Brazilian Development Experience from 1500 to 1929*

By

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In terms of population Brazil is the world's sixth largest country. In area, it is fifth largest. With 8.5 million square kilometres, it is 4.3 times as big as Mexico, 3 times the size of Argentina, and not much smaller than the U.S.A. Most of it is in the tropics, with 4 million square kilometres of Amazon forest. From Sao Paulo to the southern border there is a temperate zone, which is the most prosperous economically. The two big river systems are the Amazon which flows from West to East near the equator, and the Parana which flows from North to South into Argentina and Uruguay. Most of the country is lush and humid, but there is a semi-arid high plain (the sertão), set back from the North East coast and watered by the São Francisco river which suffers from severe droughts and is a major locus of poverty.

A striking feature is the inequality between regions. The Southeast has a per capita income level about four times that in the Northeast. The variance of per capita income between the 20 states is even wider, almost 9:1 between the prosperous South and destitute Piaui.

Brazilian territorial history is more like that of the United States than Mexico and this has had long term effects on national policy and character. Experience of more or less untrammelled expansion has made Brazilian nationalism self confident rather than defensive. Portugal and Spain agreed amicably on a longitudinal split of the new world before it was clear what was available. Under the Treaty of Tordesillas (1494) Portugal got a slice East of a line about 48 degrees West of Greenwich, but the present borders encompass nearly three times as much land.

Most of the territorial gain was made by frontiersmen. The only substantial foreign invasion was the Dutch occupation of the Northeast (1630-54). Wars to preserve boundaries against French and Spanish incursion did not involve much effort, and the last territorial acquisition, the Acre territory, was by purchase from Bolivia. The biggest foreign war was with Paraguay (1865-70).

Another striking characteristic of Brazilian history is the ease of its domestic political transitions. In this respect, it is the antithesis of Mexico. This is partly due to the nature of colonial rule. In Mexico, Spanish rule was heavy and exclusive with a proud insistency on conformity to metropolitan norms. Portugal, by contrast, imposed a relatively "soft state". The bureaucratic hand was lighter, the clergy more easy going. For centuries, settlement was not dense, with the Portuguese strung out in enclaves like "crabs on the beach". There was substantial local autonomy, foreigners were allowed to trade and even settle, the Inquisition had no effective existence and discreet heretics were left undisturbed. Portugal, like Holland, was a nation of seafarers and traders. Colonialism had bigger "merchant capitalist" elements than in New Spain whose policy was closer to the ancient Roman model of "tribute imperialism".

Although Brazil was for centuries a slave economy as brutal in human terms as any other, there was more miscegenation and manumission than in other slave economies of the

Americas. Portugal had for centuries been an enclave in the Arab world, surrounded by moorish regimes in Spain and North Africa. In many ways this Arab world was culturally and technologically more advanced than Europe, certainly in fields of pragmatic importance to a seafaring nation, like astronomy and navigation. Portuguese mores were affected by this contiguity, and, like Muslims, they had no hesitation, at least in Brazil, about open maintenance of polygamous households without anglo-saxon or Spanish concerns with blood purity.

The evidence of soft transitions in Brazil is overwhelming. Independence was gained with no significant struggle. The Portuguese crown prince became the Emperor of Brazil in 1822. Slavery was abolished without a civil war in 1888. The Empire became a republic without a struggle in 1889. The Vargas dictatorship from 1930-45 began with little and ended with no violence. The 1964 military takeover began and ended in parallel fashion.

Finally, one should stress the cosmopolitan character of the country. In this respect, and in the dynamism of its long run demographic development, it is much more like the U.S.A. than Mexico. The bulk of the population are descended from slaves and immigrants. The indigenous Indian element is the smallest.

Brazilian development can be conveniently broken into five main periods: - the colonial regime 1500-1822; independence as an Empire with slavery 1822-89; an oligarchic republic with wage labour 1889-1929; accelerated development 1929-80; and the period of crisis since 1980. This article.deals with the first three periods. For developments since 1929, see Maddison and Associates (1992).

The Colonial Regime 1500-1822

When the Portuguese arrived in 1500, they did not find an advanced civilisation with hoards of precious metals for plunder, or a social discipline and organisation geared to provide steady tribute which they could appropriate. Brazilian Indians were mainly hunter-gatherers, though some were moving towards agriculture using slash-and-burn techniques to cultivate manioc. Their technology and resources meant that they were thin on the ground. They had no towns, no domestic animals. They were stone-age men and women, hunting game and fish, naked, illiterate, innumerate.

In the first century of settlement, it became clear that it was difficult to use Indians as slave labour. They were not docile, had high mortality when exposed to Western diseases, could run away and hide rather easily. So the Portuguese turned to imported African slaves for manual labour. The ultimate fate of Brazilian Indians was rather like that of North American Indians. They were pushed beyond the fringe of colonial society. The main difference was greater miscegenation with the white invaders and with black slaves in Brazil.

Table 1

Comparative Long Term Indicators of Brazilian Economic Performance 1889-1986

(annual average compound growth rates)

	Oligarchic Republic 1889-1929 1929-50	Induced Develop-mentalism 1950-64	Populist Develop-mentalism 1964-80	Military Develop-mentalism 1980-86	Crisis and Inflation
Population	2.2	2.2	3.0	2.6	2.5
GDP	3.6	5.0	6.6	8.1	2.8
GDP Per Capita	1.4	2.7	3.5	5.3	0.3
Export Volume	2.7	1.4	1.6	10.6	8.6[a)]
GDP Deflator	3.6	6.2	33.6	37.0	150.9[a)]

a) 1980-5

Source: Maddison and Associates (1992), 1889-1950 GDP deflator from Goldsmith (1986).

The size of the pre-conquest population is problematic. Hemming (1978), a protagonist for Indian rights, suggests 2.4 million, but he himself calls this figure "pure guesswork". It was derived by blowing up the present day figures for 28 regions for assumed depopulation. Kroeber's older (1939) more cautious estimate of less than a million (based on hypotheses about the nature of land-use and technology) seems preferable.

A bigger proportion of Portuguese gains from Brazil was commercial profit than was the case of Spain in Mexico. There was no significant surplus to capture from the indigenous population, and in the sixteenth and seventeenth century official revenue from Brazil was small - about 3 per cent of public revenue in 1588 and 5 per cent in 1619 (see Bethell (1984), Vol. I, p. 286). Economic activity was concentrated on a small population of settlers engaged in a highly export-oriented sugar industry in the Northeast. The techniques for this industry, including negro slavery, had been previously developed by the Portuguese in Cabo Verde (off the African coast). Cattle ranching was developed in the dry backlands area (the sertão), to provide food for those working in sugar production.

Peak production of sugar occurred in the 1620s when it amounted to 15,000-20,000 tons a year. Around 1600, the population in the Portuguese settlements was around 100,000 of which about a third were white, 15,000 were African slaves, and the rest were mulattos, or mamelucos (offspring of whites and Indians). This small population produced exports of sugar much higher in per capita value than the silver exports of New Spain in that epoch. At their peak in 1650, they amounted to about £3.8 million a year (if we are to believe the figures of R. Simonsen (1962, p. 382)) compared with a peak of bullion shipments from the whole of Spanish America of around £4 million in the quinquennium 1591-5 (Davies, (1962),p. 300) only 40 per cent of which was from Mexico.

Brazil was originally divided into 15 horizontal strips (captaincies) which were sold on a hereditary basis in 1533-5. They kept a shadowy existence until abolished in 1759. A royal supervisory administration was set up in 1549, and from 1621 to 1774 was split in two. Maranhão in the North was administered first from São Luis and then from Belem. The rest of the country was governed from Salvador until 1767 when the capital moved to Rio.

The top administrative group was thinner than in New Spain. In the colonial period the Portuguese did not establish a separate Brazilian aristocracy as the Spaniards did in New Spain.1 Parallel to the civil administration was the church, with the Jesuits coming in 1549 as the dominant religious order maintaining social control over Indians. As in Spain, the crown had the right of ecclesiastical patronage, so the link between church and administration was close. However, the church was not as powerful as in New Spain, many of the clergy were Brazilian and the Inquisition's influence was vestigial. Some of the white settlers (perhaps a third in 1600) were New Christians, i.e. descendants of forcibly converted Jews, and many of these remained Jewish *de facto*.

Sugar planters in Pernambuco and Bahia were the top economic group running integrated sugar plants growing cane and make sugar. There were some smaller scale white cultivators, who grew sugar which was sold to the mills. In the urban centres there were professionals and traders. Virtually all manual labour was performed by slaves.

The Dutch played a major part in financing and carrying Brazilian sugar, and when Portugal became part of Spain in 1580-1640, they themselves occupied the sugar producing North East from 1630 to 1654. When they were expelled, they transferred their techniques, finance, shipping and slavery to the Caribbean. The new Caribbean industry was technically better2 than the Brazilian and nearer to European markets. The U.K. and France also gave preference to the products of their Caribbean colonies. Within thirty years of the Dutch departure, the price of Brazilian sugar fell two thirds and exports fell considerably.

The setback to the sugar trade caused large parts of the North East to lapse into a subsistence economy. With plenty of land it was easy to feed a big population, but living standards dropped. In the eighteenth century, the discovery of gold and diamonds further south in Minas Gerais gave a new boost to the economy. During the eighteenth century, the non-Indian population increased tenfold, and its growth rate was probably second only to that of the U.S.A. There was considerable immigration from Europe, and internal migration from the North East to Minas, to engage in small-scale alluvial gold prospecting. The eighteenth century prosperity in Minas is obvious even today from the number of elaborate buildings and churches in Ouro Preto, the centre of mining activity. As Minas Gerais is very barren, the food and transport needs of the mining area stimulated food production in the neighbouring provinces of the South and North East, and mule-breeding in Rio Grande do Sul. The gold industry was at its peak around 1750, with production around 15 tons a year, but after that the output and exports declined.. In the first half of the eighteenth century profit remittances from Brazil averaged 5.23 million milreis (£1.4 million) a year, of which the identifiable royal revenues were around 18 per cent (Alden, (1973), p. 331).

Table 2

Brazilian Population by Ethnic Group 1798-1980

(percent of total)

	Whites	Slaves	Free	Mixed Blacks	Indian	Japanese
1798	31.0	48.7	a	12.5[a]	7.8	0.0
1872	38.1	15.2	a	42.8[a]	3.9	0.0
1890	44.0	-	14.6	41.4[b]	b	0.0
1940	63.5	-	14.6	21.3[b]	b	0.6
1950	61.7	-	11.0	26.7[b]	b	0.6
1980	55.0	-	6.0	38.0[b]	b	0.6

a) free blacks included with mixed; b) Indians included with mixed.

Source: 1798 and 1872 from Merrick and Graham, p. 29; 1890-1950 from **O Brasil in Numeros**, p. 8.; 1980 from census.

Table 3

Slave Imports to Western Hemisphere 1500-1870

(000s)

Brazil	3,647	Dutch Caribbean	500
British Caribbean	1,665	British North America	399
French Caribbean	1,600	Danish Caribbean	28
Spanish America	1,552		
		Total	9,391

Source: Merrick and Graham, p. 51 (derived from Curtin).

Table 4

Gross Immigration to Brazil 1872-1969

(000s)

1872-9	176	1920-9	847
1880-9	449	1930-9	333
1890-9	1,198	1940-9	114
1900-9	622	1950-9	583
1910-19	815	1960-9	197
		Total	5,335

Source: Merrick and Graham, p. 91.

When gold declined, Brazil turned back to agricultural exports. At independence in 1821-3, the three main exports were cotton, sugar and coffee. Coffee exports were lower in value than the other two but rising rapidly. Coffee production started at the beginning of the nineteenth century after the slave revolt cut output in Haiti. Coffee was grown in the Southeast, whereas sugar and cotton were typical Northeast products.

In the second half of the eighteenth century, Portuguese finances were in desperate straits. Metropolitan revenues from Brazil were squeezed by the decline in gold production, the oriental colonies had mostly been lost, and Portugal had to bear the costs of reconstructing Lisbon after the 1755 earthquake. To meet this problem, the Portuguese prime minister, Pombal, expelled the Jesuits from Brazil (1759), confiscated their property, and sold it to wealthy landowners and merchants for the benefit of the crown. Most of the property of other religious orders was taken over a few years later. These actions by Pombal settled the question of religious power and property expeditiously and permanently.

At the end of the colonial period, half the Brazilian population were slaves imported from Africa. They had a very high activity rate as there was an abnormally low proportion of women and children. They were worked to death after a few years of service, and fed on a crude diet of beans and jerked beef. Unlike the U.S. situation, slavery was a national not a regional institution. Slaves produced a rather large economic surplus for a privileged fraction of the white population (which was 31 per cent of the total - see table 2), but the average per capita product of this economy was low. The rest of the population were free blacks and mulattos (12.5 per cent) and Indians (about 7.8 per cent) who were somewhat better off than slaves, but rather peripheral members of society. Amongst the whites many were also poor. Landownership was largely restricted to slave owners, thus unequal distribution of property buttressed a highly unequal distribution of income.

The economy was highly specialised exporting sugar, cotton and coffee, and importing manufactures, slaves and jerked beef. Productivity was relatively stagnant and there was no agronomic research. There was already a noticeable regional inequality, with the poorest area in the Northeast, which had declined substantially in per capita income after the end of the seventeenth century sugar boom. Minas Gerais had also passed its peak, and the most prosperous area was around the new capital, Rio de Janeiro.

The Empire 1822-89

Independence came to Brazil very smoothly by Latin American standards. In 1808, the Portuguese queen and the regent fled to Rio to escape the French invasion of the motherland. They brought about 10,000 of the mainland establishment with them - the aristocracy, bureaucracy, and some of the military who set up government and court in Rio and Petropolis running Brazil and Portugal as a joint kingdom (both parts by then being about equal in terms of population). After the Napoleonic wars, the two countries split without too much enmity. Brazil became independent with an Emperor who was the son of the Portuguese monarch.

With independence, Brazil ceased remitting official tribute to Portugal, and there were probably fewer private remittances there as Brazil now had a polished and Frenchified upper crust which looked on the old metropole as a backwater. Nevertheless the bigger ruling establishment meant a higher internal tax burden, and there were new destinations for private remittances. There was an outflow to finance holidays in Paris; and the British, the new protectors of Brazil, also took out some of their growing commercial profits. However, independence meant that the country could create its own banking system, print paper money, indulge in mild inflation and borrow on the international capital market.

There was an intermittent in flow of foreign capital from the 1820s onwards, mostly in the form of direct loans to the government or the proceeds from sales of Brazilian government bonds abroad. The government usually borrowed abroad if it had a particularly large budget deficit as it had during the Paraguayan war. There were seventeen foreign loans in the Imperial period. There was no default on this debt, and Brazil remained in good standing with her British bankers who supplied all the funds.

The Imperial regime kept a fixed theoretical value for the gold milreis3 (67.5 pence, changing to 27 pence in 1846), but issued paper currency which circulated at a discount and let the effective rate float freely. The Bank of Brazil and the Treasury both issued currency, and the budget was usually in deficit. There was no legal limit on the issue of paper money nor any prescribed level of gold reserves to back it.

During the Imperial period the rate of price inflation was only 1.6 per cent a year if we can trust the very crude price indices available. This was faster than seemed respectable in European banking circles, but was small by subsequent Brazilian standards and certainly not enough to create any inbuilt spiralling processes in a largely non-monetised economy. Thus the government was able to capture resources from increased monetisation without pushing inflation too fast.

Although the exchange rate was free to fluctuate without government intervention, it was relatively stable for long periods. There was a tendency for variations in the volume of the coffee crop to be offset by corresponding inverse price movements (Delfim Netto, 1979). As Brazil held a near monopoly in the world coffee market, this phenomenon was more pronounced than if she had had only part of the market and had been affected by crop variations elsewhere which were dissimilar to her own.

There were also changes in commercial policy which came with independence. Until 1808, Brazilian ports were open only to British or Portuguese ships,4 and mercantilist restrictions prevented production of manufactured items. These barriers were lifted in 1808, but the U.K. retained special extra-territorial rights and tariff preferences until 1827. The preferences were then abolished, but Brazil was obliged to limit tariffs to 15 per cent ad valorem until 1844. This was a serious fiscal constraint on a government with all the trappings of a monarchy to support, and without the political clout to impose land or income taxation. It encouraged the trend towards inflationary finance and a depreciating paper currency. In 1844, when Brazil regained its customs autonomy the general tariff level was raised to 30 per cent for manufactured goods, but duties on raw materials and machinery were lifted. These measures stimulated the creation of the cotton spinning and weaving industry. Tariffs were raised again during the Paraguayan war, and by 1880 the duty on cotton goods had risen to 60 per cent.

In the Imperial period, tariff revenue provided two thirds of the government's tax receipts and their effect in protecting local industry was incidental.5 The government did not want to push tariffs to a level which would reduce its own revenue, but by comparison with the low tariffs enforced on Asian countries by colonial rule in the nineteenth century, the tariff was high. In fact it would seem that tariff receipts were a higher proportion of imports than those of any other country except Portugal.6 Only the U.S.A., Russia, Chile and Argentina came close to her tariff level.

The coming of independence involved little political disturbance and brought no basic social change at the bottom of society. The main change which occurred was due to exogenous pressure. In 1833, the U.K. abolished slavery in the West Indies and started to interfere actively with the slave trade. Between 1840 and 1851, the inflow of slaves to Brazil was 370,000, but thereafter the British Navy brought it to an end. Slavery continued for almost four more decades, but the economy was modified significantly by the ending of the trade. The immediate effect was to double the price of slaves and make it less profitable to work them to an early death. The sex and age structure of the black population began to change, making for lowered activity rates. The profitability of sugar production in the Northeast was hit by the higher labour costs and slaves were sold off the booming coffee economy in the South.

In 1888, slavery was abolished without compensation, or any kind of resettlement help for slaves. By that time the slave population had already fallen to only 7 per cent of the total compared with 50 per cent in 1798, or the 13 per cent figure for the U.S.A. in 1860, on the eve of the US civil war.

In assessing performance in the Imperial period, several things stand out:

a) the pace of economic growth was slow by later standards but in per capita terms it was mildly positive. It was not exactly stagnation, and export earnings were rising, but in the light of U.S. or European experience it could hardly be called "modern economic growth";

b) the institution of slavery faded away gradually, mainly as a result of outside pressure, which made it much less profitable and elastic as a form of labour supply;

c) regional inequality grew. The coffee economy of the South expanded, but Northeastern income fell as sugar and cotton stagnated;

d) with the exception of pressures to abolish slavery, and the period to 1844 when tariff autonomy was limited by pressure form the U.K., there is little evidence that an independent Brazil suffered significant constraints from a new informal imperialism or <u>dependencia</u> as some historians (Stein and Stein 1970) have insinuated or asserted. In terms of monetary and exchange rate policy and tariffs (after 1844), Brazil pursued its original and independent path. This was in sharp contrast to Mexico which suffered from very direct forms of imperialist intervention. This different experience of the two largest Latin American countries shows the danger of vague general theories for Latin America such as Prebisch (1981) advocated in various forms with such evangelic success.

The Oligarchic Republic 1889-1930

The Emperor was deposed in 1889 by the military which established an oligarchic republic. Church and state were separated. The franchise was expanded, but still restricted to those with property. The Presidency generally alternated between politicians from Sao Paulo and Minas Gerais on a prearranged basis. The monarchy had exercised a centralised power, but now the provinces became states with a good deal of autonomy, including control over customs duties which could be levied on both foreign and interstate commerce. At the state level, power was concentrated in the hands of a small political class who favoured their cronies and relatives.

At local level, "coronelismo" (rule of the colonels) prevailed. This semi-bandit gentry built up their landholdings by means not always legal, and exercised seigneurial type power over the less prosperous citizenry. This social order is best described in the novels of Jorge Amado.

In the initial years of the Republic, the strains involved in moving from slave to wage labour were obvious. Coffee was no longer profitable in the region around Rio, which switched to cattle raising. The competitive position of São Paulo was strengthened. Its climate and soils were better suited to coffee than the eroded valleys near Rio. It had been building a free labour force of white immigrants since the 1840s, when Senator Vergueiro introduced them to his plantation. The state government subsidised immigration (mainly of Italians) on a large scale from 1880 to 1928. This part of the country was further helped by the growth of rail transport and the development of the port of Santos. The average education level of immigrants was considerably higher than that of native born Brazilians. They had twice the literacy rate and three times the level of secondary and higher education (Merrick and Graham, p. 111). Their wage level made them more expensive than slaves, but their productivity was higher, and their number could be quickly expanded by immigration.They were thoroughly familiar with the Italian sharecropping tenure system, which was replicated in São Paulo because it reduced risk and managerial problems for landowners.

For Brazil as a whole European immigration was less significant than in the U.S.A. or Argentina. In 1889-1928, the foreign born averaged little more than 5 per cent of the population and peaked at 6.2 per cent in 1900. In Argentina, the average was around 25 per cent and the peak around 30 per cent in 1914. For the U.S.A., the average was around 14 per cent (Skidmore 1974, p. 140). But in Sao Paulo state, the proportion of immigrants was well above that in Argentina (Cano), p. 36.Between 1884 and 1913, there were 2.7 million immigrants, of whom nearly half were Italian, 0.7 million Portuguese, and 0.4 million Spanish.

In contrast to the prosperity of Sao Paulo and its new white immigrants, the Northeastern economy stagnated in the Republican period. There and elsewhere, the black and mulatto population generally got little of the benefits of growth in a country where they had no voting rights, access to land, or any form of social security or governmental help in adjusting to a wage economy. As education was in the hands of the States, its growth in São Paulo and stagnation elsewhere only exaggerated the regional variance in the quality of human capital.

During the last year of the Empire and the first years of the Republic, policy was extremely inflationary as governments were trying to placate as many of the propertied groups in the community as possible to maintain power. The republic ended restrictions on the creation of corporate enterprises and banks. Between May 1888 and October 1890, issues of new corporate capital were almost four times as big as in the whole of the Imperial period (Villela Luz, p. 98). The general price level doubled in the 1890s and the value of the milreis fell by two-thirds.

The inflation of the 1890s upset the normal mechanism of the foreign exchange and coffee markets. The exchange rate fell faster than the rise in internal prices and raised the domestic price of coffee even in real terms. This stimulated production. Coffee output doubled in the 1890s and so did world coffee stocks. There was a switch away from subsistence crops to coffee, and imports of cereals rose.

After the 10 years of inflation following abolition, there was a period of stabilisation. There were eight years of deflationary policy from 1898 to 1906 with the budget usually in surplus, a reduction in the money supply and a fall in prices. The exchange rate rose from 7d to 16d per milreis. The deflationary policy attracted foreign capital on a large scale, and although the policy was not too popular with industrialists, they were protected by the tariff from the falling price of imports. Those with chief cause for complaint were the coffee exporters who saw a decline in their domestic currency receipts from exports.

Table 5
Share of Leading Primary Commodities in Exports, 1821 - 1983
(percent of total)

Cotton	Sugar	Coffee	Rubber	Cocoa

1821-3	25.8	23.1	18.7	0.0	n.a.
1871-3	16.6	12.3	50.2	0.0	n.a.
1901-3	2.6	2.4	55.7	22.5	2.5
1927-9	2.0	0.5	71.1	2.0	3.8
1949-51	10.0	0.3	60.5	0.2	4.8
1983	2.3	1.8	10.6	0.0	1.4

Source: 1821-73 from Leff (1982), Vol. II, p.9; 1901-51 from *O Brasil em Numeros*; 1983 from *Anuario Estatistico* 1984.

In order to meet this problem, there was a direct attempt to restrict coffee supplies. The state of São Paulo prohibited the planting of new coffee trees in 1902 and in 1906 introduced a stabilisation scheme. Its interest derived not only from the fact that it was the biggest producer and that coffee was relatively larger in its total income than in other states, but also because its coffee economy involved a higher risk element for landowners. After the abolition of slavery São Paulo had adopted the *colono* system of tenure mainly designed to appeal to Italian immigrants. The landowner paid a fixed sum to the peasant per 1000 trees, a daily salary and a bonus proportional to the crop. The Italian immigrants were organised enough to put up resistance to cuts in their cash income when prices fell. In other states the tenant got no cash income and took a bigger share of the crop.

Initially it was intended that São Paulo should buy and stock five million bags in 1906, but the state had to buy eight million bags as the crop was so large. This was to be financed by foreign borrowing of $ 73 million. Interest and storage costs were to be covered by an export tax of 58 cents per bag, and the planting area was to be limited. As the São Paulo scheme did not include the lower grades of coffee, the market for these was very disturbed. Minas and Rio, which were the main producers of low grade coffee, were forced to join the scheme, and this led to federal government intervention. The Bank of Brazil then guaranteed the foreign borrowing and made the financing of the scheme much easier.

The federal government also set up a fund in 1906 to stabilise the exchange rate. The coffee producers wanted this in order to ensure that better coffee prices would not improve the exchange rate and reduce their returns in terms of national currency.

The coffee stocks accumulated under the scheme were mostly held in warehouses in New York and Le Havre as there was no space in Brazil. Foreign coffee traders participated in the scheme financially, making advance payments for the coffee they held.

The 1907 and 1908 crops were poor so that official stocks were sold from 1908 onwards, and the export levy was raised. By 1914 the São Paulo government had repaid its borrowing and still had 3.1 million bags on hand which it sold at good prices during the war. Its eventual profit amounted to $ 49 million. The bankers received 9 per cent interest and the dealers also made a profit. In fact the scheme was financed 80 per cent by foreign dealers and really amounted to creating a temporary corner in the market to deal with an exceptional situation. This was the world's first commodity stabilisation scheme and appeared to be a great success. Foreign dealers had co-operated with Brazil to maintain prices, the world market was expanding, coffee planting was controlled and the surplus removed. Brazil was in a very powerful position, controlling three-quarters of the supply of a product where demand was not very sensitive to price changes. Nevertheless there were adverse long-term repercussions on the Brazilian competitive position. Foreign production of coffee almost doubled from 1906 to 1920 as a result of high Brazilian prices and production restrictions.

During the first world war the federal government carried out another scheme to support coffee prices, after having dropped the limitation on planting in 1917. This time the government financed stockbuilding by its own inflationary finance and kept the coffee in Brazil itself. The stock accumulation was not large or prolonged as there was a severe frost which reduced the 1918 crop at a time when foreign countries were rebuilding their stocks rapidly. São Paulo state made a $ 20 million profit on this second stabilisation venture.

However, the 1920 crop was very large and led to a violent fall in prices, and a third stabilisation scheme was started in 1922. It was financed by internal credit creation and warehouses were built in the interior to hold the stocks. The government declared a policy of "permanent" defence of coffee prices, and provided low interest loans to coffee producers via the Agricultural Mortgage Bank which was set up in 1925. The São Paulo Coffee Institute was made responsible for administering the scheme which succeeded in raising the world price to an extent which irritated importers in the United States. The retail price of coffee inside the U.S.A., which had previously been fairly stable, rose from 36 cents a pound in 1921/3 to 50 cents in 1925. This led U.S. coffee interests to make substantial investments in the Colombian industry. Colombian producers benefitted greatly from Brazilian policy because it guaranteed them a minimum price, and the cost of holding inventories was born entirely by Brazil.

The major problem with the third stabilisation scheme is that there were no restrictions on Brazilian production. The policy of high export prices should have been combined with low internal prices, acreage controls or other devices to stem the flow of resources to the coffee sector. There is a four-year lag before coffee trees start to produce so that the impact on output did not come until the late 1920s.

Thus on the eve of the world crisis, Brazilian coffee policy had pushed production well beyond the absorptive capacity of the market and had greatly stimulated foreign competition. Production had doubled from 1925 to 1929, and the Coffee Institute ran out of finance. At this stage the Federal Government took over the scheme, and borrowed $107 million abroad to finance it. On the eve of the Great Depression, Brazil had coffee stocks equal to 2 years exports (or 10 per cent of its GNP.) and a rate of production well above world needs. In 1929 exports were only half the crop.

In the first republican period, Brazilian manufacturing advanced considerably from the negligible level at the end of the Empire. The Imperial regime had been suspicious of urbanisation and industrialisation which were felt inappropriate for a slave economy.

Industrial development policy consisted very largely of tariff protection though the government provided emergency credit of $24 million in the financial crisis of 1890-1892. There was no attempt to build up technical education. Industrial management and supervision often depended on foreign immigrants or labour hired specially from abroad. Government did little directly to sponsor industry and did not own industrial plants, though a new industrial town, Belo Horizonte was created in 1900 in Minas Gerais (from which Kubitschek drew his inspiration for the creation of Brasilia) The governmen did try to promote the development of the iron and steel industry by providing tax concessions and funds for geological research, and it encouraged railway and power development by the private sector. By 1913, there were 25,000 kilometres of railways. Cotton cloth production rose from 21 million metres in 1885 to 548 million in 1917 (Stein 1957a, p. 100). In 1915 there were more than a million cotton spindles. The textile industry was more highly developed than that of the rest of Latin America. By the end of the first world war, domestic industry produced four fifths of cotton textile needs and imports were confined to very fine piece goods.

A new industrial town, Belo Horizonte was created in 1900 (from which Kubitschek drew his inspiration for the creation of Brasilia). Brazil became a major immigrant country and the majority of immigrants were subsidised. Between 1884 and 1913 there were 2.7 million of them, of whom nearly half were Italian, 0.7 million Portuguese and 0.4 million Spanish.

The government borrowed extensively abroad. Until 1908 all loans were raised in the U.K., but thereafter France became a supplier of funds. In 1914, total government foreign debt was $ 737 million and other foreign investment was about $ 1.2 billion, making a total of about $ 2 billion. There was considerable British investment in railways and raw material production, some U.S. investment in manufacturing and utilities and a Canadian interest in the power industry. Foreign private investment was particularly active in the decade or so preceding the first world war. Between 1899 and 1910, 41 Brazilian corporate enterprises were created and 160 foreign enterprises (see Vilela Luz, 1961, p. 87).

There were several changes in tariff levels during the first decade of the Republic - both up and down. The nomenclature for import duties was complicated, assessment was uncertain and sometimes fraudulent. The structure of protection had no systematic rationale but had grown in response to *ad hoc* pressures. The 1900 tariff tried to deal with these problems and set the pattern of protection until 1929. The characteristic rate was 50 per cent ad valorem but went as high as 80 per cent for some items. At the same time, the tariff on capital goods and industrial materials was very low and items such as machinery, dyestuffs, chemical products for industrial use, entered duty free.

When the first world war started, the shortage of outside supplies gave a big boost to industrial production. There was some setback to its growth in the 1920s as European industry regained its competitiveness. However, protection remained high and there was a good deal of foreign investment in the 1920s, when many American companies set up foreign branches. In 1921 the Belgo-Mineira Company started steel production. Immigration continued in the 1920s, São Paulo expanded vigorously and it was in this period that there was a large influx of Japanese immigrants. There was only a mild depreciation of the currency in the period 1921-29.

We may summarise socioeconomic performance during 1889-1929 as follows:

a) per capita income growth at 1.4 per cent a year was quite respectable by international standards. It was about twice the progress achieved by Mexico and the U.K., and not too far below that of advanced capitalist countries (France 1.6, Germany 1.7, Japan and the U.S.A. 1.9 per cent);

b) the degree of structural change in the economy by 1929 was rather limited, 65 per cent of the labour force were still in agriculture, less than 12 per cent in industry. Virtually all exports were primary commodities with an increased concentration on coffee, which had been somewhat over half in 1889 and was almost threequarters in 1929;

c) the economy had made the transition from slavery to wage labour, but the activity rate had dropped substantially from 46.7 per cent to around 34.5 per cent of the population;

d) regional inequality increased, because most of the growth in per capita income, productivity and exports occurred in Sao Paulo and the other white immigrant areas of the South. There were big disparities in per capita state spending on social services, so illiteracy rates remained very high in the backward areas of the country. Migration between states was not as big as one might have expected given regional disparities in wages;

e) the pace of inflation was about 3.6 per cent a year in this period as a whole. This was higher than in the Imperial period, but policy was not consistently inflationary. There were a few years of wild inflation from 1889 to 1895, followed by budgetary restraint from 1896 to 1906 when inflation was checked and the exchange rate appreciated. In the 1920s policy was also deflationary and Brazil moved onto the gold standard;

f) by later standards, government policy was not activist in a development sense, but it was not one of *laissez faire*. Policy to support coffee prices absorbed considerable resources and in the end proved damaging, because stocks which had cost 17 per cent of GDP to accumulate were destroyed and Brazil's share of the world coffee market declined. Without this government action, resources could have been used more profitably in other directions. Industrialisation was supported by tariffs, but these were mainly for revenue purposes. The variety of protective devices was much narrower than it subsequently became, and state participation in industry was negligible. Although in 1929 productivity in industry was a good deal higher than in agriculture, the ratio was about 2.5:1, i.e. a much smaller disparity than was later to emerge through government promotion of capital-intensive industry.

Notes

* I am grateful to Marcelo de Paiva Abreu for comments on an earlier draft.

1) There was, of course, a substantial Brazilian aristocracy in the imperial period to 1889.

2) The Caribbean islands were even more specialised on sugar than the Brazilian North East and imported food and shipping services from New England.

3) The milreis was renamed as the cruzeiro at the end of October 1942. Frequently, milreis totals were expressed in "contos", a conto being a thousand milreis.

4) In 1640 when Portugal regained independence from Spain, she allied herself closely with the U.K. The British were allowed to have merchants in Brazil and Portugal, to engage in the carrying trade, were granted extra-territorial rights, and duties on British goods were bound at a fixed level. In 1703, Methuen Treaty gave British goods free access to Brazil and the Portuguese market. In return, the U.K. propped up the Portuguese Empire with military guarantees.

5) See Vilela Luz (1961) and Stein (1957a).

6) Mulhall (1899), p. 172, shows Brazilian customs receipts equal to 21 per cent of trade turnover (about 37 per cent of imports after allowing for export taxes of about 5 per cent) in 1887 compared with a world average of 5.6 per cent. The figure for the U.S.A. was 15 per cent, Russia 10.2 per cent. India was the lowest at 2.2 per cent. In Egypt the figure was 4 per cent. Mulhall also shows (p. 258) that in the decade 1871-1880 Brazil received 72 per cent of her revenues from customs duties (higher than any other country) whereas in India it was only 4 per cent (the lowest).

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