2008, p. 370) easily solves the question: "[a]lthough ascertaining causality is always difficult, I argue that in this instance causality is likely to run from undervaluation to growth rather than the other way around". But certainly, given the positive relationship between growth and productivity, the 'competitive' real exchange rate could be the result of growth (and distribution) rather than a causal factor.

Likewise, the *transmission channels* from the real exchange rate to the growth postulated by this vision have been severely questioned. A devaluation increases the price (in domestic currency) of tradable and non-tradable goods that depend on imported inputs, such as food and fuel. Relative price increases lead to increased profits in these sectors, which, according to the new development authors, would stimulate industrial investment (BRESSER-PEREIRA, 2016).

The counterpart of this higher profitability, however, is a reduction in real wages and consumption, and an increase in the inequality of income distribution. Domestic demand necessarily contracts and the level of activity and employment falls. But those authors assume that in the medium term these negative effects would be more than compensated by the increase in investment, stimulated by higher profitability, and a higher level of product.

The models that formalize these ideas are extremely varied and adopt different assumptions, which are often not consistent with each other. In some versions, typical marginalist mechanisms of factorial substitution (direct and indirect) are used, giving rise to a 'labor intensity channel,' whereby a 'competitive' real exchange rate (lower real wage) leads to a labor/capital ratio higher in both the tradable and non-tradable sectors (FRENKEL, 2008).[11]

For example, Frenkel and Ros (2006) use a standard neoclassical function of the Cobb-Douglas type whereby the level of employment in the tradable sector does not depend on the product level but is determined by a process of maximizing benefits under conditions competitive. Similarly, Gerchunoff and Rapetti (2016) build a model to represent the distributive conflict of Argentina with three sectors (tradable and intensive in natural resources, another tradable and labor-intensive, and a non-tradable and labor-intensive sector). Tradable and labor-intensive is represented by "a standard production function" (p. 230), while the remaining sectors are represented by fixed coefficient production functions. The authors provide no justification to the reasons that lead to adopting this criterion, although the results crucially depend on the adoption of this 'standard production function' (neoclassical or marginalist) that, precisely, allows the substitution mechanisms (direct and indirect) without which the model cannot sustain its results.[12]

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[11] In the Cambridge debate, more than 50 years ago, the inconsistency of such a postulate was evidenced by demonstrating that it is not possible to propose an inverse relationship between the demand for 'factors' (capital, labor) and their relative remuneration (rate of profit and wages, respectively). Therefore, a fall in the price of a factor will not necessarily be accompanied by an increase in its demand. In addition, these substitution processes are not verified at the empirical level (see CHIRINKO, 1993).

[12] In addition, in a marginalist world, with 'standard production functions', a 'structural conflict' over distribution conflict makes no sense because a level real wage above the 'natural' level produces unemployment and that would put workers in a worse situation. Why would workers insist on producing a situation that only makes them worse?

Other times, the same authors use a 'profit-led' growth criterion that is incompatible with the marginal mechanisms involved in standard production functions where the profit rate is endogenous (and therefore not it can be an independent variable that leads the process). Thus, a 'tradable-led growth' type channel is postulated where the accumulation in these activities depends on its profitability, which in turn depends on the level and volatility of the real exchange rate (RAPETTI, 2019).

But, as Medeiros and Trebat (2016) argue, an increase in the rate of profit (or the expected rate of profit) will not justify the creation of a new productive capacity if sales expectations have not changed. It would be irrational, for example, for industrial companies to expand productive capacity simply because their workers accept large wage cuts, or because the devaluation of the currency has increased the rate of profit on sales abroad. For these companies, the most likely effect of a currency devaluation is simply an increase in profits without changing the volume of investment.

A peculiarity of this 'Neodevelopmentalist' policy is that it is a regime that is proposed for all developing countries without exception (FRENKEL and ROS, 2006; RAZMI, RAPETTI, and SKOTT, 2009; SKOTT, RAPETTI and RAZMI, 2012; BRESSER -PEREIRA, 2012, among many others). In summary, the coordinated application of these policies would result in a more 'competitive' real exchange rate for the whole periphery or, what is the same, a lower real exchange rate in relation to the dollar.

This approach omits an important aspect observed by Prebisch. A significant number of empirical studies have revealed a close connection between the price of commodities exported by the periphery and the real exchange rate of these countries.[13] According to these studies, the appreciation of 'peripheral' currencies against the dollar by developing countries exporting commodities (the so-called 'commodity currencies') was a key factor in determining and sustaining the (absolute) price in dollars of those commodities.[14]

Druck, Magud and Mariscal (2015) show even more clearly that during periods of appreciation of the US dollar (devaluation of peripheral currencies against the dollar), real GDP growth in emerging markets slows down despite the positive growth

[13] See for example Chen, Rogoff and Rossi (2008), Coudert, Couharde and Mignon (2008), Cashin, Céspedes and Sahay (2003), Bodart, Candelon and Carpantier (2011), and Druck, Magud and Mariscal (2015), among others. For a different interpretation see Amico (2014).

[14] 'Commodity currencies' is the denomination of the currencies of those countries that depend significantly on the export of raw materials and commodities. In general, and not without ambiguity, the denomination includes developing countries, although a number of developed countries may be included as well, such as Canada and Australia.

momentum of the US. The main transmission channel is through an income effect due to the impact of the dollar on world commodity prices.

As the dollar appreciates, commodity prices in dollars tend to fall. In turn, lower commodity prices depress domestic demand through lower real income (in dollars). Thus, real GDP in emerging markets slows. In addition, these effects are maintained despite any potential substitution effect on expenses resulting from monetary depreciation in emerging market economies.

Eventually, it could be expected that despite everything the devaluations of the periphery will be a stimulus to increase the quantities exported (even with a deterioration of prices). In a suggestive article, Ahmed, Appendino, and Ruta (2015) show that what really happens is something else: devaluations without exports. The authors show that the elasticity of the exchange rate of exports would have changed over time and that the formation of global value chains has affected this relationship. As countries are more integrated into global production processes, currency depreciation only improves the competitiveness of a small fraction of the value of finished product exports.

A crucial implication of this stylized fact is that capital inflows and improvements in the terms of trade in favor of commodity exporters allowed for a wide appreciation of their currencies against the dollar in developing countries. Consequently, the upward trend of the dollar price of these commodities consolidated and, given the trend in industrial prices (increasingly governed internationally by the costs of China), it led to a rise in the relative price of commodities in the international market (SERRANO, 2013).

Certainly, in relation to the times of the Prebisch *Manifesto*, the phase of financial globalization (and deregulation) and the dominance of the floating dollar standard substantially change things in terms of the dynamics that govern the trend of terms of trade.

It is also possible to reverse the direction of causality between these variables (from the exchange rates of developing countries to the dollar price of commodities). For example, the stages in which the interest rate in developed countries increased sharply, resulting in a sudden stop of capital flows and, therefore, a flight to quality towards the center. Then, capital flight to the center produces a coordinated depreciation in developing countries, which lowered the dollar price of commodities exported by these countries.

Certainly, in Latin America, it seems difficult to consider the opposite causality (from the real exchange rate to the dollar price of commodities) as the result of an exchange policy target. The 'neodevelopmentalist' consensus considers that the real

exchange rate appreciation is an unwanted result, that is, some variant of the so-called 'Dutch disease' or the 'natural resource curse'.

However, Serrano (2013) argues that one of the factors that allowed the decoupling of periphery growth rates was the notable improvement in balance of payment management policies in many developing countries. These improvements include managed floating exchange rate regimes.[15] In this case, the flexibility of the exchange rate is by no means 'free-floating', but is a heavily managed regime instead, which makes it particularly strong to deal with speculative attacks.

Undoubtedly, these changes in the balance of payments position of commodity-exporting countries in the 2000s had, in turn, an impact on exchange rate policy and therefore on the prices of commodities that these countries export. Indeed, instead of a fear of excessive appreciation of exchange rates, the policy of central banks seems to have been more focused on the old 'fear of devaluation', an underlying bias to the 'fear of floating' detected by Calvo and Reinhart two decades ago.

The reasons are simple. First, nominal devaluations, if persistent, can favor capital outflows and produce feedback with expectations about the devaluation process, generating cumulative imbalances in the exchange market and introducing greater external fragility.[16] If, additionally, it is taken into account that real devaluations appear to be contractual both in the short and long term, generating an inflationary acceleration, reducing real wages and consumption, and therefore negatively affecting private investment, it is understood the bias towards exchange appreciation or stability that tended to prevail in developing countries since the early 2000s.

Certainly, more recently in many developing countries, a tendency to devalue their currencies has prevailed even in the context of a large accumulation of reserves. There seem to be two types of reasons that interact to explain why most countries are allowing the depreciation of their currencies (even though these adjustments do not improve exports or decrease the propensity to import).

First, under a floating exchange rate regime, when an economy has capital inflows (either portfolio flows or even foreign direct investment) denominated in national

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[15] In addition, the massive accumulation of foreign exchange reserves, the advance payment (or restructuring) of the public external debt, the creation of sovereign funds and the selective taxation of some basic export products (and, sometimes, the subsidy of some imports of basic products), among others.

[16] Clearly, this seems to be the case in Argentina in recent years, where the tendency to further devaluation of the nominal exchange rate had two consequences (not necessarily related to one another). On the one hand, it produced a higher inflation rate in face of high 'wage resistance' (while devaluations tried to 'accommodate' increases in wage costs in tradable sectors).On the other, it stimulated capital outflows as it had a negative impact on the external-internal interest differential.

currency and whose returns must be paid in that currency, investors must assume the exchange risk, since the dollar value of these liabilities can always be reduced by a devaluation of the exchange rate. This characteristic seems to be a factor that explains the policy followed in recent times by the central banks: when a negative external shock (small or large) occurs, the depreciation of domestic currencies seems to be an option due to the loss of reserves.

In a floating exchange rate context, both indebtedness with domestic public debt securities and portfolio investment and returns of foreign direct investment do not necessarily imply the payment of a defined dollar amount. Transnational companies obtain benefits in the country where they are based in domestic currency, but to remit such gains abroad they must convert those benefits into dollars at a certain exchange rate. These payments may be higher or lower depending on the level of the nominal exchange rate.[17]

In summary, when a country takes resources in its own currency, it is the rest of the world that assumes foreign exchange risk and an exchange devaluation can significantly reduce the financial service of external liabilities (SERRANO and SUMMA, 2012).[18]

The second reason (perhaps more important than the first) is that currency depreciations aim to improve the profitability of the business sector (particularly the tradable sector) and try to 'accommodate' the higher wage costs. This objective is often rationalized by arguing that increasing profitability is a necessary stimulus to increase productive investment, promote technological progress and export diversification.

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[17] Whenever an external asset or liability is priced in a currency other than the dollar, changes in the exchange rate of that currency to dollar make the price of the asset (or liability) in dollar change accordingly, leading to a variation in the value of the stock of net external liabilities. The net external liability, measured in dollars, will be the sum of all types of external liabilities. But the effective rate of return in dollars of these liabilities will be an average between the interest rate of the external debt in dollars (which is a fixed nominal amount in dollar) and the effective rate of return in dollar of the other external liabilities. This last rate of return will be given by the rate of return of those assets in local currency (for example, the nominal interest rate of the internal public debt or the variation of the prices of the shares in the domestic currency) added to the rate of valuation of the local currency in relation to the dollar.

[18] In the scheme presented in section 2, where (1+ r) and (1+ gX), based on Bhering and Serrano (2016), are compared, that meant that in some periods in Brazil in the 2000s the return rate of external liabilities was negative ($r < 0$).

FINAL REMARKS

From the above, some important implications arise.

First, the need to consider Prebisch's contribution in a more general analytical framework (from the foreign trade multiplier to a super-multiplier type model), within which growth is driven by autonomous demand and there are other autonomous expenses besides exports. A second extension – closely linked to the previous one – is the incorporation of capital flows as significant autonomous components in Latin American external dynamics and its growth pattern.

If it is generally accepted that there are other autonomous expenditures in addition to exports (such as public spending, credit-financed consumption, residential investment, etc.) and that the largest economies in Latin America cannot grow driven exclusively by exports. Then, in the growth phases, these economies will be led by autonomous domestic expenditures and a tendency to trade deficit will emerge that will require a net flow of capital. The dynamics of these capital flows can be sustainable or not, having positive or negative implications on the growth rate (depending on the cases presented in section 2).

Even so, if the capital flow is sustainable (basically that the export growth rate is greater than the return rate of the net external liabilities), the effect of the capital flow will be an effect on the output *level*, but the long-term growth rate will continue to be linked to the Thirlwall constraint, that is, the import growth rate may not diverge too much from the export growth rate.

However, this level effect can be very important in the context of a *development strategy* that aims to diversify the productive structure and promote structural change within the framework of a growth process. The international context opened in the 2000s reveals that the conditions of relative financial and commercial bonanza could provide significant time to make such transformations, which become crucially dependent on the internal conditions of the countries, the state of the distributive conflict, the political conflicts, etc.

Finally, in this framework, the difficulties posed by the neo-developmentalist proposal are clearer, in particular concerning the negative effect of the coordinated devaluations of the periphery, not only on its domestic activity levels but above all due to the worsening of the terms of trade of commodity-exporting countries, an aspect that is completely ignored in all the neo-developmentalist analyses. In this way, although by a somewhat different path, we return to Prebisch's old idea that, since "industrialization is not an end but a means to capture the fruits of technical progress" (PREBISCH, 2012[1949], p. 6), for the same reason it is not incompatible with the development of primary production and export. In this context, the "primarization" of

exports may not be, at all, a 'curse' as long as it represents better terms of trade and greater possibilities for industrial growth and diversification.

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