

Autarkic obsession: a long-term view of Brazil in the world economy¹

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When the long-term links of Brazil to the world economy are examined the striking feature is how persistent has been the stress on autarchy for quite a long time. The economy today is more closed -- as measured by both its share in world exports and world foreign investment --- than at least since the beginning of the last century. Is this likely to change?

Section 1 of this paper seeks to establish the evidence to support this assertion based on trade flows, capital flows and the level of import tariffs.³ The origins for this inwardness are examined in section 2, taking into consideration the possible inheritance of Portuguese policies on state intervention and the Brazilian commodity export structure, especially with reference to market power in the world coffee market. Section 3 focuses on the success of a strategy based on high protection and high state intervention up to the 1970s. The exhaustion of such strategy in the 1980s and the relatively modest opening up of the economy in the 1990s are examined in section 4. Section 5 is on protectionist alliances involving domestic and foreign interests with particular attention to the convergence of interests between trade unions and multinational firms. It looks into the driving forces that explained the successful negotiation of Mercosur and the failure of hemispheric integration in the 1990s and early 2000s. It also covers the resurgence of protectionism in the last ten years. In section 6 the emergence of new political economy elements which serve as counterweights to the well- entrenched protectionist lobbies is examined in the context of the likelihood of a shift towards more outward-looking policies.

1. Brazil and the world economy: the long-term evidence

The Brazilian economy is very closed, even taking into account its continental size: in 2013 its share of world GDP was in the region of 3.7% while its share of world exports was 1.3%. It is much more closed today than it was before the great depression of 1929-1932.

³ With the possible exception of the 1890s, when it absorbed about one third of the US total, Brazil was not a very important destination of immigrants in absolute terms, Hatton and Williamson (1998). In contrast, it was the major destination of the slave trade in the first half of the 19th century, <http://www.slavevoyages.org/tast/assessment/estimates.faces>.

This is shown by data on long-term trade and capital flows and also on the share of exports in GDP presented in table 1.

Trade

In the early 19th century the Brazilian share of world population was very low and the share of world exports substantial. There was a steady secular rise in the Brazilian share of world population from 0.3% of the total to almost 3% now while the share of world exports after stumbling in the mid-19th century increased again to reach a peak of 2.2% in the early 1950s. This mainly reflected increased world coffee prices which reached record levels in the late 1920s and early 1950s propped by Brazilian control of world supply. This ratio fell spectacularly to around 0.8% around 1970 with the stagnation of exports. Since then there has been a very slow recovery which was due to a large extent to booming prices of commodities such as mineral ore and food products. The recent reversal of this trend has reduced this ratio.

Brazil's export to GDP ratio peaked before World War I at more than 20% and is now around 12%. As exports stagnated after the early 1950s until the late 1960s it decreased to 6-8% in 1960 and 1970. It has been slowly increasing since then. This in part reflected the rather laggard long-term growth performance since 1980 rather than any exceptional growth of exports. It increased to around 8% in 1970 and 1990, 10-11% in 2000 and 2010, and 12.5% in 2013.⁴

Capital flows⁵

⁴ Data reflect ratios between exports and GDP at current prices. Data presented in Findlay and O'Rourke (2007), p 41, are based on Maddison (2001), p. 362, in 1990 prices and show much lower values for the post-1950 period which reflect the use of different deflators for exports and GDP.

⁵ With the possible exception of the 1890s, when it absorbed about one third of the US total, Brazil was not a very important destination of immigrants in absolute terms, Hatton and Williamson (1998). In contrast, it was the major destination of the slave trade in the first half of the 19th century, <http://www.slavevoyages.org/tast/assessment/estimates.faces>.

The empirical evidence on capital flows is shakier than that on trade flows, but it also indicates a very significant Brazilian market share as a destination of foreign capital (FDI plus mainly public debt) until the mid-1850s, followed by a precipitous fall until the end of the 19th century and a sharp recovery especially until the 1920s. But there was not much reduction of this share before the 1980s. As a destination of foreign direct investment, however, Brazil has been gaining ground after the turn of the last century. But it must be kept in mind that this might be a trend explained by efforts to profit from the persistent high protection by firms seeking entry into the Brazilian domestic market..

Tariffs

Until the mid-1840s the Brazilian import tariff was 15% ad valorem as a result of a renewal, after independence from Portugal in 1822, of the Anglo-Portuguese trade agreement of 1810. This had been signed when the Portuguese bargaining power was at its lowest level following the French invasion of metropolitan Portugal and the transfer of the Portuguese court to Rio de Janeiro.

After Brazil recovered the ability to increase the import tariff after 1845 its level rose steadily until 1930 to reach peaks of almost 50% ad valorem equivalent⁶ in the late 1880s and the early 1900s. In 1930 it was somewhat under 30%. Between 1930 and 1991 tariff levels are of course not very relevant as an indication of the level of protection as during almost the whole period there were quantitative import controls combined with extensive discretionary reduction of import duties for projects that the government deemed important. Import duty collection became fiscally irrelevant in one of most protected economies in the world. Effective protection was astonishingly high: 117% on manufactures in 1967 and almost 80% in 1987. Protection for many products was absolute.

Economic stagnation in the 1980s together with very high inflation created a propitious climate to reconsider the strategy of seeking growth through a combination of high protection and a substantial role of the state. The average nominal tariff was 57.5% in 1987

⁶ Computed as the ratio between import duties and the value of imports.

before NTBs were removed and the tariff was unilaterally reduced after 1990 to reach an average of 13.5% in 1993. This reduction was eventually bound in the World Trade Organization at 35% for industrial products and 55% for agricultural products. As in many emerging economies in most tariff lines applied tariffs are well below WTO bound levels but for a large number of manufactured products the applied tariff remained at 35% ad valorem.

There was a backlash of protectionism after the liberalization of the first half of the 1990s after 1995. It affected mostly industrial products, and especially products of the automotive sector. Motor car tariff quotas were introduced in the mid-1990s and antidumping measures on wide range of imports became much more frequent. The average tariff is still around 13%, but protectionist policies mainly based on domestic content criteria became increasingly relevant. The most important relatively recent initiative was the introduction of rebates on domestic taxation depending on domestic content targets in the procurement of parts and components. This policy is now under multilateral scrutiny at the WTO.

The statutory role of state-controlled Petrobras in the exploration of the sizeable pre-salt oil reserves has been considerably expanded. Its procurement has also been subjected to stringent domestic content requirements but it is beyond multilateral scrutiny as Brazil is not signatory of the WTO plurilateral agreement on public procurement. The sharp recent drop in oil prices of course tend to enhance the adverse effects of such policies.

2. Origins of autarchy: market power in coffee and the political economy of protection

There may be a temptation to trace the Brazilian bias towards autarchy to the Portuguese inheritance which was very strong on state intervention and rampant rent-seeking. But since the early 1700s there was a Portuguese commitment to a low import tariff. The survival of Portugal as an independent nation had depended since 1640 on political alliances to counter the Spanish menace. This explains the commercial concessions to England under Cromwell and Charles II. After the Spanish menace was removed there was a lapse into protectionism under French influence. Luso-Colbertism in the 1690s inspired

pragmáticas which, in spite of rather low tariffs, in a pioneer use of non-tariff barriers, prohibited of the public use of clothing made with imported textiles.

In the early 18th century there was an English breakthrough as a new trade treaty was negotiated as the war of the Spanish Succession posed new threats to Portugal. The treaty of Methuen of 1703 secured an abandonment of the Portuguese non-tariff barriers and a Portuguese maximum tariff of 23% on woolen cloth in exchange for preferential access of Portuguese wine to the English market paying only two thirds of the tariffs paid by other wine suppliers. The arrangement worked well while Brazilian gold lasted up to the 1770s with the significant Portuguese trade imbalance settled by the export of Brazilian gold from Portugal to Britain.

Portugal signed in 1810, after the transfer of its court to Brazil, a commercial treaty reducing the import tariff on British imports to 15%. As mentioned already, Brazil was bound to this low tariff until the mid-1840s and only afterwards it was steadily increased to almost 30% (ad valorem equivalent) in the 1860s, and then to a pre-1930 peak of almost 50% in the end of the 1880s and again in the golden decade before World War I. So there was a tradition of high protection in Brazil since mid-19th century that had nothing to do with a Portuguese inheritance.

In the 19th century Brazil was a not a very efficient exporter of commodities such as sugar, in which it had been a market leader in the past, cotton or tobacco. But it dominated the fast growing world coffee market as its competitive advantages were enhanced by the absence of plant diseases which badly affected its Asian competitors. In the 1850s Brazil produced half the world's total production and this rose to 2/3 of the world coffee supply in the early 1900s.

Given the low price elasticity of coffee demand, and Brazil's weight as a coffee producer, there was room for the adoption of coffee valorization policies after 1906 that sought to maximize coffee prices and avoid the sharp price fluctuations in the wake of volatile crops. Pre-World War I coffee "valorization" was undertaken by a financial syndicate mainly

controlled by foreign export and banking firms but which depended on Federal government financial guarantees. In the 1920s such "valorization" efforts were mainly undertaken by the State of São Paulo and special agencies created for the purpose.

Dominance in the world coffee market had important consequences for the political economy of protection. World coffee's supply curve reflected costs of production in Brazil. High import tariffs in Brazil resulted in high prices of imported inputs used in coffee production. The higher the import tariff in Brazil the higher coffee prices for consumers in the world market. Had Brazil been a minor coffee producer higher tariffs would result in reduced profits in the coffee industry and/or loss of market share.⁷

This peculiar political economy of protection fits well with what is now the dominant view on the origins of Brazilian industrialization. The interpretations that emphasized the conflict of interests between well-rooted coffee interests and emerging industrial interests have been superseded by interpretations that underline the close links between coffee and industrial interests. Industry was mainly the result of portfolio diversification by coffee growers.⁸

So high protection and state intervention (mainly in the coffee sector) were well-ingrained policies in the Brazilian Old Republic (1889-1930). These policies continued to be adopted in the 1930s with the relatively high tariff being complemented at times by stringent import controls.

Towards the end of World War II there was some debate on what should the economic strategy after the war. Two influential economists vented their opposing ideas. Roberto Simonsen, a well-known industrial leader, favoured continued state intervention, following the model of the newly installed state-owned Volta Redonda steel mill, coupled with high protection. Eugenio Gudín, a seasoned economist with experience in foreign providers of railway and cable services, was in favour of opening up the economy, less state intervention and more incentives to industrial sectors producing consumer goods and industrial inputs

⁷ Abreu and Fernandes (2005).

⁸ The original revision is by Dean (1969).

rather than capital goods. In spite of the technical superiority of Gudin's reasoning, Simonsen easily won the debate politically. The roots of the autarky cum state intervention strategy further deepened. This deepening was, of course, helped by crucial economic decisions taken to face the post-war difficulties, especially those concerning the balance of payments.

3. Ingrained rent-seeking and high growth

Persistent foreign exchange overvaluation after World War II rationalized by concerns on inflation and attempts to maintain high coffee prices required long-standing import controls that were dismantled only in the early 1990s. Rent-seeking by import-substituting domestic firms became even more significant after the 1950s than it had been previously. This was further strengthened by the lobby of entrant foreign firms which became important in the manufacturing sector, especially after the middle of the decade. They were attracted by a combination of generous subsidies, restrictions placed on the number of entrants and high protection. What was offered was oligopolist competition behind a hefty protective wall. Foreign direct investment which until 1930 was concentrated in suppliers of public services such as energy and transport became increasingly important in the manufacturing sector..

Up to the military coup in 1964 Brazil remained essentially a commodity exporter, mostly coffee, in spite of rapid change in GDP composition with industry gaining share at the expense of agriculture. Industrial products were inefficiently produced and simply unable to face competition in world markets. Textile exports had been significant in the immediate post Second World War, but disappeared as a result of foreign exchange overvaluation coupled with low efficiency due to obsolete plant.

This changed dramatically after the end of the 1960s: exports of industrial products increased rapidly and reached a peak of around three quarters of total exports by the end of

the century (see Table 3). This was in part due to the role played by export subsidies which varied between 40 and 60% of the value of exports until the late 1980s.⁹

Brazilian subsidy policies faced strong criticism by main trading partners, in particular the United States. A lot of pressure was exerted on Brazil to sign the newly designed GATT Code of Subsidies which would make GATT-illegal most of the export subsidies introduced in the late 1960s and 1970s.

To a large extent these trade policy difficulties were put into perspective by the debt crisis which badly affected Brazil after 1980. Up to the early 1970s Brazil had quite a good growth performance and was in the group of high growth economies since the beginning of the 20th century together with Japan and Finland. This was abruptly changed in the wake of oil shock of 1978-79 and the steep rise in international interest rates.

4. Exhaustion of the inward-looking strategy. The bumpy road towards trade liberalization

In the early 1980s there was an abrupt end to Brazil's half a century of glorious growth after 1931. First there was a sharp recession which involved a deeper fall in output than during the relatively mild Great Depression of 1929-1931. This was followed by a long recession: GDP per capita increased only 0.5% yearly on average in 1980-2005. With low growth, high inflation and fiscal difficulties subsidies had to be reduced and there were increasing doubts on the virtues of the state cum protection growth strategy. But attempts to reverse the very high inflation tended to dominate the economic policy agenda.

The share of industry in GDP peaked in the mid-1980s at almost 50% but fell dramatically afterwards to reach 25% in 2013 (Table 2).¹⁰ The outcry on deindustrialization and the "primarization" of Brazilian exports has failed to take into account that almost two thirds of the reduction in the weight of industry was due to the fall of industrial prices in relation to

⁹ Baumann and Moreira (1987). There was much misguided enthusiasm, even among professional economists, who commemorated Brazilian exports of motor cars to Finland...

¹⁰ The share of manufacturing industry fell in the same period from more than 35% to 13.1%.

other prices. Recent increased penetration of imports -- from 11-13% in the late 2010s to 14-15% for the industry as a whole in 2012-13 -- had a relatively secondary role in explaining this trend.¹¹

This is not the place to discuss comprehensively the reasons for the relative decline of industry and especially of manufacturing industry in GDP. But industrial competitiveness has been affected in different moments by foreign exchange appreciation, the relative stringency of monetary policy and the so called "custo Brasil" generated by policies which increase the cost of domestic production in relation to foreign competitors. Perhaps the most important point to take into account in this context is that there is a trade-off between prudent macroeconomic policies in a context of inflationary pressures and import penetration.

5. Protectionist alliances: domestic and foreign. A resurgence of protectionism.

A clear protectionist bias permeates the Brazilian intelligentsia in line with Roberto Simonsen's stance in his debate with Gudin. The long-standing vogue of protectionism resulted from the convergence of industrial "special interests" with bureaucratic *idéas fixes* on the role of the State and nationalism. There is, and was, massive support for protection across the political spectrum. Industrial protectionist lobbies in Brazil after the 1950s were reinforced by multinational companies, especially, but not exclusively, in the automotive sector, which had been attracted by a combination of absolute protection and discriminatory right of establishment. Such firms sought to protect their profits and have as natural allies their workers which sought to preserve their jobs, increase their wages and improve their working conditions. This is especially relevant due to the political importance of metal workers' trade unions which gained strength especially in São Paulo and were at the origin of the Partido dos Trabalhadores. There is no serious counterweight to this alliance of vested interests and ingrained prejudice. As a rule the Brazilian Congress merely rubber stamped trade agreements and not seriously debated their implications.

¹¹ Data from World Development Indicators. In middle of the 1980s this had fallen to about 6%.

As already mentioned, economic stagnation and very high inflation created conditions that opened the way for doubts on the continued efficacy of the state cum protection strategy. Initial moves in the late 1980s merely removed water from the tariff but then there was an important breakthrough in the early 1990s. It is ironic that it was under Collor de Mello, a president who would be impeached because of accusations of corruption, that significant initial efforts were made to reduce the long-standing barriers to imports and sell publicly owned assets.

This spurt of unilateral liberalization that reduced average tariff to around 13%, and ended import prohibitions, was helped by the increasing importance of economic integration with Argentina as an objective of Brazilian diplomacy. Brazil in the early 1990s was laggard in relation to Argentina on inflation control and economic reform. Negotiations on the creation of Mercosur acted as important stimuli to open the economy. It was after the crisis of 2001 that Argentina started to be a foot dragger in relation to initiatives involving a deepening of Mercosur's trade liberalization. Brazil slowly drifted towards more protection and Argentina's commitment to trade liberalization simply disappeared. It is not surprising that there has been no significant trade negotiation by Mercosur with its trade partners since then. Perhaps the emblematic failure is the protracted negotiation with the European Union.

Failure of the negotiations of the Free Trade Area of the Americas should, however, be debited mainly to reluctance to liberalize in Brasília and Washington at least until 2002.¹² Difficulties of integration of the US economy with efficient agricultural exporters such as Brazil and Argentina and the power of industrial protectionist lobbies in Mercosur proved insurmountable. After 2002, the subject was contaminated in Brazil by politically grounded anti-US sentiment in the wake of the victory by the opposition in the presidential elections of 2002.

The rise in commodity prices after the turn of the century coupled with the competitive difficulties of domestic industry led to a significant change in the export composition with a

¹² By then Argentina's enthusiasm for "carnal relations" with the US had been replaced by the standard Peronist anti-US stance.

rise of the share of primary products and semi-manufactures in total exports. This at least partly explains the priorities of Brazilian trade diplomacy and its emphasis on agricultural trade liberalization. The failure of the Cancún WTO Ministerial Conference in 2003 resulting from a clash between some developing economies and the US and the European Union on agricultural liberalization provided the basis for the formation of a coalition of the G-20 (WTO) group that included China and India. After five years, sharp differences between the more protectionist members of the coalition and the US led to failure in Geneva in spite of Brazil's keen interest in a breakthrough. Failure persisted in 2014 and the basis for a G-20 coalition seems undermined in spite of late Indian concessions. There are now mounting domestic criticisms of the Brazilian focus on multilateral trade liberalization to the detriment of pursuing regional trade agreements. These seem unreasonable. There was nothing wrong with the emphasis on the WTO negotiations. What was less reasonable was the absence of Mercosur trade agreements with any significant trade partner.

There was renewed resurgence of protectionism in Brazil in 2013-14. The average tariff is still around 13% but this fails to portray the significant backlash involved in new protectionist legislation. This has affected mainly automotive and electronic products and was based on new instruments depending on local content requirements, whose legality under WTO rules has been questioned by Brazil's trade partners.

The products of some of the most active protection seekers as the automotive industry were already protected by a bound tariff of 35% in the WTO. Further protection resulted from hefty domestic tax rebates for locally produced products conditional on their use of domestically produced components.¹³ Local content requirements also affected oil investments, a sector where the influence of Petrobras, the big state-controlled company, is paramount.

6. A shift towards outward-looking policies?

¹³ The European Union has formally requested that a WTO panel examine the matter.

A serious effort to drastically reduce barriers to imports into the Brazilian market should be an essential element of the strategy that aims to repair the damage done by the disastrous economic policies adopted under Dilma Rousseff, especially in the later period. However, the obstacles that are likely to prevent such an effort should not be underestimated.

There have been some signs of at least a partial *pentimento* in the private sector, and also in government circles, on Brazil's stance on outwardness. But it is not easy to predict which trend will prevail concerning the government's position on deepening globalization: more of the same or a significant effort to overhaul present policies? Can the past low-level equilibrium in favour of protectionism and inwardness be disturbed?

There is now increasing dissatisfaction with what is perceived by some sectors as the progressive economic isolation of Brazil as regional agreements excluding Brazil proliferate and the multilateral alternative does not seem promising, to say the least. It is unclear if, how and when these perceived shortcomings are to be addressed.

It is possible to detect a new balance of lobbies in recent years. Commodity exporters have interests that are not always coincident with those of domestic industry. It is likely that any future trade negotiations involving Brazil will depend crucially on the opening of markets for commodity or commodity-based exports in exchange for the opening up of the domestic markets for industrial goods as well as concessions on several less traditional issues as services, public procurement and other new themes that are in fact becoming rather old. These new agricultural interests mainly located in central Brazil are likely to play an important role in countering the, until now, dominant influence of industrial lobbies.

A shift towards more outwardness will require a break with inherited tradition and substantial self-criticism. Less autarkic policies will depend on improvement in many other aspects of economic policy in order to reduce the likely initial adverse effect of trade liberalization on the competitiveness of firms established in Brazil.

Brazilian capacity to negotiate has been unfavourably affected in the recent past. Brazil still seems to have aspirations to play a more prominent global role, consolidate a position of

preeminence in Latin America and to seek a seat in an expanded Security Council of the UN. Past doubts on whether this agenda was realistic for a soft power are now enhanced by stagnant economic performance, the mediocre record concerning its commitment to outwardness and the recent political turmoil which resulted in Dilma Rousseff's impeachment. In contrast with the 2003-2010 period, when Lula's flamboyant presidential diplomacy prevailed and had some success, even if without many substantive results, Itamaraty has been facing a major credibility crisis and recent foreign policy has adopted a much lower profile than in the past.

Recent disclosures made evident the shortcomings of Petrobras management and very poor decision-making at the highest level of public administration under Lula and Dilma Rousseff. There are strong indications of widespread systematic corruption -- as opposed to the more trivial forms of venal corruption -- affecting election results and political representation generally. Brazil is in the middle of possibly the worst crisis in Republican history. This suggests a likely concentration of efforts to fight corruption and improve management in the public sector. Any significant shift in foreign economic policies will be rather low in most agendas.

It is unlikely that the Temer administration will be able to open up significantly the Brazilian market. It is even not clear if trade liberalization is an objective seriously sought before the 2018 presidential elections. A necessary, but far from sufficient, condition to make possible a significantly change in the Brazilian stance on outwardness, and particularly protection, hinges on the nature of the political coalition that wins the next presidential election. It must be kept in mind that autarkic obsession is widespread among politicians of all parties and is well represented within Temer's administration.

References

M. de P. Abreu and F. T. Fernandes, "Market Power and Commodity Prices: Brazil, Chile and the United States, 1820s-1930", *Texto para discussão* 511, Departamento de Economia da Pontifícia Universidade Católica do Rio de Janeiro, December 2005.

Banco Central do Brasil, annual reports.

R. Baumann and H.C. Moreira, "Os incentivos às exportações brasileiras de produtos manufaturados", *Pesquisa e Planejamento Econômico*, 17 (2) August 1987.

W. Dean, *The Industrialization of São Paulo, 1880-1945*, Austin (TX) and London: University of Texas Press, 1969.

R. Findlay e K. H. O'Rourke, *Power and Plenty. Trade, war, and the world economy in the second millennium*, Princeton: Princeton University Press, 2007.

T.J. Hatton and J.G. Williamson, *The Age of Migration: Causes and economic impact*, New York: Oxford University Press, 1998.

A. Maddison, *The Global Economy: A millennial perspective*, Paris: OECD, 2001.

M.Obstfeld and A.Taylor, " Globalization and capital markets" in M.D. Bordo, A.M. Taylor and J.G. Williamson, *Globalization in Historical Perspective*, Chicago and London: The University of Chicago Press, 2003.

United Nations International Trade Statistics, UNCTADSTATS, UNCTAD,

UNCTAD, Foreign Investment Report, several issues.

World Bank, *Brazil: Industrial policies and manufactured exports*, Washington, D.C.: World Bank, 1983.

<http://data.worldbank.org/data-catalog/world-development-indicators>

<http://www.slavevoyages.org/tast/assessment/estimates.faces>

Table 1

Brazil: Shares of population, exports, foreign capital stock and foreign direct capital stocks in world totals, 1850-2013

	Share of world population %	Share of world exports %	Share of world foreign investment stock %	Share of world foreign direct investment stock %	Exports as a share of GDP %

1850	0.5	0.98	4.4		9.8
1870	0.7	1.46	1.4		13.1
1900	1.0	1.61	1.8		21.8
1913	1.4	1.65	3.7		18.1
1928	1.7	1.45	5.1*		16.8
1950	2.1	2.19	3.1**		10.1
1960	2.3	0.98	4.3		6.0
1970	2.5	0.86	n.a.		8.4
1980	2.7	0.98	2.6		9.0
1990	2.8	0.90	1.6	1.8	8.2
2000	2.6	0.85		1.6	10.0
2010	2.8	1.32		2.5	10.9
2013	2.8	1.29		2.9	12.5

*1930. **1945.

Sources: United Nations International Trade Statistics, UNCTADSTATS, UNCTAD, Foreign Investment Report, Obstfeld and Taylor (2005).

Table 2
Brazil: Composition of GDP, 1947-2013

	Industry	Manufacturing
1947	26.0	19.9
1960	33.2	26.3
1970	38.3	29.3
1980	44.0	33.7
1985	48.0	35.9
1990	38.7	26.5
2000	27.7	17.2
2010	28.1	16.2
2013	25.0	13.1

Source: IPEADData.

Table 3
Brazil: Export composition, 1965-2013

	Primary products	Industrial products	Semi-manufactures	Manufactures
1965	82.2	17.8	9.7	8.1
1970	75.7	24.3	9.1	15.2
1975	60.4	39.6	9.8	29.8

1980	42.5	56.5	11.7	44.9
1985	33.3	65.6	10.8	54.8
1990	27.8	70.4	16.3	54.1
1995	23.6	74.6	19.7	55.0
2000	22.8	74.5	15.4	59.0
2005	29.3	68.6	13.5	55.1
2010	44.6	53.4	14.0	39.4
2013	46.7	51.0	12.6	38.4

Source: Banco Central do Brasil, annual reports and World Bank (1983).

With special operations the columns add up to 100%.