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RULES AND OUTCOMES: Brazil in Transition during the 1990s

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I. Introduction

Brazil, like many other countries in Latin America, has radically altered the "rules of the game" that govern its economic and political systems in recent years. After two decades of military rule, democracy was restored in 1985 and a new constitution established in 1988. Then, starting in the early 1990s, Brazil began to restructure its economic system. It began in 1991 with the Mercosul Agreement — the establishment of a free trade zone between Brazil, Argentina, Paraguay, and Uruguay. This was followed by the Real Plan in 1994, which sought to end years of high inflation by introducing a new currency (the *real*) pegged to the U.S. dollar. At the same time, the relationship between the private and public sectors has undergone a fundamental change, complete with privatization of state-owned firms and fiscal reform.

This paper examines these developments and explores the various economic and political forces behind the recent attempts at liberalization. I do so by drawing on two different perspectives. The first is that of a macroeconomist and economic historian; the second, as a participant in the Macalester College Faculty Development International Seminar.[1] The essay looks at the recent policy changes in Brazil by viewing them through the lens of two disparate economic literatures: the "new" institutional economics and modern growth theory. The argument that emerges is straightforward. The institutional structures and rules of the game in society determine the pace of technological

and human capital development and, ultimately, the well-being of its members. When particular rules produce bad outcomes, political pressure is created to change the rules. The objective of this paper is to examine how this process has worked in Brazil.

The paper is organized as follows. The next section discusses, on a general level, the interplay between the rules of the game and economic outcomes. Particular emphasis is given to the role that technological and human capital development play in the process of economic growth and how the rules influence the pace of this development. Section III contrasts the two competing ideological perspectives that shaped policy formation in Brazil in recent decades. Section IV examines two of the most important economic outcomes produced by the "old" rules — namely, high inflation and increasing economic isolation — and explores the role that each played in constraining technological and human capital development. Section V provides an overview of the new rules, and Section VI examines why the path of economic liberalization was chosen. The essay ends with a few concluding remarks.

II. Knowledge, Demography, and Institutions

According to Nobel laureate Douglass North, a leading contributor to the new institutional economics, the interplay of three forces determine how economic systems evolve over time.[2] The first is the *stock of knowledge*, which "determines the human command over nature" and the "potential upper bound of the well-being of the society." The second is *demography*, which includes not only the "fertility, mortality, and migration characteristics and labor-force composition, but also the stock of human capital (derived from the stock of knowledge)." Finally, the *institutional framework* and associated rules of the game shape the incentive structure of society.

Modern growth theory focuses on one particular form of knowledge: technology. Technology is important because it determines the extent to which basic raw materials can be transformed into final goods and services. Advances in technology (or "ideas") include the discovery of new goods (e.g., electricity, plastics, microprocessors, etc.) and methods of production (e.g., the assembly line, just-in-time inventory management, etc.). It is

now widely accepted by economists that advances in technology are largely responsible for the tremendous growth in standard of living experienced by the industrialized world in the twentieth century.[3]

Technology plays such an important role in the creation of wealth because it is largely a *nonrival* good.[4] That is, when one person uses knowledge to produce a good or service, this action does not preclude others from doing so as well. The nonrivalrous feature of technology distinguishes it from other inputs into production (e.g., a piece of capital equipment or labor), which, by their very nature, can be used in only one place at a time. To illustrate, consider the production of computers. The "idea" or "recipe" for making a computer can be used by many different economic units (i.e., IBM, Dell, Compaq, Gateway 2000, etc.) simultaneously, while the use of a particular factory to produce computers by one firm precludes others from using it. The essential implication is that the returns to society from investment in technology, vis-à-vis other factors of production, are enormous. As I argue below, it is the recognition of the crucial role of technology that has driven much of the recent institutional change in Brazil.

Modern growth theory also emphasizes the human capital dimension of demography. Human capital is the set of specialized skills that people acquire from society's stock of knowledge by devoting time to "schooling." Investment in human capital takes place through formal education, such as learning calculus in high school, or on-the-job learning. Unlike technology, human capital is knowledge embedded in people. Thus it is rival in nature. Moreover, society's stock of human capital is subject to entropy over time as people die. Nevertheless, human capital determines the productivity of labor and its ability to create wealth. Finally, economists generally believe that differences in human capital are the main factor that explains wage and unemployment differentials in society.

The institutional framework and associated rules of the game are the final leg of the stool. Institutions and rules are man-made. Examples of important rules that I discuss below in the Brazilian context are (a) the property rights system (who owns what), (b) "openness" of the foreign trade regime (who can

trade with whom), and (c) rules governing money creation (who controls it and what factors constrain them).

Understanding the interplay between knowledge, demography, and institutions is key to understanding how economies and societies evolve over time. For instance, consider the case of technological development. While technology is a largely nonrival good, it is partially *excludable* in many societies in that the creator of a new idea can, for a given amount of time and under certain circumstances, prevent others from using it. This possibility arises, not from the inherent nature of the idea, but from patent and copyright laws that have been put in place by society. These rules are vital because they create incentives for people to produce new ideas (i.e., through research and development) by insuring they receive monopoly rents for their effort.

Rules certainly determine economic and social outcomes, but the causality is not unidirectional. If the outcomes produced by the existing rules are unsatisfactory, political pressure is created to change the rules. Steady state equilibrium is reached only when the outcomes produced by the existing set of rules no longer create pressure for these rules to be changed. As I argue in the remainder of the paper, Brazil is in transition toward a new steady state equilibrium.

III. The Old Rules

The rules of the game in place during any particular period of history reflect, in part, the victory of one ideological perspective over another. In the case of Brazil, two radically different perspectives have competed to set the rules.

The orthodox perspective holds that certain fundamental laws govern all economic systems (i.e., economic agents rationally maximize utility and profit subject to budget constraints, inflation is primarily a monetary phenomenon, etc.) and that the welfare of society is maximized when unfettered markets, rather than governments, determine outcomes. This perspective has emanated from sources largely outside of Brazil — such as the University of Chicago and the International Monetary Fund — but is also popular in certain domestic strongholds such as the Vargas Foundation in Rio de Janerio. One controversial aspect

of this perspective is the suggestion that a particular set of rules are equally applicable to *all* nations. William Barber articulates this point:

> If one presupposes that the truths of economic science are universal and timeless, a "one size fits all" approach to economic policy making readily follows. The particularities of diverse culture, institutional, and historical environments are expunged from this view of the world. It remains an open question whether optimal economic policies can be formulated when these aspects of reality are ignored.[5]

In strict opposition to this view, the heterodox perspective argues that countries should:

> reject "models" premised on the view that economic "laws" had universal validity. They should instead build analytical structures of their own — ones which reflected the particularities of their structural circumstances.[6]

For example, with regard to trade policy, the dependency theory view of the world argues that there exists a "systematic bias in the terms of trade in favor of the rich industrialized countries, at the expense of the poor ones dependent on exporting primary products."[7]

The heterodox perspective dominated policy-making in Brazil until the 1990s and, as a result, the rules of the game reflected this view. In particular, the rules were set to support domestic firms over their foreign competitors through policies of import-substitution and protectionism. On the domestic front, government intervention in the economy was pervasive, with the state ownership of many manufacturing and banking firms. Finally, there were few constraints placed on government spending (e.g., central bank independence) and the monetization of public debt.

IV. Growing Pressure for Rule Changes

This section focuses on two features of the Brazilian economy produced by the old set of rules, namely, high inflation and increasing economic isolation. The objective is to examine how these two outcomes influenced human capital and technological development and, ultimately, set the stage for a change in the rules.

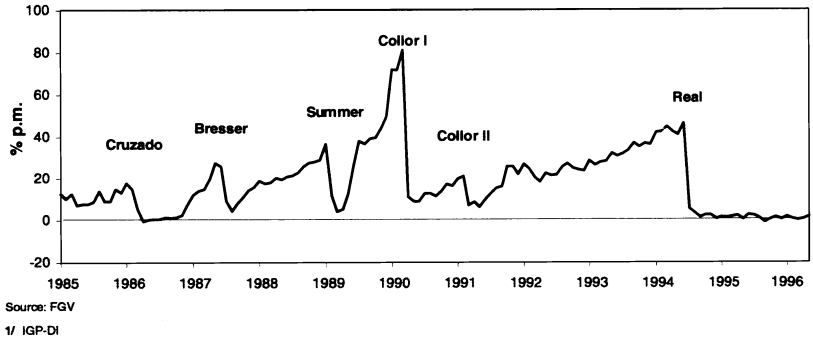
A. Inflation

One of the dominant features of the Brazilian economic landscape over the past two decades has been high inflation. This can be seen in figure 1. Prior to implementation of the Real Plan in 1994, the inflation rate was rising, with each new peak in inflation exceeding the previous one. In some years, inflation rates in excess of 5,000 percent (on an annual basis) were common.

The two competing perspectives discussed above were clearly visible in academic and policy circles during the 1980s, when the causes of Brazilian inflation were debated and solutions proposed.[8] The orthodox (or monetarist) perspective saw inflation as largely the result of excessive increases in money supply due, in part, to lack of control over the government budget. In contrast, the heterodox (or Neo-Structuralist) school argued that

FIGURE 1

Inflation 1/



Source: *Boletim do Banco Central do Brasil*, Volume 32, no. 7, Separata.

characteristics unique to the Brazilian economy led to rising prices, which were then accommodated by monetary expansion. In particular, the Brazilian economy was dominated by large oligopolistic firms (private and state-owned) and strong labor unions. Given this particular structure — a structure foreign to the competitive models used by the orthodox school — inflation was seen as the end product of a "fight-for-shares" struggle between different sectors of the economy that had monopoly power.[9]

During the 1980s, the heterodox view dominated policy-making. Because inflation was thought to be the product of a "coordination problem" and "inertial" in nature, the obvious solution was for the government to impose price and wage controls. Thus prices were frozen as part of the stabilization plans (Cruzado, Bresser, Verao, Collor I and Collor II) undertaken during the 1980s and early 1990s. Although these plans differed in many respects, they shared two common elements. First, they did not work. Second, each was motivated by the heterodox view of inflation and did not seek to radically change the rules of the game that would ultimately come to be seen as the fundamental source of inflation.[10]

What impact did this inflation have on Brazilian society? Did it lead to a slower pace of human capital and technological development? The answers are not as transparent as one might first think. After all, why should people care if it costs 5,000 percent more *cruzados* to buy goods this year than it did last year if, at the same time, wages expressed in *cruzados* have risen by the same percentage?

From a somewhat narrow perspective — one that does not consider the issues raised in Section II — economists have focused on two channels through which high inflation adversely affects the economy. First, savers are less willing to hold long-term assets whose real returns become more uncertain in the face of greater inflation uncertainty. Consequently, the cost of long-term borrowing rises and firms accumulate less capital.[11] Judging by the share of GDP dedicated to investment spending — which fell from around 20 percent in the 1970s to 14–16 percent during the late 1980s — this seems to have been an important channel.

Second, inflation introduces noise into the price system and as the information conveyed by relative prices falls, economic efficiency and long-term growth of the system decrease. The effect of relative price confusion on the economy is difficult to measure. Nevertheless, there is evidence that determination of relative prices was a major problem confronted by Brazilian enterprises during the hyperinflation. For example, one of the main activities of the Vargas Foundation during the hyperinflation was the construction of customized price indexes that firms and agencies used to assess the "true" cost of their inputs. That is, these groups needed to know that when they purchased cement, for example, they were paying the fair market price. In a world with stable prices, there is less need for such information.

From a broader perspective, it is possible that inflation alters the demographic landscape of society by distorting the signals that guide human capital investment. Axel Leijonhufvud explains how this might occur:

> [T]he ability to forecast inflation and to hedge against it when it cannot be forecast with any accuracy becomes more important to the success and survival of firms than efficiency and competitiveness in the production and distribution of goods and services. The rules of the economy's natural selection of individuals for fame and fortune change: finance people are favored over marketing people, lawyers over product designers, accountants over production managers. People, especially ambitious people, will allocate their efforts and ingenuity accordingly.[12]

Do we see these reactions in Brazil? During the inflationary 1980s and early 1990s, banks in Brazil generated a great deal of profit by engaging in the "float"—i.e., issuing demand deposits whose return was not indexed to inflation and using the proceeds to buy short-term indexed government bonds. They did this rather than specialize in the activity that banks normally specialize in: the collection and analysis of information about potential borrowers. Did the development of human capital in the area of credit analysis suffer as a result? This is difficult to answer, but the recent wave of bank failures resulting from bad loans suggests that it may have.

The movement away from traditional activities was not unique to the banking sector. Manufacturing firms spent considerable time and resources engaging in "inventory speculation" during the inflationary period. Thus human capital development was directed toward learning when to buy and sell raw materials rather than how to make and sell a better widget. In addition, one comment you often hear from business people as you travel in Brazil is that "budgets didn't mean much during the inflationary years." This was due to the high level of price and cost unpredictability. With the loss of budgeting as a management tool, managers had less ability to control the various sectors of their organization. This loss of control can be viewed as technological regression.

Leijonhufvud also argues that in addition to skewing incentives for human capital and technological development within the private sector, inflation can lead to the public sector taking on activities that it is not well suited to perform:

> When contracting increasingly fails, political lobbying becomes a substitute strategy for many groups. . . . [M]onetary mismanagement will bring in its wake efforts by all sorts of groups to obtain by public compulsion what private cooperation failed to achieve. Legislatures will be swamped by demands to control this price or that rent, to regulate his or her way of doing business, to tax X and subsidize Y.[13]

That is, there is increasing political pressure for governments to intervene in markets when inflation is high and price increases are not synchronized (e.g., interest payments rise faster than output prices, or apartment rents rise faster than wages).

Do we see this effect in Brazil? Clearly, we do. Brazil has a complex system of administered "minimum wages" that are set to protect workers from market forces that are exacerbated when all prices do not move together. Moreover, "indexation" is imposed on markets to make up for the lack of synchronization between price and wage movements. We also see this when the government bails out firms and banks whose price rises do not keep up with cost increases.

Finally, one cannot travel through Brazil without being struck by the income inequality. The contrast between the rich and the

poor has led some observers to describe Brazil as "Belgium in India." It can be argued that this disparity contributes to the social tension one observes in Brazil (e.g., pervasive pickpocketing, high murder rates, and repressive police forces). Moreover, the inequality retards human capital development (e.g., what skills are being developed by the hoards of gatekeepers that populate the wealthier sections of Brazilian cities?).

Did the high inflation of the 1980s contribute to income inequality in Brazil? According to the Central Bank of Brazil it did. The reason is that the poor segments of society did not have access to the mechanisms to protect the purchasing power of their income that the wealthier segments had. These mechanisms include the holding of dollars rather than *cruzados* (or holding indexed *cruzado* deposits) during the period between receipt of income and payment of expenses. Instead, the poor were forced to hold *cruzado* currency, which could lose 80 percent of its value over the course of a month.

According to Leijonhufvud, high inflation and its effects cause governments to become less efficient in "carrying out their proper business." In the end,

> The political system thus loses legitimacy, and a generation of politicians will come to face the public demand for new constitutional constraints on government—constraints not imposed on a previous generation of legislators.[14]

Clearly, we see evidence of this dynamic process between inflation and political implosion in Brazil. It cannot simply be a coincidence that major constitutional changes began to take place in Brazil beginning in 1988 after several years of sustained inflation.

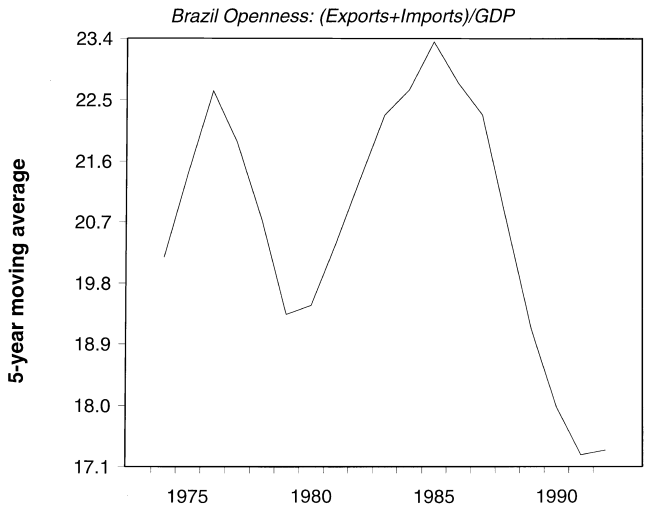
B. Economic Isolation

Brazil has pursued the inward-directed policies of import-substitution and protectionism for decades. As discussed in section III, these policies were, in part, a response to the dependency theory view that Brazilian firms were at a competitive disadvantage vis-à-vis their foreign counterparts and thus needed tariff and quota protection.

At the same time that the Brazilian government was protecting domestic firms from foreign competition, government-imposed trade barriers in other countries fell dramatically as a result of major changes in the rules of the game that govern world trade. These include the creation of regional trading blocs —i.e., the North American Free Trade Agreement (NAFTA) and the European Union (EU)—and an increase in the liberalization of global trade as a result of the General Agreement on Tariffs and Trade (GATT). These changes in world trading rules have occurred largely outside the control of the Brazilian people. Nevertheless, they have had a profound impact on Brazil.

One impact was that the Brazilian economy actually became less "open" to trade with the rest of the world by the early 1990s. This is seen by looking at the ratio of imports plus exports to GDP for Brazil. A five-year moving-average of this ratio is illustrated in figure 2.[15] It clearly shows that the Brazilian economy has become less open in recent years. Moreover, during the same time period many other countries have become dramatically more open. For example, the openness ratio for the United States has more than doubled since the early 1970s. Thus the isolation of the Brazilian economy is even more apparent when examined in relative terms. One implication of this increasing

FIGURE 2



Source: The Penn World Tables

relative closeness is that Brazil's share of world exports fell from 1.9 percent in 1984 to 0.9 percent in 1994.[16]

What impact has reduced trade had on Brazil? Has it affected technological and human capital development? Consider the case of TV programming, which has been a common target of trade barriers. Dependency theory views quotas on the importation of TV programs as a positive development; imported programs displace Brazilian-produced shows and Brazilian workers. If the imported program in question is MTV, then protectionism has even more value because it allows Brazil to avoid "cultural colonization."

In contrast, modern growth theory sees these barriers as being adverse to the long-run health of Brazil. It is true that these imports displace Brazilian-produced shows and Brazilians working in this sector. On the other hand, Brazilian currency earned by Americans in this transaction must ultimately be spent in Brazil. Thus unemployed Brazilian TV workers will experience a rise in the demand for their labor in other sectors of the economy. But this point — which is the standard one made about the gains from trade associated with comparative advantage — is not the key issue here. If one believes that ideas and knowledge are the principal sources of economic and social progress, then the importation of TV programs provides additional benefits beyond those associated with comparative advantage. These benefits may not be clear if the program in question is MTV. However, Brazil's access to the world's stock of knowledge is certainly enhanced by the importation of C-Span, CNN, or TLC (The Learning Channel).[17]

V. The New Rules

As Leijonhufvud's analysis suggests, adverse economic outcomes such as hyperinflation and increasing economic isolation create social chaos and cause the political system to lose legitimacy. The loss of legitimacy, in turn, generates popular support for new constitutional constraints on governments. This dynamic is evident in Brazil and is responsible for many of its recent policy changes.

In the economic realm, three major thrusts of reform have been initiated. First, Brazil has begun to change the rules of the

game that govern international trade. In 1991, Brazil formed a common market with three of its neighbors: Argentina, Paraguay, and Uruguay. During the first phase of the Mercosul agreement, tariffs were cut dramatically among its members. Currently, most trade inside Mercosul is tariff-free, and by the year 2000, all internal tariffs will be cut to zero. The agreement also calls for the formation of a "customs union," whereby members of the group apply a common external tariff to imports of nonmember countries. Finally, the member countries agreed in 1995 to a five-year plan to establish a "free trade" area. Such a plan will standardize trade-related rules and harmonize broader economic policies across the member nations.

The second thrust of reform has been on the monetary front. In July of 1994, Brazil initiated the "Real Plan." The mastermind of the plan was President Fernando Henrique Cardoso, who was minister of finance when the plan was conceived. The plan consists of several purely monetary measures intended to end high inflation. First, the battered *cruzado*, which had lost much of its value during the recent inflationary years, was replaced by a new currency, the *real*. More important, the new currency was pegged to the U.S. dollar. This rule change has provided a "nominal anchor" on monetary policy in Brazil. In essence, it ties the hands of the Central Bank and forces it to expand the money supply at a rate similar to that of the United States.

In contrast to its predecessors, the Real Plan explicitly recognized that the primary source of inflation was the political structure, which permitted and promoted excessive money creation. This point is emphasized by the Central Bank of Brazil:

> The worsening of Brazilian inflation in the early 1980s generated a series of economic stabilization plans. The programs introduced prior to the Real Plan were generally based on high levels of intervention in the economy, in the form of price freezes or cutbacks in liquidity levels, while the fundamental question of structural reform was relegated to a position of lesser importance.… The Real Plan was targeted at the fundamental causes of inflation, particularly public sector financial equilibrium.[18]

The recent experience of Banespa, the São Paulo state development bank, helps to illustrate the nature of the problem.[19] In

the election year of 1990, the governor of the state of São Paulo, Mario Covas, borrowed $600 million from Banespa to finance "development projects" in the state. Four years earlier, Covas's predecessor had taken out a $350 million loan for similar purposes. Both loans were guaranteed by future São Paulo state tax revenues. However, neither loan was repaid or serviced and, as of late 1996, the state of São Paulo was in arrears to the tune of $19 billion to Banespa.[20] In the past, such debts would be absorbed or "socialized" by the federal government and ultimately paid for by printing new money. It is this "monetization" of government deficits that, according to the orthodox view, caused the high inflation of the late 1980s and early 1990s.[21] In effect, the inflation problem was largely a political problem in that incumbent politicians used the money supply to further their narrow political ends.

Another source of the inflation problem has been the public-sector pension system. According to *The Economist*, it "represents the largest single threat to Brazil's fiscal health, and thus to the sustainability of Mr. Cardoso's hitherto successful efforts to kill chronic inflation."[22] The system breaks almost every known rule of financial prudence. There is no minimum age requirement (e.g., 80 percent of state government workers in the state of Paraná retire before the age of 56, 44 percent before 46). It allows retired people to draw more than one pension and, in some cases, retire with higher incomes than when they were working. People can continue to work full time while receiving a full pension.

In contrast to previous reform efforts, the current one recognizes the crucial role that these features of the system have played in the production of inflation. As a result, the Real Plan has been accompanied by a third thrust of reform, one aimed at changing the rules of the game that promote excessive money creation. In many ways, this change reflects a victory of the orthodox perspective over that of the heterodox and has produced pressure for change on several fronts.

First, efforts have been made to reduce government deficits and to sever the link between politics and money creation. For example, the Immediate Action Program (PAI), announced in June 1993, sought to reduce the size of the federal budget, reduce tax evasion, and encourage repayment of state and

municipal debt to federal banks. Second, efforts have been made at reform of the pension system. Recent proposals would set a minimum age requirement, require minimum contributions, limit pension incomes to the average of the past five years' salary, and restrict retirees to one public-sector pension. Finally, the National Privatization Program (PND) has begun to scale back state participation in the productive sector of the economy by the sale of state enterprises.[23] In addition to reducing the government's deficit by providing a one-time source of revenue, the privatization program was intended to raise efficiency by increasing competitiveness. Moreover, by alleviating the government of duties better carried out by the private sector, it is hoped that the government will be in a better position to undertake "traditional socially-oriented functions" and "other tasks typical of government."[24]

VI. Why Liberalize?

Why has Brazil decided to go down this path? Why has Brazil chosen to liberalize after decades of the inward-directed policies of import-substitution and protectionism, state ownership of firms, and inflationary monetary policy?

Part of the answer to this question is obvious. A consensus has emerged that the old rules were not producing rising living standards for a majority of Brazilians and the recent push for reform simply reflects the feedback loop running from outcomes to rules. This is the type of response one would expect in a democracy.

Moreover, the three different thrusts of reform discussed above are not mutually exclusive attempts to improve the lot of the average Brazilian. Rather, they reinforce one another with each being fundamentally necessary for the success of the other. That is, an environment of low inflation is necessary for the promotion of trade because high inflation imposes risk on foreign investors and creates balance-of-payments problems. On the other hand, trade liberalization helps to keep a lid on inflation by exposing domestic firms to greater competition.[25] Also, as stressed above, the fiscal and political reforms are necessary for creating an environment of low inflation that is conducive to international trade.

Yet this analysis still does not address the fundamental question: Why has Brazil chosen to adopt the liberal economic order? For *The Economist*, a decidedly free-market British weekly, the answer is clear.[26] There has been growing recognition that decades of import-substitution policies have left Brazilian firms ill-equipped to compete with foreign firms. Greater exposure to competition within Mercosul will thus prepare Brazil's inefficient oligopolistic firms for worldwide competition in the coming years. Moreover, Mercosul acts like a magnet attracting foreign direct investment to Brazil. Thus the primary virtue of liberalization is that it stimulates technological and human capital development. It does this by exposing domestic firms and workers to foreign competition: they either improve or suffer the consequences. However, while greater openness threatens survival by raising competition, it also facilitates survival and growth by enabling domestic firms to better access the world's growing stock of knowledge.

To illustrate this point, consider what has happened to the Brazilian automobile industry. Over the past several years, U.S. and European auto producers have been rushing into Brazil to take advantage of the rising demand for consumer durables produced by Mercosul-induced economic growth. One outcome of this process is that many Brazilian auto factories, loaded with new technology, are equal or superior to those in the United States in terms of productivity.[27] Clearly, GM, Ford, Fiat, Volkswagen, and other foreign firms benefit from these investments, but it is not a zero-sum game. Brazilians also benefit by learning innovative technologies and management techniques ("learning by doing") practiced around the world, not to mention the income that is earned by Brazilian firms that engage in joint ventures with foreign firms.

For those who wish to dismiss this explanation on the basis of its sources, consider the comments of Fernando Henrique Cardoso—ex-Marxist academic and one of the early contributors to the dependency theory literature. Cardoso argues that one of the two great trends of the modern world is the globalization of the world economy. The second is the "marriage of science, technology, and freedom." For Cardoso, freedom promotes technological development, and technological development promotes freedom:

> This "marriage" made it possible for the great technological revolutions (from nuclear energy and the laser beam, to biotechnology, to computers, microelectronics, and robotics) to go beyond the factory walls and affect the organization of society[;]…it revolutionizes the organization of the factory and of management; it reaches the public sector, the schools, the churches, the unions, and eventually, everything—not only through the new methods of management it permits, but also through the establishment of great mass-communication networks.[28]

Cardoso continues:

> [T]he other pillar of socialism — the theory of exploitation (of classes and of nations) — has been shaken by an earthquake of magnitude 8 on the Richter scale: the technological-scientific revolution has greatly reduced the mass of the exploited who are necessary for the health of the capitalist system both at home and among nations.[29]

According to Cardoso, nations like Brazil must thus make a choice:

> [E]ither the South (or a portion of it) enters the democratic-technological-scientific race, invests heavily in R&D [research and development], and endures the "information economy" metamorphosis, or it becomes unimportant, unexploited, and unexploitable.... A future with dignity for the countries of the South will be achieved only with more education, a better state, enhanced productivity from its "human capital," and a great technological leap forward (information technology, new materials, environmental sense, and new modes of organization). Also required are a democratized society and state.[30]

Cardoso, a powerful force in the recent institutional change in Brazil, recognizes that technological and human capital development are key to economic and social progress. Certainly, he is no great admirer of laissez-faire economics.[31] Yet he appreciates the fact that certain liberal economic rules — free trade in the global sphere and private enterprise and macroeconomic stability in the domestic realm — are the best mechanisms for achieving these ends.

VII. Conclusion

This paper is an expression of my attempt to make sense of the monumental policy changes that have recently taken place in Brazil. At one level, this is a very presumptuous endeavor, doomed to failure by omission. After all, I have spent relatively little time in Brazil and am by no means an expert on sociological and political theory. At another level, however, there certainly is value in approaching a subject of study without strong prior beliefs and a vested interest in the outcome. Moreover, I believe that viewing Brazil through the lens of modern growth theory and the new institutional economics helps us to better understand the forces behind the recent changes.

I conclude the paper by considering one final idea. The radical Brazilian educator Paulo Freire, who died a few weeks prior to our arrival in Brazil, stressed the importance of human capital in improving the plight of the poor. In teaching literacy, he wanted to instill in his students not just the ability to read, but what he referred to as "a critical comprehension of reality." For example, he argued that[32]

> We want to create schools where questioning is not a sin. It's not sin to make a critical study of Brazil's reality. A small percentage own land. Most people don't.

Freire's words are important because they remind us that rules of the game, such as property rights for land, are not set in stone and immutable through time. Rather, rules can be changed by those who are affected by them. Moreover, a precondition for the establishment of a fair and just set of rules is that all members of society are able to participate in their construction and have access to the human capital necessary to make this participation a fruitful one.

Notes

1. I traveled to the cities of Campinas, São Paulo, Rio de Janerio, Brasília, and Salvador during my three-week stay and spoke with economists at the Central Bank of Brazil, the Vargas Foundation, and the Universities of Campinas and São Paulo, as well as numerous business people. I am very grateful to all of these people for taking time to meet and share their impressions of Brazil with me.

2. See Douglass North, "Cliometrics — 40 Years Later" in *American Economic Association Papers and Proceedings* 87, no. 2 (May 1997): 412–14.

3. Robert M. Solow was the first person to quantify the importance of technology. See his "Technical Change and the Aggregate Production Function" in *Review of Economics and Statistics* 39 (August 1957): 312–20.

4. For an excellent discussion of these issues, see Paul Romer, "Endogenous Technological Change" in *Journal of Political Economy* 98, no. 5 (1990): S71–S102; and Gene M. Grossman and Elhanan Helpman, *Innovation and Growth in the Global Economy* (Cambridge, Mass.: MIT Press, 1993).

5. William J. Barber, "Chile con Chicago: A Review Essay" in *Journal of Economic Literature* 33, no. 4 (December 1995): 1948.

6. Ibid., 1942.

7. Ibid.

8. For a detailed discussion of this debate, see Werner Baer, *The Brazilian Economy: Growth and Development*, 4th ed. (Westport, Conn.: Praeger Publishers, 1995).

9. That is, firms raised prices, which caused workers' real wages to fall. Declining real wages then provoked unions to demand higher nominal wages, which induced firms to raise prices further, and so on.

10. This is not to suggest that the orthodox view had no impact policy. The government did undertake several measures to deal with fiscal imbalances (e.g., tax reform was implemented to improve revenue collections and the government unified its budget to improve monitoring). However, these plans did not incorporate widescale tax and spending reform, and the influence of the orthodox view on policy was generally muted.

11. This problem can be partially alleviated by the issuance of indexed bonds, a solution that has been used in Brazil and other high-inflation countries, but indexation produces problems of its own, i.e., it wastes resources and makes inflation more inertial.

12. Axel Leijonhufvud, "Constitutional Constraints on the Monetary Powers of Government," in *Constitutional Economics*, ed. Richard B. McKenzie (Lexington, Mass.: Lexington Books, 1986), 98.

13. Ibid., 99.

14. Ibid.

15. Data are from Robert Summers and Alan Heston, "Penn World Tables, Version 5.5," The National Bureau of Economic Research (Cambridge, Mass., 1993).

16. See *The Economist*, 30 November 1996, 10.

17. In recent years, TLC has become a common fixture on TVs in Brazilian airports.

18. "The Brazilian Economy in the Wake of the Real Plan" in *Boletim do Banco Central do Brasil* 32, no. 7 (July 1996): 92–93.

19. *The Economist*, 30 November 1996, 78.

20. Ibid. According to *The Economist*, these bad debts have created "the biggest bank bust in world history."

21. For those familiar with recent U.S. economic history, this story may sound familiar. During the 1980s, many U.S. Savings and Loan banks became insolvent and had to be bailed out by the federal government. However, in contrast to the case of Brazil, the socialization of these losses took place through increased borrowing in the short term and, ultimately, tax and spending adjustment rather than through inflationary finance. The "independence" of the Federal Reserve is an important rule that helps to separate the political and money creation processes in the United States.

22. *The Economist*, 7 June 1997, 32–33.

23. Brazil has lagged behind the rest of Latin America in this effort. Nevertheless, as of April 1997 it has sold off fifty-five different companies worth a total of $15 billion. See *The Economist*, 26 April 1977, 57–59.

24. "The Brazilian Economy in the Wake of the Real Plan," 92.

25. In response to rising prices of oligopolistic firms, the Brazilian government reduced import tariffs on approximately 5,000 products in September 1994. See "The Brazilian Economy in the Wake of the Real Plan," July 1996.

26. *The Economist*, 12 October 1996.

27. Keith Bradsher, "In South America, Auto Makers See One Big Showroom," *New York Times*, 25 April 1997.

28. Fernando Henrique Cardoso, "North-South Relations in the Present Context: A New Dependency?" in *The New Global Econmy in the Information Age: Reflections on Our Changing World*, ed. Martin Carnoy et al. (University Park: Pennsylvania University Press, 1993), 154.

29. Ibid., 152.

30. Ibid., 156–57.

31. For example, he argues that "The 'invisible hand' . . . is not perfection, it exacerbates and accumulates injustices." Ibid., 151.

32. Quote from Freire's obituary, *New York Times*, 6 May 1997.

BRAZIL BETWEEN MIRRORS

Galo F. González

I. Traveler Poet

It is not in vain that Roger Bastide, a French sociologist quoted by Brazilian scholars Maria Lucia Caira Gitahy and Francisco Foot Hardman, utilizes the concept of a "traveler poet" when encountered with that extraordinarily vast and hybrid nation named Brazil. Although Bastide directed his remarks mainly to sociologists, his concept could also be applied to any field and anyone who encounters Brazil for the first time. Bastide stated: "The sociologist who wants to understand Brazil not rarely needs to become a poet."[1] Along these lines, Professors Gitahy and Hardman suggest that becoming a "traveler poet" may be a requirement to better comprehend Brazil today.

> In order to gain a comprehensive, accurate, and up-to-date understanding of Brazil today, the travelers need to become poets. For it is only with a poet's eyes that we are able to reconcile such drastically different situations and experiences, from the lyric to the epic, from the tragicomic to the dramatic.[2]

In reflecting upon my encounter with Brazil, I find myself agreeing with these scholars' opinions and perceptions. In fact, I even wrote a poem in which I expressed what my eyes have seen and my senses have felt.

Inspired by the enchanting Brazilian landscape and its people, the poem, reproduced below, was written during a bus trip between São Paolo and Rio de Janeiro. I must emphasize that this is a very personal reflection and encounter with Brazil. Be