Brazil Economic Development: The Exchange Rate Issue

22 December 1997

By Eduardo Giuliani

BRAZIL SHOULD REPOSITION ITS EXCHANGE RATE TO CONTINUE SUCCESFUL ECONOMIC DEVELOPMENT

EXECUTIVE SUMMARY

This is a great moment for Brazil. After decades of disorder and no progress the country is back on track with a competent government that is doing its best to improve the living standards of the majority.

The first win was the reduction of inflation to reasonable levels and now it is strongly implementing reforms necessary for growth: privatization, reallocation of resources to social agenda (e.g. elementary education), reduction of fiscal deficit, etc.

The exchange rate was initially fixed at a level that was adequate to create incentives for imports that put pressure on local companies to improve productivity and raise the interest of other global players to the attractiveness of the Brazilian market.

It has been like that for 3.5 years. Now it is time to move on to a new challenge and continue the economic growth. The challenge now is to speed growth to 7-8% per year, double gdp/capita and improve income distribution. This is possible if we engage in a catch up strategy: reduce the gap between Brazil's $5k/cap and best practice's $27k/cap (United States). This strategy has two challenges: improve the mix of employment and increase productivity in every sector. Employment should reduce in sectors with high informality (agriculture and services) and move into more formal ones. The most important addition is in manufacturing that has to double share of employment.

Doubling the employment in manufacturing while creating an internationally competitive industrial base requires focus on exports that are very dependent on the exchange rate. Adjusting the exchange rate will create good incentives for exports and creation of better jobs in Brazil.

The creation of new and good jobs is critical for a country that is bringing 2 million new people every year in the labor force. It is only through the incentives for job creation that income gets distributed. When companies are competing for scarce labor, wages have to rise and the incentives to become educated increase.

A 60% adjustment in the exchange rate would bring Brazil to the level of competitiveness of countries engaged in the catch up strategy. In spite of government concerns, this should not bring inflation back to the high levels of the past because the economic context is much different today than 3 years ago: gov't is not printing money, the economy is not as much indexed any more and there are lower barriers for FDI to come in and compete against cartels.

Brazil has very good economic prospects: a good democratic government is putting the country on the right track and it is at a good time to make a few adjustments to engage in a faster growth strategy

Brazil is at a good time with a good government team and good prospects for growth. After more than a decade of erratic economic policies it now has a strong democratic government team in place performing very consistent policies: macro economic stability, reduction of fiscal deficit, privatization, regulation to increase competition, focus on elementary education, reduction of corruption etc.

As Brazil experienced in the years after Plano Real growth is a process that is good for everyone when it happens through the creation of more jobs and increase in living standards. Being a country at $5k/cap Brazil has a tremendous opportunity to learn from best practice (U.S. at $27/cap) and grow its economy at a fast pace (7-10% per year) through a process similar to the one used in the successful countries of East Asia (e.g. Korea): catch up (Exhibit 1).

However, in order to engage in such a process Brazil has to make a few adjustments. One of them most people are very sensitive about: the exchange rate. They are sensitive because the word devaluation is not a very appropriate one. It sounds negative. The right term should be repositioning. Repositioning because it is a factor that influence relative prices (between countries) and sets up specific incentives for the economic agents.

The past three years of high value currency was appropriate to control inflation, expose the Brazilian market to foreign capital and make competitive pressures on local companies to increase productivity. Now it is time for Brazil to think ahead of time, understand its new challenges (e.g. employment) and make the necessary adjustments.

Brazil can understand its future challenges looking at some other benchmark fast growth economy like Korea: build manufacturing

Most of the economic growth of the past decades happened in East Asia. Countries going through economic development stages similar to Brazil (e.g.: China, Indonesia, Thailand, Malaysia and Korea) have been able to continuously grow their income per capita at rates above 6% per year with full employment. There is a lot to learn from them. Their growth strategy is based on promotion of exports, low currency value, growth of manufacturing and allocation of credit towards production rather than consumption.

Looking into the future and comparing Korea at $11.5k/capita with Brazil at $5.4k/capita, both in 1995, approximately half of the gap comes from differences in job mix (new jobs in different sectors) and half comes from increase in labor productivity (Exhibit 2a). Most of the gap in job mix and a significant portion of the productivity gap comes from manufacturing (Exhibit 2b).

The creation of more jobs in manufacturing, trade, construction and finance (higher value added formal jobs) would eliminate informal low value added jobs in agriculture and services and contribute to closing approximately half of the income gap (Exhibit 2c).

On top of creating good environment for manufacturing to grow, as Korea did, Brazil should also take advantage of allowing foreign direct investment to improve other sectors as well, instead of restricting them. This two levers together should help to maximize economic development.

Manufacturing has an important role to industrialize Brazil and create good jobs that consistently improve productivity

Brazil is not an industrialized country yet. Its share of employment in manufacturing is too low and have been decreasing. The government projections ("O Brasil na Virada do Milênio" - IPEA) are estimating manufacturing to decrease even further as Brazil grow at 5-6% per year. This is not consistent. Manufacturing is much more important to Brazil than the government is predicting. It is important because of productivity growth and creation of good jobs.

In order to understand economic development over different stages of income per capita two economies were analyzed: Korea 1970-95 and U.S. 1950-95. As can be seen in Exhibit 3 manufacturing is the sector with the fastest and most consistent productivity growth for all the stages of economic development. Furthermore Exhibits 4a, 4b and 4c shows a Korea with a very similar employment structure to Brazil as it grew but for manufacturing, the engine driving their 8% per year growth in income per capita. In summary, manufacturing is the one piece missing in the phase of economic development that Brazil will have to go through: build product base and raise average income (Exhibit 4d).

The analysis suggests that Brazil needs to increase the manufacturing share of employment from 13% to the 24-35% range. It means more than double. However Brazil needs to be careful about building an internationally competitive manufacturing base. Its current manufacturing base charges very high prices in the Brazilian market because of high taxes and inefficiencies. Looking at manufacturing share of GDP at current prices Brazilians seem to be spending enough on manufacturing products however if prices are adjusted the corrected output is really low (Exhibit 5).

Another empirical evidence of the importance of manufacturing jobs in the Brazilian economy can be seen in Exhibits 6a, 6b and 6c.

- ¶ The best jobs in the economy are the formal ones: highest income and most educated labor (Exhibit 6a).

¶ Manufacturing is a major source of formal employment in spite of only 13% share of total employment (Exhibits 6b and 6c)

The most competitive manufacturing base is built through exports, which is another key factor driving fast economic development

There are many advantages for an economy to engage in exports: use of best technology with spill over effects on other sectors, optimization of economic decisions and maximization of output.

Focus on exports forces the productive base of the country to use the best technology available given that they have to compete in the tough global market through price and quality. On top of that this global market is a much larger one than the domestic with many more alternatives to optimize economic decisions and find growth opportunities. Furthermore, in spite of representing only 10 to 30% of the value added of a growing economy, the best technology brought in by exporters influence suppliers (e.g. services, distribution) and quality/diversity of other products sold in the domestic market by the same companies.

Another important aspect of export is the maximization of output. Exports maximize production and therefore job creation. Maximizing production automatically maximizes income per capita, and maximizing employment maximizes the learning (and productivity) of the labor force that happens through formal education or on the job.

The economic evidence of the success of export oriented strategies can me seen through a sample of countries from East Asia and Latin America that are in the range of $1.4 to 11.5k/capita. Growth in exports and economic growth are very well correlated and manufacturing plays a role of increasing importance as they develop. Brazil clearly has a huge manufacturing export gap to close (Exhibit 7).

In addition to all this evidence about the importance of exporting, Brazil has a structural need to export more than import if one considers a pure current account equilibrium point of view: in order to pay for interest on foreign debt and send profits of foreign direct investment Brazil needs to run a trade surplus.

Brazil's exchange rate is incorrectly positioned. It is very important to bring it to the right level to support the necessary expansion of exports, manufacturing and jobs creation

Looking at the evolution of the effective exchange rate the Brazilian currency is at a historically very high level. In fact, the black market exchange rate proves the fact that the Brazilian currency has always been overvalued by the official rate. It was never managed from a strategic economic development perspective. It was always established by something else, like in the 80s when the pressure to pay for interest on the external debt after the 83 crisis and import oil forced the country to lower the currency to create incentives to export (Exhibit 8). The current situation with a trade deficit is even worse.

The positioning of the effective exchange rate is critical for a country economic development as can be seen in Exhibit 9a. Most of the fast growing countries have their GDP per capita at market exchange rate at a much lower level than the real GDP per capita at PPP [Korea, the outlying, has its currency recently devalue by 50%].

Mismanagement of the currency has a very negative impact on growth. Chile, the main country in Latin America to hold a consistent economic growth over the last 15 years correctly positioned its currency in the beginning of the 80s and kept the effective rate reasonably consistent during the growth period (Exhibit 9b).

Plotting a graph of the ratio between market and PPP exchange rate through different levels of income per capita one can notice a fast track line. This is a line in which one find countries with fast economic growth: East Asia and Chile. As a country grows the closer the market exchange rate gets to PPP. This adjustment helps a developing country compensate for the low productivity of its labor force. Brazil would have to decrease its currency by 60% to reach the fast track line and become competitive against the 2 billion people engaged in catch up in China, India and Indonesia (Exhibit 10a). It is interesting to notice the coincidence between the 60% found here with the 60% of Exhibit 8, that would bring Brazilian currency to the same effective level of the black market in the 80s.

Is 60% too much ? What is the right level for an effective exchange rate ? The right level should be one that creates full employment and moves the economy in the right direction for catch up and growth. As a country grows and its labor force becomes more productive the higher value added businesses will attract labor from the lower value added ones and the exchange rate will move up as a consequence. The higher exchange rate will make the low value added businesses less competitive and will be forced to release labor through increase in productivity or shutting down. The level of adjustment depends on how fast Brazil wants to engage its informal labor (60%) and grow (Exhibit 10b).

Brazil's labor force is growing very fast. The government needs to consider market driven policies that maximize employment in order to engage in a process of income distribution

Brazilian labor force is growing fast at 2.5% per year, demanding 1.7 million new jobs every year (Exhibit 11). On top of that, the majority (60%) of the employment today is composed of informal, low wage, low skill jobs. This situation puts a lot of pressure on the government to create policies that support the creation of many formal jobs.

Furthermore, overtime Brazil needs to eliminate misery, illiteracy and criminality. This would happen through a process that distributes income, a process of growth in which the labor force is a scarce resource, fully utilized, that companies have interest to train to improve their businesses. This is a fact in East Asia. Exhibit 12a shows that these countries have very high utilization of labor and poverty decrease as they grow. Exhibit 12b shows wages in Korea growing in pace with income per capita.

Income distribution happens when people improve their human capital, their knowledge content, when they become more productive. The learning on how to become more productive happens through formal education or on the job. When an economy is growing with a lot of job opportunities people naturally look for better education in order to become more competitive in the labor market and access better jobs. Education becomes a good economic decision. An empirical evidence of this is the fact that the number of students completing 8th grade and high school went up by 62% and 46% respectively after Plano Real when the economy started to grow again.

The current situation of abundant supply of cheap, uneducated labor is a terrible context for income distribution. The labor has no bargaining power to increase wages and the owners have less incentive to train and increase productivity if there is plenty supply of cheap labor. For many businesses the owner can substitute trained labor for cheaper untrained one and the economics of the business still hold.

An adjusted exchange rate would create more incentives for manufacturing employment, export and FDI (e.g. trade and services), factors that would maximize the learning and average productivity of the labor force. It is important to note that an adjusted exchange rate would make investments in the country cheaper, maximizing the creation of output capacity.

60% seems too high an adjustment but it might be the type of incentive one would like to have to double its manufacturing base, having to hire and train a labor force that would start at a much lower level of productivity than the current one and that would be engaging in new processes not yet dominated in the country know-how.

RECOMMENDATIONS

- ¶ Progressively adjust the effective exchange rate to a level 60% below the current one and do not forget to continue adjusting to compensate for inflation. It is important that the effective exchange rate is in the right position.

- ¶ Once the exchange rate is adjusted reduce import barriers and allow FDI to come free. FDI is smart, long-term capital that increase country output, improve productivity, increase competition and create jobs. In fact it does not matter the nationality of the owner of the company, what matters is who is transferring the most knowledge to the labor force, creating jobs and training them.

- ¶ Restrict credit to consumption and allocate credit to producers with focus on export performance. Capital is scarce so direct the capital you can control to finance production, which generates more externalities to the economy than consumption. The market itself should create enough credit for consumption.

- ¶ Continue policies that reduce fiscal deficit and increase economic efficiency, like: privatization, land reform, public employees job stability, structure of social security

- ¶ Inflation should not come back as in the past. Macro economic stability was a critical win by the government that helped the country get back on track. It is reasonable to be careful when risking the stability however the context is very different today when compared to 1994. Some of the causes of past high inflation were the government printing currency to cover the fiscal deficit, general indexation of prices that carried over inflation, and protected internal markets. Now the gov't is not printing currency any more, prices are not as much indexed and the internal market was very exposed to new companies that would probably start production in Brazil if their imports are damaged by a change in exchange rate. Now they know how attractive the market is and would compete against entrenched players.

  Imports represent less than 10% of GDP. If the exchange rate is adjusted by 60%, the 10% imports would cost 150% more, increasing average prices by 15%. Even if inflation reaches 30% it still would not be a big deal for a country that was used to 3000% if it is a trade-off for real economic growth and better income distribution (more jobs). In Chile, after a 45% adjustment to the effective exchange-rate in 1981 the country faced only a 19% per year inflation.

The facts put here prove the point that a repositioning of the Brazilian currency is not an speculative issue but simply a question of good macro economic sense given the context the country is in. The need for trade surplus, the social environment and the government commitment to improve life to the majority of the population would suggest that keeping the currency at its current level is not the most appropriate economic solution.

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- ¶ 4 years working for McKinsey & Company, 8 months involved with its Global Institute in a study about Brazil Economic Development
- ¶ 1 year working for Michael Porter's strategy consulting firm
- ¶ MBA from Harvard Business School where he studied Economic Strategies of Nations with Bruce R. Scott who researched Asian and Swedish economic development for more than 20 years and was appointed by the U.S. Senate in 1991 as one of its four representatives on the U.S. Competitiveness Policy Council
- ¶ Industrial engineer from the Polytechnic School of the University of São Paulo

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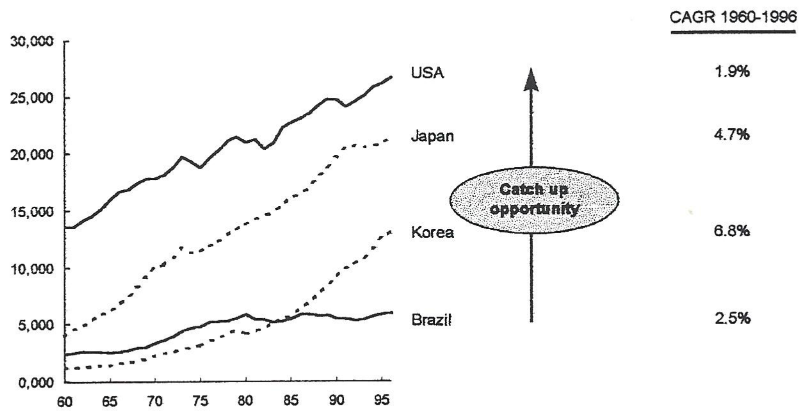
Brazil has a very low productivity when compared to best practice in the world. Like Korea did, Brazil can engage in a catch up strategy growing its economy at a much faster pace

Exhibit 1

ECONOMIC DEVELOPMENT: GDP PER CAPITA (1960-96)
in 1995 US$ (PPP*)



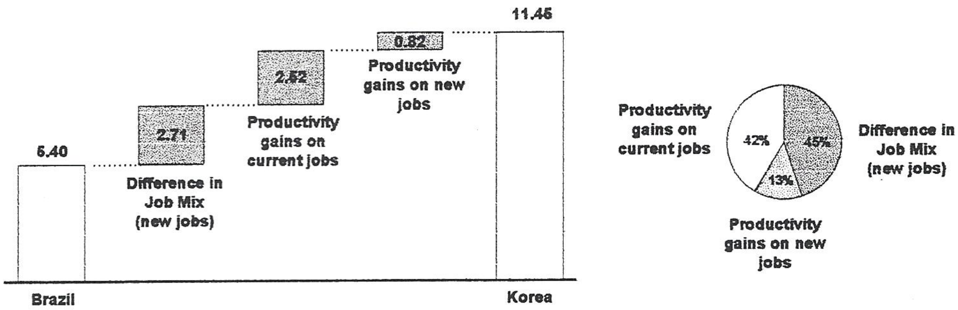
* Purchasing Power Parity

Source: Penn World Tables, IMF

The explanation of the gap between Brazil and Korea lies on job mix and differences in labor productivity

Exhibit 2a

GDP PER CAPITA: CLOSING THE GAP BETWEEN BRAZIL AND KOREA IN 1996
in US$ '000 PPP

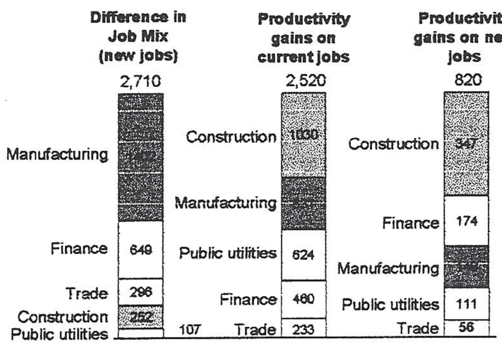


Source: IBGE (PNAD, Contas Nacionais), OECD (National Accounts), Authors' analysis

Manufacturing will have an important role on closing the economic gap in terms of creation of new jobs and productivity improvement. Construction will also have a key role however more on the productivity improvement side

Exhibit 2b

GDP PER CAPITA: CLOSING THE GAP BETWEEN BRAZIL AND KOREA IN 1996 - BY SECTOR *ESTIMATE*
in US$ PPP*/cap



Description of the sectors:

Agriculture	Agriculture, hunting, forestry, fishing
Construction	Residential, commercial and heavy (materials are in manufacturing)
Finance	Banks, insurance, real estate, business and legal services
Manufacturing	Manufacturing and Mining
Public utilities	Electricity, gas, steam, water, transport, storage and communications
Services	Community, social and personal services
Trade	Retail, wholesale, lodging, restaurants and repair
Not included:	Public administration (including military)

* Overall economy PPP, not adjusted by sector specific

Source: IBGE (PNAD, Contas Nacionais), OECD (National Accounts), Authors' analysis

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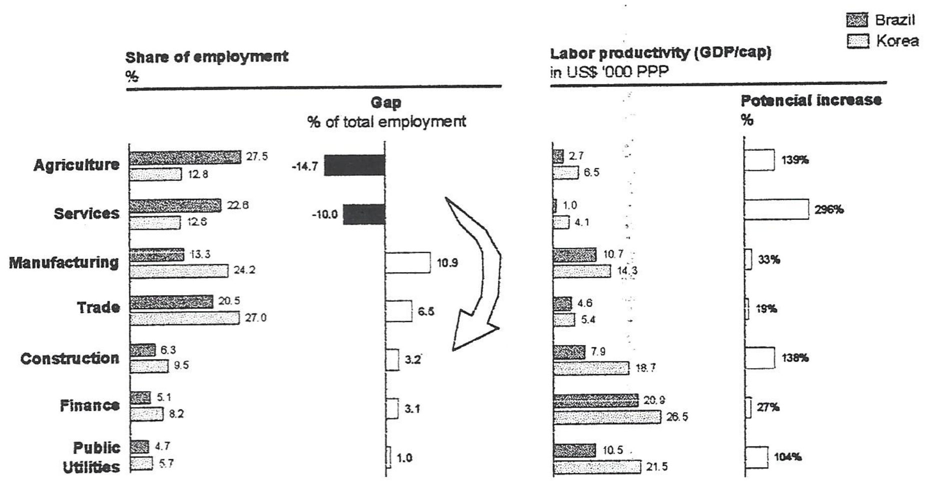
Brazil will have to move labor from subemployment in agriculture and other services into the other more formal sectors

Exhibit 2c

COMPARISON BETWEEN THE BRAZILIAN AND THE KOREAN ECONOMY BY SECTOR - 1995



Source: IBGE (PNAD, Contas Nacionais), OECD (National Accounts), Authors' analysis

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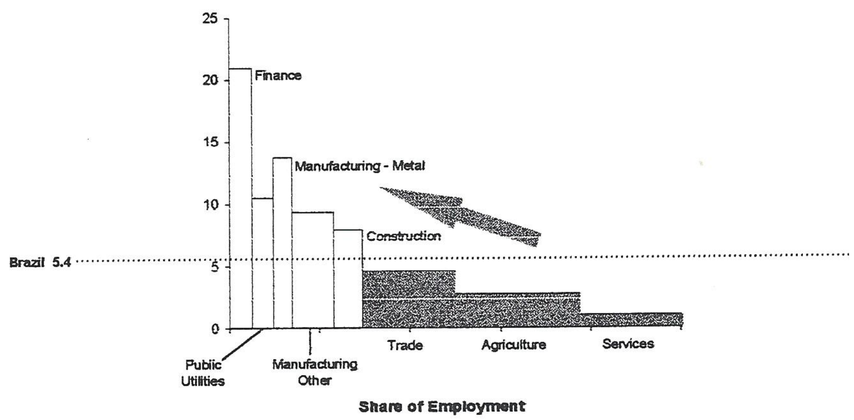
Brazil has to create incentives for the formal sectors to grow and attract labor from the low value added informal sectors

Exhibit 2d

GDP PER EMPLOYMENT BY SECTOR OF THE BRAZILIAN ECONOMY IN 1995

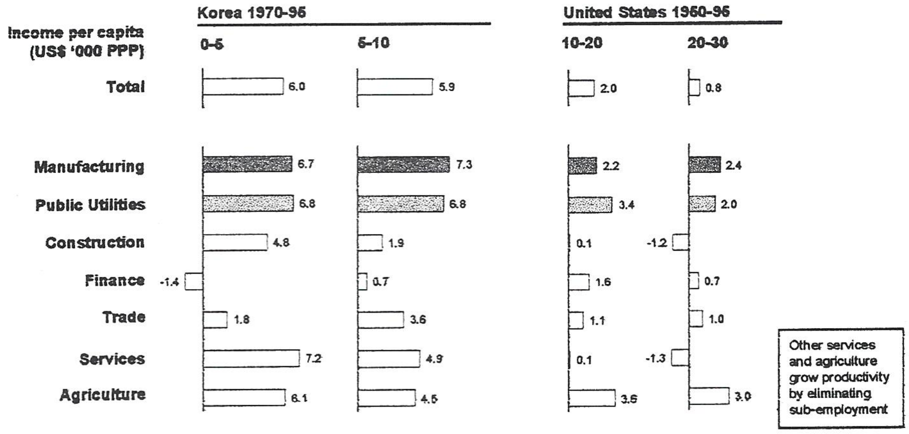
Indexed to US$ '000 PPP per capita



Source: IBGE (PNAD, Contas Nacionais), OECD (National Accounts), Authors' analysis

Manufacturing is the sector that drives productivity improvement in an economy over all the development phases

Exhibit 3
LABOR PRODUCTIVITY GROWTH BY SECTOR BY PHASE OF ECONOMIC DEVELOPMENT
in % (CAGR)



Source: OECD, World Development Report (WB), Authors' analysis

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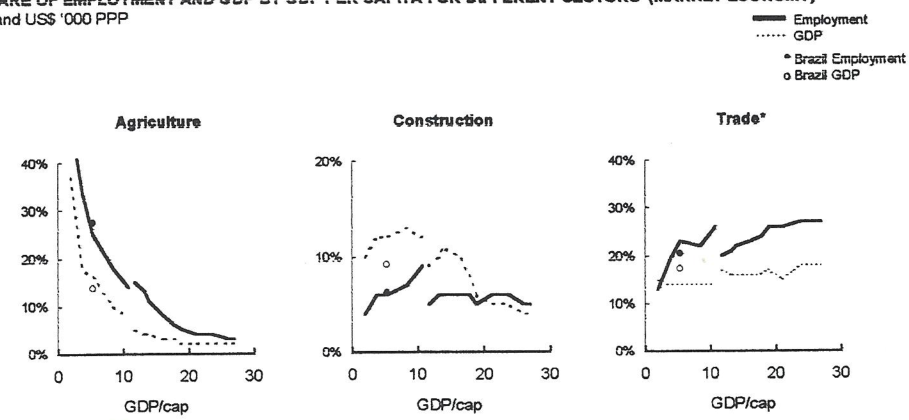
Brazil has an employment structure very similar to Korea at same GDP per capita level

Exhibit 4a
SHARE OF EMPLOYMENT AND GDP BY GDP PER CAPITA FOR DIFFERENT SECTORS (MARKET ECONOMY)
% and US$ '000 PPP



Note: Korea in the ranGe US$ 0-11,000 and U.S. in the range US$ 11,000-27,000

* Korea includes lodging and repair services

Source: IBGE, OECD, World Development Report (WB), Authors' analysis

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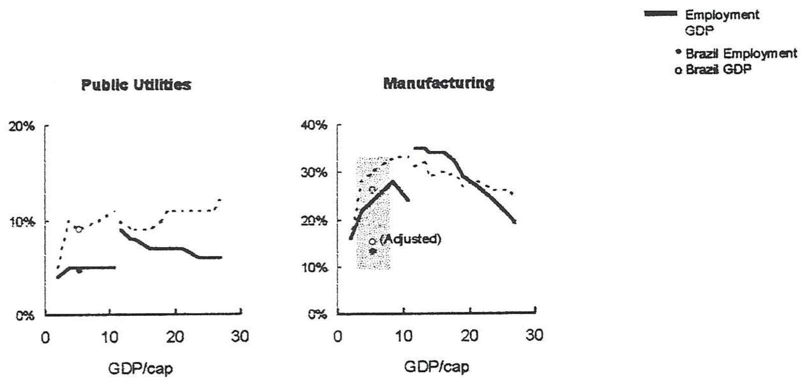
The highest distortion happens in manufacturing: sector in which Brazil is too low

Exhibit 4b

SHARE OF EMPLOYMENT AND GDP BY GDP PER CAPITA FOR DIFFERENT SECTORS (MARKET ECONOMY)

% and US$ '000 PPP



Note: Korea in the rante US$ 0-11,000 and U.S. in the range US$ 11,000-27,000

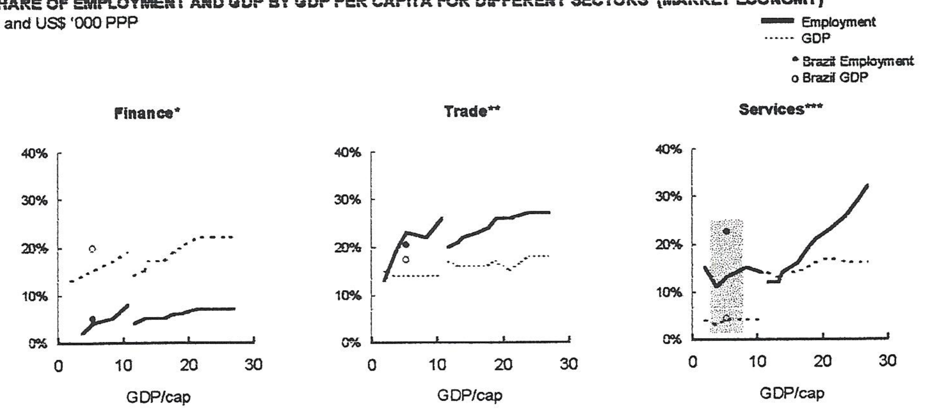
Source: IBGE, OECD, World Development Report (WB), Authors' analysis

The lack of jobs in manufacturing is leaving Brazilian in informal low value service jobs

Exhibit 4c

SHARE OF EMPLOYMENT AND GDP BY GDP PER CAPITA FOR DIFFERENT SECTORS (MARKET ECONOMY)

% and US$ '000 PPP



Note: Korea in the rante US$ 0-11,000 and U.S. in the range US$ 11,000-27,000

* Korea and Brazil inlcude business and legal services

** Korea and Brazil include lodging and repair services

*** U.S. include business, legal, lodging and repair services; Brazil and Korea do not

Source: IBGE, OECD, World Development Report (WB), Authors' analysis

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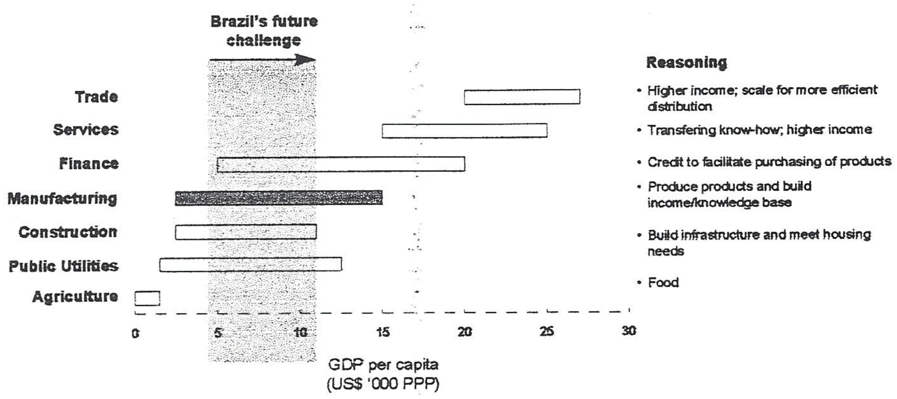
Manufacturing should be playing a critical role at the current stage of economic development that Brazil is facing

Exhibit 4d

ROLE OF THE SECTORS ON EMPLOYMENT AT DIFFERENT STAGES OF ECONOMIC DEVELOPMENT



Note: Korea in the rante US$ 0-11,000 and U.S. in the range US$ 11,000-27,000

Source: IBGE, OECD, World Development Report (WB), Authors' analysis

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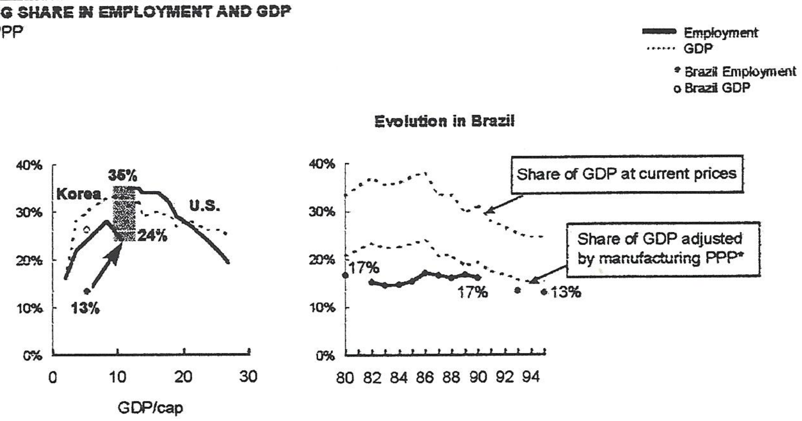
In order to become an industrialized nation Brazil will have to double its share of employment in manufacturing: bring it from 13% into the 24-35% range. The manufacturing share of GDP is also too small once adjusted by manufacturing PPP.

Exhibit 5

MANUFACTURING SHARE IN EMPLOYMENT AND GDP

% and US$ '000 PPP



Note: Korea in the rante US$ 0-11,000 and U.S. in the range US$ 11,000-27,000

* In the composition of overall economy PPP, manufacturing prices are estimated to have a higher ratio when compared to international prices than the remaining sectors of the economy. Here the author used a 60% premium above the overall economy based on average of Andre Hofman 1980 machine and equipment PPP and PWT 1985 investment goods PPP

Source: IBGE, OECD, World Development Report (WB), Penn World Tables (PWT), Andre Hofman's PPPs, Authors' analysis

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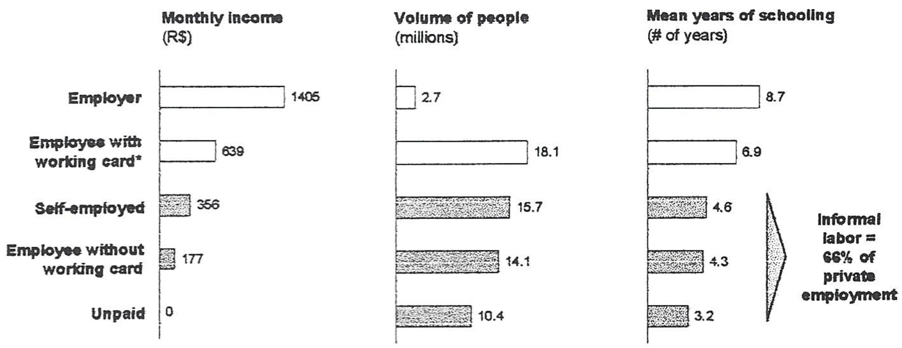
Informal jobs represent 66% of market sector employment, pay the lowest wages and attract the less educated people: it is a safety net

Exhibit 6a

CHARACTERISTICS OF THE BRAZILIAN PRIVATE LABOR FORCE BY EMPLOYMENT STATUS - 1995



* Include 50% benefits on top of wages; does not include public employees

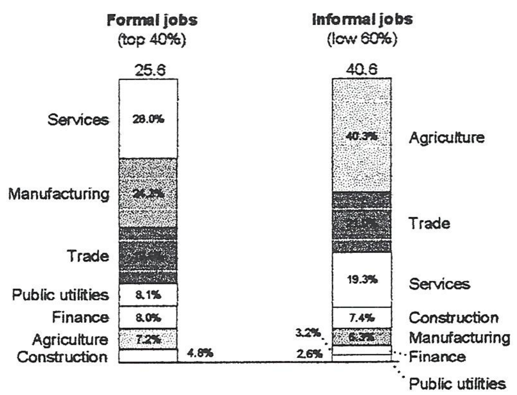
Source: IBGE (PNAD)

Informal jobs are concentrated in Agriculture, Trade and Services. In spite of having only 13% of total employment, manufacturing is of major importance in the creation of formal jobs

Exhibit 6b

FORMAL AND INFORMAL EMPLOYMENT BY SECTOR - 1995

million people and %



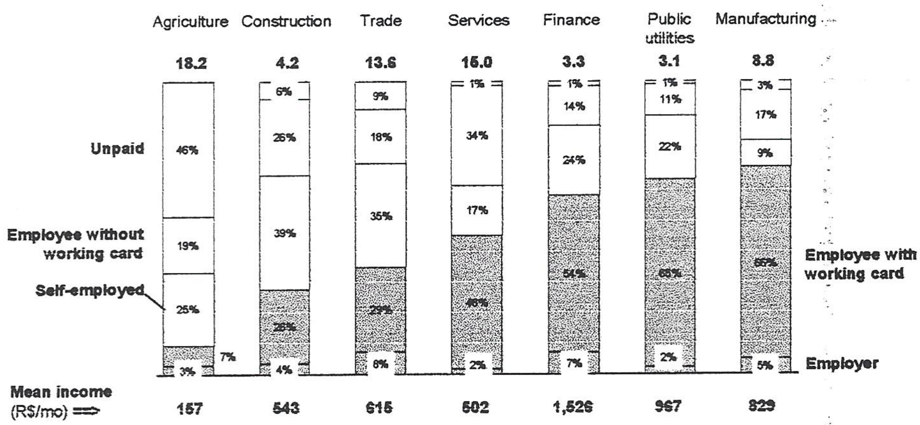
Source: IBGE (PNAD)

Manufacturing is the sector with the highest share of formal employment

Exhibit 8c

EMPLOYMENT BY JOB STATUS BY SECTOR - 1996

million people and %

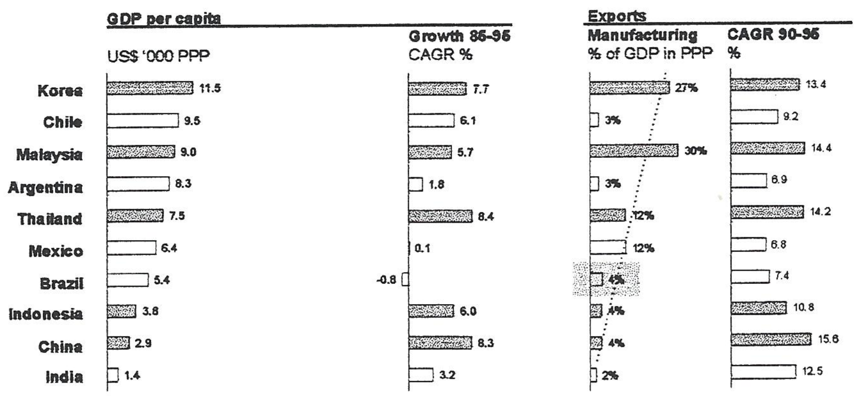


Source: IBGE (PNAD)

Fast track countries increase exports very fast (11-16% per year) and its manufacturing exports as a share of GDP in PPP increase as they grow. Brazil could more than double its manufacturing export at current gdp/cap or multyply it by 6 to 7 times as it moves towards Korea's.

Exhibit 7

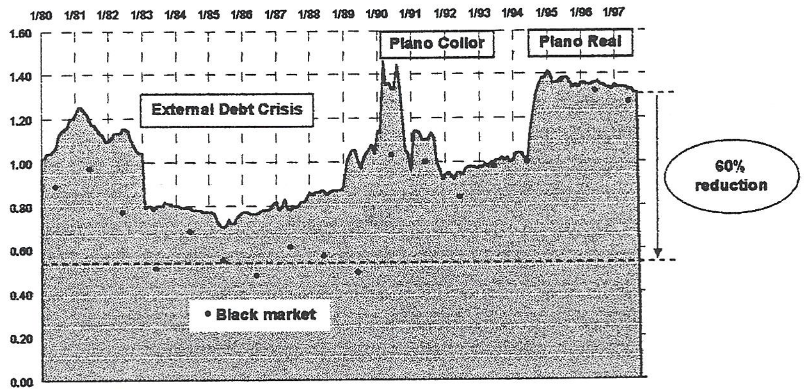
ECONOMIC INDICATORS OF DEVELOPING COUNTRIES



Source: World Development Report (WB), World Competitivenes Report (IMD), Authors' analysis

60% reduction in the effective value of Real would bring Brazil to a level comparable to the black market exchange rate of the 80s, when Brazil was forced to look for exports to help the current account to balance

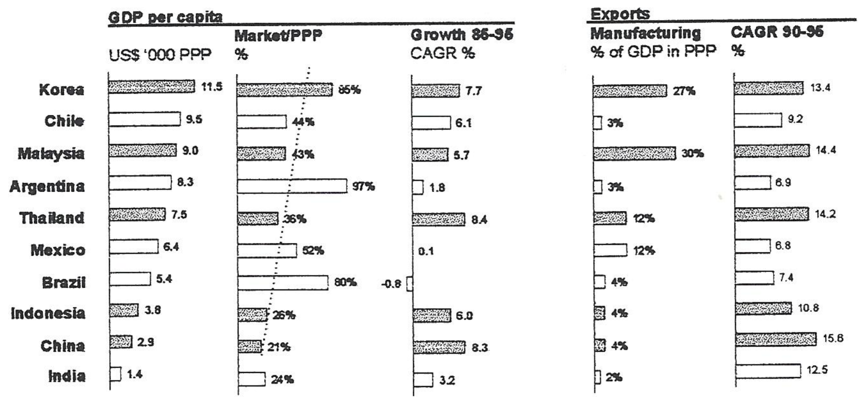
Exhibit 8
EFFECTIVE EXCHANGE RATE: CONSTANT US$ PER CONSTANT R$
Indexed to 12/79



Source: US$ Commercial (BC), Consumer Price Index (US Statistical Abstract); IGP-DI (FGV)

Low currency helps the fast track countries increase exports from manufacturing very fast

Exhibit 9
ECONOMIC INDICATORS OF DEVELOPING COUNTRIES



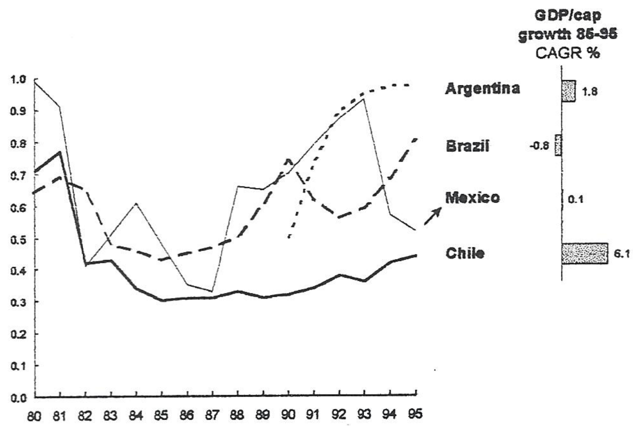
Source: World Development Report (WB), World Competitivenes Report (IMD), Authors' analysis

Chile adjusted its effective exchange rate to the fast track Asian countries level before engaging in sustainable growth. Argentina, Brazil and Mexico showed small growth while having erratic effective exchange rates

Exhibit 9b

EFFECTIVE EXCHANGE RATE: CONSTANT US$ PER CONSTANT LOCAL CURRENCY

Indexed to market exchange rate per PPP

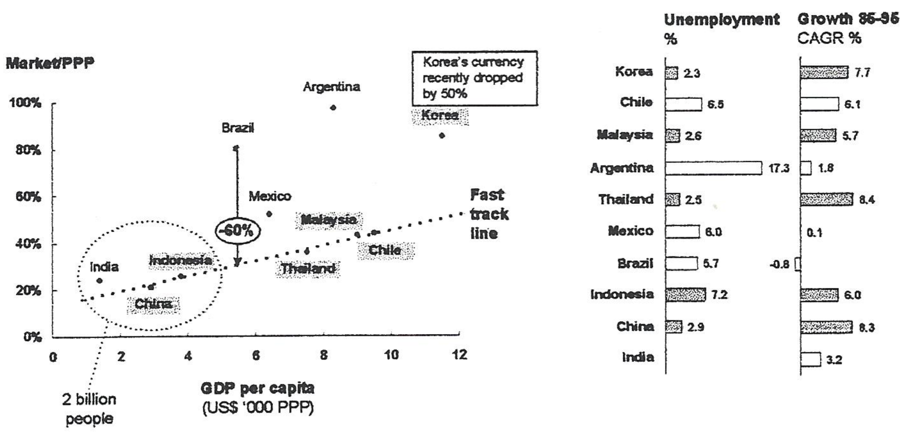


Source: IBGE, IFSY (IMF), Author's analysis

Brazil needs to adjust its exchange rate to a level 60% lower in order to engage in a fast track, full labor utilization growth strategy

Exhibit 10a

EXCHANGE RATE POSITIONING AND ECONOMIC DEVELOPMENT - 1995



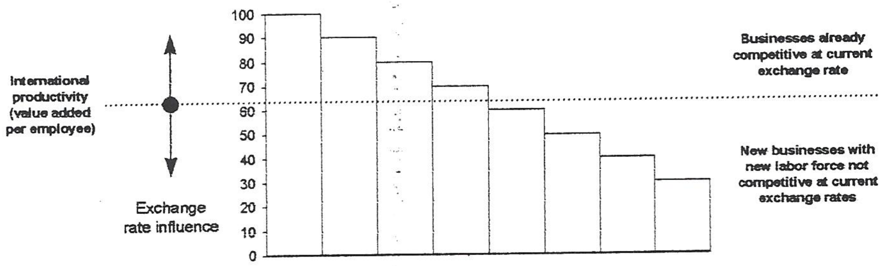
Source: World Development Report (WB), World Competitivenes Report (IMD), Authors' analysis

An adjustment in the exchange rate would make many new businesses viable under Brazilian low productivity conditions. The new labor coming into this new capacity would be at a much lower level than the trained current one.

Exhibit 10b

VALUE ADDED PER EMPLOYEE FOR DIFFERENT BUSINESSES IN BRAZIL *CONCEPTUAL*

Indexed to highest value added business



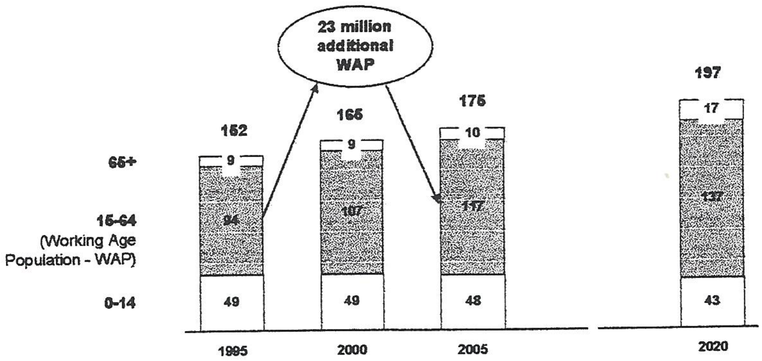
Source: Author

Brazilian demographic dynamics will demand the creation of approximately 17 million new jobs in the economy for the 23 million additional people becoming part of the working age population between 1995 and 2005

Exhibit 11

PROJECTIONS FOR THE BRAZILIAN POPULATION: 1995-2020

million people

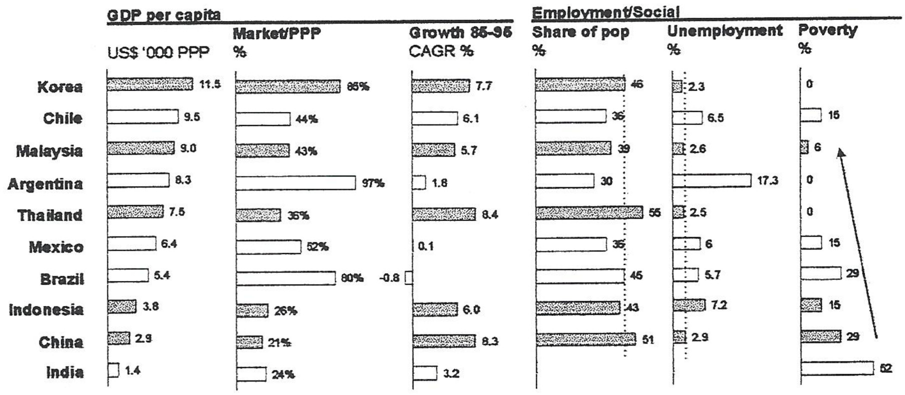


Source: "O Brasil na Virada do Milênio" (IPEA)

Eduardo Giuliani

Fast track countries have high utilization of labor and decreasing poverty as they grow

Exhibit 12a
ECONOMIC AND SOCIAL INDICATORS OF DEVELOPING COUNTRIES

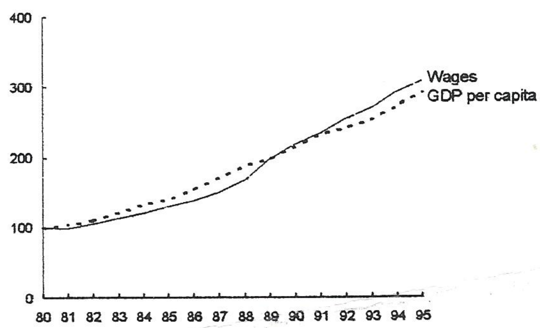


Source: World Development Report (WB), World Competitivenes Report (IMD)

Eduardo Giuliani

In the fast growing East Asian countries wages increase together with GDP per capita giving a good indication that growing with full employment helps income distribution

Exhibit 12b
EVOLUTION OF KOREA'S MONTHLY WAGES AND GDP PER CAPITA
Constant currency indexed to 1990



Source: IFSY (IMF), Author's analysis