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Historical sources of Brazilian underdevelopment

Fontes históricas do subdesenvolvimento brasileiro

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RESUMO: Neste trabalho mostra-se que o Brasil já entrou, no século passado, com atraso em relação aos países desenvolvidos. As três principais visões para explicar esse fato são revistas e uma quarta visão, baseada em desenvolvimentos teóricos recentes, é apresentada. Essa visão explica o atraso da economia brasileira pela composição de suas classes sociais, as raízes históricas destas e as suas interrelações.
PALAVRAS-CHAVE: Subdesenvolvimento; história econômica do Brasil; crescimento econômico.

ABSTRACT: In this work, it is shown that Brazil has already entered the past century behind the developed countries. The three main views to explain this fact are reviewed and a fourth, based on recent theoretical developments, is presented. This view explains the backwardness of the Brazilian economy due to the composition of its social classes, their historical roots and their interrelations.
KEYWORDS: Underdevelopment; economic history of Brazil; economic growth.
JEL Classification: O15; O19; N16.

1. INTRODUCTION

The Brazilian underdevelopment has its roots in the process of colonization and the historical formation of the country. Brazil entered the nineteenth century already as an underdeveloped nation and was not able to recover from this disadvantageous position hitherto, despite the reasonably good performance of its economy in the last two centuries. It will be argued throughout this paper that the reasons for Brazil to have entered the nineteenth century already less developed than the currently developed nations are the same which restricted the ability of its economic development to catch up with those of the developed countries thereafter, although they did not prevent the economy from growing considerably.

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Next section relies on some statistics to show that the Brazilian population already had a much lower per capita income than the population of a representative group of developed countries at the time of its independence. The same data also indicate that the Brazilian economy outperformed most developed countries in the past 167 years. Section 3 summarizes the two most important interpretations of the Brazilian underdevelopment, namely, the Structuralist and Dependency approaches. It also elaborates on what would be a standard Neoclassical interpretation. Section 4 forwards an alternative explanation, while sections 5 and 6 focus on the roles of industrialization and international trade in this approach and how they change when compared to the previous interpretations. Section 7 discusses some policy implications and section 8 summarizes the main conclusions.

2. ECONOMIC GROWTH IN THE LAST TWO CENTURIES

Tables 1 and 2 are illustrative of the relative level of development of the Brazilian economy with respect to a sample of developed countries. As may be seen in this table, the Brazilian per capita GDP grew faster than the per capita GDP of all developed countries included in the tables between 1820 and 1987. This century, Brazil was by far the fastest growing country. Only in the second half of last century did it have a disappointing performance, when compared to other countries. The figures in the first column of Table 1 indicate that its per capita GDP was already much lower than the one of all other countries included in that table.

The good performance of the Brazilian economy when compared to the sample of developed countries displayed is clear, despite a possible downward bias of the estimated growth rates of the Brazilian GDP in the last century. The growth rate for imports was used as·a proxy for GDP growth rate, as there are no figures for the Brazilian GDP in the last century. However, it may be expected that in an export led economy with the characteristics of Brazil last century, a boom in the exporting sector would lead to an increase in domestic diversification. The booming sector in the Brazilian economy at that moment was coffee, which was then extensively produced.

Workers in the coffee plantations in Brazil came mainly from abroad and from other regions of the country, where they engaged in subsistence agriculture, with a very low participation in market activities (Furtado, 1959). The surplus of labour under such conditions in Brazil was very high at that time, as a large share of the country was already populated by peasants. Moreover, other exporting regions were stagnant, such as the sugar-cane sector in Northeast and the mining production in Minas Gerais. As a consequence, these regions could not absorb the vegetative growth of the labour supply and were able to release workers to the coffee sector.

A large share of the demand arising from the subsistence of workers were directed to other sectors of the economy, outside the coffee plantations, as most foodstuff, such as manioc flour, beans and meat, came from the small farming sector or other regions of the country[1]. In this sense, both the importing of workers or the specialization of some already existing workers in the coffee production fostered a domestic demand for other sectors, which certainly attracted more investments and led to productivity increases (at least in value). Together with the diversification of services, which also had some domestic multiplying effect, the total additional demand generated by the coffee sector probably increased the domestic activity by more than its ability to generate importing capacity.

Table 1: GDP per capita (corrected for PPP, in_1985 US dollars) in selected countries

	1820	1850	1900	1950	1987
Australia	1255.60	2517.10	3532.50	5931.10	12892.80
USA	1050.70	1671.20	3757.10	8610.50	17339.50
England	1353.20	1820.30	3539.30	5650.80	12659.20
France	1070.80	1442.90	2421.50	4148.80	13048.70
Germany	578.50	623.60	1265.10	3338.90	13171.60
Belgium	1031.80	1440.70	2910.70	4227.70	11898.90
Denmark	1032.50	1433.00	2447.00	5224.10	13394.00
Sweden	946.60	1020.00	2026.30	5331.30	14340.60
Brazil	136.20	243.90	330.20	1112.50	4128.70

Sources: Maddison (1991) and IBGE (1990).
Note: Statistics for developed countries are a straightforward combination of data in Maddison (1991) for GDP in US dollars corrected for PPP, population and GDP indexes. Brazilian data for 1900-1987 are from IBGE (1990), combining the data for real GDP and population figures. The PPP level of GDP was calculated from real GDP and the World Bank (1992) estimates of per capita GDP with ICP correction for 1985. The growth of the quantity index for imports was used between 1850 and 1900, and the growth of the value of imports (deflated by the UK consumer price index) for 1820 and 1850 was used as a proxy for GDP growth between these two years. See text for a discussion of the shortcomings of this proxy.

Table 2: The average annual growth rate of real GDP per capita in selected countries (%)

	1820-50	1850-1900	1900-50	1950-87	1850-1987	1820-1987
Australia	2.30	0.70	1.00	2.10	1.20	1.40
USA	1.60	1.60	1.70	1.90	1.70	1.70
England	1.00	1.30	0.90	2.20	1.40	1.30
France	1.00	1.00	1.10	3.10	1.60	1.50
Germany	0.30	1.40	2.00	3.80	2.30	1.90
Belgium	1.10	1.40	0.70	2.80	1.60	1.50
Denmark	1.10	1.10	1.50	2.60	1.60	1.50
Sweden	0.20	1.40	2.00	2.70	1.90	1.60
Brazil	2.00	0.60	2.50	3.60	2.10	2.10

Sources: Maddison (1991), IBGE (1990).
Note: Statistics for developed countries are a straightforward combination of data in Maddison (1991) for GDP in US dollars corrected for PPP, population and GDP indexes. Brazilian data for 1900-1987 are from IBGE (1990), combining the data for real GDP and population figures. The PPP level of GDP was calculated from real GDP and the World Bank (1992) estimates of per capita GDP with ICP correction for 1985. The growth of the quantity index for imports was used between 1850 and 1900, and the growth of the value of imports (deflated by the UK consumer price index) for 1820 and 1850 was used as a proxy for GDP growth between these two years. See text for a discussion of the shortcomings of this proxy.

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[1] Beef from the South and Northeast are classic examples of regional integration in the Coffee Cycle.

Thus, from the data presented in this section, we are left with the conclusion that the current low per capita income in Brazil is partially a heritage of the colonial period, although a higher growth rate of the Brazilian economy since the last century could have compensated for this heritage. A growth rate which could overcome the negative heritage was shown to be feasible by countries like Japan. Therefore, despite the good performance of the Brazilian economy in the last 170 years, the explanation for the causes of its underdevelopment has to account for its lower than necessary performance after independence, in addition to unveiling the formation of an underdeveloped society during the colonial times.

3. ALTERNATIVE EXPLANATIONS FOR THE BRAZILIAN UNDERDEVELOPMENT

Some of the most relevant explanations of the Brazilian underdevelopment is briefly surveyed in this section. The order of presentation does not imply any order of importance, only the convenience of presentation. To my knowledge, the Neoclassical approach was never forwarded with the logic sketched below. The outlined Neoclassical hypothesis is formulated within the New Growth tradition, emphasizing the role of increasing returns and international capital mobility.

3.1 Neoclassical approach

A Neoclassical interpretation would emphasize the low level of physical and human capital per worker in the indigenous population when the Portuguese first arrived in Brazil. The transference of capital and skilled labour was not sufficiently high because of the preferences of the Portuguese and other Europeans to stay in Europe. As there was a high transport cost between Brazil and Europe and a scarcity of human capital, the return on physical capital[2] employed in Brazil was low when compared to alternative uses in Europe, despite the availability of natural resources. The return to human capital would have to be very high to tempt skilled workers to migrate to Brazil, given the lifestyle that was possible to have here. This low attraction for human capital and low marginal return on physical capital – were responsible for the low growth rate in the colonial era. Therefore, the situation of low capital-labour rate and human capital availability persisted during the whole colonial era, implying in low per capita income in the colony.[3]

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[2] See Lucas (1990) for further development of the relationship between human capital availability and low return on physical capital (see Barros, 1993a).

[3] This relation can be seen from the standard Neoclassical production function:

$$Y=A\,K^{\alpha}(HL)^{1-\alpha}$$

Which implies that:

$$Y/L = A(K/L)^{\alpha}\,H^{1-\alpha}$$

Given the capital-labour ratio and consequent low productivity of labour, the small domestic market size and the high transaction costs, there were very few possibilities of profiting from returns to scale. This restricted the installation in Brazil of activities which depended on scale to bring a reasonable rate of return. Such activities at the period of colonization were mainly banking and wholesale, large scale trade enterprises. The small market also restricted additional activities such as theatre and other urban leisure activities, which also depend on scale. Therefore, very few typical urban leisure activities were available in Brazil at the colonial era. This restricted the potential welfare of agents with high income and consequently increased the cost of attracting skilled labour to the colony. This relation between low scale and cost to keep skilled labour may have generated a Myrdal's type circular cumulative process which tended to keep the economy "locked in by historical events".[4]

The domestic accumulation of capital, which was already restricted by the low productivity of labour, was also reduced by the outflow of capital, either through private decisions to return to Europe after accumulation of some assets in the colony or through heavy taxes on the colonial economic activities, which was imposed by the Portuguese Crown. Despite the slow changes in preferences by agents, who started to slowly give more value to the local environment of the colony, the dream of returning to Europe after some asset accumulation persisted throughout the whole colonial era and even after the independence.

The same restrictions to profit from scale persisted after independence and restricted the inflow of capital to Brazil. Nevertheless, the local population started to increasingly prefer to stay in the country even if they had competitive skills and volume of assets to migrate. Cultural and family links justified this slow change in preferences. Therefore, the necessary relative rate of return to keep a certain rate of the endogenously generated capital within Brazil started to fall. However, the total number of agents with a reasonable stock of capital who became increasingly motivated to stay in Brazil was not sufficient to create a market which could justify a wide, efficient use of returns to scale so that the return to capital in Brazil could become higher than in Europe, the United States or Australia. Therefore, the net inflow of capital was still low or perhaps even negative. Thus, despite the reasonable rate of growth of the Brazilian economy after independence, this rate of growth was not high enough to compensate for the initial disadvantage.

It could perhaps be added that the control of the State by local elites forced public investments to sectors which had a higher rate of return to them, even if such

Where Y is GDP, L is the available labour force, K and H are the stock of physical and human capital, respectively.

[4] The reference is to the hypothesis that an economy may be placed in a less efficient technological path because of historical accidents, which was so emphasized by Arthur (1989). This possibility is important under situations of multiple equilibria, when there are sources of increasing returns to scale, as is argued in the text and is becoming increasingly accepted by mainstream growth theory.

returns were not the most welfare improving for the whole society. Therefore, investments in sectors such as human capital, whose externalities spread the social return for a much broader social spectrum, were not at the most efficient rate and the productivity of factors of production were not sufficiently raised to justify a higher inflow of capital, which could have boosted the growth rate of the Brazilian economy. The inefficient accumulation of human capital, which persists until today, could justify the inefficient inflow of physical capital to the Brazilian economy and its inability to catch up with the developed countries.

3.2 Structuralist approach[5]

For the Structuralists, the purpose of the Brazilian colonization was for the Portuguese to extract some surplus of the economic activities developed. In this sense, some major export-oriented activities were promoted, which could generate income in international currency to be appropriated by the Portuguese Crown and elites. These activities were mainly agricultural production, such as sugarcane and cotton plantations, and mineral extraction, such as gold and diamond mining.

In order to assure the efficiency of surplus generation, there was mobilization of the cheapest possible labour, which was slave labour. The dynamics of these export activities were determined by demand, which originated from abroad, particularly Europe. As primary activities, the growth rate of the demand for their output was limited and there were other alternative sources of supply which increased the competition in the world markets. Decreasing terms of trade limited the benefits from gains in productivity both in the domestic and foreign productions. Therefore, there were external constraints to domestic growth, aggravated by the outflow of part of the generated surplus as payment to the Crown and capital repatriations. These constraints generated crisis in each exporting sector, with a re-orientation of their production to subsistence activities with very low productivity levels.

When Brazil became independent, there was already a vast amount of the population living at very low productivity levels and engaged mainly in subsistence activities. Therefore, the per capita income was very low at the time. The insufficient growth of the economy after independence was a consequence of the maintenance of the same colonial structure. Only a share of the generated surplus would not flow to Portugal anymore, but this additional surplus, which could be re-invested, was not sufficient to significantly alter the domestic accumulation of capital. All foreign barriers to grow still persisted, as the specialization in primary production did not change.

At the advent of the industrial revolution in Europe, Brazil did not have a market which could provide the necessary demand for firms to benefit from returns

[5] Furtado (1959) brings the major contribution to this view. The ideas reviewed in this section are mainly extracted from his interpretation.

to scale and absorb the newly developed technologies. As a consequence, Brazil did not participate in the first technological spillover of the industrial revolution. At that time, there was further specialization in production of primary commodities and the deepening of the limits to catch up as the rising per capita income in Europe reduced even more the share of primary commodities in the total consumption expenditures of the European population. The limits to import imposed by the low growth of exporting income and the diversification of domestic demand led to a slow start of industrialization by the end of last century. Moreover, the reduced size of the domestic market, given the low level of consumption of the majority of the population, restricted the industrial development.

Loss of surplus through deterioration of terms of trade of exports and the unproductive expenditure of part of the domestically generated surplus by the local elite, which tried to copy the consumption pattern of the European elites, reduced the ability to catch up after independence. Import substitution industrialization was seen as the only way to increase productivity, to overcome the external constraint and to catch up. As there were positive externalities in industry, domestic investment would be below optimal, so that the State should intervene directly, devising policies to promote industrialization. Only through such policies could Brazil grow fast enough to catch up with developed nations.

In this view, the nature of the activities installed in Brazil and their role in international trade are responsible for the backward start. The constraint associated with these activities, which tended to persist after independence, were responsible for the lower than necessary growth to catch up with the world leading nations thereafter.

3.3 Dependency theory

Dependency theory agrees with most of the Structuralist analysis, especially in what concerns the disadvantageous colonial heritage. The main difference between the two is that the former emphasizes that the "foreign constraints" to the Brazilian economic development were not a result of the behaviour of the world economy only, but of the interaction of domestic elites with foreign capitalists. More precisely, the international relationships which constrained Brazilian development were not a necessity of the particular type of activities developed in Brazil. They argue that there was a symbiosis between the interests of the domestic and foreign elites to maintain the development pattern, in which the Brazilian economy specialized in the production of primary commodities, while importing industrial goods. This relation was profitable for the domestic elites which controlled the domestic primary production and was in the interest of the merchant foreign capital because it also assured their profits. The persistence of this type of international division of labour was not the product of market forces only, it was forged by the political will of the social groups which benefited from these relations.

When the domestic industry started to develop as a consequence of the domestic demand generated by the primary exporting sector, the local elites readjusted the relations with the foreign interests, but was unable to overcome the dependence on foreign capital.[6] This dependence concentrated mainly in technology transfer and imports of capital and intermediate goods. The Brazilian industry developed without the appropriate balance between the sectors producing capital and consumption goods. Capital goods were relatively under-produced and had to be imported, creating the technological dependence. This dependence implied in the use of technologies which were not the most efficient, given the factor endowment of the country. Furthermore, the absence of the domestic capital goods sector restricted the domestic dynamic effect of the industrial production, limiting the feasible growth rate of the economy. This was a major restrictive factor in the development of the country, which persisted at the time of the domestic industrial development.[7]

Problems such as the waste of domestic surplus in superfluous consumption by the domestic elites and the deterioration of the terms of trade for primary commodities are also emphasized by the Dependency theory as elements restricting the economic development in the periphery. However, these problems had already been emphasized by Structuralists. The major innovations of the Dependency school with respect to the Structuralist ideas were the emphasis on the limits to industrialization in a situation of dependence and the emphasis on different sectorial interests to explain why the appropriate policy to overcome the constraints imposed by the primary exporting model of development was not undertaken.

4. AN ALTERNATIVE EXPLANATION

It is argued in this paper that the major cause of the Brazilian underdevelopment is the profound division of the Brazilian society. This division is reflected in the pattern of income distribution, Brazil being one of the countries in the world of highest income concentration. The roots of this income concentration are in the formation of the Brazilian society, with the institution of slave labour, which not only was the cause of the low average standard of living in the country at the time of independence, but also slowed the rate of technical progress in the Brazilian economy thereafter.

From colonization, a local elite was formed which did not recognize the poor population around them as part of the same people as themselves. This lack of identity implied that the former did not have any will to improve the standard of living of the latter. All the benefits of productivity increases were concentrated in the hands of the elite, who did not wish to share any of such gains with the poor population, as they did not feel any responsibility towards the poor. Moreover, the poor population was always subject to a morally degrading standard of living, and

[6] See Cardoso & Falletto (1972).

[7] See for example Cardoso de Melo (1982).

consequent social disaggregation.[8] As a consequence, the poor never managed to organize and force a better distribution of productivity gains. Furthermore, this class was formed mainly by Africans and Indians, who were incorporated in the plantations at a very low cultural level and were not sufficiently stimulated by the elites to improve their cultural standards, despite the attempted cristianization.

The ideological conception which predominated in the colonial period was that the two major social groups of the Brazilian society are formed by intrinsically different people, with a clear hierarchy and superiority of European descendants. The incorporation of the inferior classes in the Brazilian society was made under this paradigm, which still survives. This ideology has been powerful in denying large scale serious educational policies which could lead to effective social convergence.

The sources of the Brazilian underdevelopment, according to the view presented here, were a consequence of the process of colonization adopted. When the Portuguese arrived in Brazil, they set up a structure of production which had its foundations in the inequalities of the standard of living. The feasibility of this inequality was assured by sociological aspects, which also provided its stability, and was the reason for its perpetuation, with a slow reduction in its strength to the present days. Such inequalities made possible the export-oriented model of colonization but constituted a barrier for technological innovation in the nineteenth and twentieth centuries.

Given the high transaction costs with Europe, and since the entrepreneurs who established themselves in Brazil targeted at the generation of a stock of assets which could be transferrable to Portugal, only activities using very cheap labour were profitable at the time of colonization. At the same time, there was a potential supply of labour in Africa as well as locally, which could have its remuneration pushed down to very low levels, since it was socially accepted in Portugal at the time that these workers could be subjected to a forced labour regime to increase their productivity and to keep their standards of living at very low levels. In other words, the Portuguese society accepted the idea of slavery, as long as Europeans were not subjected to such working regime, and there were two accessible sources of such potential labour supply at the colonial period: Brazil and Africa.[9]

The establishment of slave labour with completely different ethnical origins from the elites was the crucial aspect of colonization which imposed a burden for the future development of the country. As well argued by Freyre (1933), the Portu-

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[8] See Freyre (l933).

[9] There was slavery also in Portugal at the time of the Brazilian colonization. See Buarque de Holanda (1936). Several reasons are forwarded to explain the import of slaves from Africa, while the indigenous population could be submitted to slavery. The higher productivity of the African slave, as they were already using superior technologies in Africa, conflicts with the Church, which wanted privileged access to the local labour force, as well as the higher ability to escape and stronger reaction to slavery of the native Indians are among the main explanations found in the literature. For a survey, see Albuquerque (1981, pp. 25-36).

guese did not have the racist attitude which the British had in their colonies. However, their approach was far from integrative. Instead of the British racist approach, in which they emphasized the race as a very important segregationally factor, the Portuguese created a more subtle, yet not less segregationally ideology, which they hid behind an apparently less racist ideology: classism. Contrary to the British, they did not choose to isolate themselves from other social groups, but rather to internet intensively with them, but always keeping clear the differences, as if that consisted of "a natural order". The recognition of differences in cultures were complemented by an ideological hierarchy of such cultures, which was accepted by the non-hegemonic social groups and, consequently, allowed interaction without threatening the dominant culture.

The classism of Brazilian society and the low level of organization of the poorer social strata implied a wage policy which endowed workers with only a marginal share of productivity gains.[10] The socially accepted fair wage was very low and did not respond much to productivity increases.[11] Therefore, productivity increases in the Brazilian economy was accompanied by a process of income concentration, which reduced the incentive to promote technological development, as the low cost of labour made it more difficult for the more technically efficient technologies to compete with the more backward technologies, which were more labour intensive. In this way, the growth of labour productivity in Brazil was inhibited by income concentration.[12]

As recognized by modem Neoclassical theories, there are very important economies of scale in production. The low level of wages also reduced the demand for each particular industrial good in the Brazilian economy. This also had a negative impact on productivity, as there was less room for firms to benefit from economies of scale. When income is concentrated, demand tends to be more diversified in terms of types of goods consumed. This reduced the potential scale of each particular good as well as the competitiveness of local producers with foreign companies. It also reduced the availability of domestically produced intermediate goods, as there was no scale for their production. Consequently, there was less specialization of intermediate and capital goods and lower productivity in the production of final goods.[13]

One counterargument against the relationship between scale of production

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[10] By wages I mean the resources dedicated to the consumption of workers. In fact, most of such resources were directly provided by the landowners as indirect wages, as workers lived in the farms and had access to some of its facilities and services available.

[11] See Solow (1990), Akerlof & Yellen (1990) and Barros (1991) for analyses of the role of the notion of fair wages in wages determination.

[12] A formal model in the endogenous growth tradition which shows how real wage increases press for more technical progress may be found in Barros (1993c).

[13] The role of more specialization of intermediate goods in the productivity of firms using these inputs was emphasized by Rivera-Batiz & Romer (1991a and 1991b). The effect of income concentration on productivity through scale has been emphasized by Structuralists. See for example Prebisch (1976).

and income concentration could be that Brazilian firms could engage in exports and compensate for the small domestic markets, as firms in some Asian countries have done. Nevertheless, Brazil has always had a strong comparative advantage in agriculture and consequently has always had its exchange rate determined by its agricultural productivity.[14] Thus, for firms producing industrial goods, without any long learning process, it was extremely difficult to match the relative efficiency of the domestic agriculture.[15] Furthermore, the competitiveness of Brazilian agriculture was based on labour intensity and low wages. Therefore, a rise in real wages would both increase the ability of domestic firms to export and to profit from scale, as the domestic demand would be more concentrated in less products.

An alternative mechanism to explain the positive impact of real wage increases on productivity growth is presented by Barros (1993c). It is argued in that paper that positive wage changes boost the relative profitability of the sector engaged in the development of new technologies, when compared to other sectors more intensive in labour. This argument follows from the fact that the sector which especialize in technical progress is more intensive in human capital and less intensive in labour, when compared to the final output sector of the economy. This mechanism of increasing technical progress was certainly very weak in Brazil, since autonomous changes in real wages were limited. The often authoritarian control of the State by the elites restricted the organization of workers to increase wages. Moral hazards on entrepreneurs were also very weak because of the social segmentation. Finally, the particular cultural origins of the working class and the cultural heritage of slavery restricted their own mobilization to demand better wages.

In colonial Brazil and after independence, education was limited to the elites, making human capital a scarce factor of production, since the relative share of the elites in the total population was small. The lack of an adequate educational policy available to the majority of the population was one more consequence of the prevailing classism. While governments in countries without the degree of social segmentation found in Brazil in colonial times had made an effort to provide education across classes in reasonably homogeneous quality, the Brazilian elite, which dominated the State, excluded the majority of the population from educational opportunities. This severely restricted the return to physical capital in Brazil according to the mechanics outlined in the section on the Neoclassical interpretation and had a negative impact on capital accumulation and productivity increase.

Additionally, a large share of human capital investment was directed to law and medical schools, with only a very small share engaging in technical activities. One could argue that the determinants of such pattern of specialization was only social values, in which case such values may be seen as obstacles to the Brazilian develop-

[14] Ranis (1989) has raised this hypothesis that countries rich in natural resources faced more obstacles to industrialize, especially to export. Balassa et *alii:* (1982) has raised this type of criticism to the argument that market size could be a barrier to industrialization.

[15] Relative to the productivity in other countries, given the exchange rate.

ment. These values, however, could be simply a consequence of the rationality of agents. The return of human capital employed in technical activities could be low because of the prevailing low real wages and the difficulty for more human capital-intensive technologies to compete with already existing labour intensive technologies.

At some stage and in some regions, low wages certainly led to the Myrdal effect.[16] The low wage reduced the standard of living of workers to an extent that damaged their productivity. As a consequence, the accumulation of capital was limited. Particularly in Northeast, the absorption of some indigenous populations in the market economy was made by destruction of their original economic organization, but without a proper integration which increased their productivity and offered them a reasonable standard of living. The marginal pattern of their integration following the destruction of their habitat created conditions for their assimilation at very low productivity levels. No effort was made to improve their standard of living and productivity because of the already mentioned dissociation of the elites, who controlled the State, from the social groups which formed the poor strata. In such cases, the level of misery was so high that the Myrdal effect was particularly strong. In some regions, such effect still persists very strongly, contributing to reduce the growth rate of the Brazilian economy.

Thus, in this view the deficiency of capital accumulation is not a consequence of undersupply of surplus, as additional savings could be imported if the economy offered profitable options for investments. The determining factor of the lower speed of the domestic technical absorption than that required to catch up with developed nations, which could generate a high endogenous rate of growth because of its externalities, was the low level of wages. The low wages, in turn, was determined by the strong classist ideology formed in the colonial time. Therefore, low wages were a consequence of the classism and was responsible for the low increase in productivity in the colonial period. Consequently, it also justifies the low starting point seen in section 2. As a barrier to technical progress, it also reduced the growth of productivity after independence. Thus, the historically determined relationship between the Brazilian social classes and the low level of wages is the cause of the Brazilian underdevelopment.

5. INDUSTRIALIZATION AND DEVELOPMENT

Structuralists saw industrialization as the solution to Brazil. They argued that the technological development was faster in industry and Brazil was relatively more backward in this sector than in agriculture, so that industry was the most efficient sector to achieve rapid labour productivity increases.[17] Although industrialization

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[16] For Myrdal's exposition of what was called here the "Myrdal effect", see Myrdal (1981).

[17] Services were seen by Structuralists as a second-class sector, whose development was dependent on industry.

in Brazil did not start as a consequence of explicit policies of promotion, but rather as a sector dependent on the primary exports demand,[18] Structuralists argued that the government should promote industrial development through protectionist policies, financing investments and making using of other policy instruments at its disposal. If Brazil could succeed in industrializing, it would become a developed country. Other problems associated with underdevelopment would be solved in the process of industrialization and most of them as its natural consequence, through market forces. For example, they argued that once industry started to grow fast, it would absorb the existing surplus labour force and would automatically rise the labour share in total income. Income distribution would automatically be corrected through supply and demand in the labour market.

The Brazilian experience has shown that reality is not so simple. After the "Nacional Desenvolvimentismo" became the dominant ideology in Brazil, there was a tremendous effort to promote industrial growth, which succeeded in installing a reasonably integrated and relatively mature industry in the country by the early 80s.[19] Nevertheless, income disparities have accentuated in the last three decades and a large share of the population still lives at very low standards of living. Industry could only absorb the increasing supply of labour to a limited degree, while educational policies have been sufficiently inefficient to produce a large contingent of poorly educated inhabitants. The urban informal sector has absorbed a large share of the new entrants in the labour force and salaries and wages have been very low. Therefore, industrialization as a policy to overcome underdevelopment did not work.

Dependency economists claimed that the structure of a dependent industry was such that it had only a limited impact on employment and on income generation. Additional effort to promote some key sectors, such as capital goods, was necessary to bring the structural changes which could rescue the ability of industry to become the leading sector in development. Brazil had made this effort in the 70s and in the early 80s and has succeeded in integrating its industry. However, this has not been sufficient to change the role of industry in the economy. As argued above, poverty still persists after all this effort.

A huge amount of resources has been transferred into the hands of industrial entrepreneurs during the process of industrialization in Brazil. In addition to several alternative instruments to subsidize industrial investments, there were tax incentives and government investments in economic infrastructures designed to help industrial development. Moreover, all the exchange rate policies and protection of domestic industry have transferred income from consumers to industrial producers. All these resources certainly helped the industrial development and generated employment, but a reasonable share of these resources ended up in hands of entrepreneurs and consequently promoted income concentration. Thus, despite the social

[18] See Suzigan (1986).

[19] See Barros de Castro (1985).

debt Brazil has, the government engaged in transferences to those wealthy segments of society. Structuralist and dependency theories provided the theoretical support for such policies, which may have promoted industrial growth, but did not succeed in raising the standard of living of the majority of the population.

Examples of other countries, such as Norway, Iceland, New Zealand, and Australia, have shown that industrial development is actually a consequence of the development process, not its cause. Industrialization is caused by the appropriate economic structure which creates incentives for productivity increases. Industry is only one sector in which productivity must increase. An adequate economic structure, where the benefits are shared by all, may lack special policies for industry, but it cannot afford the lack of political will to pursue distributional policies, which may be implemented through the State, but has to result from a compromise of civil society.

If industry is the sector with fastest rate of technical change, an economy which has more incentives for technical change will naturally concentrate a larger share of its investments in industrial sectors. This follows from the fact that those sectors with a real wage similar to all other sectors, but with a faster technical progress tend to be the sectors which become progressively more profitable. Consequently, investments tend to concentrate on such sectors, which expand at higher rates. Therefore, if the Structuralist assumption on the relative speed of technical change is correct, industry would naturally absorb more investments and increase its share in total output.

The existence of learning-by-doing and other sources of increasing returns to scale may justify the use of policies to promote industrialization. Such policies certainly help to develop a country as they have an impact on the productivity, but if they are not followed by policies to improve income distribution and increase the elasticity of real wages to labour productivity, their effect may be severely reduced. This is exactly what happened in Brazil. Policies to promote industrialization and increase labour productivity were not followed by appropriate policies to improve income distribution because the State was controlled by the elites, who were not interested in reducing income concentration. The consequence was that the long-term growth rate of the Brazilian economy was lower than it could have been if, in addition to the promotion of industry, there were appropriate distributive policies.

6. INTERNATIONAL TRADE AND DEVELOPMENT

Structuralists emphasized that the specialization in exports of primary commodities was one of the major obstacles for the Brazilian economic development. Low productivity growth, low dynamism of demand and excessive competition in the world market constrained the economic growth of the economies specialized in primary commodities exports. The particularities of the Brazilian development, in this view, followed from such specialization. In the particular case of Brazil, such constraints did not impede the economy from growing faster than most developed economies during the last century, as previously seen in section 2, but it still slowed down economic growth so that a faster catching up could not be achieved.

Furtado (1959), for example, recognized that the Brazilian economy grew fast, but he emphasized that this growth was a consequence of the particularities of coffee, which was a commodity with expanding markets in developed countries. The simple structure and low integration of an economy specialized in primary exports was responsible for the constraints to catch up. In other words, despite the dynamism of the demand for coffee, which was the leading exporting good of the Brazilian economy in the last century, the structure of primary exporter inhibited a faster growth and the ability to catch up with developed countries. He also recognized that the Brazilian economy had gone through profound structural changes in the last one hundred years. They enhanced the response of the economy to exports and were responsible for a large share of the growth achieved. Nevertheless, the low diversification of the economy forged by the primary export orientation hampered the ability to grow. Such curb was not fully offset by the structural changes, although the latter tended to slowly reduce the former. Structuralists agree that this process, however, was not completed in Brazil yet.

The idea of falling terms of trade for primary commodities, which was a consequence of the world market structure and the domestic organization of production in the center and in the periphery, implied in a transference of surplus from developing countries to the center. Or, in other words, underdeveloped countries could appropriate only a small (if any) share of the gains associated with domestic productivity increases, while developed countries managed to keep most of their gains in productivity for themselves, through higher wages and profits. Competition and labour market structures were seen as the major causes for such asymmetrical behaviour in exporting prices.[20] This transference of surplus reduced the ability to accumulate capital domestically and consequently constrained economic growth.

Dependency theory also agreed with this interpretation, although they added that the international relations were not imposed by foreign agents; but actually, reflected the interests of local elites.[21] They also agreed that such specialization in international trade would relegate Brazil to underdevelopment were there not appropriate policies to counter-balance such result. In the analysis of dependent industrialization, foreign trade played only a minor role. Competition for domestic industrial goods and the technological dependency were the international relations which restricted industrialization and reduced its impacts on the domestic economy, since a large share of intermediate and capital goods had to be imported from developed countries.[22]

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[20] See Prebisch (1951) for the initial statement of this idea for Latin America. Furtado (1959) develops such analysis for the Brazilian economy. Barros & Amazonas (1993) survey the hypothesis of deterioration of the terms of trade for primary commodities.

[21] See Cardoso & Falletto (1970).

[22] See for example Cardoso de Melo (1982).

The alternative view presented here does not attribute a relevant role to international trade in the explanation of the Brazilian underdevelopment. The idea is that if there was a change in social relations which forced domestic entrepreneurs to adopt more efficient technologies in terms of output per labour, whatever sector they were engaged, they would do it as a surviving policy. Those unable to adjust their production would lose the ability to compete and would eventually bankrupt. In such process entrepreneurs would probably shift some of their production to sectors which would become more profitable at the new capital/labour ratio, at the same time that they would introduce more efficient technologies. Thus, the Brazilian economy would not only engage in a faster process of technological absorption, but would also shift its international comparative advantages, possibly specializing in goods with lower deterioration of terms of trade.

This reduction in the role of international relations to explain the historical performance of the Brazilian economy does not mean that international competition in the domestic industrial market could not be an important constraint. Since there are market failures in information and in technological development, and since learning-by-doing is an important source of technological improvement, selective protection is a policy which should be used in the process of development. Nevertheless, its inappropriate use may not be blamed for the underdevelopment of Brazil, nor its appropriate use would be sufficient to develop the country.

7. POLICY IMPLICATIONS

While Structuralists see State intervention to promote industrialization as the appropriate policy to overcome underdevelopment in Brazil, the alternative view expressed here emphasizes the need of a radical social reform as the way to speed up the growth of the Brazilian economy. Explicit policies of income distribution and concern of the government with the inequality of opportunities consist in the major policies to foster technological absorption and rise productivity. Historical experience shows that the elites will not change their attitude towards the marginalized sectors, unless there is pressure for such. Thus, the organization of the poorer social segment to press for higher citizenship is the only way to overcome the barriers for productivity growth in the Brazilian economy. In this context, the deepening of democracy is crucial for the development of Brazil.

Following the developmentist tradition, the Brazilian State has concentrated efforts to promote capital accumulation. Structuralist economists thought that increasing the capital/labour ratio was the most important way to raise productivity. In this sense, the government should try to control luxurious consumption and give subsidies to industrial investments. In addition, the government should give support to industry through investments in economic infrastructures, development of labour skills and promotion of technological acquisition. These policies certainly have a positive impact on economic growth, but they are not necessarily the most efficient, as they will not bear all the possible fruits if the labour force is not adequately educated, and new technologies find it difficult to compete in a low labour cost environment. Therefore, a more adequate development strategy would concentrate more resources on social policies, which promote the ability of the marginalized sectors to increase their efficiency and to press for a larger share in total social production, increasing incentives for technological absorption by entrepreneurs. The relevance of such policies to promote the development of the country was ignored by Structuralists, due to their emphasis on industrialization and the assumption made that labour markets could work reasonably well to raise wages following the absorption of the existing surplus labour and productivity increases.

An illustrating example of the differences in emphasis is to be found on the tolerance with inflation. The Structuralist recipe claimed that some inflation is even beneficial to the development of the country, since it concentrates resources in hands of entrepreneurs, increasing their ability to invest. The alternative view presented here favours austere monetary and fiscal policies so that inflation is controlled, to avoid the income concentration associated with it. This comes from the fact that real wages do not recover automatically from inflationary losses. It is necessary to make some effort of political mobilization to recover the losses caused by inflation and such claims may jeopardize additional efforts to improve income distribution. Furthermore, the flexibility of prices in an inflationary economy is such that it becomes more difficult to crystalize improvements in the pattern of income distribution.[23]

Even with respect to social policy the approach which comes out of the alternative interpretation presented here would be different from the Structuralist suggestions. In the Structuralist interpretation, such policies either represent a liability to the speed of development or they are directed to increase the productivity of the labour force. In the interpretation forwarded here, such policies represent an instrument to promote citizenship and, consequently, they may increase future claims by the poor for a share in productivity gains. This in itself already increases the future technological progress of the economy and speeds up its development. This alternative view does not imply that the role of health and educational policies on productivity increases is not important, but only that it does not embrace all the potential positive impact of such policies. This difference in views may be rather very unimportant at the micro level. For example, expanding water supply for areas with low productive potential may be seen as a cost with very low return in the Structuralist view, since it will not help capital accumulation and increase productivity in the economy. However, it will rise the standard of living of the population in the area reached and give them strength to claim for their rights, as they will feel more integrated in society. It will also reduce the social tolerance for low levels of standard of living, pressing for higher real wages.

[23] See Barros (1991) for a real wage determination theory which incorporates such effects. Barros (1990, 1993b and 1994) provide empirical tests which give support to the hypothesis that inflation tends to leave a negative and permanent effect on real wages in Brazil. See also Amadeo (1993).

The Dependency school argues that the backwardness of the Brazilian economy could only be overcome through the control of the country by socialist forces, which would be able to re-structure the economy directing investments for key sectors which could bring more forward and backward linkages. Therefore, they based their policy proposals on the idea that the market was inherently inefficient in dependent economies. If the economy was left free to respond to the market mechanisms, the dependent development would be perpetuated. A political will of those sectors which did not benefit from the dependence relations was necessary to apply the right policies.

The alternative view presented above also emphasizes that a change in political relations is necessary to overcome the backwardness. Nevertheless, it has weaker demands than the Dependency theory on this. First, it does not demand that there should exist State intervention at the level of resource allocation, or that market forces are inherently inefficient to promote economic growth. The State is actually urged to avoid excessive intervention and to concentrate efforts in policies which may improve the long-term income distribution. The more it intervenes in resource allocation the higher the chances to deviate its attention and resources from its real task in development, which is to promote income distribution. As regards expenditures, investments in human capital, both in education and health, should be the main policies. In addition, a progressive and efficient tax system must be implemented to finance social investments.

It is important to stress that State intervention is not a requirement for changes in income distribution. For example, a more active participation of workers in politics may be sufficient to press for higher wage shares and spur a process of higher technological absorption and economic growth. This is perhaps the most efficient way to improve income distribution and to promote growth. Educational and health services, however, together with technological research, are areas in which the private sector does not allocate resources efficiently.[24] Therefore, they are important areas of State intervention.[25] A clear democratic political structure and an efficient judicial system are also crucial policies to create the appropriate environment for economic prosperity, as they are instruments to develop citizenship.

This more restricted demand for political changes to foster a long-term economic catching up of Brazil with developed countries follows from the fact that while the dependency theory argues that markets lead to a reproduction of dependence and restrict growth, the view expressed above concentrates only on the failure of the labour market to determine the most appropriate pattern of income

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[24] See for example Romer (1990), Lucas (1988) and Stockey (1991).

[25] Technological development was also included among areas for government intervention, although it does not necessarily lead to better income distribution. Nevertheless, growth theory has strongly emphasized the existence of inefficiency in the allocation of resources to the technological sector through market forces. This explains its inclusion in the policy priorities, despite our main concern with policies that promote income distribution.

distribution to the development of the country. In more technical terms, it is argued that the Brazilian economy faces a situation of multiple equilibria and that improvements in income distribution may force the economy to jump to a more satisfactory new equilibrium. While income is more concentrated in Brazil than it is in developed countries, there is still room to move fast from a poorer equilibrium to other equilibrium with higher average per capita income, even without concentrating as higher a share of its GDP to research as that of developed countries. Therefore, failures in the labour market are the most crucial failures deterring the economic growth of the country.

There certainly are other relevant sources of market failures which are also recognized by modern growth theory, although human capital accumulation and technological development are the most prominent cases.[26] Such failures could justify more government intervention and partially justify the planning urged by the Dependency school. First, it is important to mention that a better balance of political power than the one which was found in the Brazilian political history would lead to a type of State intervention more adequate to the increase of the rate of growth and welfare of the whole population. Under such conditions, there is a lower probability of prevailing interests of particular groups, which may be contrary to the overall interests of the country. Therefore, a broader democratic participation is crucial to the development of the country, even if these additional market failures are taken into account.[27] Secondly, the existence of such market failures does not imply that market forces are necessarily contrary to the development of the country. Neither is a detailed State planning necessary, as normally argued by Dependency theorists, to assure that the economy follows the appropriate path to catch up with developed countries. As emphasized by Krueger (1990), such interventions, when excessive, may easily have costs which overcome their benefits. Additionally, these interventions tend to draw resources from more relevant policies, such as the social policies suggested above.

As in the Dependency theory, some changes in the political hegemony of the country are also seen as crucial, as the control of the State by the elites restricts the level of citizenship of the poor. This change in hegemony, however, does not require the exclusion of the elites from the political scenario, or its marginalization, but only a sharing of power, where different social strata are integrated as part of the same society and as such are entitled to participate in the gains of productivity of the economy.

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[26] For the discussion of additional cases of market failures see Barros (1993a) and Amazonas (1993).

[27] The socialist road advocated by some Dependency theorists would not necessarily deepen democracy in Brazil.

8. CONCLUSIONS

This paper develops a new interpretation of the Brazilian underdevelopment. It argues that the roots of Brazilian underdevelopment lies in the deep social division which has marked the Brazilian society since its colonial period. Lack of capital accumulation and its particular position in world trade relations are not the relevant factors to explain the Brazilian backwardness. Its determinants are to be drawn from the lack of dynamism in economic growth, which originated from the low standard of living of the working class and the consequent low incentive to technological development.

The Brazilian economy lagged behind developed economies since the beginning of last century. However, the prevailing low productivity of the economy could be an asset to achieve fast growth, as there were available technologies which could be imported if there were the appropriate domestic incentives. Countries like Japan and Finland also started from behind, but they managed to catch up with the early starters, such as France and England. Brazil could do the same were it not for the social obstacles which delayed its development.

A profound restructuring of the Brazilian society is necessary to overcome the obstacles to catch up. More political power in hands of the social segments which have been marginalized in the process of development is necessary to undertake such changes. It is urgent to extend the basic notions of citizenship to a large share of the Brazilian population. As governmental action, a serious educational policy is necessary. This has the advantage of promoting the demand by the educated population to rise its standard of living at the same time that it increases their ability to enhance their own productivity. Thus, an efficient educational policy should have the highest priority in any development strategy in Brazil.

The recent rise of the Workers Party after the re-democratization of Brazil opened a new chapter in the Brazilian history. For the first time in history the marginalized sectors in Brazil became a relevant political force in the country and has begun to have an active participation in the political scene. Unfortunately, this has happened in a period in which the Brazilian economy faces a recession and, consequently, there have been adverse conditions to improve the standard of living of the poorest segments of the population. However, this structural change in the political scene creates new perspectives for the long-term development of the country once the current short-term difficulties are overcome.

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