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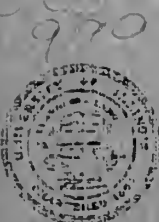
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Expansion of the Economic Frontier:
Paraguayan Growth in the 1970's

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FACULTY WORKING PAPER NO. 999

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December 1983

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Paraguayan Growth in the 1970's

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Acknowledgment: This paper was written during the authors' stay at the Centro Paraguayo de Estudios Sociologicos. We wish to thank the director, Domingo Rivarola, and the associate director, Graziella Corvalan, for their encouragements and help.

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ABSTRACT

The rapid growth of the Paraguayan economy over the last decade is analyzed in terms of the expansion of agricultural production and an increase in construction activity. Construction of the Itaipu Dam, the world's largest hydroelectric project, has provided employment and spurred private construction. A government colonization program and spontaneous Brazilian immigration has brought new land into production. Favorable international prices for Paraguayan exports and funds from the Itaipu project swelled foreign reserves and served to maintain the Paraguayan currency at an already overvalued rate. The paper argues that the overvaluation, combined with extensive smuggling, undermined incentives for investment in manufacturing and deprived the government of revenues needed to finance infrastructure for sustained economic growth and development.

EXPANSION OF THE ECONOMIC FRONTIER:
Paraguayan Growth in the 1970's*

by

Werner Baer and Melissa H. Birch
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Introduction

Rapid economic growth of small Less Developed Countries (LDC's) can be achieved most easily by outward-oriented strategies. The main reason for this is the small market, which makes an import-substitution growth strategy not economically feasible. The outward-oriented models, in turn, can take various forms. If the country is richly endowed with one or more primary products, for which there is a growing world demand, emphasis on growth based on the exportation of these products will result in a classic primary export economy, which is subject to economic cycles emanating from the customer countries. Another strategy, especially of small overpopulated countries (like Hong Kong, Singapore, Puerto Rico) is to attract foreign firms to import semi-finished goods in order to add labor-intensive value and re-export, and/or to have local entrepreneurs engage in such activities. Such a strategy also subjects the economy to the vicissitudes of outside economic cycles, but it may have the advantage of diversifying the economy's structure and increasing the country's human resource endowment. A third strategy is to join other countries of the same geographical region in a common market, which would enable the small country to participate in a regional import-substitution program. Such a strategy requires common market partners who would also be unable to follow import-substitution by themselves.¹

Paraguay does not totally fit into these categories. It is a small country, especially population-wise (3.5 million inhabitants

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in 1983). Although it has a large land base (406,752 km²) relative to its population, much of the land is unsuitable for agriculture, given present technology, and is without known mineral wealth. The gigantic neighbors, Argentina and Brazil, followed their own import-substitution program, thus making an effective common market virtually impossible. Finally, given the country's physical isolation and difficult transportation condition, and its small and relatively unskilled population, there was little attraction for foreign firms to use the country as a value added base for imported semi-finished products which would be subsequently reexported.

In spite of these obstacles, Paraguay experienced rapid growth in the 1970's. This was based on a combination of special circumstances, derived mainly from the country's proximity to two of Latin America's largest, most dynamic, and also most unstable economies. It is our purpose to examine and interpret Paraguay's growth performance in order to gain new insights into the possibilities and limits for small country growth and development.

Brief Historical Background

Landlocked and without reasonable amounts of gold or other precious metals, Paraguay was of little interest to the Spanish crown after its discovery in the mid-sixteenth century. Geographically removed from Buenos Aires and left alone to settle the northern portion of the Rio de la Plata basin, the conquistadores turned to agriculture to guarantee their subsistence and made use of local Indian labor to clear the land and plant crops. The rural lifestyle that developed resulted in a high level of cross-cultural interaction that gave way in succeeding years to a quite homogeneous, bilingual mestizo population.²

Paraguayan independence was accomplished in 1811 with relatively little bloodshed and the country entered into a 40-year period of near autarky under its first president, Gaspar R. de Francia, who severed relations with nearly all foreign countries and concentrated

on developing local resources and small artisan workshops.³ The two Lopez administrations that followed protected the national base in the agricultural sector, while opening Paraguay to foreign investment, especially in basic infrastructure.⁴ This sixty-year period of economic growth was brought to an end by the devastating war of the Triple Alliance which left Paraguay's economy and society in ruins. In order to pay the war debt Paraguay saw itself forced to sell government-owned lands to foreign investors, who exploited forest and agricultural resources.⁵ Argentine interests came to dominate the political, economic and cultural life of the country, a situation that continued well into the 20th century.

With the onset of the Chaco War against Bolivia (1932-35), Paraguay was again forced to divert resources from productive uses. While physical infrastructure was left intact, the war was costly in human and political terms. Political turmoil, reflecting in great part differing views on the handling of economic affairs, continued until 1954, when General Alfredo Stroessner came to power by a military coup.⁶

With the aid of an IMF mission in the late 1950's, the government was able to bring inflation under control and to stabilize the currency (the Guarani) at an exchange rate pegged to the U.S. dollar (126 Guaranis to the dollar). Foreign aid was ample and basic physical infrastructure was gradually expanded.

The Economy in the Early Sixties

Examining Paraguay in the early sixties, one finds an open, agriculture-oriented economy, with a low per capita income (US\$ 168 in 1962 at current prices). In 1960 agriculture accounted for almost 39 percent of GDP⁷ and 55 percent of the economically active population. Besides producing subsistence goods, the sector was the major foreign exchange earner; wood, livestock and quebracho extract (tanin) accounted for more than 60 percent of export receipts. Industry contributed 17.3 percent to the GDP, employing 15 percent of the work force, and over 75 percent of its value added originated in agro-industries. Of the less than 6,000 establishments in 1963, 85

percent were individually owned, 63 percent had between 2 and 4 employees, and close to 70 percent had no mechanical power.⁸ The openness of Paraguay's economy is shown by its trade/GDP ratio: exports of goods and services amounted to 12.6 percent and imports to 14.7 percent in 1962. Imports in the early sixties consisted of manufactured goods, wheat and fuel, and originated mainly from the country's major trading partners - Argentina, the United States and the EEC.

With savings and investments hovering around 12 to 13 percent of GDP, the average growth rate of real GDP in the sixties was 4.2 percent per year, while population was growing at an annual rate of 2.5 percent.- After the financial chaos of the 1947-54 period, when the average annual inflation rate was 50 percent, stability was restored and in the sixties the country experienced price stability (the cost of living rising at an average of 2 percent per year) and total exchange rate stability, as the country stuck to the same pegged exchange of 126 Guaranis to the dollar.

Three Determinants of Paraguay's Economic Performance in the 1970's

The 1970's were characterized by a substantial upsurge in the economy's growth rate, averaging 8 percent per year. The driving force behind this growth came from two sectors - agriculture and construction. The former was the result of the expansion of the agricultural frontier and the latter of the surge of construction on various infrastructure projects, culminating in the building of Itaipu (jointly with Brazil), the world's largest hydroelectric project. These two leading sectors had a unique impact on the nature of the economy's growth, while the exchange rate policy pursued also affected the pattern of the allocation of incremental resources in a significant way. To fully understand the nature of Paraguay's growth in the 1970's, it is important to analyze in greater detail the three relevant policy areas: agricultural colonization, the construction of hydroelectric capacity, and exchange rate policies.

1. Expansion of the Agricultural Frontier

Prior to the 1960's Paraguay's population and economic activities were located in the capital city and its surroundings. In 1950 more than 60 percent of the population could be found in Asuncion and within a radius of about 100 miles.⁹ Rural activity in this area was characterized by a minifundio structure, i.e. an abundance of tiny, family-owned plots. For instance, in 1962 Cordillera, one of the minifundia departments, had a population density of 38 persons per km², while the national average was 4.5. Attempts to expand agricultural output by resettling farmers to the vast areas of unutilized lands date back to the 1870's.¹⁰ It was not until the early 1960's, however, with the founding of the IBR (Instituto de Bienestar Rural - Rural Welfare Institute) (1963) and the opening of the highway linking Asuncion to Brazil, that any serious progress was made to decongest the traditional minifundia area. The IBR is an autonomous government agency charged with carrying out the government land settlement program.¹¹ Between 1963 and 1973 42,000 families were resettled by that institute; of these 30 percent were relocated to the Eastern frontier region. By the end of 1976 almost 90,000 land titles had been issued, covering about 4 million hectares of land. However, the ability of colonists to effectively exploit their new properties was hampered by the lack of adequate infrastructure, roads, credit and technical assistance.¹²

In the 1970's Paraguay's colonists were joined by large numbers of Brazilian and Japanese farmers, who came to the area in response to a number of economic stimuli: low land prices, high world soybean and cotton prices, low taxes and favorable treatment of agricultural exports. The Japanese colonists were supported by assistance from the Japanese government. Brazil's colonists were able to take advantage of prior agricultural experience and superior access to credit.¹³ These spontaneous colonization activities came to overwhelm IBR-directed programs.

The frontier lands were mainly used to produce export crops, especially cotton and soybeans. In the period 1972-9 soybean output

increased by 350 percent and cotton by 470 percent, while domestic crops grew by only 23 percent. In 1972 cotton represented 6.4 percent of the value of Paraguay's crop output, while in 1979 it had grown to 16.4 percent; soybeans' share increased from 8.2 percent to 17 percent in the same period.¹⁴ In contrast, the output of mandioca (cassava), one of Paraguay's major domestic staples, in 1979 was 25 percent smaller than in 1970 and its share of output in Paraguay's crop production fell from 22.6 percent to 14 percent. It will also be noted in Table 3 that the share of cotton in total exports rose from 1.1 percent in 1960 to 43.7 percent in 1981 and soybeans from zero to 16.1 percent.¹⁵

The frontier region comprises 14 percent of Paraguay's land area and roughly 28 percent of the economically usable land; it was responsible for 80 percent of the country's land area devoted to soybeans and 35 percent devoted to cotton in 1979 (see Table 13).

There can be little doubt that the expanded agricultural frontier contributed to Paraguay's economic growth. Previously idle land was brought under cultivation and much of it produced export crops for which there was a rapidly expanding world market.

The highway to Brazil and the development of the lands in the frontier region substantially reduced Paraguay's traditional dependence on Argentina as its trade route. It will be noted in Table 3 that whereas only .2 percent of Paraguay's exports went to Brazil in 1960 and .8 percent of imports came from there, by 1981 the respective percentages were 18.3 and 25.9. Even trade with the U.S. and Europe now had an alternative route. This regional trade diversification gave Paraguay an increasing amount of economic and political leverage in its international economic and political contacts.¹⁶

It is also of interest to note that available data suggest a negative linkage effect caused by the agricultural frontier development. One notes in Table 3 a) that while vegetable oils accounted for 11 percent of exports in 1970, by 1981 they had shrunk to 7.6 percent. In the light of the previously mentioned increase in soybean output, one can only infer that an increasing portion of this product is being exported as raw materials, with little value added.

Another impact of the expanding agricultural frontier was on the regional distribution of the population, whose changes are shown in Table 12. Whereas 18.3 percent of the population lived in the frontier regions in 1962, by 1982 this share had grown to 27.3 percent. Asuncion's share remained relatively stable, while the minifundio region's share fell from 40.5 to 34.2 percent.

Unlike many other LDC's, Paraguay did not experience a marked rural-urban migration, but rather a rural-rural movement, out of the traditional minifundia regions to the newly opened lands. One might think that this presented Paraguay with an advantage, as it avoided the urban population explosion, so common in many other LDC's. That is, it avoided the massive demand for expensive urban infrastructure, or the socio-political tensions arising from its neglect.

These positive aspects, however, have to be weighed against problems arising from the neglect of rural infrastructure. A World Bank study found that "...The lack of adequate transport infrastructure is a major factor depressing small farmer incomes. Where physical access is difficult, product prices received by farmers are reduced by high transport costs, the quasi-monopsonistic situation that often develops because of a limited number of buyers, and the farmer's need to sell soon after the crops are harvested to avoid losses due to lack of storage facilities. Similarly, cost of inputs and other necessities are increased since the middleman is often the supplier of inputs and source of financing. Even when access to institutional credit is possible, the small settler often does not know about the procedures required to secure a loan, or cannot provide adequate guarantees, since it is likely that he does not possess a land title."¹⁷

Since IBR settlement did not automatically confer permanent title to the land, small landholders have often been evicted. Usually occurring after the land had been cleared, the evictions frequently

benefitted large landowners, including Brazilians and multinational firms. The well-known Paraguayan scholar, Dr. Domingo Rivarola, has brought some further insights into the socio-economic development resulting from the frontier region expansion. He stated that: "Highly capitalized commercial agricultural businesses have become an efficient mechanism for increasing the volume of agricultural production, but have simultaneously brought about a secondary result of singular importance to the traditional peasant economy: the definitive limitation of their movement toward the extensive - and now disappeared - land reserves of Eastern and Northeastern Paraguay."¹⁸

2. Growth through Construction.

Another major source of growth in the 1970's was the construction with Brazil of the gigantic hydro-electric dam, called Itaipu.

For some 200 kms the Parana river forms the border between Paraguay and Brazil. Until the 1970's, however, its hydroelectric potential remained unexploited. In 1973 Paraguay and Brazil signed a treaty for the construction of Itaipu, destined to be the world's largest hydroelectric facility, with an installed capacity of 12,000 MW. Later in the same year Paraguay signed a similar treaty with Argentina to build another dam further downstream on the Parana river, called Yacyreta (4,040 MW). The latter project was postponed a number of times. Paraguay's planners were hoping to have construction begun on Yacyreta as Itaipu would ^{be} down in the early 1980's.

The Itaipu treaty provided for the construction and administration of the project by a jointly-run binational firm - Itaipu Binacional - owned in equal parts by Paraguay's utility company ANDE and its Brazilian counterpart, Eletrobras. The enterprise was to be run by an equal number of Paraguayan and Brazilian directors, and loans contracted by the binational firm in international capital markets would be guaranteed by the Brazilian government.

Given the "...manifest interest of the two governments in maximizing the utilization of the technical expertise of the two

countries..."¹⁹, civil construction contracts were let to one Paraguayan and one Brazilian consortium of construction companies. Each consortium was to hire workers in its own country. Contracts for the electro-mechanical equipment were given to various firms "...with the purpose of attaining the highest rate of participation of Paraguayan and Brazilian industries..."²⁰

Once completed, the energy produced would be sold by Itaipu Binacional to the electric companies of the respective participating countries. Its price was established in U.S. dollars, pegged to gold.

The project began in 1974. According to a study carried out by the Paraguayan government²¹, construction of Itaipu was expected to employ more than 11,000 workers at the height of activity in 1976, half of whom would be Paraguayan. In fact, employment reached a peak of 31,318 workers in 1978, of whom only 43 percent were Paraguayan. In addition, 57 percent of Paraguayan workers were in the lowest-skilled level, while only 38 percent of the Brazilian workers fell into that category.²²

Original estimates of the cost of Itaipu were around U.S.\$ 2 billion, while in the early 1980's it was expected to reach US\$ 13 billion (which makes the cost of Itaipu close to 3 times the GDP of Paraguay).²³

It has been estimated that between 1977 and 1980 approximately US\$ 250 million were spent in Paraguay per year. This inflow of funds provided liquidity to the banking system, markedly increasing the availability of credit and placing downward pressure on the cost of foreign exchange (an aspect to be discussed more fully in the next section).

The construction activity represented a huge increase in demand for labor. The construction sector grew at annual rates of 26 percent in the period 1975-8; it reached a peak of 32 percent in 1978 (see Table 6). This reflected not only the construction of the dam, but also the boom in private residential construction and public spending on buildings and other infrastructure.²⁴

Linkages to other sectors of the economy were weaker. While cement output expanded from 103,000 tons in 1974 to 155,000 tons in 1981, official figures for the same period show that the value of cement imports rose from US\$ 3,000 to US\$ 8.6 million.²⁵ Non-metallic minerals as a proportion of total industrial production increased by only .5 percent between 1970 and 1981. Reduced and nearly obsolete capacity of the country's only cement plant (a state-owned monopoly), the lack of adequate transportation facilities from the plant to the dam site, and an active trade in contraband cement, prevented a fuller utilization of the domestic potential.

The lack of linkages was not limited to cement. Overall, industry's share of total GDP declined from 16.6 percent in 1972 to 14.2 percent in 1981 - see Table 1 b).

While industrial linkages were weak, the linkages to the service sector were notably stronger, and were also reinforced by the impact of the expanding agricultural frontier. High levels of employment in the 1970's, coupled with the availability of consumer credit²⁶ and a favorable exchange rate (see the following section), led to a rapid expansion of commercial activity. Small private "financieras" opened and some of the larger retail establishments created their own credit plans for consumers. While in 1972 there were only 6 banks in Asuncion, by 1981 there were 20, many with branches in cities of the interior (especially in the expanding frontier area). Plentiful foreign exchange permitted the import of a variety of consumer goods, as many world-famous brand names found representation in Paraguav. Commerce and finance grew at annual rates of over 10 percent in the 1976-80 period. By 1981 commercial and financial services accounted for 16 percent of GDP.

While Itaipu construction created a substantial increase in

effective demand, an increase in the supply of domestic consumer goods was not immediately forthcoming and the excess demand was only partially met by increased imports. This situation, in combination with increased liquidity, resulted in inflationary pressures. Between 1965 and 1970 the cost-of-living had increased at annual rates ranging between 3.8 and -.1 percent. By the late seventies, however, Paraguay experienced double-digit inflation, which reached 28.2 percent in 1979. Annual rates of inflation have subsequently declined, reflecting slack demand, tight monetary policy (see Table 9) and, perhaps, more reliable supplies as contraband trade became institutionalized.

Located some 350 kms. from Asuncion, Itaipu's construction created a new growth pole. Thousands of workers in a new area implied the need for provision of goods and services. The city of Ciudad Pres. Stroessner developed as a commercial center to serve those needs and also the incipient tourist industry. Sawmills located in the area to process timber as land was cleared and primary product processing plants, mostly for the local market, were beginning to appear in the early 1980's. Thus the migration to the frontier departments, as discussed in the previous section, was due not only to the expanding agricultural frontier, but also to the opportunities associated directly and indirectly with Itaipu.

3. The Impact of Exchange Rate Stability.

Paraguay's exchange rate was fixed at 126 Guaranis to the U.S. dollar in 1961 and was not altered until the 1980's. Given the relative internal price stability that prevailed until the 1970's, there was no threat of overvaluation vis-a-vis the world's major currencies, especially the U.S. dollar. This was often the case with other countries in Latin America which experienced high rates of inflation and rigidities in exchange rate adjustments. However, the economic instability of such important trading partners as Argentina and Brazil had some notable impact on Paraguay. Both partners experienced periodic inflation with lagging exchange rate adjustments vis-a-vis the dollar.

Whenever the neighbor's currency became overvalued, Paraguay's

imports would become more expensive, while its exports would become more competitive, and tourism from Argentina and/or Brazil would increase.²⁷ Thus the undervaluation of the Guarani relative to the neighbors' currencies would act as a stimulant to exports of goods and services, but would also threaten domestic financial stability as import prices would rise.

The overvaluation of the Guarani in the 1970's, on the other hand, made imports increasingly attractive and placed a downward pressure on the cost of living. It provided a subsidy for the importation of capital goods, but this had little effect in stimulating industrial growth as the domestic market for manufactured goods was small and imported manufactured consumer goods, also made cheaper by overvaluation, were too competitive for local substitutes.²⁸ We should emphasize that in spite of the cheapness of imported goods due to exchange overvaluation, a large contraband import trade flourished due to high tariffs, required payments of taxes and commissions, and to complex administrative procedures, which made the resulting effective exchange rate less attractive.

In theory, the increased overvaluation of the Guarani should have caused exports to decline as they became less competitive. In fact, however, these expectations did not materialize. First, with rising prices in international commodity markets the impact of the overvaluation was mitigated. Second, an increasing amount of exports was permitted in the free floating exchange market. Third, contraband trade flourished.

With growing inflation in the second half of the seventies, the adherence to the fixed exchange rate began to have increasingly perverse effects on the country's allocation of resources. One major impact of the Guarani's overvaluation was this accelerated growth of contraband trade. As domestic prices were rising, it became increasingly unremunerative to export legally. It was increasingly attractive to exchange dollars earned in contraband at the free market rate, which hovered around 130 to 140 Guaranis to the dollar in the second half of the 1970's. But even this rate was overvalued in the late 1970's

because the building of Itaipu and the concomitant inflow of large quantities of foreign capital.²⁹ Another motive for contraband was the avoidance of export taxes. Also, one should take into account that Paraguay's exports consisted of primary goods, which are easier to channel through unofficial markets than manufactured products.

Contraband trade became so prominent that most Paraguayan and international balance of payments analysts pay only slight attention to official export and import data. Table 5 presents various orders of magnitude of contraband trade. Part a), which contains World Bank estimates, shows an ever-widening gap between official trade data and estimates based on partner country information and on data from free floating exchange transactions volume. Part b) shows the divergence between Paraguayan data and that of its three major trading partners. It is thus quite likely that the degree of openness of the Paraguayan economy is more than twice as large as revealed by export and import/GDP ratios of Table 7; i.e., in the period 1970-81 the export/GDP ratio could have averaged around 26 to 30 percent instead of 13 percent and the import/GDP ratio about 35 instead of 18 percent, ranking Paraguay's economy among the most open in the world.

The fixed exchange rate policy, with its resulting overvaluation of the Guarani, also had some general deleterious macro-effects. This becomes clear when one considers that one-third of government revenues come from taxes on international trade and that public sector revenue as a percent of GDP fell from 14.7 percent in 1972 to 12.2 percent in 1981 (see Table 8). Thus the contraband trade deprived the public sector of necessary funds to finance infrastructure necessities. For example, the geographic expansion of the economy increased the need for access-roads to bring products from the new agricultural lands to the market. As the government had few resources to build such roads, only private companies were able to manage adequately as they built their own road system.³⁰ The peasants were thus forced to sell at lower prices to middlemen.

One should also consider the country's pressing needs for social infrastructure. It will be noted in Table 11 that only 22 percent of the population had access to piped water and 11 percent had access to sewer services. While in the Asuncion area the infant mortality rate dropped from 73.1 per 1,000 in 1970-2 to 63.1 in 1974-7, in the interior the rate remained at 96 per 1,000. An already precarious social infrastructure is constantly worsening due to the high population growth rate of 3.2 percent per year. The growing contraband trade has limited the rise of government revenues and has thus curtailed the provision of adequate services to raise the standard of living of the bulk of Paraguay's population.³¹

The Economy in the Early 1980's

The agricultural expansion and the construction activities in the 1970's increased the growth of real GDP from an annual average rate of 4.2 percent in the sixties to 8.3 percent in the seventies, the rate being over 10 percent in the 1976-81 period. The GDP of 1981 was roughly US\$ 4.4 billion and the per capita GDP reached about US\$ 1,372. However, given the great concentration of income, this number obviously did not reflect the standard of living of the average Paraguayan.³² A glance at the social indicators in Table 11 shows that in spite of some improvements in the life expectancy and the literacy rate, the bulk of the Paraguayan population continued to live on a fairly low standard. One should also consider that despite the increased demand for labor in the boom years, real wages in 1981 were slightly lower than in 1975.³³

The structure of the economy underwent some notable changes. The share of agriculture decreased to 27.8 percent in 1981. Though one of the dynamic sectors was to found in agriculture, one should recall that only frontier agriculture expanded rapidly, while traditional agriculture stagnated. By 1977 employment in agriculture had declined 3.5 percent of the labor force and it is most likely

that in the early eighties this proportion was slightly over 40 percent. It should be noted that in the well-known Kuznets cross-country study of economic structures the expected share of agriculture in GDP for a country at the per capita⁴ income level of Paraguay was 20.5 percent and the expected employment share was 37.9 percent.³⁴ Thus Paraguay's agricultural GDP share is well above the "normal", indicating the dynamic role of that sector in the country's growth.

In the 1960-81 period the share of industry in GDP had decreased slightly and the employment share had risen only a little. Both shares were substantially below the Kuznets expected shares of 34 percent of GDP and 30 percent of employment.³⁵

The most pronounced changes in the GDP shares can be found in construction and in commerce/finance, the former rising from 2.2 to 6.6 percent and the latter from 18.4 to 26.6 percent. The alternative GDP estimates in part b) of Table 1 have construction reaching 13.1 percent of GDP in 1981. Employment in construction had risen from 3.3 percent in 1962 to 5.6 percent in 1977 by official estimates, and, according to Inter-American Bank estimates this proportion had risen to almost 15 percent by 1980.³⁶ The share of employment in commerce rose from 7.1 percent in 1962 to 13.2 percent in 1977, and probably exceeded 15 percent in the early eighties.³⁷

A glance at the macro ratios in Table 7 show a more than doubling of the fixed investment/GDP ratio, from an average of 15 percent in the early 1970's to an average of over 30 percent in the late 1970's/early 1980's. This was partially financed by domestic savings, which rose from an average of 13 percent of GDP in the early 1970's to 25 percent in the late 1970's/early 1980's. The notable increase in private savings can be explained by the expanding incomes in the boom years and the increased monetization of the economy. The major beneficiaries of growth (the higher income groups) with their higher marginal propensity to save, took advantage of higher real interest rates, the existence of new financial instruments and the expanding number of banks and "financieras".³⁸

Foreign savings, which were negligible in the early 1970's, financed about 25 percent of investments in the 1979-81 period. It should also be noted in Table 8 that over the 1972-81 period the presence of the public sector in the economy declined. The limited role of the government explains the modest increase of the foreign debt in the 1970's when compared to most Latin American countries. ³⁹

Conclusions

After long periods of stagnation Paraguay achieved very rapid growth by exploiting its relatively empty spaces through agricultural production and construction. Besides growth, this strategy contributed to the deconcentration of the country's population and economic activity, and also to the diversification of exports and of markets. The latter was important in decreasing Paraguay's dependence on Argentina as the sole economic corridor to the outside world.

Important contributory factors to these developments were the favorable world trade situation of the 1970's, the large availability of finance from world capital markets, and the domestic political stability. The latter, combined with high economic growth rates, also contributed to substantial increases in the country's saving capacity.

Paraguay failed to take full advantage of this growth because of the government's unwillingness to play a larger role in the economy. The insistence on maintaining a fixed exchange rate (which became increasingly overvalued), on relying on market forces to allocate resources, and on keeping the activities of the state restrained by the revenue produced by the existing tax structure, limited the government's influence in the economy. The overvalued exchange rate resulted in cheap imports, discouraging local industrial development and thus limiting the backward and forward linkage potential of the new exports. It also discouraged "official" exports and encouraged contraband trade. The latter consisted of raw materials with no value added, i.e. no forward linkage.

The small growth of government revenues impeded the construction of adequate infrastructure which, in turn, hampered domestic vertical linkages. This explains, in part, the dearth of any pronounced linkage

effects of Itaipu. Also contributing to the latter's low backward linkages was the underdeveloped industrial structure resulting from a history of cheap imports.

In other words, the institutional weakness (or underdevelopment) of the public sector caused a relatively weak economic repercussion effect from the two motor forces of the economy - frontier agriculture and construction. The linkage weaknesses also led to a distorted use of a large proportion of increased savings, which were invested in commerce (to distribute imported goods), and residential and commercial construction.

The emphasis on construction produced a relatively distorted economic structure, as an unusually large percentage of the GDP and work force were devoted to that sector. It was hoped that the construction of Yacyreta would chronologically follow Itaipu and thus keep these factors of production fully employed. The temporary delay of Yacyreta in the early 1980's, creating a large amount of unemployment and idle capacity, only foreshadows what may be expected from such emphasis on construction without the type of structural changes in the economy which could produce a substantial number of vertical repercussion effects.

Paraguay's growth was inequitable as the broad mass of its population did not benefit. Real wages declined, the new lands fell into the hands of privileged individuals and firms (both domestic and foreign), and the construction of social infrastructure lagged behind the country's needs.

The opening of the Eastern frontier, the diversification of exports and of markets contributed to a decline of the country's traditional dependency. On the other hand, Itaipu and Yacyreta will lock the country into a new kind of dependency, as markets for electricity exports are rigid in destination and sales are dependent on the economic fortunes of Brazil and Argentina.

In the framework of small LDC development possibilities, Paraguay's position is such that it must exploit its natural resources to promote growth and development. Becoming a base for industrial value added activities is unrealistic in the short-run because of

the country's location. We have shown that in order to achieve development, rather than just growth, it is important to produce adequate institutional structures which are capable of taking advantage of favorable international market conditions.

Notes

1. This was the motive behind the formation of the Andean Group and the Central American Common Market.
2. Graziella Corvalan, Paraguay: Nacion Bilingue (Asuncion: Centro Paraguayo de Estudios Sociologicos, 1981); also, Justo Pastor Benitez, Formacion Socio-Cultural del Pueblo Paraguayo (Buenos Aires: America Lee, 1955).
3. Different interpretations of the Francia period can be found in: Efraim Cardozo, Breve Historia del Paraguay (Buenos Aires: Editorial Universitaria de Buenos Aires, 1965); Richard Allen White, Paraguay's Autonomous Revolution (Albuquerque, N.M.: University of New Mexico Press, 1978); John Hoyt Williams, "Paraguay Under Francia: A Reevaluation," Hispanic American Historical Review, Vol. 52, p. 103.
4. John Hoyt Williams, Rise and Fall of the Paraguayan Republic, 1800-70. (Austin: University of Texas, Institute of Latin American Studies, Latin American Monograph No. 48, 1979).
5. Harris G. Warren, Paraguay and the Triple Alliance: The Postwar Decade (Austin: The University of Texas, Institute of Latin American Studies, 1978).
6. Paul Lewis, Paraguay under Stroessner (Chapel Hill: University of North Carolina Press, 1980).
7. In a recent report some World Bank experts evaluated Paraguay's national accounts. They concluded that: "Paraguayan national accounts estimates and other macroeconomic data are not reliable and the structural changes in the economy brought on by fast growth and the importance of external factors of the last few years most probably are increasing the unreliability of current estimates." World Bank, Economic Memorandum on Paraguay, 1981, p. 85. For this reason we provided some alternative estimates, where possible. See Table 1 b) and Table 5.
8. Joseph Pincus, The Economy of Paraguay (New York: Praeger, 1968), p. 139.
9. Fran Gillespie, "Comprehending the Slow Pace of Urbanization in Paraguay Between 1950 and 1972," Economic Development and Cultural Change, Vol. 31, No. 2, January 1983, p. 359.
10. Domingo Rivarola, "Estado, Modernizacion agricola y diferenciacion campesina en el Paraguay," in Estado, Campesinos y Modernizacion Agricola (Asuncion: Centro Paraguayo de Estudios Sociologicos, 1982) pp. 11-46.

11. Describing the IER, the World Bank stated that it has "...powers to define and carry out policies with respect to land-reform, land settlement and rural welfare." World Bank, Paraguav: Regional Development in Eastern Paraguav (Washington, D.C.: A World Bank Country Study, August 1978), p. 8. It should be noted that, given the supply of government-owned idle land, it has not been necessary to expropriate property, but only to distribute titles.
12. Ibid., p. 8; Gillespie, op.cit., pp. 362-4.
13. Ibid., p. 11.
14. World Bank, Economic Memorandum on Paraguay, 1981, p. 214.
15. These percentages are based on official data. Given the large amount of contraband trade, to be discussed in a later section, it is likely that these proportions are underestimated.
16. Paraguay tried to increase this leverage even further by negotiating two separate treaties for hydroelectric projects, one with Brazil and one with Argentina.
17. World Bank, Regional Development in Eastern Paraguay, pp. 9-10.
18. Domingo Rivarola, op.cit., p. 77.
19. Itaipu Binacional, Memoria Anual, 1974, p. 10.
20. Itaipu Binacional, Summary of Project, p. 20.
21. Paraguay, Ministerio de Justicia y Trabajo, Direccion General de Recursos Humanos, Estimacion de la Demanda de Mano de Obra para la Construccion del Complejo Hidroelectrico de Itaipu, Octubre 1975, p. 5.
22. These calculations are based on official reports of the Itaipu Binacional and internal memoranda. Paraguayan participation is said to be even less than these statistics indicate. See: Melissa H. Birch, State Enterprise and Economic Development: ANDE in Paraguay (Champaign, Illinois: University of Illinois, Department of Economics, Doctoral Dissertation, 1984).
23. Itaipu Binacional, Memoria, 1981, p. 77.
24. Naciones Unidas, Estudio Economico de America Latina, 1981, "Paraguay", p. 14.
25. Banco Central del Paraguay, Boletin Estadistico, Nov. 1982.
26. The rising level of credit was influenced by the huge inflow of capital associated with Itaipu.
27. With the geographic diversification of its trade relations, there was an increased possibility of switching. That is, if Argentine's currency were to become overvalued, there is the possibility of switching purchases to Brazil, and switching exports to Argentina. More studies remain to be undertaken to fully understand whether and how such switching works.
28. Overvaluation also facilitates the purchase of many luxury goods and snopping trips abroad.

29. As Itaipu construction came to a close, the free floating exchange rate rose substantially, reaching 190 Guaranis to the dollar in 1982. At that time the government intervened and established 160 Guaranis as the binding free floating exchange rate. There quickly developed a black market where the dollar reached 330 Guaranis in mid-1983.
30. World Bank, Regional Development in Eastern Paraguay, p. 21.
31. Of course, an alternative would be to change the structure of the tax system, introducing new taxes, especially income taxes.
32. In 1970 the highest 20 percent of the population received 62 percent of the national income, while the lowest 20 percent received 4 percent. Given the trends in wages and land distribution (by 1980 10 percent of the farm units in the department of Paraguari occupied 85 percent of the land area, World Bank, Memorandum, 1981, p. 3) there is every reason to expect a worsening of this distribution during the 1970's.
33. IMF, Paraguay: Recent Economic Developments, 1981, p. 16.
34. Simon Kuznets, Modern Economic Growth (New Haven: Yale University Press, 1966); in a recent World Bank analysis, it was found that the average for Middle-Income Economies which are oil importers was 15 percent for share of agriculture in GDP in 1980 and 42 percent for agriculture's share in the labor force. See: World Bank, World Development Report 1982.
36. The World Bank findings for 1980 for Middle-Income Economies which import oil was 37 percent share of industry in GDP and 22 percent share of industry in labor force. See previous footnote.
35. Inter-American Development Bank, Economic and Social Progress in Latin America, 1980-1, p. 338.
37. Employment in the commercial sector is even larger if activities in the informal sector are taken into account.
38. World Bank, Economic Memorandum on Paraguay, June 14, 1977, p. 5; Economic Memorandum....., 1981, pp. 21 and 23.
39. Naciones Unidas, Estudio Economico de America Latina 1981, "Paraguay", p. 26.

Table 1

a) Paraguay: Sectoral Composition of GDP
(at current prices) (percentages)

	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>
Agriculture	38.8	32.1	36.9	29.5	27.8
Mining	.1	.1	.2	.4	.4
Industry	17.3	16.7	15.6	16.5	16.8
Construction	2.4	2.8	3.8	6.1	6.6
Electricity, Gas, Water	.8	1.1	1.4	2.3	2.2
Transport & Communication	4.0	3.9	4.0	4.2	4.1
Commerce & Finance	18.4	24.4	22.9	25.8	26.6
Government	4.4	5.3	3.4	3.4	3.8
Misc. Services	13.8	13.6	12.0	11.8	11.7
Total	100.0	100.0	100.0	100.0	100.0

Source: Banco Central del Paraguay, Cuentas Nacionales.

b) Paraguay: Sectoral Composition of GDI
Based Alternative Adjusted GDI
Estimates, at 1970
prices (%)

	<u>1972</u>	<u>1981</u>
Agriculture	32.0	25.2
Mining	.2	.6
Industry	16.6	14.2
Construction	2.9	13.1
Basic Services	5.3	6.2
Commerce	24.6	26.0
Other Services	18.4	14.7
Total	100.0	100.0

FOOTNOTES: These special estimates were made by Richard Lynn Ground in his article "Las Cuentas Nacionales Del Paraguay," in Revista Paraguaya de Sociología, forthcoming.

Table 2

Paraguay: Sectoral Distribution of Economically
Active Population (percentages)

	<u>1962</u>	<u>1972</u>	<u>1977</u>
Agriculture	54.7	49.6	43.5
Mining	.1	.1	
Industry	15.1	13.8	17.7
Construction	3.3	4.0	5.6
Commerce	7.1	7.9	13.2
Other	19.7	24.6	20.0
Total	100.0	100.0	100.0

Source: Presidencia de la Republica, Secretaria Tecnica de Planificacion, Diagnostico Demografico Del Paraguay (1950-1977), Volumen II, Asuncion, Paraguay, 1980, p. 387.

Table 3

a) Paraguayan Exports: Commodity Composition
(percentage distribution)

	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1981</u>
Food Products	14.9	19.7	15.0	12.3
Livestock	35.2	26.7	19.5	2.3
Tobacco	5.0	9.0	0.8	2.2
Cotton	1.1	6.3	11.4	43.7
Soybeans	-	-	9.2	10.1
Sugar	0.3	-	3.0	-
Vegetable Oils	5.7	10.9	0.0	7.6
Essential Oils	3.7	3.2	5.5	2.2
Guaraná Extract	10.9	3.1	1.4	1.9
Other	7.4	21.1	19.7	11.7
Total	100.0	100.0	100.0	100.0

Source: Banco Central del Paraguay, Boletín Estadístico.b) Paraguayan Imports: Commodity Composition
(percentage distribution)

	<u>1970</u>	<u>1981</u>
Food	9.2	6.4
Other Consumer Goods	14.4	21.0
Primary and Intermediate Goods	39.3	17.0
Fuels and Lubricants	16.4	18.8
Capital Goods	21.7	36.8
Total	100.0	100.0

Source: same as a).

c) Paraguayan Exports: Destination
(percentage distribution)

	<u>1960</u>	<u>1970</u>	<u>1981</u>
Argentina	28.4	27.4	23.2
Brazil	.2	1.6	18.3
United States	26.8	14.2	5.2
EEC	27.0	30.9	25.3
Japan	-	1.8	8.4
Other	17.6	24.1	19.6
Total	100.0	100.0	100.0

Source: same as a).

d) Paraguayan Imports: Origin

	<u>1960</u>	<u>1970</u>	<u>1981</u>
Argentina	23.1	19.5	19.8
Brazil	.8	3.2	25.9
United States	23.6	23.4	9.7
EEC	23.7	29.7	17.7
Japan	6.5	6.8	8.3
Other	22.3	18.4	18.6
Total	100.0	100.0	100.0

Source: same as a).

Table 4
Paraguay: Balance of Payments, 1970-81
(millions of US\$)

	<u>1970</u>	<u>1971</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1980</u>	<u>1981</u>
Exports, FOB	65.3	175.0	170.4	182.3	279.4	281.5	305.3
Imports, FOB	70.6	193.3	227.3	236.3	360.1	432.0	577.1
Trade Balance	-11.3	-25.3	-50.9	-54.0	-80.7	-150.5	-271.9
Current Account Balance	-10.4	-54.0	-59.6	-105.2	-133.4	-138.7	-353.7
Direct Investments	3.9	29.7	14.3	11.4	17.0	21.9	51.9
Long Term Loans	15.0	35.0	65.0	120.0	64.0	147.0	25.0
Short Term Capital	0.0	55.0	11.0	-6.0	100.0	103.0	223.0
Total External Debt		560.0	475.0	545.0	654.0	835.0	1055.0
Debt Service (interest & amortization)		-	-36.0	-38.0	-48.0	-61.0	-68.0
Foreign Debt as % of GDP	20.4	22.0	26.8	24.8	26.1	21.5	19.4
Foreign Debt Service as % of Exports	15.9	18.9	19.4	15.4	18.2	22.0	28.3
							35.8

Sources: Banco Central del Paraguay, Boletín Estadístico; ECLA, country report, W&W

Table 5

Paraguay: Alternative Estimates of Trade

a) Overall Merchandise Trade (millions of US \$)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
<u>Exports (FOB)</u>				
Official Estimates	192.3	279.4	281.5	305.2
Including Adjustments from Partner Country Data	234.4	343.7	421.2	520.3
Including Adjustments from Exchange Houses Data	301.2	640.2	713.7	1,191.0
<u>Imports (FOB)</u>				
Official Estimates	236.3	360.1	432.0	577.1
Including Adjustments from Partner Country Data	315.5	480.5	671.1	865.6
Including Adjustments from Exchange Houses Data	398.5	717.3	912.4	1,494.6

Source: World Bank, Economic Memorandum on Paraguay, September 1981, p. 89, based on information provided by the DOP Division of the Central Bank.

b) Paraguayan and Partner Country Reports on Trade (millions of US \$)

	<u>Paraguayan Exports to Argentina</u>	<u>Argentinian Imports from Paraguay</u>	<u>Paraguayan Imports from Argentina</u>	<u>Argentinian Exports to Paraguay</u>
1969	14.6	16.9	12.5	15.3
1970	17.6	19.8	11.8	15.1
1971	17.8	21.1	10.1	9.7
1972	15.7	19.8	10.8	12.9
1973	16.2	20.7	27.5	29.7
1974	36.5	42.9	48.4	51.6
1975	49.7	50.2	33.2	37.3
1976	17.9	22.3	37.7	56.4
1977	35.8	35.4	43.2	84.8
1978	24.1	42.7	48.8	127.4
	<u>Paraguayan Exports to Brazil</u>	<u>Brazilian Imports from Paraguay</u>	<u>Paraguayan Imports from Brazil</u>	<u>Brazilian Exports to Paraguay</u>
1969	.1	.4	1.6	6.6
1970	1.1	1.4	2.0	11.3
1971	.8	2.5	5.0	21.5
1972	.7	6.2	10.4	31.9
1973	2.9	23.0	15.5	60.5
1974	6.0	35.5	28.8	93.0
1975	6.1	27.3	37.1	118.4
1976	11.0	27.0	31.2	132.1
1977	16.3	33.2	53.9	185.2
1978	20.4	46.5	62.7	274.3
1979	29.1	71.0	102.3	374.4
1980	40.2	91.6	140.5	499.2
1981	54.1	101.5	131.0	449.6

Table 5 (cont'd)

b) Paraguayan and Partner Country Reports on Trade (millions of U.S.)
(cont'd)

	<u>Paraguayan Exports to United States</u>	<u>United States Imports from Paraguay</u>	<u>Paraguayan Imports from United States</u>	<u>United States Exports to Paraguay</u>
1970	9.0	11.0	15.0	18.0
1975	15.0	19.0	22.0	33.0
1976	21.0	20.0	18.0	38.0
1977	40.0	24.0	31.0	51.0
1978	22.0	51.0	35.0	90.0
1979	17.0	164.0	50.0	128.0
1980	17.0	81.0	51.0	109.0
1981	15.0	48.0	49.0	108.0

Sources: Banco Central Del Paraguay, Boletín Estadístico; Banco Central do Brasil, Boletim; Republica Argentina, Ministerio de Economía, Sec. de Programación y Coordinación Económica, INDEC, Comercio Exterior; U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States 1982-1983, Washington, D.C., December 1982.

Table 6

Paraguay: Growth Rates (real) of GDP and
Its Components (percentage growth)

	<u>GDP</u>	<u>Agriculture</u>	<u>Industry</u>	<u>Construction</u>	<u>Commerce</u>
1960-1970 (yearly average)	4.2				
1970	4.8	2.2	8.0	7.2	4.0
1971	5.4	6.5	1.7	14.3	6.2
1972	6.4	6.2	11.0	2.6	3.1
1973	7.2	6.4	8.4	16.5	8.5
1974	8.2	9.8	7.4	14.1	8.8
1975	6.3	8.2	-1.8	21.2	4.4
1976	7.0	3.7	5.5	18.1	10.1
1977	12.8	11.1	20.1	31.1	12.0
1978	10.9	5.9	13.7	32.0	12.8
1979	10.7	6.7	10.5	30.0	11.6
1980	11.4	9.2	12.6	26.0	10.5
1981	8.5	6.7	8.0	16.7	8.4
1982	-2.5				

Source: Banco Central Del Paraguay, Cuentas Nacionales.

Table 7

Macroeconomic Ratios of Paraguay
(current prices, % of GDP)

	<u>Gross Fixed Investment</u>	<u>Savings Total</u>	<u>Private Savings</u>	<u>Public Sav.</u>	<u>Foreign Sav.</u>	<u>Exports of G & S</u>	<u>Imports of G & S</u>
1962						12.6	14.7
1970	14.5	13.5				14.9	16.1
1971	14.1	12.0				13.4	16.0
1972	16.6	15.7	14.4	1.3	.9	13.8	13.9
1973	21.3	20.1	15.4	4.7	1.2	15.0	14.3
1974	22.0	18.9	14.2	4.7	3.1	15.5	17.0
1975	22.1	17.5	14.1	3.4	4.6	13.2	18.7
1976	25.4	20.6	17.1	3.5	4.8	12.4	17.8
1977	27.8	22.8	17.4	5.4	5.0	15.0	20.7
1978	30.5	22.5	15.9	6.6	8.1	13.4	20.6
1979	33.2	25.0	17.7	7.3	8.2	10.3	19.1
1980	34.4	25.6	20.4	5.2	8.8	9.6	18.5
1981	34.7	25.7	22.6	3.1	9.0	6.7	16.1

Source: Banco Central del Paraguay, Cuentas Nacionales and Boletín Estadístico.

Table 8

The Size of Paraguay's Public Sector
(as percent of current GDP)

	<u>1972</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Public Sector Revenues	14.7	13.8	14.6	15.0	13.3	12.2
Current Expenditures	11.8	8.8	8.5	8.4	8.8	9.5
Capital Exp.	5.5	6.3	7.1	5.9	5.5	7.1

Source: Naciones Unidas, Estudio Economico de America Latina, 1981.

Table 9

Selected Monetary Indicators
(rates of growth, %)

	<u>Cost of Living</u>	<u>Money Supply</u>	<u>Free Floating Exchange Rate</u>
1965	3.3	10.4	
1966	2.2	5.1	
1967	1.4	4.9	
1968	.6	6.2	
1969	2.2	5.3	
1970	-.1	16.4	
1971	5.0	10.2	
1972	9.2	18.8	
1973	12.8	30.4	
1974	25.2	24.7	3.8
1975	6.7	17.3	3.6
1976	4.4	19.1	-4.9
1977	9.4	42.9	-2.3
1978	10.6	53.2	6.8
1979	28.2	32.0	-2.9
1980	22.4	21.8	-2.2
1981	13.0	-14.1	13.3
1982		-7.6	

Source: Banco Central del Paraguay, Boletín Estadístico, and Índice de Precios del Consumo.



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