Economic inwardness and stagnation: why does Brazil persist?

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1. Introduction¹

Adolfo Canitrot was the quintessential *porteño* and a true latinoamericanist. He held important positions in the government of Argentina and was an adviser on economic policymaking in Chile and Peru. His dedication to international economics dates from his doctoral dissertation for Stanford University where, under the guidance of Hirofumi Usawa, he dealt with import tariffs in a neoclassical two-sector growth model. But Canitrot was not a theoretical economist, his subsequent intellectual production was fully dedicated to empirical analyses of macroeconomic topics relevant for economic policy making.

In 1993, Adolfo Canitrot and Silvia Junco organized for the Interamerican Development Bank a study of macroeconomic conditions and trade liberalization in the Southern Cone. One of the book's most important findings was that eliminating the public sector deficit was essential to the success and sustainability of trade liberalization (Canitrot and Junco, 1993). Nowadays, Canitrot might be puzzled by the insistence of both Brazil and Argentina to maintain Mercosur as a customs union relatively closed to the rest of the world when neighboring Chile in Latin America and many other countries were such economic success stories since opening its economies to international trade in the last decades.

Along these lines, this chapter argues that the refusal to open the economy to foreign trade is one of the central causes that prevent Brazil from growing at an accelerated rate and reducing the gap of the country's per capita income to that of rich countries.

The next section begins with brief comparison of Brazil's growth experience with that of South Korea after World War II. This is the motivation for the subsequent statistical analysis of the collapse of Brazil's growth from 1980 onwards. The section argues that a fundamental source of growth frustration relies on the deepening of import substitution dissociated from export expansion. The third section considers the variety of arguments highlighting the importance of openness to foreign trade for the boosting of economic growth. One wonders why, given this evidence, Brazil persists in remaining relatively closed to international trade, as illustrated in the fourth section. In the fifth section, five narratives for the status quo are considered. The chapter concludes with elements of a program for the integration of Brazil to the world economy.

2. Economic inwardness and low growth

A comparison of Brazil's and South Korea's economies since 1950 may illustrate the relevance of trade openness as a driver for growth. As seen in Graph 1, until 1974 South Korea had a per capita income lower than Brazil, but, from the beginning of the 1960s, it

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begun a process of catching-up and then overtaking Brazil. Currently, Brazil has a per capita income of only 1/3 of South Korea's.



Graph 1: Brazil's per capita income as a ratio to South Korea's (%), 1950-2020

Source: Our own calculation, with data from the Maddison Project (1950 to 2016) e from the IMF (2017 to 2020). Series corrected by the purchasing power parity.

There are several hypotheses about why South Korea succeeded in overcoming the so-called middle-income trap, and Brazil did not. The literature highlights different dimensions to explain the South Korean success going from intensive education investment, high saving rates, export driven policies and international trade to agrarian reform (Amsden, 1992). The hypothesis that we explore in this chapter is illustrated in Graph 2: the opening to foreign trade that South Korea did from the beginning of the 1960s, when it started to take off, and Brazil did not.



Graph 2: Shares of foreign trade in GDP, Brazil and South Korea, 1953-2018

Source: Our own elaboration with exports, imports, and GDP data from PWT 9.1 and World Development Indicators, in constant 2011 prices. Foreign trade share is defined as the sum of exports and imports over GDP.

In the mid-1960s, South Korea's openness to foreign trade – measured by the ratio of the sum of exports and imports to GDP – was around 7%. Today, that figure is around 110%. Meanwhile, Brazil, which in the mid-1960s had an openness ratio of around 5%, currently has reached around 25%.

To support the conjecture regarding the relationship between the closure of the economy to foreign trade and the collapse of growth, we study the Brazilian experience in the post-World War II period. Graph 3 shows the path of Brazil's GDP since 1950. The bars indicate annual GDP growth rates and the dotted line the ten-year moving average of these rates. We observe a strong decay in the growth path from 1981 onwards.



Graph 3: Brazil's GDP growth rates, 1950-2020

Source: Our own elaboration with data from Ipeadata

According to the country's national accounts, from 1947 to 1980 Brazil grew at around 7.5% p.a.² This long period of sustained growth was followed by a transition phase – the so-called *lost decade* – leading to a new growth pattern of just 2.5% p.a. until the mid-2010s. More recently, there has been an additional downturn with the growth rate in the last decade close to 1% p.a.

In a simplified Harrod-Domar (HD) model, GDP growth depends in the first place on an increase in capital goods' stock: machinery, buildings, and equipment generating more production. Households, firms, and government savings, are made available to private firms and the public sector to buy new capital goods. Foreign savings are an additional source of financing for the acquisition of new capital goods. The amount of capital goods purchased depends in turn on these goods' prices, which determine the purchasing power of savings. The prices of new capital goods are defined as the ratio of the implicit price deflator of fixed capital formation to the implicit price deflator of GDP. The more expensive are these goods, the fewer total savings will be able to acquire.

² In a recent paper (Bacha, Tombolo and Versiani, 2023), I argue that Brazil's national accounts overestimate the country's GDP growth up to 1980. The reason is the exclusion of slow-growing service sectors (adding up to some 30% of GDP) from the accounts. When the growth rates of the excluded service sectors are accounted for, Brazil's average yearly GDP growth falls from 7.4% to 6.2% in the 1947-1980 period. This is still much better than the country's subsequent economic performance.

Finally, and critically, GDP growth generated by the new capital goods will depend on their productivity. The higher the marginal output-capital ratio the higher with be the GDP growth rate.

This simplified HD growth story is illustrated in Figure 1 below.

Figure 1: Simplified Harrod-Domar growth story

Savings \rightarrow Capital Goods Prices \rightarrow Purchasing power of savings \rightarrow Increase in the Stock of Capital Goods \rightarrow Marginal Productivity of Capital \rightarrow GDP growth

We now consider what happened with such channels of GDP growth in post-WW-II Brazil – savings, prices of new capital goods and capital productivity. Firstly, savings, which is illustrated in Graph 4.



Graph 4: Evolution of savings rates by periods (% GDP), 1947-2020

Source: Our own elaboration based on data from Ipeatada. Foreign savings calculated by subtracting domestic savings from gross capital formation.

Comparing averages for the periods before and after 1980, we observe a slight reduction in the savings rate, from 19.4% to 18.1% of GDP.

More important, however, were two other phenomena. First, savings began to buy fewer new capital goods due to the rising price of these goods. The price increase was around 30% when comparing the averages for the period prior to and after 1980, as illustrated in Graph 5.



Graph 5: New capital goods prices, 1947-2020 (p=1 in 2000)

Source: Data from Ipeadata and IBGE for Gross Fixed Capital Formation (GFCF) in current prices and GFCF in 2010 prices, to calculate the implicit price deflator of GFCF. Implicit price deflator of GDP from Ipeadata. Capital goods prices calculated as the ratio of the implicit price of deflator of GFCF to the implicit price deflator of GDP, with p=1 in 2000. See Bacha and Bonelli (2016a) for an explanation of the correction of p between 1986 and 1995.

Additionally, we observe a fall in the productivity of capital goods. The drop in capital productivity was around 25%, when comparing the averages for the periods before and after 1980, as illustrated in Graph 6.



Graph 6: Capital productivity (GDP/fixed capita stock), 1950-2020

Source: Our own elaboration based on Bacha and Bonelli (2016a). The series are in 2000 prices. The data for fixed capital formation are from Ipeadata.

Capital goods became more expensive and less productive throughout the post-war industrialization process, leading to a negative impact on GDP growth. Why did this occur? One explanation lies in the insistence on keeping the economy closed, and promoting the local production in Brazil of inputs, machines and equipment that were previously imported at lower prices and with higher productivity. The country deepened import substitution instead of increasing exports to allow imports leading to more efficient investment. This would have been the consistent and sustainable strategy for the supply of competitive goods and services in the international market. It was the path to success taken by South Korea. In addition to more expensive and less productive machines and equipment, savings also declined, and the result was the growth collapse from 1980 onwards.

Bacha and Bonelli (2016a) discuss this hypothesis in more detail, but it is worth noting the contrast with the widely held view that Brazil's growth collapse was due to the external debt crisis of 1981-83 followed by the acceleration of inflation and the failed stabilization plans until 1994. Without denying the importance of these events, the interpretation proposed here is, so to speak, more structural. The process of growth deceleration was already underway in the 1970s, particularly during the Geisel government (1974/79), but this was masked by an increase in the savings rate from 17.6% to 23.6% of GDP between 1963- 67 and 1974-80 (with a large contribution from external debt). In the

1970s, the increase in savings more than compensated for the fall in capital productivity and the rise in capital goods prices which were under way.

In view of Brazil's low growth experience since 1980, and the deepening of import substitution, in the following section we consider a set of arguments in favor of trade openness.

3. Integration is beneficial

Ever since the classic book by David Ricardo, *Principles of Political Economy and Taxation*, in 1817, economists have stated the benefits for a country from being integrated to the international economy. Ricardo had in mind the benefits that would accrue from a country's specialization in those goods in which it is relatively more productive. This is the principle of comparative advantage: each country specializes in those goods in which it is relatively more productive and, as a result, all countries can benefit from greater world production and lower prices than in an alternative scenario, in which countries would produce and consume in autarky.

Nowadays, international trade is no longer in final products as in Ricardo's examples, but predominantly in intermediate products along global value chains: each country specializes in a production stage -- a smartphone, for example, has parts produced in many countries, automotive companies specialize not in producing the entire vehicle, but in parts and components that are assembled in third countries. Company headquarters are normally responsible for design, technology and, in many cases, advertising and marketing.

Nor is it trade between small firms, operating with increasing costs, under perfect competition, as in Ricardo's examples. The game is now predominantly between large companies, which can differentiate their products by brands or specific attributes, thus gaining the ability to set prices and have some mechanism to protect their markets.

Finally, much of international trade is no longer between independent firms, but between branches and subsidiaries of the same multinational company. For a review of modern international trade theory, see Helpman (2011).

Under these conditions, three other dimensions of the benefits of trade beyond specialization stand out. Firstly, trade allows firms located in a country to absorb the technology available at the international production frontier, either because they are multinationals that are on this frontier, or because national firms become part of the production chain of the firms on the frontier. Firms in a country engaged in global value chains incorporate the world's "state of the art" into their production processes. They therefore become more productive and capable of generating more growth.

Second, due to the expansion of markets brought about by international trade, the more productive firms can gain scale without the limitations of their domestic market. In turn, they thus produce goods and services at lower costs and more competitive prices.

Finally, by increasing competition for markets, trade allows a natural selection of the most productive firms, overcoming those that previously survived under the protection of import barriers. Workers, physical capital, and inputs are transferred from less to more productive firms. As a result, the economy as a whole benefits.

Thus, international trade favors innovation and growth through technology transfer, market size, and competition. Each of these mechanisms offers a potential source of dynamic welfare gains, showing in a higher rate of economic growth. Recent literature suggests that these gains are substantial in relation to the static gains of the Ricardian theory. For a review of the theoretical and applied literature on trade and innovation, see Melitz and Redding (2021).

The historical experience of "economic miracles" in Southeast Asia, on the periphery of Europe, and in Oceania shows that countries that overcame the middle-income trap and joined the developed countries after the 2nd World War did so with a growing integration to international trade. Not all countries that opened to trade developed, but all countries that developed did so with a significant trade integration to the rest of the world. Under the assumption that a per capita income cutoff of US\$ 25,000 defines a country as rich we select a set of economies. As summarized in Table 1, we identify twelve successful cases of the transition from middle-income to rich. South Korea, Hong Kong, Israel, Singapore, and Taiwan became rich with industrial exports; Spain, Greece, Ireland, and Portugal, with exports of services including labor; Australia, New Zealand, and Norway, with exports of natural resources. The nature of the products varied according to the countries' comparative advantages, the common factor being integration to the world economy.

	Per Capita Income (USD mil)	Population (million)	Gini	Trade/GDP (%)
Industry				
South Korea	43	52	35	108
Hong Kong	60	7	54	375
Israel	40	9	39	56
Singapore	97	6	46	322
Taiwan	25	24	34	118
Services				
Greece	30	11	34	68
Ireland	87	5	33	210
Portugal	35	10	34	85
Spain	41	47	35	66
Natural Resources				
Norway	64	6	27	69
Australia	50	26	34	43
New Zeland	43	5	36	53
Median	43	10	35	77
Brasil	15	213	54	24

Table 1: Features of 12 countries that overcame the middle-income trap after WW-II

Source: Central Intelligence Agency (CIA), available at: <u>www.cia.gov.</u>

Curiously enough, the median per capita income of these 12 countries (US\$ 43.000) is three times that of Brazil (US\$ 15.000), the same relationship between the median of their degree of openness (77%) and that of Brazil (24%).

In addition to being open, these 12 countries are small and relatively egalitarian, as seen in Table 1 by their population and Gini coefficients. Brazil is a large and unequal country. Size and income inequality seem to be problematic for growth. For Mexico, it was not enough to open to foreign trade through NAFTA. The northern part of the country joined US and Canada, but the South remained relatively stagnant. This experience suggests that to ensure growth in large and unequal countries, two integrations are necessary: the external and the internal, and the latter from both social and regional points of view, a theme elaborated by Bacha and Bonelli (2016b) in a comparison of the post-WW-II growth experiences of Brazil and Mexico.

Donaldson's (2015) and Irwin's (2019) reviews the recent empirical literature on trade and growth and highlights the benefits of trade. There is a positive causal relationship between the share of trade and the size of GDP, whereas liberalizing trade reforms have a positive impact on economic growth. In a macroeconomic model with an important informal sector, Dias-Carneiro et al. (2021) suggest that a 40% reduction in foreign trade barriers would bring an output gain for Brazil of 9.6%.

4. Brazil is one of the most inward-looking countries in the world

In contrast to the abundant evidence of the benefits of international trade, Brazil remains one of the most closed economies in the world.

Big economies are big exporters: in 2018 the United States was the first economy in the world and the second biggest exporter; China was the second largest economy and the first exporter; Japan was the third largest economy and fourth largest exporter; Germany was the fourth largest economy and third largest exporter; France ranked fifth in both the size of the economy and the importance of exports; the UK had the sixth largest economy in the world and was the tenth largest exporter.

Brazil, in 2018 the eighth biggest economy in the world, was only the 25th biggest exporter. Brazil's GDP stood for 3% of world GDP, but its exports reached only 1.1% of world exports. A tiny giant in terms of GDP, Brazil is a dwarf in terms of exports.

What is seen on the export side is confirmed on the import side. In 2018, the share of imports in Brazil's GDP was only 11.6%. This was the lowest value among the 164 countries considered by the World Bank.

This is a paradoxical situation, because in 2018 Brazil was the sixth most preferred destination for foreign direct investment in the world (behind only the United States, China, Canada, Hong Kong and Singapore). The country allows the free entry of foreign firms but creates obstacles to exports and imports of goods and services. This is a ready-made recipe for "impoverishing growth", as Harry Johnson and Jagdish Bhagwati warned us in the 1960s. Multinationals and their employees thrive by exploiting the protected home market. But the rest of the country becomes impoverished, seeing its domestic resources used in an inefficient import substitution activity instead of in production lines that would allow the country to compete in the international market.

As Rios and Veiga (2022) point out, Brazil is an outlier when it comes to the level of tariff protection granted to industrial products. In 2020, only nine countries in the world had higher average import tariffs for non-agricultural products: Algeria, Argentina, Bhutan,

Cameroon, Comoros, Gabon, Iran, Venezuela, and Zimbabwe. The country is tied to a common trade protection framework with Argentina on account of Mercosur, but there is no economic or social criterion that justifies Brazil's presence in this small group of countries with high tariff protection for industrial goods.

Another characteristic of the protection structure in Brazil indicated by Rios and Veiga (2022) is its lack of selectivity. The country not only has high tariffs for inputs and capital goods compared to the rest of the world, but also for the new generation of consumption products jeopardizing the social and professional insertion of the citizens, in particular young people. Brazil and Argentina charge significantly higher tariffs than Australia, China, India and the European Union for notebooks and tablets, eyeglass frames, bicycles, and sports shoes. Brazil's degree of protection is in line with that in India for cell phones and video game consoles, but it is significantly higher than in Australia, China, or the European Union, where there are no tariffs on these products. This high degree of protection makes goods available to the Brazilian consumer more expensive. While rich Brazilians may buy these goods on their trips abroad – escaping the harmful effects of tariff protection – the vast majority of the population pays more, often for worse quality products available in the local market.

5. Arguments against opening to foreign trade

Why does Brazil remain a very closed economy, when the benefits of integration to foreign trade are so big as argued in Section 3? We explore five possible reasons:

- the pro-integration argument is too complex
- opposition from vested interests is very strong
- the benefits of integration are distorted by the Brazil cost
- a simplistic reading of the country's history disfavors openness
- pro-openness hypotheses are wrong about the real functioning of the economy.

5.1. Complexity of the pro-openness arguments

In the 1960s, a mathematician who disbelieved the scientific nature of economics challenged Paul Samuelson (Nobel Prize in Economics in 1970) to indicate a logically true economic proposition that was not obvious. Samuelson replied: the theory of comparative advantage! In his words (Samuelson, 1969):

That [the theory of comparative advantage] is logically true needs not be argued to a mathematician; that it is not trivial is attested by the thousands of important and intelligent people who have never been able to understand the doctrine for themselves or believe it even after it has been explained to them.

In fact, it is not intuitive that a country should abandon part of its production and jobs to concentrate its resources on goods and activities the demand for which depends on the mood of foreigners. The theory of foreign trade before David Ricardo was that of Adam Smith, for whom countries should export what was left over after satisfying domestic demand — trade was a vent for surplus, an outlet for excess domestic capacity. This is a more intuitive and easy-to-understand position than Ricardo's famous but complex example, according to which Portugal should specialize in wine production even though it was also more productive than England in textile production. (But Ricardo's intuition can perhaps be better captured by the example of a lawyer who is a better typist than her assistant, but still profits by dedicating herself only to law practice, leaving the typing to her assistant).

The idea of protecting the internal market and exporting what is left over domestic demand is a common platform for populist politicians on the left and right. Recent examples are Donald Trump's America First foreign trade plans, and Dilma Rousseff's speeches in 2011 calling for the defense of the internal market in view of the international financial crisis. On a political level, the openness to trade that stems from the theory of comparative advantage appears to be an act of intellectual masochism. To try to overcome this cognitive barrier, all that remains to academic economists is to appeal to the saying that water dripping day by day wears the hardest rock away.

5.2. Vested interests' opposition

The second explanation for the difficulty of a policy to promote trade openness is the opposition of vested interests – firms and unions that would stand to lose with the lack of protection of the domestic market. The benefits of opening to international trade are diffuse: favoring consumers in general as well as firms and workers without the habit of exporting. On the other hand, firms that have positions of dominance in the domestic market and would lose out are politically powerful, as illustrated by the influence of manufacturing associations on Brazil's government's trade policy decisions. Not only manufacturing interests; but also the agricultural lobby prevents Brazil from importing goods such as bananas from Ecuador, meat from Paraguay, or Robusta coffee from Vietnam. The same is true in services, such as law and engineering associations that do not allow competition from foreign practitioners. These professional associations create barriers to hiring foreigners, in addition to the bureaucratic difficulties they face to obtain work visas from the National Immigration Council.

This is a political economy question: organized and powerful economic interests would be harmed. Keynes once said that in the long run it is not interests but ideas that prevail. If he is right, the task ahead is winning the war of ideas to increase voters' awareness of the costs of protection, including in this effort the mobilization of business groups that may benefit not only in the short run but also in the longer term.

5.3. Distorted resource allocation due to the "Brazil cost"

The third explanation for not liberalizing trade is that government failures generate a distorted domestic allocation of resources. More specifically, Brazilian manufacturers' associations frequently invoke the "Brazil cost" to resist openness, referring to the dysfunctions of the consumption taxation system and the lack of infrastructure.

To the extent that they equally affect the entire economy, these distortions reduce the competitiveness of firms located in Brazil in general, but do not affect the country's comparative advantages. In equilibrium, the exchange rate of the Real to the US dollar would balance imports with exports, devaluing to the extent necessary to offset the Brazil cost.

The argument has some validity insofar as the Brazil cost punishes some sectors more heavily than others, artificially altering the composition of domestic demand. For example, industrial products are more heavily taxed than agriculture and services. This negatively affects the consumption of both domestic and imported industrial products and benefits the expansion of agriculture and services at the expense of manufacturing.

A consumption tax reform to simplify tax compliance and equalize the taxation of different goods and services would thus be a welcome companion to a program of opening the economy to foreign trade. This would avoid both sectoral distortions and an excessively undervalued exchange rate.

5.4. A simplistic reading of history?

A fourth explanation for opposition to trade liberalization derives from a simplistic reading of the country's economic history. According to it, Brazil stagnated in the 19th century with an open economy, based on exports of primary products. The country progressed in the 20th century with a closed economy based on industrial import substitution. Why then, in the 21st century, open the economy to international trade, which according to this view would be synonymous with deindustrialization and condemnation of the country to the status of exporter of primary products?

To qualify this simplistic view, it should be noted that for 120 years, from the 1840s to the 1960s, coffee alone accounted for more than 50% of Brazil's exports. Given its dominance of the international coffee market, from the early 1900s Brazil practiced a policy of higher pricing of the product, leading to the overvaluation of the currency, harming the export of other products that could otherwise have become competitive, such as cotton and fabrics. These Brazilian products found it difficult to compete in foreign markets, as the dollar price of coffee was very attractive, and the exchange rate remained overvalued. Brazil's higher prices for coffee also resulted in the progressive entry of other countries into the international coffee market, reducing the country's monopoly power. From 70% at the beginning of the 20th century, Brazil's share of world coffee exports dropped to 30% in the 1960s. There was also a sharp reduction in the share of exports to GDP, as the country's share of the world coffee market declined and domestic sectors that did not participate in foreign trade expanded. The share of total exports in GDP declined from 20.6% in 1906, when the policy of hiking coffee prices was introduced, to just 3.3% in 1964, when coffee finally lost its dominant position in Brazilian exports.

The coffee valorization policy was intended to increase revenue from coffee exports in the short run, taking advantage of the low reaction of demand to higher prices as well as the extended time period taken for coffee production in competing countries to react. Paradoxically, in the medium term it resulted in a chronic shortage of foreign exchange, as the share of exports in national income was compressed. This shortage was dealt with through the so-called national similar policy. It meant that products similar to those produced in Brazil could not be imported, either because of quantitative restrictions, or because of high tariffs and complex port bureaucracy. But these domestic products that replaced imports could not be exported due to their high prices in world markets and the low quality. Thus, an industry was created almost exclusively turned to supplying a protected domestic market.

At the same time, the foreign exchange generated by coffee exports was reserved for the import needs of inputs and capital goods of this industry. For a long time, this reservation policy was guaranteed by quantitative controls, through the licensing of imports. Later, a multiple exchange rate system was implemented. Under this system, importers of goods considered essential had access to international currency at more favorable rates. From the late 1970s onwards, a system of high tariffs on industrial imports prevailed, under a unified exchange rate regime.

Nowadays, other commodities have gained importance in the export basket and Brazil no longer depends on coffee. But a shrinking industrial sector remains inward-looking, not able to compete in foreign markets.

Import substitution worked well for a while because when it started, in the 1930s, the country was an underdeveloped agrarian economy, characterized by an excess of labor that emigrated from rural to urban sectors. Also, from 1930 until the end of World War II, protectionism prevailed in international markets. The simple fact that workers left low-productive subsistence farms to start working in the urban environment ensured the country's productivity growth. It was urbanization associated with industrialization that transformed Brazil from poor into a middle-income country.

Nowadays, the population is almost entirely urban and the easy source of productivity gains due to labor migration from the countryside to the cities has ceased. Now, productivity growth needs to be achieved through the modernization of already established activities. As argued by Dias-Carneiro et al. (2021), the presence of an important urbanized informal sector increases the benefits of trade openness, as it allows more productive formal firms to replace less productive informal firms.

Furthermore, in the 21st century, at issue is no longer exporting primary products in raw form and in isolation from the rest of the economy, but adding value to these primary products through agro-mineral-industrial complexes, whose productivity is comparable to and even higher than that of the manufacturing sector. In *Agriculture and Industry in Brazil: Competitiveness and Innovation*, Fishlow and Vieira-Filho (2020) argue that the recent agricultural expansion in Brazil was technologically intensive and therefore significantly different from commodity booms of the past.

Furthermore, the examples of rich countries that are mostly exporters of primary goods, such as Canada, Norway, Australia and even Chile, shows that it is inappropriate nowadays to associate the export of primary products to backwardness and poverty. As Bacha and Fishlow (2011) argue, the so-called curse of natural resources can be overcome with good institutions and appropriate policies.

4.5. Excessive optimism of pro-openness hypotheses

The previous arguments seem insufficient to deter a move towards trade openness, but they do not exhaust the subject. There is a fifth argument to consider. It refers to the excessive optimism of the hypotheses entertained by trade-liberalization advocates. The standard neoclassical model, holds the implicit assumption that supply creates its own demand. A

reduction in the level of tariffs and sweeping other protectionist measures should lead to an efficient allocation of resources, without affecting either the internal balance (full employment) or the external balance (exports paired with imports) of the economy.

However, due to price rigidities and fixed costs in the reallocation of resources, replacing domestic production with imports can generate unemployment and a trade imbalance. If the exchange rate floats, in principle, it would depreciate responding to the external deficit, leading the economy back to full-employment and balance of payments equilibrium. But under a managed exchange rate regime as Brazil had until January 1999, such a devaluation may not occur. Dias-Carneiro and Kovak (2019) document that, following Brazil's trade liberalization episode in the early 1990s, the country's regions most exposed to external competition faced an increase in unemployment relative to the national average.

The transition from the initial trade-liberalization shock back to full balance can be long and painful. In democratic regimes, where politicians need to give immediate answers to the plight of the population, the opening of the economy to trade can simply be aborted.

This is what happened in Brazil in the second half of the 1990s, when there was a rollback of the 1990 trade liberalization of the Collor government. In this period, the negative impact of import liberalization on manufacturing activity was amplified by an overvaluation of the real exchange rate.

6. Outline of a trade liberalization program

The implication of the fifth criticism to trade liberalization is that to be successful an integration strategy needs to be based both on carrots and sticks. In other words, it is necessary to stimulate demand and remove impediments to the restructuring of supply. Tax reform and infrastructure recovery should complement the trade liberalization strategy, to raise the productivity of the economy and the competitiveness of the manufacturing sector.

The suggestion is, first, to make trade liberalization a gradual and pre-announced process. Second, to expand unemployment insurance and workforce retraining and reallocation programs to mitigate transition costs. Additionally, to promote trade reciprocity arrangements to ensure that foreign markets are open to exports as the domestic market is opened to imports. However, these arrangements are often slow and difficult to implement, as shown by the slow progress of the proposal for a trade agreement between Mercosur and the European Union. Business lobbies may boost their resistance to reform and extend unlimitedly the timetable for trade liberalization. A variety of political economy arguments of defensive incumbents emerge in the face of these reforms. Announced gradualism or surprise shock in the reform should be discussed searching for dominant strategies.

Starting from a situation of trade balance, when tariffs and other protectionist mechanisms are reduced there must be a currency devaluation that compensates domestic producers by increasing domestic firms' competitiveness.

More broadly, the suggestion is to devise a strategy for the future of Brazil's economy that involves both trade liberalization and the reduction of the Brazil cost. Such a strategy of reform to be successful needs to show a set of consistent incentives for relevant segments of the country's business community.

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