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THE TRAGEDY OF LOST OPPORTUNITY:

PERU 1968-1983

by
Daniel M. Schydrowsky

To appear in Financial Crisis, Economic Turmoil and Political Change
in Latin America, ed. J. Hartlyn and S. A. Morley.

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The Present Disaster*

For the Peruvian economy, 1983 has been the worst year of this century. In the first semester, aggregate GNP is estimated to have fallen some 13 percent, and the second semester is not projected to be much better. For the year as a whole, aggregate GNP is expected to fall about 12 percent. This economic decline comes on top of a very poor 1982, with GNP falling percent and a not particularly good 1981 with zero growth. In addition, inflation has been continuously increasing, reaching a monthly rate of almost 9% in August (145% annualized) before falling back to about 6% in September (100% annualized). The budget deficit stands at 8 to 10 percent of GNP despite enormous efforts to cut government expenditure, which have been reduced in real terms by about a quarter. At the same time, the balance payment situation is extremely precarious. Peru's public foreign debt, at an all time high of 13 billion dollars, cannot be serviced; continuous rescheduling efforts are required. However, these hinge on complying with targets negotiated with the IMF, which include substantial reductions in inflation and in the government deficit. At the time of this writing, it is clear that the September 1983 targets agreed upon with the IMF have not been met and that a new

* This paper was initially written at the end of October 1983. Subsequent revisions have kept the time-frame intact. Hindsight would have changed very little, e.g., according to the final official figures, GNP in 1984 fell by 11.3% instead of by 12%.

agreement with the Fund needs to be negotiated.

It is hardly disputed that the most immediate cause of the current situation, regarding the level of GNP at least, must be found in the severe balance of payments problem. The lack of foreign exchange is leading the Peruvian government to follow a very tough deflationary policy designed to reduce domestic aggregate demand and thereby to depress the country's import level. There is less agreement with regard to the causes of inflation, but it appeared through August at least to be the government's firm conviction that a deflationary policy would cure that problem too.

Neither the balance of payment situation nor the inflation have happened upon the country out of nowhere. It is true that in 1983, Peru was hit by several natural disasters: terrible rains in the North and a severe drought in the South. However, these disasters at most account for a drop of 4 percent of GNP. The remaining 9 percent drop as well as last year's drop and the lack of growth before that cannot be assigned to an "act of God." Rather, Peru's current economic situation is the result of a cumulative process begun many years ago and steered at successive times by different economic teams.

The following sections of this paper review the various policy decisions that were taken at different strategic moments, explore their rationale and consequences, and questions why alternatives that were available at the time, were not adopted.

As an introduction, the nature and dynamics of the import substituting industrialization (ISI) strategy will be laid out; they provide the necessary key to understanding a major part of Peru's economic tribulations. The later sections focus on successive periods of Peruvian economic history when policy makers had the option of breaking out of the ISI pattern but did not do so. In each case, an attempt is made not only to describe the policy followed but to analyze its rationale, its shortcomings and the apparent reasons for policy makers' rejection of alternatives. This review covers the policy flexibility available in the devaluation year of 1967, the new policy departures chosen by the very autonomous Military Government in "Phase I" in 1969-75, the reversal of policy under pressure during "Phase II", 1976-78, the use of balance of payments and fiscal latitude during "Phase III," 1979-80, and the fresh start made by the civilian Constitutional Government during 1980-83. Given the nature of the task as well as the limitations of space, the analysis covers the high points and the broad sweep of policy rather than going into minute detail.

II

A Not So Extraneous Story:

The Latin American Prescription for Economic Disaster

The popular economic strategy of Latin America has been that of import substituting industrialization. The rationale for it is simple: Latin America has plenty of labor, and it can mobilize

savings, but it does not have enough land to occupy all its workers; therefore it must industrialize. National savings should be invested in industry, and the most obvious things to produce are those consumed by Latin America itself. Substituting imports means making use of a ready market, and also one which is safe. Moreover, by protecting against import competition, domestic infant industrialists can be given a chance to learn their trade and to solidly establish themselves. Since import substitution will save foreign exchange, this strategy will also contribute to improving the balance of payments.

Implementation of the strategy is also quite straight forward. In the initial stage, tariffs or quantitative restrictions are imposed on the import of finished goods, thus raising the profitability of their domestic production. As a range of imported products are domesticated, the production process is integrated backwards to intermediate goods. At this point, it is the turn of the intermediate goods producer to receive protection. However, this raises the cost of domestic finished goods producers who request and receive additional protection in turn. The process of successive backward integration generates an escalator in the protection system, with every successive stage of backward integration of a domestic industrial process requiring higher levels of protection for the later stages of transformation. As the process continues, the domestic cost structure becomes more and more different from that obtaining in the developed world.

The development of the protection system has no negative impact on domestic profitability, since domestic prices move along with the additional protection. The only difficulty experienced in the domestic market is that this market is relatively small, and therefore the economies of scale in industrial production cannot be realized. Instead, firms diversify their product mix, become less specialized, and markets become increasingly monopolistically competitive.

On the export side, the situation is quite different. The industrial producer who makes quite reasonable (or sometimes quite high) profits on sales in the domestic market is completely unable to compete in the export market. The reason is that high input prices raise his costs well above those of the world market. Lack of competitiveness in the export market, however, is taken as an indication of inefficiency. Combined with the generalized view that high protection in the domestic market also indicates lack of competitiveness and therefore inefficiency, the conviction gradually grows among industrialists, government officials and the public alike, that Latin American industry is inefficient.

Much of the conviction that industry is inefficient is based on a mistaken calculation. Efficiency is measured in a simple-minded way by looking at costs of production in local currency, dividing by the exchange rate and then comparing the resulting cost figure to the import price (excluding tariff) of comparable goods. On this basis, indeed, domestic industry in Latin America has typically been high

cost and "inefficient." However, there is something fundamentally wrong with this calculation. When a country levies a tariff, it is essentially devaluing for the particular good on which the tariff is levied. This is so because what matters for trade and for domestic production is the total cost of an import after all payments of taxes are taken into account. Thus, if Latinia's exchange rate is ten pesos to the dollar and the import of widgets is taxed with a 50 percent import duty, it is as though the exchange rate for widgets were 15, with no duty levied. Likewise, if for broomsticks the tariff is 80 percent, it is as though broomsticks had its own exchange rate of 18 pesos to the dollar. It follows that the system of differentiated tariffs in fact produces the equivalent of a multiple exchange rate system. Therefore, in order to properly compare domestic costs with international prices, it is necessary to convert cost figures in local currency to dollars at the exchange rate which actually affects those costs. Now, since in the process of industrialization, many imports have tariffs on them and are therefore produced domestically at prices reflecting exchange rates higher than the "financial" rate, it also turns out that the "cost rates" are all higher than the financial rate. Of course when costs are converted to dollars at the financial rate, which is lower than the costs rates, the costs in dollars are going to be overstated and look high. Much of the conviction of industrial inefficiency therefore is an illusion, properly called the "industrial inefficiency illusion".^{1/}

^{1/} For early statements see Diamand (1973), Schydlosky (1972).

What is not an illusion, however, is the lack of export competitiveness of domestic producers. This lack is policy induced too, however, resulting from the absence of proper offset on export sales to the high cost exchange rates. Thus, while in the domestic market tariffs on outputs are typically higher than the tariffs on the inputs, such is not the case for export sales. Traditionally, these sales receive the same exchange rate as all financial transactions, and therefore are effectively subject to an exchange rate lower than that affecting their costs.

The lack of export competitiveness naturally locks domestic industrial producers into the domestic market.

Now consider what happens as the economy is made to grow. The strategy is to have industry lead the growth process; this means that industry must grow faster than the rest of the economy. However, industry needs imported raw materials to produce and, therefore, the demand for imports will have to grow rapidly. However, the supply of foreign exchange is provided by the primary sectors, which are growing more slowly, and are intended to grow more slowly. As a result, after some point, the growth in demand for imports is going to exceed the growth in the supply of exports, and a foreign exchange crisis will result. The fundamental cause of this crisis is the divergence in growth paths between the foreign exchange using sectors (industry and services) and the foreign exchange producing sectors (agriculture and mining).

Unless and until the foreign exchange using sectors can be made to earn their own foreign exchange, this sectoral imbalance will strangle growth. If this structural problem is misdiagnosed as a cyclical one, and the economy is deflated to repress the balance of payments problem, nothing is solved. The only thing that occurs is that for a time foreign exchange reserves are built up again, but as soon as the economy begins to grow the problem reappears, to the increasing frustration of the policy makers who have treated the fever but not the disease.

III

Setting the Peruvian Stage: The Missed Opportunity of 1967

Peru embarked upon the explicit phase of import substituting industrialization with the Industrial Development Law of 1958. Before that period, Peru had begun to industrialize but this "Ley de Promocion Industrial" provided systematic tariff incentives and liberalization of material inputs designed to raise the profitability of industrial investment and to boost the domestic supply of industrial goods.

The military government of 1962, and then the Belaunde regime which followed it a year later adopted as their planning criteria the fundamental tenets of ECLA: Expansion for the domestic market, modification of price signals through deliberate government policy,

and the expansion of domestic demand through government investment. However, there was no recognition of the inherent by self-limiting nature of the strategy.

Quite independently of this ISI strategy, the deliberate and explicit adoption of a planning approach made available to Peru external assistance under the Alliance for Progress. Also, coincidentally, growing export revenue from earlier investment in copper (Toquepala) and from newly "discovered" fishmeal were available.^{1/} Thus the foreign exchange requirements of the inward looking industrialization policy became coincidentally available.

The Belaunde regime followed a generally expansionary policy in its first two years and began to fuel a demand-driven inflation. By 1965, a number of signs indicated that the exchange rate was becoming overvalued and the required planning for an orderly devaluation began in the Central Bank, the responsible government organ. Nonetheless, through 1967 every attempt was made to hold the exchange rate, including the adoption of substantial increases in import duties which reinforced the import substituting nature of the country's policy.

By 1967 it was quite clear that the exchange rate could no longer be maintained for very long. In August of 1967 the Central Bank's

^{1/} Toquepala generated substantial export revenues beginning in 1960 and the volume of fishmeal exports almost quadrupled between 1959 and 1962.

international reserves ran out and it withdrew from the foreign exchange market, thereby allowing the sol to depreciate against the dollar.^{1/}

One member of the small group at the Central Bank which conducted the technical studies leading to the devaluation had had experience in Argentina and persuaded his colleagues that the exchange rate system had acquired an anti-export bias, due to the gradual increase of import duties which had no symmetric analog on the export side. The dangers of locking the industrial producer into the domestic market were thus perceived and it was resolved to try to use the devaluation as an occasion to modify the situation.

The exchange rate at the time was 26.80 soles to the dollar and had been at that level since the beginning of the decade. The internal projections of the Central Bank indicated that an exchange rate of approximately 33.50 soles would be appropriate for traditional export production. However, it was also believed that for capital flight to be reversed, a somewhat higher rate would be needed. Moreover, the conviction existed that a devaluation to 33.50 would cause some degree of domestic price increase and that therefore it was desirable to devalue somewhat more in order to offset in advance some of the domestic price increase that the devaluation itself would bring about. It was thus felt that a rate in the neighborhood of 38.00

^{1/} A very interesting almost blow-by-blow account of this period can be found in Kuczynski (1977).

would be appropriate. However, adopting such a rate would provide a substantial windfall to export producers who only needed an exchange rate of 33.50 to be competitive. It was therefore resolved to levy an export tax of $1/3$ of the exchange rate difference, i.e. 3.73 soles after all had worked itself out, thus picking up most of the exporters' windfall. Since this export tax would only affect traditional exports, the full 38.00 or so would be available for industrial and other non-traditional exporters, thus making it more possible for them to overcome their cost disadvantage, particularly since the most recent tariff increase would be rescinded with the devaluation.

The policy proposed, therefore, was a partially compensated devaluation, i.e. one which partially compensated the inflationary effects of the devaluation, by lowering tariffs and retaining some of the windfall given to traditional exports. Substantial cost push still remained in the policy, however, since neither food nor industrial inputs were affected by the compensation measures. The only direct domestic consumption item which was subject to price restraint as a part of the policy was sugar, which at the time was an important export product from Peru. Its limitations notwithstanding, however, the policy would have gone a long way to correct the existing anti-export bias in the industrial policy and to begin the process of making Peruvian manufacturing export oriented.

The proposal wound its way through bureaucracy where it was

largely perceived as an ingenious way of covering the yawning budget deficits. It thus gained acceptance throughout the executive as a revenue-raising measure. However, the administration had no legal power to impose an export tax. Congressional approval being unobtainable, particularly in advance, the formula found was to create an "export retention," to be paid into an Economic Stabilization Fund.^{1/}

As can be imagined, Congress and exporters rose in anger at the "illegal export tax". Congress formally declared it illegal and the executive rescinded the retention two weeks after it had been imposed. However, the export tax was not completely dead: the fiscal crisis made it imperative. Accordingly, two months later it reemerged, this time as a 10% forced loan from exporters, repayable over a period of eight years, and deductible as a current cost. In effect, then, it became a tax of some 6%. It lasted on the books for about eight months until it was again abolished.

A measure that had the potential of changing the trend of Peru's industrial growth thus became entangled in a major political struggle on financing the government deficit.^{2/} In the process, it completely lost its long-term policy character and became transformed into a mere revenue-raising tax. As such it had only the appeal of easy collectibility. Moreover, instead of being part of a compensated devaluation involving an off-setting reduction in import duties, it

^{1/} In the event, 40% of the export windfall was to be paid into the Fund.

^{2/} See Kuczynski (1977), Chapter VII for a vivid account of these battles.

coexisted for the short duration of its life with an import surcharge! Thus even if it had survived, its long-term effect would have been quite different from the one intended.

The question now is why did this first attempt to balance Peru's trade policy end so badly? It would appear that the reason was the far too narrow base of understanding on which this policy initiative was based. At best, a half-a-dozen people really understood what long-term objective was being pursued by the export retention. A far wider group of people thought of it as merely a tax gathering device. But the handful of people who understood the purpose was concerned simultaneously with monitoring a wide number of issues surrounding the implementation of the devaluation, which was being resisted among others by the President of the Republic. In such a context, "implementation overload" occurred, and a number of things had to be sacrificed. Unfortunately, one of those things was righting the trade policy for long-term gain. It might therefore be concluded that along with a milieu unaccustomed to complex economic analysis, the root cause for this missed opportunity was Peru's far too narrow technocratic base. Fortunately, this very small group of technocrats had recognized that problem, and set in motion mechanisms which over the long term would very substantially multiply the base of technicians on which any future Peruvian government team could draw. Of course, nobody could guarantee that these technocrats would do better when their turn came! But of course that is getting somewhat ahead of the story.

IV

Strategic Mistakes of the Peruvian Revolution,Phase I, (1968-75)

The Peruvian Revolution, Phase I, set out to create a new Peruvian reality. The country was to have an economy able to grow autonomously and in a sustained fashion, it was to be an economy more modern than in the past, and much more independent of the rest of the world. Industrialization was an obvious choice of strategy, but it was balanced with very large investments in mining projects of long gestation periods. Thus, import substitution on the one hand and mineral exports (including petroleum) on the other were intended to produce a very strong balance of payments. Equity would be improved through changes in the control of enterprises: agrarian reform, industrial legislation, etc. Moreover, it would all be held together by strong government control of the commanding heights of the economy: direct ownership, import licensing and exchange control were the tools of implementation.

The identification of the objectives to be achieved and the strategy of a frontal attack to break through to these objectives was consistent with the military mind. However, little thought was given to protecting the flanks: there was a total disregard for secondary consequences. Yet, quite soon the Peruvian economy produced pernicious and cumulative by-products which ultimately engulfed the whole

operation and exploded in an unmanageable balance of payments problem.

The military picked up in 1968 pretty much where they had left off in 1963, even allowing for Belaunde's continuation of the industrialization policy. They viewed the world in terms of ECLA's import substitution doctrine. However, they also knew that Peru had enormous riches beneath its soil, and thus they regarded developing of mining as absolutely essential. Since they believed (not altogether incorrectly) that constraints are removable by human effort, they pursued industrial development and mining expansion at the same time. Their promotion of industry was by far the most vigorous ever known in Peru, and it was perhaps more vigorous than that undertaken in any comparable period in Latin America. The procedure was simple enough: the import of anything that could be produced in Peru was prohibited; all that was required to trigger a prohibition was for a domestic producer to appear on the scene. The result was that the foreign-exchange-saving period of import substitution, i.e., that period when the existing imports are reduced as domestic output expands, was compressed to a year and a half or two. This was so because all it took was the announcement of domestic production for the import reduction to occur. From then on any domestic production which occurred was in fact foreign exchange using, for it would require imported inputs. Thus, the Military Regime concentrated all its foreign exchange savings in the the first two years and left for later the foreign exchange using parts of its industrial development effort.

The mining development program for all practical purposes had the same time profile. All the foreign exchange saving occurred at the beginning when the existing foreign enterprises were nationalized, and the previously existing profit repatriations were retained in the country. Thereafter, all new mining activity involved heavy expenses of state enterprises for exploration and expansion. These were in very large measure expenses in foreign exchange. Thus, increasingly, the mining sector was absorbing the foreign exchange it was earning in its own expansion program. Evidently, well into the future the new investment would pay off in foreign exchange earnings but only after a long gestation period. Moreover, the foreign exchange intensity of the mining efforts was increased further by virtue of the lack of experience on the part of the government enterprises involved. Finally, it is also likely that the foreign exchange revenue realized from current exports of minerals was lower than would otherwise have occurred as a result of the ineptitude of the government marketing corporations, which needed to learn their trade in the school of hard knocks. Oil from the jungle was the principal source of new foreign exchange, however the quantities involved turned out to be well below expectation.

As far as the productive sectors are concerned, the development strategy, therefore, was clearly headed for the classical type of trouble which Latin America's import substitution pattern generates as discussed in section II above. However, the Peruvian revolution's other policies aggravated the matter substantially.

Pursuing fairness in agriculture led to an agrarian reform (1969) which broke up the large sugar and cotton estates and reduced output of a major foreign exchange producing sector, thus aggravating the imbalance between foreign exchange production and foreign exchange usage. The "industrial community" legislation (1970) had the same effect. It provided very strong incentives for the substitution of labor by capital. However, capital goods were largely imported and therefore the import intensity of new industrial investment rose substantially. Moreover, the exchange controls (1970) which accompanied the trade policy made it very attractive to over-invoice machinery and to operate with imported inputs, preferably over-invoiced, in order to expatriate assets which the private sector feared would ultimately be confiscated in any case. Thus, the foreign exchange intensity of current industrial production went up, once more aggravating the trend towards a structural balance of payments explosion. The income redistribution policy added the final touch. Income was distributed from the top 5% to the following 15% of the population. It supplied a substantial increase to the middle class, and with it a substantial change in the composition of final demand in the country: the demand of the more modern industrial goods increased significantly. These, however, are precisely the goods with a high import component. Thus, the income distribution added further reinforcement to an already unsustainable trend.

Once Peru's development policies were set, the count-down to a collision between the demand for foreign exchange and the availability

of such foreign exchange was under way.

The terms of trade and foreign bankers came providentially to the rescue, or so it seemed initially. Impressed by the superficial order and purpose to Peru's government policy, and later awash with Eurodollars from the first oil shock, international bankers lent Peru large amounts of foreign exchange, at least in comparison to the magnitudes heretofore customary. From 1970 to 1974 export prices rose and Peru's foreign debt doubled. The effect of the price rise and the capital inflow was to postpone the moment of explosion of the balance of payments, but by the same token, that explosion when it came, was much larger. Export prices fell and the balance of payments exploded in 1975.

While all the foregoing was occurring on the main stage of the Peruvian economy, a very minor side show was occurring as well. The story starts in 1969, at the beginning of the military government, when a general with strong roots in the 1962-63 military government was Minister of Finance, and before the Central Bank had been purged of its leading technocrats of the Belaunde Administration. In January 1969, the Central Bank's team approached General Valdivia, then the Minister of Finance, with the notion that the new Peru might benefit substantially from balancing its industrial development strategy. To that effect, it would be necessary to create an export promotion instruments, akin to the tariff, which would raise the number of soles obtained by the industrial exporter on sales abroad to something

approximating its yield on the local market. The argument was buttressed by calculations to show how, given Peru's depressed economy of that time, fiscal support of exports would be largely a self-financing venture thanks to the fiscal consequences of a high foreign trade multiplier. The Minister was not completely convinced of the multiplier analysis and its conclusion that promoting exports with tax refunds was a more profitable venture when the economy was depressed than when it was booming, but he nonetheless accepted the general notion. Thus the Certex (Certificado de Reintegro Tributario a las Exportaciones) was created. However, before the implementation regulations could be drawn up, the Minister as well as the civilian technocrats of the Central Bank were fired, and the Certex passed temporarily into oblivion.

A set of regulations for the Certex did appear eventually, and the Certex began to be used cautiously but persistently by the bureaucrats charged with directing Peruvian trade, whenever they thought that export sales could be closed with some additional support. And thus under the protection of a very cautiously administered Certex, Peru's non-traditional exports grew from \$ 34 million in 1970 to \$ 108 million by the time the Balance of Payments exploded in 1975.

There is little question that, the Certex side show notwithstanding, the Peruvian economic strategy of Phase I was one of import substitution to the hilt. What is perplexing is why this

should have been so. The self-limiting nature of import substitution had by then been recognized by a number of writers, 1/ and had even been documented thoroughly in an OECD study; 2/ a part, albeit a minor one, of the government was timidly promoting exports, and a number of the highly placed civilians in the economic team were certainly acquainted with the notions of comparative advantage and the limitations arising from systematic violations of comparative costs.

One major element was certainly ideology. The military who ran the show had been trained in the early and middle sixties at the Centro de Altos Estudios Militares. Lecturers there were almost invariably of a left-wing persuasion, since right-thinking civilians at that time did not bother to lecture at the Military Institute. Moreover, the students at the CAEM carefully analyzed ECLA's doctrines, and ECLA at that time had not yet swung from import substitution to export promotion. The second element was also a gut conviction of the military that Peru was not an industrial country. They were willing to take risks in the area of mining, even to the extent of expropriating from foreigners whom more timid minds would have thought indispensable to run the operations. They were willing to take enormous risks in agriculture, believing that farmer cooperatives could run those complex enterprises as well as their capitalist owners. But they were profoundly convinced that Peru was

1/ CEPAL (1964), Diamand (1971), Diaz Alejandro (1965), Felix (1968) to name just a few.

2/ Little, Scitovsky and Scott (1970).

not able to produce industrial output competitive in the world markets in price and quality.^{1/} And they also feared becoming prey to the marketing capabilities of multinational enterprises. Of course, the industrial inefficiency illusion generated by the existing trade policy structure reinforced their belief, thus providing apparent empirical justification to their conviction.

The Certex program in that context was truly a side show, which took place quite outside the main attention span of the economic team. Nobody on that team would in their wildest dreams had thought that Peruvian industrial growth could be outward-looking. The timidity of those wildest dreams brought about the nightmare of the crisis of 1975-78.

v

The Pendular Swing of Phase II (1976-78)

The Balance of Payments explosion of 1975 made it impossible to continue with the same economic strategy. Indeed, it made it impossible to continue with the same people at the head of the Peruvian Government. Thus by the beginning of 1976, most of the key players had changed. With the new players, and under considerable pressure from the international financial community, a new set of

^{1/} Their industrial programming approach to the Andean Group illustrates this point well.

ideas began to take hold. These were not easily accepted by the successive Peruvian government teams of 1975 to 1978, but they ultimately became the basis of government policy.

The basic scheme was the standard one of the IMF: Peru was diagnosed to have an overheated economy, which needed to be cooled off. This involved a reduction of government expenditure and a reduction of credit expansion. It also required that the shackled Peruvian markets be freed starting with the exchange rate, which was thereupon devalued by 350% over the next 30 months. However, price controls of various sorts, subsidies on food and other goods, etc., all had to go.

Thus a diagnosis derived from the workings of a well-balanced economic structure was applied to an economy with severe structural distortions fostered by an unusually vigorous import substitution program.^{1/} It confused scarcity of foreign exchange with scarcity of overall productive capacity. It presumed high elasticities of substitution of domestic goods for imports, when the reality was that this substitution had been removed by legislation.^{2/} It presumed the

^{1/} This view is also taken in Schydrowsky and Wicht (1979) and (1983). However, Cline (1981) argues that a standard IMF-style stabilization program was suitable; indeed, it should have been applied earlier.

^{2/} Cline (1981) adduces econometric evidence to the contrary, estimating the exchange rate elasticities at .5 for exports and -1.05 for imports (pp. 313-315). Running the export regression in percentage changes instead of shares makes the elasticity come out insignificant and with the wrong sign. A more complete econometric analysis of imports which segments the data fully by period makes this elasticity statistically indistinguishable from zero too. See

capacity of the economy to adjust flexibly to major price changes when rigidities had been built into the system with extraordinary vigor.

The only way to bring the Balance of Payments into equilibrium under such conditions was to induce a substantial deflation. The only way to do that was to substantially reduce real income. That in turn required a substantial inflation and a lag in adjustment of nominal wages. In other words, stagflation was needed. That indeed was achieved with the massive devaluations of those years. GNP fell in per capita terms from 1976 through 1978, and inflation increased year after year to reach 80%.

An alternative approach was certainly possible. Rather than cutting back the demand of foreign exchange, its supply could have been increased. Given Peru's very large unutilized industrial capacity at that time,^{1/} vigorous export promotion could have contributed very quickly to increase foreign exchange earnings.^{2/} But once again, efforts to increase foreign exchange earnings were a side show, by no means integrated into the main stream of economic policy.

The side show was run properly enough by the Ministry of Trade, which instituted a reform of the Certex in 1976, generally substantially raising the rates and making the whole administrative

Schydrowsky (1981), pp. 329-330 on these points.

1/ See Abusada-Salah (1975) and Millan (1975) on this point.

2/ For estimates see Schydrowsky and Wicht (1979), p. 97 ff or (1983) p. 132 ff.

system much more flexible. The Deputy Minister of Trade, the man largely responsible for this side show, was a man of unusual pragmatism, who correctly saw that a dollar earned with industrial products was as good as a dollar earned with mining exports. However, raising the Certex was not enough. The economy at that time was strangled by an import licesing system as well as by credit restriction. And it happened quite frequently that an industrial producer had an export market but not the import license to procure the necessary material inputs. Or he might have the import license but not the credit required for working capital. At the same time, others who did not have a market, would have the import licenses or the credit. Despite all this, the side show became gradually more important. Non-traditional exports grew from \$137 million in 1976 to \$344 million in 1978.

It is now necessary to ask why the policy shift was so pendular between the two phases of Military Government. The answer lies in good part in the dichotomous nature of the economic explanations available for the country's situation. The ECLA type view had had their day and failed, therefore the orthodox IMF-type view had to be correct. Another, and reinforcing, part of the answer lies with the nature of the alternative team of technocrats. Again the ECLA-trained, interventionist oriented, team had had their chance; it was now the turn of the U.S. trained, market-oriented economists. Furthermore, international pressure also played a major role, and the views of the funding agencies (particularly IMF and IBRD) as well as of the banks

were quite orthodox. And Peru had to listen if it wanted to be financed!

These factors all produced a policy climate in which restricting demand was favored while expanding supply was neglected and where sectoral selectivity was deliberately avoided in the conviction that broad macro policy was what the country needed.^{1/} Leaning against such a massive swing of opinion, Phase I bureaucrats were able to drag their feet but not more.

VI

The False Respite of Phase III (1979-1980)

The crunch of 1975-1978, the massive devaluations of those years combined with the fall in real wage and the increase in the Certex rate of 1976 all combined put the side show of non-traditional exports on the main stage by 1979. Between 1976 and 1979, non-traditional exports grew by a stunning 453% from \$137 million to \$756 million. Industrialists who had never thought they could penetrate foreign markets suddenly found themselves exporting substantial amounts not only to neighboring countries but also to the United States and Europe. Government officials, who had been convinced that Peruvian industry was hopelessly inefficient, began to think otherwise.

^{1/} While export promotion may seem a "broad macro policy," it is conventionally viewed as a policy narrowly discriminating in favor of selected inefficient producers who need subsidies to compete in world markets.

Long-held convictions about Peru's limitations as a potential industrial producer were suddenly abandoned and reversed. Peru seemed to be on the verge of breaking out of its structural Balance of Payment's problem. The Exporters Association even lobbied effectively for the passage of a new Export Law which contained numerous improvements of incentives, and guaranteed the stability of the export incentive system for the following decade.

And then destiny intervened. Prices of Peru's minerals doubled, and with this increase, traditional exports soared from \$ 1.6 billion in 1978 to \$ 3.1 billion in 1980. Suddenly, the country was overrun with foreign exchange. Where in 1978 the problem of Peru was a shortage of foreign exchange, by the end of 1979, Peru's problem was widely diagnosed as being that of having too much foreign exchange.

The economic team, principally the Minister of Economics and the President of the Central Bank, were in the forefront of those who worried that the Balance of Payments surplus resulting from the commodity boom was going to fuel an unmanageable internal inflation. Indeed, money supply rose by 70% in 1979 and the 1979 price increase on a December-to-December basis was 68% and threatened to continue at the same or higher rate in 1980.

Unfortunately, the economic team looked only at the massive increase in foreign exchange income which the country had obtained. It did not look at who received this foreign exchange income, nor did

it look at what kind of supply capacity was available in the country to respond to an increase in demand. Had they done so, they would have found that the overwhelming part of the increase in foreign exchange income wound up in the government's coffers and was effectively sterilized. To begin with, an export tax of 17.5% accrued directly to the Treasury. Thereafter, about half of the revenue of mining accrued to the government enterprises, which were instructed to prudently squirrel away this windfall until appropriate investment projects could be found. Another quarter or so of the revenue accrued to the Southern Peru Copper Corporation which used the funds to repay debt, to pay additional taxes to the Peruvian government, and to repatriate the balance. Thus, only 20% or so accrued to small and medium miners who in turn spent a part of their additional income within the country (and some on imports of new equipment). Thus directly and indirectly some 60-70% of additional foreign exchange revenue accrued to the Treasury and was sterilized, while another 10 to 15% left the country in the form of dividend remittances or other imports. The remaining 15-20% were expansionary, but they faced a depressed economy with very substantial underutilization of existing capacity, even in comparison to past normal levels. Under such circumstances, the accumulation of monetary balances was a counterpart to the accumulation of surpluses by the public enterprises, and not a sign of expansionary pressure. In turn, inflation was driven largely from the cost side as a result of successive devaluations and the resulting attempt by wage earners to catch up, combined with a world increase in food prices. Moreover, as the recession deepened, and

unsold inventories increased, producers widened their markups in order to be able to pay for current financial costs on the basis of smaller volumes of sales.

All these circumstances notwithstanding, the government was convinced that it was facing a demand-pull inflation which originated in an excessive accumulation of foreign exchange reserves. And therefore it set about to try to reduce those reserves. The tools were quite simple: imports had to be raised, and the growth of exports had to be slowed down. The former involved dismantling import controls, which had been inherited from the previous phases of the Military Government. This involved two steps, a first one to consolidate import duties by removing a wide variety of ad hominem exemptions, and a second one, which involved removing quantitative restrictions and relying exclusively on tariffs. Both these measures were slowly but surely implemented, however the barriers against imports were still quite high and imports grew quite slowly. On the export side, the main policy tool used was to limit the amount of export credit available, thus slowing down the rate of growth of non-traditionals. The net effect of all these measures did not accomplish their end: when the outgoing economic team of the Military Government handed over to its elected successors, Peru still was running a surplus and had a substantial accumulation of foreign exchange reserves.

The mineral price boom and ensuing bonanza of foreign exchange

pushed non-traditional exports once again to the side of the scene, and made inflation the primary concern. Non traditionalists did not become the side show again, however, because in volume they were now about 20% of exports, and also because the Exporters Association had become an effective and articulate pressure group. Nonetheless, it is interesting to reflect on why the boom of 1979-80 should have been considered so inflationary and why such efforts should have been made to squander the foreign exchange reserves which might have served well in a later and rainier day.

One element in the puzzle seems to have been the wrong conviction that world prices of minerals would not soon fall, thus guaranteeing very high foreign exchange revenues to Peru for a longish period. Had a cyclical downturn in commodity prices been foreseen, one might have expected less of an attempt to spend current foreign exchange revenues and more of an attempt to maintain alternative sources of foreign exchange earnings through non-traditional exports. As it was, the Government saw a need to sterilize a significant part of the foreign exchange revenue in order to prevent a massive inflation from taking place. However, once having undertaken sterilization measures on the fiscal side, the consequences of these measures for the interpretation of the monetary balance sheet seem not to have been comprehended. Having underestimated the amount of sterilization they had accomplished, and also feeling that they could not do more in this direction, their only remaining policy option was to "burn up the reserves".

Another possible element in this context might have been the aggregate monetarist framework of analysis adopted gradually by the economic teams of Phase II and believed in firmly by the economic team of Phase III. An aggregate view by explicit intent, this model is by construction incapable of accomodating different behavior for different subgroups within the economy. It therefore does not prompt its users to enquire as to the actual behavior of distinct groups of economic agents.

In the middle of 1980, when the Military's economic team handed over the reigns of the economy to the economic team representing Belaunde's second administration and headed by Manuel Ulloa, the conviction that it was essential to "burn up" the dollars in order to stop inflation was very well established.

VII

Getting the Prices Wrong: The Technocratic Disaster of 1980-1983

The credentials of the economic team taking over in mid-1980 was outstanding. A Harvard Ph.D. in economics became President of the Central Bank and a Cornell Ph.D. in economics became Deputy Minister of Trade, while experienced international bankers staffed various executive positions. Moreover, economic decision-making was concentrated in the hands of the Ministry of Economics and Finance which became the Ministry of Economics, Finance and Trade. The

addition of the Secretariat of Trade to the Ministry of Economics was of particular significance, since the power to set tariffs and export promotion levels was one of the crucial levers of economic power in the country.

The new economic team applied a very clear and coherent policy consisting of two essential elements: (i) getting the prices "right"; and (ii) keeping President Belaunde's spending urges under control.

Getting the prices "right" had as objective to unravel the substantial distortions of the Peruvian economy. The team felt that Peru had overprotected its infant industry, it had gone into excessively capital intensive activities, it had discriminated against the country-side in favor of the city, it had discriminated against savers in favor of borrowers, and all this had caused very substantial distortion in the economy. To straighten this out, subsidies on food and gas prices needed to be removed and those prices needed to reach their appropriate (and higher) levels; real wages were too high to generate full employment, these should ideally come down, but since that would cause serious social unrest, the best that could be done was to prevent them from rising; the real interest rate needed to rise to make sure that scarce capital was properly applied; moreover, higher real interest rates would at least get the relative price of labor and capital more into line, particularly since wages could not be depressed; tariffs need to be lowered and the structure of tariffs made as uniform as possible; the Certex (Peru's export promotion

device) needed to be reduced to prevent excess profits from being made in the export business. The exchange rate needed to be devalued more quickly, at least to keep in line with domestic inflation, but if possible to effectuate a real devaluation.

Each one of these policy elements had merit in itself and could be justified in terms of the market towards which it was oriented. Taken as an interactive package, however these policies added up to a whole which had quite different effects. The first of these was the creation of an inflationary spiral by policy action. The circle started with the removal of subsidies on food and gasoline. As the prices of these rose, the cost of living increased, which required a rise in the nominal wage in line with the policy objective of keeping real wages constant. At the same time, however, a higher domestic price level required a devaluation in order to prevent over-valuation from occurring. The devaluation in turn, caused an increase in the price of imported food and in the reference price of gasoline, which required a further increase in the domestic prices of these goods, which in turn required further wage increases and devaluation, which in turn ... The economic team called the initial steps of this process a "corrective inflation". Unfortunately, however, after a while only the inflation part of the label remained.

The second consequence of the package was a substantial movement towards the de-industrialization of the country. The reduction of tariffs brought in a wave of imports as the consuming public satisfied

an accumulated hunger for foreign goods. Correspondingly, the market for domestic producers shrunk abruptly, with a consequent impact on their profit and loss statements and balance sheets. This loss of cash flow caused a substantial increase in the demand for loans on the part of local business. Faced with a higher real interest, the result was a decapitalizing sequence which has still not been arrested. On the export side, the reduction in Certex caused a substantial fall in non-traditional exports. The overall effect of this reduction in foreign sales amounts to some 1% of GNP. Moreover, the major argument buttressing the reduction in export supports was the need for economy of government expenditure. However, the fall in tax base was such as to nullify any reduction in government expenditure through a fall in government revenue. Thus the 1% fall in GNP was not even compensated by any improvement in government finances.^{1/}

The second major element of economic policy was rooted in the conviction that Peru's inflation was demand-driven. Under such circumstances, were Belaunde allowed to pursue his public works ambitions unchecked, it was believed that inflation would become three-digit. Consequently, every effort was made to keep expenditure in check during 1980. As might be expected, however, political forces eventually overcame the economic team's resistance, and by the end of 1981 the dam had broken and public investment shot up. However, the higher public investment was financed by foreign borrowing rather than

^{1/} See Schydrowsky et. al. (1983), Chapter V, for a detailed discussion.

by the country's own foreign exchange. This was necessary because the trade policy (tariff reduction and Certex reductions) were causing Peru to earn less foreign exchange on account of non-trationals and to spend more of the foreign exchange it had on newly available imports. Moreover, export prices of traditionals fell in 1981, thus further reducing the availability of foreign exchange to the country.

The phasing of government expenditure therefore was the worst possible. Had Belaunde been allowed to spend during the first year of his term with a phase-down thereafter, particularly in conjunction with a more conservative trade policy, the country might well have been able to finance that public works program with its own foreign exchange and not have needed to go further into debt. Moreover, the diagnosis of demand-pull inflation could not hold up in view of the substantial excess capacity which existed in broad sectors of the economy and which was reinforced by the "apertura" policies being pursued by the Government.

1983 saw the logical culmination of the policies adopted since mid-1980. Government finances collapsed towards the end of 1982. The possibility of further foreign borrowing evaporated, and the foreign lenders insisted on very tough cuts in government expenditure. With the change in Ministers of Economics, a competent manager arrived on the scene who was able to actually implement the cuts. The ensuing fall in government expenditure converted an existing recession into a substantial depression, knocking some 9% off the country's GNP.

Combined with some natural disasters, the fall in GNP in the first half of 1983 compared with the comparable period of 1982 was of the order of 13%. However, the cut in government expenditure did not do much to cure the Government's deficit. The depression caused a reduction in the tax base; as the level of activity in the "modern" sector of the economy fell; a substantial fraction of business became "informalized" and thereby evaded taxes; and another fraction of business took to financing itself by not paying the taxes that it owed, thus compensating for the lack of the availability of credit. The sum total of these three effects signified a substantial fall in government revenue, leaving the deficit virtually unchanged at some 8 percent of GNP. The depression took its toll in other ways as well, as the financial solvency of enterprises continuously deteriorated. At the time of this writing (October 1983) many people in Lima claim that the lack of widespread bankruptcies is only due to the fact that nobody wants to throw the first stone.

The economic team did not have a lack of alternatives facing it in 1980. It had the Southern Cone experience available to it, particularly the unraveling which was already then taking place in Argentina. Moreover, it received upon assumption of power a set of memoranda rising out of a conference held in April 1980 reviewing policy options for the new government,^{1/} and it received extensive private and public input on the probable consequences of its policies

^{1/} Schydrowsky, Abusada and Gonzalez (1980).

within the first six months of having implemented them.^{1/} Unfortunately, many of those predictions turned out to be only too accurate. The question therefore is why the policies that were adopted were chosen and why they were adhered to so persistently.

A combination of factors suggest itself. One of them is the ambition to straighten out Peru's economic problems once and for all. In this sense, the Peruvian economic team apparently shared the evangelical mystique of their counterparts in the Southern Cone. The second is the recognition that straightening things out once and for all requires toughness, patience, and staying power. These two elements together account for the willingness to be drastic in policy measures and to be persistent in the face of short-run results which do not agree with the long-term objective.

However, even with this mind set, the substance of the policy could have been different. Here the problem seems to have lain on the one hand with a faulty diagnosis of the underlying conditions of the economy, and on the other with an inappropriate policy design which was based on partial rather than general equilibrium analysis. The faulty diagnosis was inherited to a substantial extent from the preceding economic team: the view that Peru's inflation was of the demand pull variety, and that the accumulation of international reserves was the cause of the trouble. If that were so, it would seem

^{1/} See, for instance, Pennano (1981), Schydrowsky (1982).

plausible that one should try to increase imports and decrease exports, while cutting back government expenditure. If the accumulation of international reserves results from a bottling-up of the income generated by export, and if demand is low compared to full capacity production, rather than high, then of course quite the opposite policies are required. What is so wonderful, is how a new and competent economic team can so misdiagnose a situation. The only partial answer available is that the diagnosis chosen was the one closest to economic orthodoxy in the international agencies and in the textbooks. Yet this explanation is only very partial for one would hope that any practicing economist and responsible government official would go beyond simple tradition in making a diagnosis. In addition, a key member of the economic team, the Deputy Minister of Trade, had previously done extensive research to document the extent of underutilization of installed capacity in Peru's industry, a finding quite at variance with a demand-driven explanation for inflation.^{1/}

The lack of coherent instrumentation of the policy, and the lack of perception of the explosive nature of the interactions between different policy elements should perhaps be set down to inexperience. The members of the economic team who had previous experience with major executive responsibility in a policy-making capacity had been away from macroeconomic analysis or the design of packages of economic policy for about a dozen years. In the interim, Peru's economic

^{1/} Abusada-Salah (1975) and (1976).

problems had become very much more complex: the "simple truths" of the 1960's were not applicable to the complicated 80's. Thus some members of the economic team wound up updating their skills and others wound up learning their skills by operating on the live body of the patient; unfortunately the patient got worse rather than better.

In solving the underlying structural problem of Peru, i.e. in allowing the country to industrialize in a self-sustaining manner, the technocratic experience of the last three years has been a failure so far. Rather than getting the prices right and eliminating the distortions in the economy, the economic team got the prices wrong and created the worst depression in Peru's economic history, bringing a major part of the economic agents to the brink of bankruptcy to boot.

VIII

A Post Script: Is the Lesson Finally Being Learned?

October 1983 witnessed an unusual spectacle in Peruvian economic history. The Exporters Association (ADEX) held its sixth convention of exporters. Invited to speak were all the major figures of the economic team, including the President of the Central Bank, and the Minister of Economics, Finance, and Trade. The presentations of these economic officials were remarkable. The President of the Central Bank, who had over the last three years participated actively in the de-industrialization and anti-export policy, declared that

non-traditional exports were the economic salvation of the country. "Nothing much can be expected from additional foreign borrowing," he said, "nor can we look to a quick increase in our traditional exports. Therefore, we must do everything we can to promote the non-traditionals." The Minister of Economics reiterated the theme, and declared that his portfolio would be most receptive to suggestions that the business community might have to solve the country's crisis situation.

Action followed upon words and the CERTEX for agroindustrial products was reestablished forthwith to the levels it had before the reductions of 1981. Promises for additional export credit were made, and additional export promotion incentives were studied.

Pressed by the immediacy of the foreign exchange crisis, non-traditional, particularly industrial, exports finally came into their own. But was it the desperate grab for a lifesaver on the part of a drowning man or the true conviction that the country's long-term growth required balanced industrialization? Only an upturn in raw material prices would give the answer to this question.

One can hazard a guess from the attitude of the government on the remainder of trade policy. An alternative to earning foreign exchange through exports is saving foreign exchange through import substitution. Thus an obvious response to the foreign exchange crisis would be to reverse the policy of tariff reductions and liberalization

wherever it would be possible for the country to produce import substitutes, particularly if this can be done on the basis of installed capacity. Substantial margin for such "reimport substitution" exists in the areas of textiles, capital goods, and electronics. Judicious reduction in the openness of the economy would have the advantage that it would yield some additional government revenue directly in the form of import duties, and it would raise the income multiplier thus raising the level of economic activity, providing employment and an enlarged tax base from which the government could then collect further revenue. Moreover, the improved fiscal situation would improve the government's bargaining position vis a vis its foreign creditors.1/

Interestingly enough, the economic team has systematically resisted every suggestion that it should adopt such a new orientation in its trade policy. The Minister of Industry at this time, a Chicago Ph.D. in Economics, well-known for his free trade views, has been publically advocating tariff increases and temporary import suspensions. He is not, however, part of the economic team! As a consequence, his public advocacy has made it less rather than more likely that such measures would be adopted.

The danger in the government's obdurancy in adopting a balanced policy towards foreign exchange, raising exports where possible and

1/ A carefully crafted analysis of the possibilities in this regard can be found in Toledo (1983).

reducing imports where feasible, is substantial. The current emphasis on nontraditional export promotion as the salvation of the country is fine; however, if firms collapse because import competition prevents them from making a reasonable income in the domestic market, they will not be around to export.

In conclusion, as of this writing (October 1983), Peru appears by no means to be out of the economic woods into which it has wandered in the late fifties and early sixties. It may yet provide another instance of the sad Southern Cone phenomenon of a country plunging from one extreme economic policy into another without ever finding its way onto a balanced and sustainable growth path. If such a sad outcome occurs, it will not be because Peru is short of technicians as in 1967, or because the limits of planning are not known as in 1968-75, nor because the free market and orthodoxy have not been tried and found wanting for that occurred in 1976-78, 1978-80 and 1980-83. It will be because the various competing economic groups which make up the Peruvian economy cannot coalesce sufficiently around a coherent consensus policy which will promote everyone's interest to some extent and no-one's to another's detriment.

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S T A T I S T I C A L A P P E N D I X

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
1) Real GDP 1970 prices in millions of US\$	3634	3940	4296	4470	4790	5023	5378	5566	5565	5795	6219	6538	6919	7348	7852	8040	8307	8285	8139	8489	8727	8989	9071	8002
2) Real GDP 1970 prices annual growth rate (%)	-	8.42	9.03	4.07	7.14	4.88	7.05	3.51	-0.03	4.14	7.31	5.13	5.84	6.20	6.86	2.39	3.33	-0.26	-1.77	4.30	2.81	3.00	0.91	-11.79
3) GDP per capital 1970 prices in US\$	377	398	421	426	444	453	471	474	460	466	486	497	511	529	551	550	554	539	516	525	526	529	520	447
4) Exports FOB in millions of US\$	433	496	540	541	667	667	764	757	866	866	1065	893	944	1049	1503	1330	1341	1726	1972	3676	3916	3249	3293	3015
5) Imports CIF in millions of US\$	379	469	537	556	580	729	817	811	630	601	622	753	797	1019	1531	2551	2037	1911	1959	1820	2499	3447	3601	2548
6) Current Account Balance in millions of US\$	8	-8	-36	-81	16	-138	-234	-282	-23	2	202	-34	-32	-192	-807	-1535	-1072	-783	-164	953	-101	-1728	-1609	-850
7) Total Foreign Debt in millions of US\$											3681	3692	3832	4132	5237	6257	7384	8567	9324	9334	9594	9638	11340	12443
8) Public Foreign Debt Service in millions of US\$											173	223	219	433	456	474	485	622	702	825	1323	1756	1600	1769
9) Terms of Trade Index (1981=100)	61	60	63	67	76	74	84	85	87	95	106	96	88	133	128	88	100	105	84	110	120	100	86	90
10) Taxes/GDP (%)	13.7	14.6	14.2	15.0	15.0	15.4	15.3	15.4	15.6	16.5	16.4	15.9	15.9	14.8	15.2	16.0	14.5	14.6	15.7	17.7	20.5	17.9	17.6	14.1
11) Government Expenditure/GDP (%)	13.0	14.9	15.3	16.8	18.6	20.3	20.6	20.7	19.7	18.2	19.0	20.1	20.5	18.7	18.4	21.6	20.8	22.1	20.8	18.3	23.3	22.8	21.6	22.8
12) Central Government Deficits/GDP (%)	0.7	-0.3	-1.1	-1.8	-3.6	-4.9	-5.3	-5.3	-4.1	-1.7	-2.6	-4.2	-4.6	-3.9	-3.2	-5.6	-6.3	-7.5	-5.1	-0.6	-2.8	-4.9	-3.9	-8.7
13) Inflation (CPI) %	2.4	8.8	4.8	8.8	11.2	14.9	7.7	19.1	9.5	5.6	5.6	7.4	4.3	13.8	19.1	24.0	44.7	32.4	73.7	66.7	60.8	72.7	72.9	125.1
14) Devaluation (%)	-1.2	-1.8	0.0	0.0	0.0	0.0	0.0	48.0	9.2	0.5	-0.4	-0.1	0.0	0.0	0.0	3.7	54.2	89.6	49.5	27.5	36.6	45.4	90.7	135.5

(i) Row 2) calculated from row 1).

(ii) For rows 7) and 8) consistent data begin in 1970.

(iii) Row 9 is calculated as Price Index Traditional Exports/External Price Index of Imports.

The series for 1960-73 is constructed applying the percentage variation of the terms of trade series from Instituto Nacional de Planificacion to 1974 figures from Banco Central de Reserva del Peru.

(iv) Row 10) excludes revenue from social security taxes

Sources: Instituto Nacional de Estadística, "Cuentas Nacionales del Peru" 1950-1980.

Banco Central de Reserva del Peru, "Cuentas Nacionales del Peru" 1950-1967 & 1960-1974; "Memoria" various issues and "Boletín" various issues.

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