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Is the Argentine National Economy being destroyed by the Department of Economics of the University of Chicago?

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Abstract

The average Argentine is profoundly aware of the economic impacts on their country of “The Chicago boys”, economists trained at the University of Chicago (or by their students) and employed by the World Bank and the International Monetary Fund (IMF) and their national counterparts. These economists are charged with introducing neoliberal (or neoclassical economic) doctrines into the Government’s national economic policies through a process called structural adjustment. We review the history of the Argentine economy, including especially the critical agricultural and energy sectors, to determine what caused the conditions upon which it was thought necessary to introduce these structural adjustments, and attempt to apply scientific procedures to determine which, if any, of the original objectives of the structural adjustment policies were realized and which were not, as well as other apparent effects of the interventions on social and environmental conditions. We focus in particular on energy-related aspects of these economic changes. **Keywords:** *neoclassical economics, neoliberal, Argentina*

Introduction

Neoclassical economics (NCE), also known, more or less, as free market economics, monetarism or neoliberalism, has become the dominant social paradigm for the world's economies. In many cases its economic premises are presented as national political goals, and, for example, President Clinton of the United States spends considerable time unabashedly selling the virtues of neoclassical economics to the rest of the world.

Liberal is a term that is used differently in the United States than in the rest of the world. In the US it means mostly socially liberal, vaguely leftist. In Europe and Argentina "liberal" means "liberal mercantilism", or free market and vaguely rightist, deriving its meaning from earlier times when liberal meant the interests of the mercantile class vs. those of the King, who may have had much less interest in a large amount of trade beyond the borders of his country. The concepts associated with the second definition of liberal have existed for many decades or centuries and were of interest to Ricardo and other early economists. They have been formalized and codified especially by the economics department of the University of Chicago under the leadership and influence of Milton Friedman (e.g. Friedman 1972, Friedman and Friedman 1980). Curiously the term liberal has not been especially associated with the relatively pro-business American Republican party. Such questions about economic policy are important for determining, among other things, the allocation of energy and environmental resources, since all economic decisions are ultimately manifest in how and to what degree resources are exploited, and who incur the benefits and costs of such policies.

Increasingly free marketism and, more generally, neoclassical economics has become the dominant economic guideline for the Latin American developing world. There are a number of reasons for this: 1) the unresolved economic problems associated with other economic systems, 2) the "fall" of communism, the only perceived real alternative to capitalism that was available to most of the world, 3) the role model, encouragement and apparent economic success of the United States which claimed, and appeared to some to be, the successful embodiment of the neoclassical model and 4) the intervention of the IMF, the World Bank, USAID and other powerful economic actors who were extremely strong advocates of NCE (often for their own ends), and who gained strong bargaining power for intervention in Latin American economies because of the debts of many nations. In effect the options given for many countries were either to go into default, with serious repercussion on economies increasingly dependant upon international trade, or to become subject to "structural adjustment". This meant essentially to relinquish governmental control and influence over large sectors of the economy and turn the workings of the economy over to private enterprise, neoclassical economics and the marketplace, whatever that meant. Whether the main motivating factor for the IMF and World Bank to promote NCE was that they genuinely thought this would improve the economies so affected or

whether it was a means of increasing the probability of their getting back the money owed to them is a matter of conjecture. Probably both are true.

The degree to which neoclassical economics and neoliberal policies did or did not improve the economies of the countries to which they were applied and indeed even met their own objectives is rather controversial and subject to whom is doing the analysis. For example Friedman and Friedman (1980), Bhagwati (1993), The International Monetary Fund (e.g. 1999) have unequivocally proclaimed that the NCE policies would be or were effective and that the countries that did march to the NCE drummer would recover from whatever their economic ills were, and those that did not would not. (see also review in David et al. 2000). "Stabilization and structural adjustment programs contribute to debt reduction by helping to reduce deficits in the government budget and the balance of payments, to contain inflation, to stimulate savings, and to generate more resources for investment and debt service" (Gillis et al. 1996; p. 417).

Most of the pronouncements of the virtues of NCE appear to come from neoclassical economists, the agencies that employ NCE, or occasionally from government agencies associated with governments that are enamored with NCE. The assessments from other sources are less likely to be positive, and are often bitterly negative. For example Collins and Lear (1995) argue in "Chile's economic miracle: a second look" that it is only through a very selected use of the national statistics that Chile appears to have benefited from NCE-based structural adjustment policies. They also report that if the entire time span during which Chile was subject to structural adjustment is taken into account the economy not only performed very poorly by any reasonable criteria but that in addition the workers lost much more relative to the wealthy elite, and also lost many of their hard-won rights. In the authors' view structural adjustment was a disaster for most Chileans. Gray (1998) gives a similar and powerful assessment of the effects of neoliberal policies for England, Mexico and New Zealand, focusing on social impacts and the loss of the governments' ability to govern. David et al. (2000) examined the behavior of Latin American agriculture in response to liberal economic policies and found relatively few positive and many negative consequences. Montanye (1998) found that structural adjustment policies imposed upon Costa Rica met few of their own objectives while generating many additional social and environmental problems. Kroegeer and Montanye (2000) and Hall (2000) examined the effects of structural adjustments in Costa Rica and found many adverse aspects not well represented in most of the agency reports about structural adjustment. In their view structural adjustment was tending to deal with the symptoms of Costa Rica's economic problems and not the root problems of relentlessly increasing population, external debt, land degradation, and dependence upon foreign industrial products that were very sensitive to the price of oil.

We believe that it is a legitimate scientific concern to attempt to apply the scientific method to determining to what degree structural adjustment policies do or do not meet their own objectives while also examining quantitatively other effects and impacts, positive or negative. Given the very strong sentiments, often negative, expressed by many Argentines (and other Latin Americans) about

structural adjustment we believe it important to move the discussion of these issues into the arena of relatively objective, quantitative assessment. Our model for such analyses is Montanye (1998) who developed a methodology for examining explicitly whether the objectives of structural adjustment were or were not met. She set up the objectives as a series of hypotheses and then tested whether they did or did not occur. We present the IMF structural adjustment program for Argentina (such as we can find it) in Table 1. We view the objectives or expected outcomes of the plan (given in parentheses) as testable hypotheses.

Table 1. Components and objectives (in parentheses) of Argentina's IMF structural adjustment or "Convertability" plan. (Source includes various IMF documents and press releases, including 98/1 and 99/21: see e.g. www.imf.org/external/np/pn/1999/pn9921).

- 1) Monetary reform, through the convertability law, subsequently supplemented by the new charter of the Central Bank (stabilize the currency by reducing inflation)
- 2) Fiscal reform, initially through a sharp improvement in the administration of the tax system and a redefinition of the tax system and later through a redefinition of tax instruments and rate (shift the tax burden away from businesses, especially those concerned with imports and exports, to encourage international trade)
- 3) Public sector reform, through debt restructuring, civil service reform, fiscal restructuring and an "ambitious and successful plan of divestiture and deregulation of factor and product markets" (reduce government expenditures and enterprise ownership, while the newly privatized companies improved efficiency of services and generated tax revenues)
- 4) Social security reform, allowing for a new capitalization mechanism operated by the private sector (shift the pension system to the private sector).
- 5) Trade reform, (eliminate export taxes and most quantitative restrictions on imports, and reduce the level and range of import tariffs).

These actions collectively were expected to generate a stable economic climate, friendly to international trade, that would increase overall economic welfare by increasing foreign investments and hence business activities and GNP, while increasing the efficiency of the delivery of services and reduce international debt.

A brief Economic history of modern Argentina focusing on agriculture

Argentina has been traditionally amongst the world's relatively wealthy nations, and in fact for a time at the beginning of the 20th century it was the wealthiest nation. Until about 1950 that wealth was generated principally through agriculture. The peak in wealth that occurred during a period between 1875 and

1930 was created through the export of grain and cattle under the cropping/grazing system that predominated in the vast pampas. The pampas are an extensive plain originally covered by grasslands with very fertile soils (mollisols) derived principally from wind-blown sediments (loess) from the Andes Mountains (Hall et al. 1992). The way these grasslands were transformed into an agricultural mosaic from the arrival of the Europeans through the twentieth century is described in detail by several authors who cover a wide range of socioeconomic, agronomic and ecological aspects (Giberti 1961; Cortes Conde 1979, Solbrig 1997, Ghera et al. 1998). Hall et al. (1992) describe this transformation as having three phases: a) The expansion of the area used for arable farming, approximately 1875-1935, b) a phase of stagnation, 1935-1952 and c) a phase of increase of total production of grains, which persists until the present. An important fact about the pampas, which presently constitutes about 90% of Argentine agricultural land, is that the majority is too sandy, poorly drained or otherwise inappropriate for continuous agriculture (Solbrig 1997). Only about 12.4% is suitable for continuous crops and another 25 to 50% for agriculture rotated with livestock. At least 25 percent is not suitable at all for any agriculture (Solbrig 1997).

a) First phase, 1875-1915: Expansion and wealth based on solar energy alone

At the beginning of this first phase, which followed the defeat and virtually elimination of the fierce Native American populations, the land was owned by a relatively few individuals as a residual of the original Spanish colonialist approach of awarding land in huge units to those aligned with early governments. These landowners dictated developments in land use at their economic convenience, which differed across the region. In the northern portion of the pampas some of these landowners started to develop agricultural colonies and sold or rented to small agriculturalists. The Argentine government encouraged immigration from other countries, which was encouraged as well by landowners because the value of their land increased as colonization progressed. Both the colonies and tenant farms rented by large establishments expanded rapidly along with the area planted to crops such as wheat, linseed and maize, which increased from 0.1 to 4.5 Mha between 1875 and 1900. Expansion continued until the 1930s, giving rise to a management system which was described by Sabato (1980) as standing on three legs: The grazing of cattle on alfalfa and other pastures, the growing of crops by tenant farmers and the harvesting of the crops by migratory labor, which came over regularly from Europe to take part in the wheat and maize harvests.

Expansion of the railway system from less than 1000 km in 1872 to over 27,000 km in 1910 also played an important role in the spread of cropping. The First World War was an important factor in the determination of the end of this phase due to the recall of laborers who were reservists in the Italian army. In spite of the fact that at the end of this period Argentina was a wealthy country, exports of the cropping and grazing system contributed mostly to the wealth of a relatively few urban Argentines including the large landowners in particular, and the benefits to many of those laborers who played such an important role in

generating this wealth were rather less obvious.

b) Second phase 1920-1955: Exploitation of agriculture to generate industrial infrastructure

With the start of the great depression and the associated contraction in world trade, prices for grain dropped to one-half of their pre-Depression values (Coscia 1983), and a government price support scheme had to be introduced to mitigate the plight of the grain producers. Total area sown and yields responded little to the low prices (Figure 1), possibly because of the lack of alternatives for the grain producer, so that the main effect was a cessation of the earlier growth of the area under cropping (Hall et al. 1992).

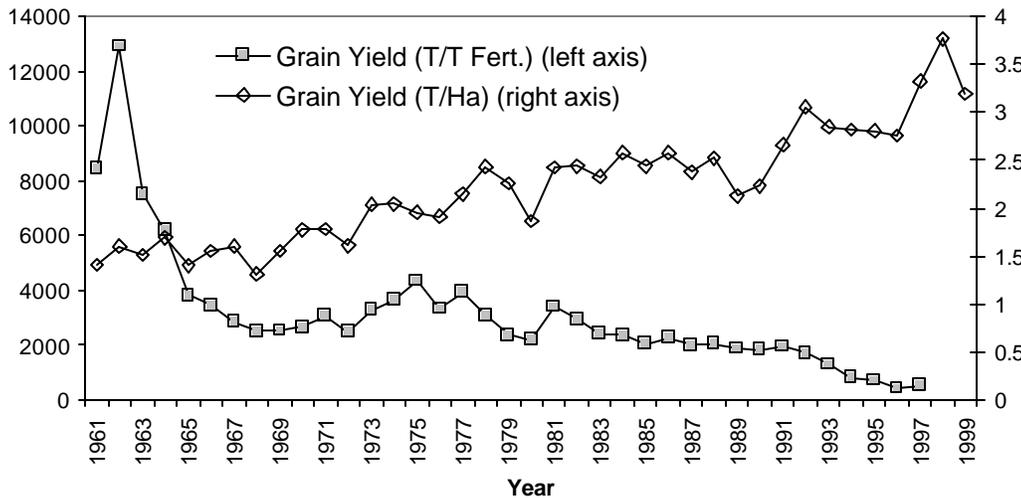
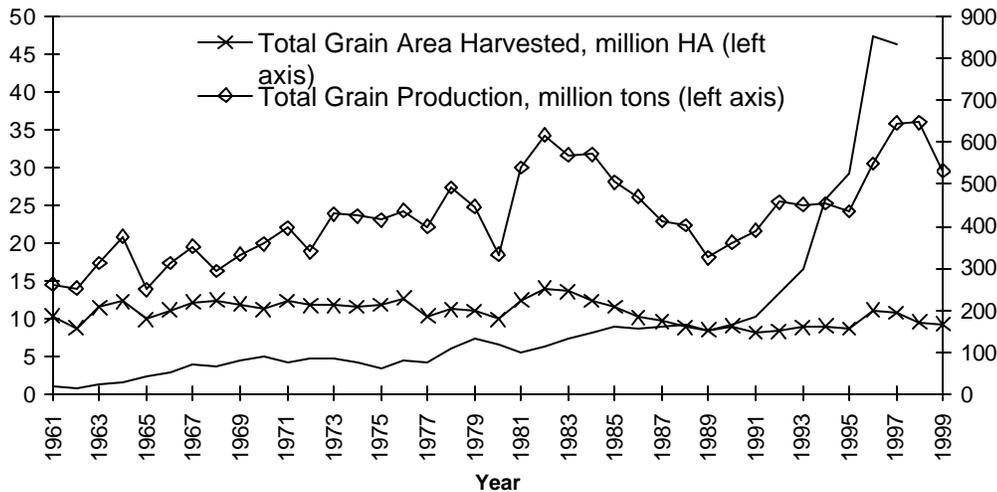


Figure 1. Time series data on Argentine grain. Top graph, area planted, total production and total national fertilizer use. Bottom graph, efficiency as tons per ha and tons per ton fertilizer over time (assuming that 70 percent of fertilizer was used on grain).

When the Second World War started meat and wool once again offered better returns than grain. The situation of the tenant farmers who grew much of the grain became so desperate that in 1942 legislation was enacted reducing and freezing the rents paid by tenants and share-croppers, and forbidding their eviction. (This law was replaced in 1967, although the changes in tenure continued during its 25 year-life span). Although the tenant could now graze cattle on as much as 40 % of the land under his control (Barsky and Murmis 1986) an important effect of this legislation was the effective suspension of the legume-based pasture cropping rotations for those parts of large holdings let to tenants. Previously alfalfa had improved nitrogen availability for crops and also the physical characteristics of soils, allowing for better water storages and crop root development (Senigagliesi et al. 1984; Barberis et al. 1985, Maddonni et al. 1998). Subsequently the suppression of the legume-based pasture cropping rotations appears to have had a negative effect on soil fertility.

In the early parts of the 20th century considerable wealth accumulated from the rich agriculture that was used to develop urban industries in order to substitute domestic products for expensive imports (Alexander 1995). Argentina became a highly industrialized nation starting especially in the Frondizi administration of 1958-1962, and developed sophisticated construction, automobile, machinery and appliance industries. This industrial development and its relatively high wages encouraged both emigration from the Pampas and the drying up the sources of migratory labor from provinces outside the Pampas, which gradually had replaced the European migratory labor with native Argentines. This dramatic reduction in available labor lead to increasing difficulties at harvest time because of the under-capitalized and under-mechanized production systems.

Government policies towards agriculture in the post-war years also accentuated agricultural stagnation. Government monopolization of grain exports kept prices to the producer low, and little foreign exchange was available for the import of agricultural machinery. Both policies had the effect of delaying mechanization relative to the industrial world. An additional burden was the restriction on the use of family labor during harvest time imposed by strong labor unions, which aggravated the harvest bottleneck as developed below. The lowest agricultural production was reached in the early 1950s when a combination of climatic events and excessive exports in relation to the harvest finally brought the problem to urban Argentina (Barsky and Murmis 1986). For the first time since the start of the wheat boom in 1875 the country had insufficient wheat to feed her population and the army was called to help bring in the next harvest (Hall et al. 1992). This forced the government to change its policies towards agriculture. The rural crisis could no longer be ignored, grain prices were increased, and the national banking system allocated long-term credits that were particularly oriented for acquisition of machinery, including from the government-initiated domestic tractor industry.

c) Third phase 1955-2000: Industrialization and more debt

It is difficult to derive a simple explanation for the enormously complex social, economic and agronomic changes that occurred during this period because of the general lack of hard data and the complexity of the interrelations among them (Hall et al. 1992). Probably the most critical issue was the spread of tractors and combine harvesters followed by an increase in their horsepower, both of which increased labor productivity enormously. Before mechanization a 200 ha farm strained the resources of a large family, but subsequently one person could prepare the soil and plant more than 800 ha with a large tractor (Coscia 1983). Combine harvesting and the bulk handling of grain reduced man-hours used per ha 5-12 fold (Coscia 1983). Inflated rural credit played a key role for machinery purchases and encouraging the cropping boom (Sabato 1980).

Coal imported from Europe was the principal source of industrial energy until World War II, then domestic natural gas, hydroelectric power and domestic coal became important. Electrical energy supplies are now based on two large hydroelectric dams that supply more than 70% of Argentine consumption. Natural gas and four nuclear plants supply the remainder. Presently, and especially since 1991, Argentina is exporting oil, natural gas and electric power to its neighbors Chile, Brazil and Bolivia. The continuous development of Argentina's energy system increased the input for agriculture. Diesel fuel was taxed less than gasoline to provide relatively cheap fuel for agriculture and transport. Average horsepower of tractors sold has increased from 34 HP in 1950 to more than 100 in the 1980s (Huici 1986). The Pampas responded to mechanization with increased yields per hectare (Figure 1) (Ghersa et al. 1997, Satorre and Slafer 1999). Fertilizer application was very restricted until the mid 1990s.

A down side to the mechanization and yield increase per ha, especially in the last two decades, is thought to be a decrease in soil fertility (Ghersa and Martinez-Ghersa 1991; Vigglizzo and Roberto 1998). Whereas in the past a person with a horse could plow perhaps 30 ha in a day, this increased to 100 ha with an early tractor and 500 ha today. In the past land had to wait its turn to be plowed, today it is perhaps more accurate to say that a tractor is always awaiting more land. Because of this increased capacity about 14 Mha of land is plowed each year and only 36 Mha is left for grazing, which impacts the soil much less (Solbrig 1996). Large quantities of soil were lost from much of the pampas during this period, often at more than 1 cm per year (i.e. 3 percent of 30 cm) (Casas 1998). Soil degradation caused by continued land use, including compaction, a particular problem with loess soil, reduced the capacity of the soil to produce maize to about 80 percent of earlier levels (Solbrig 1996, Maddonni et al. 1998). In addition soy, an extremely erosive crop, was grown increasingly for export starting in about 1980. This high soil erosion rate and a decline in corn yield created an awareness of the problem among farmers, who have increasingly adopted the "zero tillage" system developed in the USA (de la Fuente et al. 1999). To illustrate the importance of this change the area of land cropped in the pampas has been roughly stable at about 14 Mha since 1920 (Figure 1b). In 1989/1990 only 92,000 ha were sown using zero tillage, of which 87 percent was soybeans. By 1995/96 nearly 3 million ha were sown this way, about 20% of the cropped

area of the pampas, of which 72 percent was soybeans. Other crops such as maize and sunflowers also are planted increasingly using zero tillage (Solbrig 1996). In some areas where there is enough rain (about 300 mm) the percentage is as high as 50 percent (Solbrig 1996, Ghersa et al. 2000).

National and international variables affecting cropping

At all times during the development of farming in the pampas virtually all the grain produced entered the cash economy. Export markets for agricultural produce have always been very influential in determining the partitioning of land use between grazing and cropping and the mix of grain produced. Roughly 50 percent of most grain crops are exported, although the proportion is higher for soy and for oilseeds. Argentina is at present a major contributor to world trade in many grain-related commodities (around 5 % in wheat and soybeans and 30 % in sunflower oil). Nevertheless Argentine farmers rarely have received full value of the nation's remarkable agricultural potential because of storage problems and generally depressed global prices for grain. It is only through increasing labor efficiency--through industrialization based on cheap energy--that farmers are able to make a profit at all.

Agricultural products typically represent about three quarters of the value of Argentine exports, and from 50 to 90% of these are Pampean products (CEPAL 1985). The relative contributions of livestock and grain crops to the value of these exports varied over the years. It remained fairly close to 1:1 ratio between 1925 and 1969, then changed sharply to reach about 80% for crops in the years 1982 to 1984 (Sabato 1980; CEPAL, 1985) and 90% in the 1990s. Cropping on the Pampas has been influenced greatly by government manipulation of grain prices by various mechanisms. There was probably a net flow of funds to grain producers from the introduction of the price support scheme in 1933 through World War II, but thereafter grain farming was used as a net source of cash for industrialization. In contrast livestock husbandry received more consistent tax exemptions and favorable credit conditions. Coscia (1983) suggests that between 1951 and 1980 the Argentine wheat producer received, on average, slightly less than 60% of the price paid to the USA producer, the balance going mostly for export taxes (Miro 1986). Nevertheless during the 1980s high levels of exports were encouraged by the very weak currency relative to the consuming countries.

Larger economic issues: the linkage among debt, economic instability and structural adjustment

During this entire period of increase in agricultural production and, in general, massive production of wealth, Argentina had not balanced its external monetary accounts for various political and social reasons. This was done both to maintain its development rate, which has been remarkably high by international standards in the last two decades, and especially to maintain consumption (including interest on earlier debt). For this reason, the Argentine government

had exhausted its credit borrowing from commercial banks and in 1991 had to turn to the International Monetary Fund, generally considered the borrower of last resort. The IMF agreed to loan Argentina some 2.5 billion dollars initially, and more subsequently, but required that Argentina submit to "structural adjustment" in return. The officers and techniques of the IMF were for the most part indistinguishable from the neoclassical economics approach as formalized and promulgated by the faculty of the University of Chicago (e.g. Friedman 1972, Friedman and Friedman 1980, Bhagwati 1993). The objectives and techniques of structural adjustment according to the official IMF plan are given in table 1. Simultaneously the Argentine government, including both legislative bodies, responded with enthusiasm to the structural adjustment concepts by enacting additional legislation consistent with the IMF-imposed ones.

"Structural adjustment" for Argentina meant in effect decreasing government expenditures and ownership, cutting worker's benefits, encouraging foreign investment and imports through reduced tariffs, while, perhaps less clearly, encouraging exports, especially by cutting internal production costs (Table 1). Government services such as health, education and especially workers benefits were decreased. One of the ways that this took place was through "privatization", a process through which formerly state-owned industries were sold to private companies, which often instituted smaller employment and lower wages and worker benefits. An important part of the debt owed by the government (more than 60%) has been bought by citizens (especially by elder citizens) in the form of "bonuses" through the Social Security System, making the citizens the real borrowers while making the government look like it was paying off debt (although in essence it was just transferring debt). Structural adjustment also meant that export crops such as corn and soy were increased dramatically. Although beef is a more valuable commodity per kilogram than grains or pulses, beef production per hectare is low, roughly 200 kg per yr. Crop production, on the other hand, tends to range from about 1 to 5 tons per ha, allowing a roughly 5 to 25-fold increase in production per ha (or about half that in dollars) compared to beef. Thus the IMF encouraged the conversion of pastureland to crop production, resulting in greatly increased exports and hence income of foreign exchange, but also erosion. By 1992 this increased income was generating enough revenue to pay the interest, but not reduce the principal owed, on the Argentine international debt (Figure 2). During the early phase of structural adjustment a great deal of

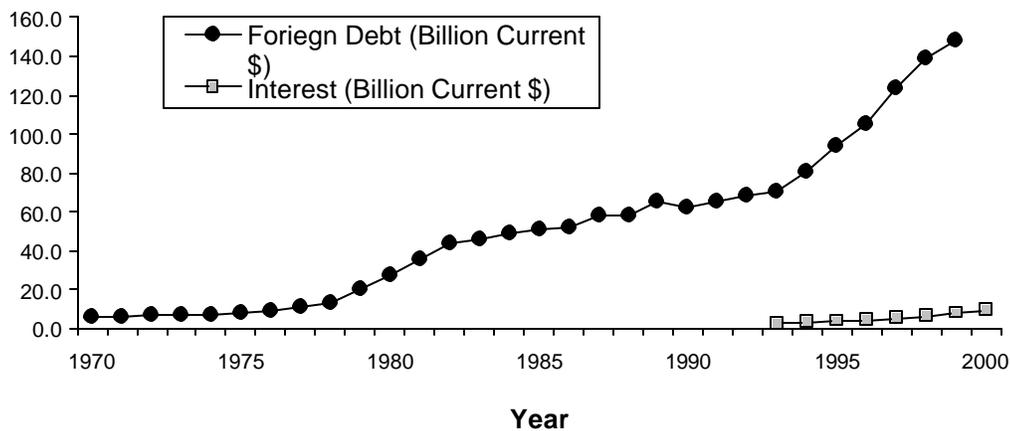


Figure 2. Foreign debt and interest on that debt. Source: Centro de Estudios Bonaerense and Ministerio de Economia.

foreign investment capital was attracted to Argentina, mostly because of a new environment that appeared favorable for foreign business. Simultaneously many large international companies (McDonalds, Walmart etc.) moved into Argentina, encouraged by the lowering or elimination of tariffs and by favorable trade terms.

Results of structural adjustment

We next examine whether the objectives of the IMF have been gained by testing their original hypotheses, or rather their objectives rephrased as hypotheses (See Table 1).

- 1) Stabilize the currency by reducing inflation: Hypothesis supported - the inflation rate dropped quickly to very close to zero, greatly strengthening the peso relative to many other currencies
- 2) Shift the tax burden away from businesses, especially those concerned with imports and exports, to encourage international trade. Hypothesis supported - Large amounts of investment capital from overseas entered the new “business friendly” environment of Argentina.
- 3) Reduce government expenditures and improve efficiency of services. Hypothesis partially supported – The government did in fact sell off many of its core industries and some industries appeared more efficient as they focused on their particular objective, for example by reducing the numbers of many workers. These industries included docks, energy, telephones and other basic industries. However “efficient” implies that prices should become less and in fact prices for privatized tolls and telephone service in Argentina are currently 2 to 4 times those in many other countries (The Economist, July 15, 2000. Meanwhile there has been a crisis in health care dramatized by the suicide of Argentina’s most prominent physician in protest against the adverse effects of privatization in health care <http://washingtonpost.com/wp->

dyn/articles/A17982-2000Aug24.html .

- 4) Shift the pension system to the private sector. Eliminate export taxes and most quantitative restrictions on imports, and the reduction of the level and range of import tariffs. Hypothesis supported – The pension system was privatized. Exports increased from about 6 to about 9 percent of GDP.

Overall objective/hypothesis

These actions collectively were expected to generate a stable economic climate friendly to international trade that would increase overall economic welfare by increasing GNP, increase the efficiency of the delivery of services and reduce international debt. Hypothesis partially supported: The economic conditions as measured by the GDP increased (Figure 3) but only for a relatively short time (4 years).

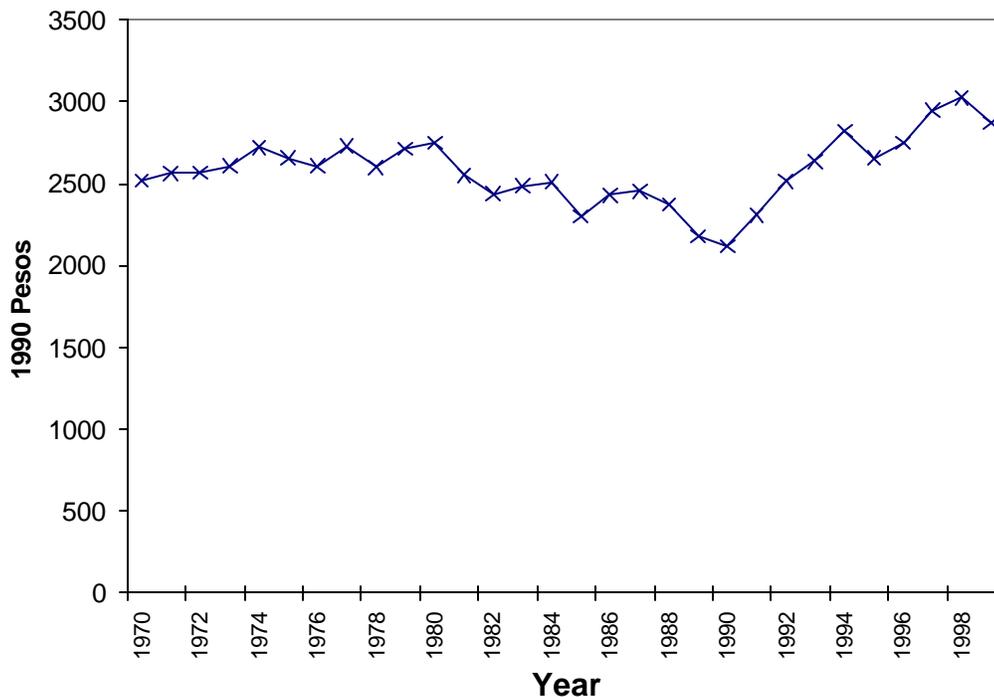


Figure 3. Per capita real GDP, Argentina, 1970-1999

Subsequently, the growth of the economy has been uneven and sometimes negative, as in 1995 and 1999. Overall economic growth has been about the same as population growth, so that per capita income has remained nearly the same in the decade since the initiation of structural adjustment as it was in the 1970s.

Adverse effects of IMF

Although many of the explicit objectives of the structural adjustment plan were in fact obtained, giving “scientific” support to the concept that the structural development plans were in fact improving the economy, there were other, perhaps unanticipated effects of the structural policies that detracted from their overall effectiveness in improving the economy. These included:

- 1) As the Peso strengthened Argentine products became relatively expensive abroad and foreign (notably Brazilian) products became much cheaper in Argentina. The net effect was to decrease greatly the demand for products made in Argentina. This effected, even gutted, nearly all industries except food, and greatly decreased the income of the average middle class Argentine. For example the Argentine tourism industry lost many of its own vacationers to Brazil as well as others from other South American countries. Tires made in Argentina began to sell for twice the price as for the same brands made in Brazil, where laborers were paid in the devalued but still domestically useful Brazilian currency. Auto parts supply companies particularly were affected. For example, in 1990 7 international brand name tire companies produced tires in Argentina. As of 1999 all had moved to Brazil. In general domestic costs for local businessmen inflated by 30 to 80 percent while receipts from international sales did not inflate at all. Argentina essentially ceased to export manufactured goods.
- 2) The GDP grew at a high level for only about four years, followed by several severe recessions in 1995 and 1999 (Figure 3.). Per capita GDP increased little or none over this period. It is not clear how much of the increase in GDP is real and sustainable. Some came from accounting changes that added in some formerly excluded black market activities. Other increases come from the sell off of national assets. For example, YPF (Yacimientos Petroliferos Fiscales, the national petroleum company) increased the level of oil and gas extraction by 66 percent between 1985-1995 (Ciccari et al. 1997). Meanwhile the value of petroleum exported increased by nearly a factor of four from 1991 to 1997 adding about 2.5 billion dollars to GDP.
- 3) The distribution of that GDP was increasingly inequitable, with unemployment increasing from roughly 7 percent to as high as 20 percent, and subemployment also increasing (Source: Centro de Estudios Bonaerense). For example, the national Petroleum Company, YPF, employed 1436 workers in the province of Santa Cruz in northern Patagonia in 1991, 350 in 1993 and 250 in 1997 while they were increasing production. While we were writing this paper there were many demonstrations of workers in Argentina against the “Chicago boys” and their national associates, including one of 80,000 people at the Casa Rosada, the President’s house. According to one poll in Argentina public support for privatization fell from 52% in 1989 to 17 percent in the middle of 2000 (The Economist, July 15, 2000).
- 4) Although the value of exports increased, partly due to the low prices for

agricultural products, imports increased more rapidly than exports. The effect was that Argentina's balance of trade deteriorated, exacerbating debt and the debt crisis that had been the impetus for structural reform (Figure 2). During this period about 10 percent of the total GDP each year went abroad to pay for debt service while debt outstanding was not decreased and in fact increased.

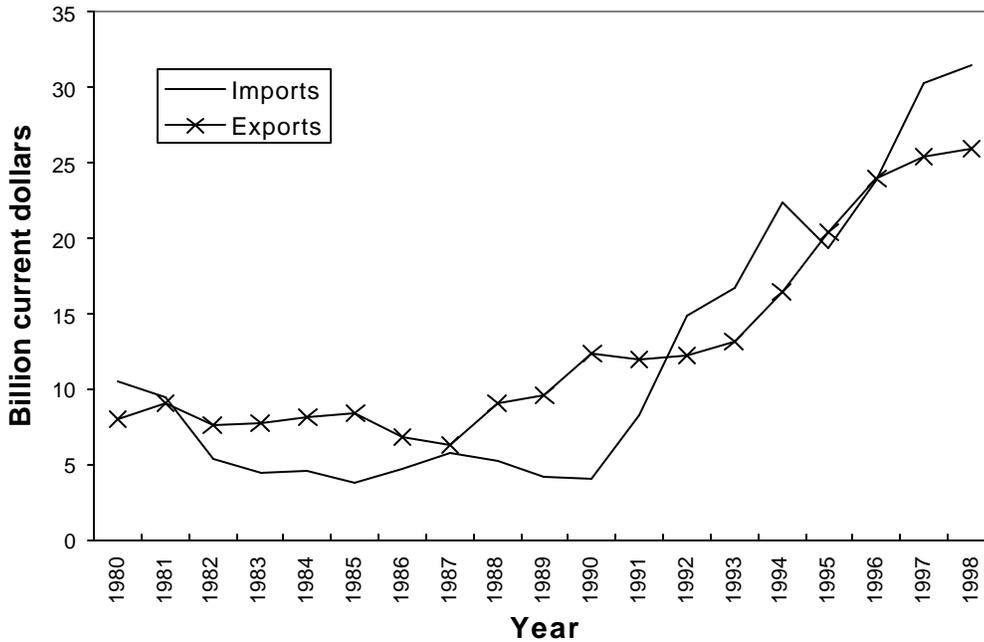


Figure 4: Argentinean imports and exports, 1980-1998

- 5) Although there was a great acceleration of foreign investment into Argentina it is not yet clear how much of that investment helped the average Argentine. Large retailing corporations such as Walmarts that sell standard consumer goods from all over the world may bring relatively cheap consumer goods into the reach of the average Argentine but they operate equally to pull foreign exchange out of the country, since few of the products sold are produced in Argentina. Likewise many large international automobile manufacturing corporations purchased their intermediate requirements (machined products etc.) from well-established external suppliers, rather than from within Argentina, as had been the case before with domestic manufacturers.
- 6) As national unemployment approached 20 percent, and the difference in wealth between the rich and the poor was greatly exacerbated, many social conditions declined seriously. The World Bank, in "Argentina: poverty assessment" (1999) reported that more than 36% (13.4 million) of Argentine people lived under the poverty line in the late 1990s and 8.6% (3.2 million) lived under indigent conditions. Much of the decline is related directly to structural adjustment, for example the convertibility plan in 1993 helped to decrease poverty to 20%, but after 1994 the situation changed. Now the top

20% of the population receive over 50% of total income, the lower 20% about 5%. (World Bank 1999). In 1990 the richest 10 percent of Argentines earned 15 times the income of the poorest 10 percent. By 1989 it was almost 24 times. Many people think this increase in inequality to be the overwhelmingly most important consequence of the neoliberal policies.

- 7) Buenos Aires, where in 1986 serious crimes against individuals were almost unknown, had become a dangerous city by 1999 as desperate individuals sought money for themselves and their families. These social impacts are extremely severe and seem to flow directly from the structural adjustment policies.
- 8) The “free market” conditions generated favored the large international enterprises. One result was an increasing import of intermediate products for production from the large international companies suppliers, generally outside Argentina, which destroyed a large proportion of the small and intermediate industries in Argentina. Alfredo Iniguez said "that the big national companies and the empresas transnacionales (ET, or transnational businesses) took advantage of the privatizations" which meant the concentration of capital in few hands and the destruction of medium and small enterprises, which are the ones with lower levels of technology (and hence not readily competitive) and that were also labor intensive. Following structural adjustments the ET fired more than 25 % of their work force. Because the ET are more capital intensive than local companies they had less demand for labor force. Thus out of each 1 million dollars they invest in Argentina, only 2.8 employment positions were created, less than 50 percent of the rate for local companies. Because ETs import more than local companies 70 cents of each dollar of profits are sent out of Argentina. The ET are now a majority of the 500 giants (grandes companias) in Argentina and are responsible for 76% of the productivity of these companies (INDEC 1999). This analysis shows that although the large financial activity of these companies can contribute greatly to the increase in GDP, they do so in ways that increase money drain, unemployment and levels of poverty in Argentina.
- 9) With the privatization of the public social services, the government reduced the fiscal deficit by, on the one hand reducing the levels of employment in those sectors, and, on the other, not having to pay for the social services once provided by the public companies. Despite the savings in government expenditures, external debt was not decreased (Figure 2). Meanwhile the government no longer received income from those profitable industries that had been sold off.
- 10) In 1994 the international interest rate began to increase, which meant the departure of financial capital from Argentina and other Latin American countries. The new government rallying cry was ‘mercados o economias emergentes’ – markets or economic emergencies, as if these were the only choices. As Iniguez (1997) says, "this shows the weakness of the model". It was based on 'economia de casino'; the international financial capital went for higher interest rates (temporarily in Asia), not for long-term productive investments. The departure of international financial capital at that time

produced uncertainty for investors in Argentine projects, generating a massive withdrawal of their savings. It generated a financial crisis in the country.

Discussion

When we examine the objectives of the IMF as hypotheses (Table 1) we see that all of the 5 “pillars” or target achievements of the structural adjustment plan might be considered “realized” in some sense. However the other side of the coin associated with each successful achievement are the additional adverse impacts given above, which tend not to be discussed by the advocates of the IMF structural adjustment or by other advocates of neoliberalism either before or after the fact, although they continue to push for the enactment of such structural adjustments around the world. Finally we see that the debt schedule of the World Bank was met each and every year although debt was not reduced. Most average Argentines without hesitation blame the severe economic conditions, worse than many can remember, on "neoliberal economic policies" imposed by "the Chicago boys of the North" or their advocates in the nation. How well aimed is this blame?

In essence, the idea behind privatization was to 'canjear empresas estatales por deuda externa' (exchange state industries for external debt). That is why most of the public enterprises were sold to international companies. Privatization was indeed a way of getting ride of “inefficient” enterprises (oil, gas, telephone, transport), where sometimes “inefficient” meant inadequate in supplying public needs (such as telephones) and sometimes it meant expensive because Argentine workers tended to have large benefits such as health care. At the same time the sales were meant to get money for the government and pay the outstanding debt. In practice privatization was necessary to balance (in theory) the public budget **because** the state never had taken responsibility earlier for running those enterprises according to good international business standards. With the great pressure of the debt on the national economy the privatization strategy allowed the multinationals to buy enterprises at “fire sale prices”, that is at prices far below the market cost, and corruption was one of the main features of the process (Nudler 1998). Thus with privatization the government allowed the international companies to get extraordinary levels of profit. The government received \$59.7 billion from this convertibility plan from 1991 to 1997 which it used for interest on debt and 'amortizacion de capital', but during the same period the government borrowed \$63.5 billion, which means that the external debt not only did not diminish but increased substantially. So much for selling off the state owned enterprises to pay the debt.

Environmental effects of enhanced exports

The economic growth that occurred both in the past and in recent decades were at the expense of Argentine natural resources, especially those of the Pampas, but it is much less clear that structural adjustment by itself particularly enhanced that degradation beyond enhancing the exports of crops, petroleum and

fish. Historically, the first major environmental impact of economic activity in Argentina was the destruction of the natural grasslands caused by the expansion of the cropping frontiers starting in 1875. This activity developed the present agricultural mosaic, and the ensuing erosion, which was often severe. For Argentina this period could be said to be equivalent to today's "globalization", with open markets and the movement of people from Argentina to Europe and vice versa which allowed exports to bloom. This developed tremendous wealth, which benefited mostly the few large landowners and the urban communities around the ports. Today Argentina has consolidated its democracy and in the last two decades is going through a new period of economic growth and wealth accumulation, but instead of that being based on enlarging the agricultural area it is based on increasing the yield per area through energy-intensive technologies, with whatever pollution that entails. In a sense the stagnation phase that occurred after the Second World War and the policies that delayed mechanization and fertilizer use delayed the impact of industrialization on the soil resource base. Both in the past and today the wealth obtained was concentrated in the hands of a very few people, which tend to be owners of large blocks of land, urban citizens and corporations.

Other resources have been affected similarly. For example the hake (merluccia) fisheries of the mid Atlantic Coast are Argentina's most valuable fisheries and a significant source of export earnings. Part of the enhanced exports recommended by the World Bank plan (Table 1) was to be supplied by increased exports of these fish. Fisheries managers said that the fishery could sustain no more than 400,000 tons harvest per year, but political pressures, including that from the IMF, pushed that limit up to 120,000 tons for the two years before the fisheries collapsed.

For many Argentines global climate change is not some abstract concept but a daily and decade-by-decade experience. Some of the real climate change hazards that Argentina has to cope with include clear temperature increases in most of the country of at least several degrees C and (perhaps) more floods and droughts caused by changes in the patterns of isohyets, ozone layer depletion in the south and perhaps soil drying in Patagonia. Although there seems to be little direct relation between economic activities in Argentina, which are small on the global scale, and the changes in climate observed there, these changes are completely within our understanding of the probable effects of continued atmospheric changes brought about by global industrialization. Hence we might say that if globalization and increased international trade is indeed as effective as advertised, it will increase global wealth and, especially, trade, necessitating increased consumption of fossil fuel while contributing to greenhouse gas warming and drying impacts (ICCP 1995, Rind et al. 1991).

What is the enhanced GDP based on?

An intriguing question is **how** have the structural adjustment programs increased the Argentine GDP? Many would argue that the neoclassical principles simply work as intended, and that the stabilized currency and decreased business

taxes have enhanced the Argentine environment for business. But in fact there may be other reasons as given above. If Argentina has greatly increased its foreign sales of oil, gas, unprocessed fish, wood etc as raw materials (vs. value-added industrial products) it is, in effect, trading outstanding current foreign monetary debt for future resource and hence monetary debt as these resources are depleted. The increased production of oil for export generated about 2.5 billion dollars more GDP in the late 1990s compared to the early 1990s, about 5% of the increase in Argentina's GDP during the same time. A barrel of oil generates roughly 8 times the income when run through an economy compared to its direct sales value. In addition these industries employ far fewer people per unit GDP derived, leading to large unemployment even during times of increasing wealth. Earlier governments were keeping many of these resources "in reserve", either deliberately or accidentally, so the development and over development of these now can make the economy look good at least temporarily. In addition there has been an extremely large influx of foreign capital investment that may have showed up in some way as GDP. A major research agenda now is to determine how is it that the per capita GDP can increase by 40 percent while the number of people employed drops from 93 to 80 percent of the population.

Is it fair to blame structural adjustment and neoclassical economics?

It is clear that neoclassical economics is not the only, or perhaps even the principal, reason for Argentina's economic and social problems, nor the sole cause of natural resource degradation. But it seems fair to consider that neoclassical economics (or its equivalent before it was named) during both the early stages of agricultural development in the pampas and again more recently has coincided with environmental degradation and unevenness of wealth distribution in two independent historical periods. It is also reasonable to think that high rates of development at the expense of natural resource exploitation (e.g. soil and energy) may contribute to an unsustainable Argentina, and to an unsustainable globe. It is also interesting to note that some of this wealth was used to develop industries and that led to a positive feedback on energy consumption. But globalization has also served as a means to enhance widespread soil conservation through the spread of knowledge about no till agriculture, and, what is more important, an awareness of the effects caused by high rates of wealth development.

The final question is whether the (few) inarguably good results from the structural adjustment plan could have been obtained in part or entirely without the many adverse impacts. Is structural adjustment just trading one set of problems for another? For example, how necessary is neoclassical economics to make the changes necessary to stabilize currencies? Even some of our most noted traditional economists are beginning to ask that question, for example whether government-directed Keynesian Economics might have some utility after all (e.g. Krugman 2000). Certainly the problem of inflation and governments debasing currency (as was the case in ancient Rome) is hardly a new one, and hardly

requires the entire grab bag of neoclassical economic theory or massive restructuring of economies for its resolution (Harl 1996).

A second critical issue in Argentina and in other places is “how are the spoils of restructuring divided”? If restructuring sells industries developed with public investments to particular individuals at fire sale prices, who are those individuals and what did they have to do with initiating restructuring in the first place? How much has restructuring benefited the total number of people in that economy vs. just a relatively small subset of economic actors outside the economy being restructured? The latter point brings to mind the general history of Latin America, where various foreigners over time, from conquistadors to banana barons from Boston, have “invaded” the cultures and made off with the resources. Frequently these individuals, often seen as heroes in their times but pillagers today, were accompanied by various priests who would sanctify the rapacious activity in the name of some higher cause, be it saving souls or “manifest destiny”. Are the “Chicago boys” analogous new priests who sanctify the rape of Argentina’s resources by wealthy elites either inside or outside the country? Obviously there are many possible answers to that question and we do not pretend to know ourselves. But it seems to us that these issues need to be addressed to a much greater degree both outside and inside departments of economics, where it does seem to us that many practitioners tend to believe rather too strongly in the virtues of whatever suite of economic principles, such as neoclassical economics, they promulgate. We are of the opinion that much more natural science can be brought to bear on these issues, which may over time leave us with at least some partial answers that are not accessible through conventional neoclassical economics (e.g. Hall, 2000). Thus we leave the reader with this critical question: “are there presently poorly articulated ways by which we can gain the benefits of structural adjustment without the severe social costs and the enhanced resource depletion that is often the accompaniment”? Certainly we need more insight into these issues than can be gleaned from neoclassical economics alone.

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