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**THE ANATOMY OF AN ECONOMIC FAILURE:
PERU 1968-78**

**Daniel M. Schydrowsky
Juan J. Wicht**

**Discussion Paper Series
Number 32
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Daniel M. Schydrowsky*
Juan J. Wicht**

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* Professor, Department of Economics; and Senior Research Associate,
Center for Latin American Development Studies (CLADS), Boston
University.

** M.A. (Economics), Harvard, 1972; Asesor Económico a la Alta
Dirección, Instituto Nacional de Planificación del Peru (1972-);
on leave at CLADS, Boston University.

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ABSTRACT

THE ANATOMY OF AN ECONOMIC FAILURE: PERU 1968-1978

Daniel M. Schydlofsky
Juan J. Wicht

Peru is undergoing its current crisis as a result of having vigorously adopted a development strategy (import substituting industrialization) which caused the sectors demanding foreign exchange to grow more rapidly than the sector supplying foreign exchange. The reform measures adopted by the Military Government as well as their adoption of exchange and import control served to aggravate the inherent tendencies and overborrowing postponed the crisis while making it substantially worse.

The attempted stabilization has been unsuccessful due principally to a misdiagnosis of the situation as one of general excess demand, while capacity in industry was grossly underutilized and a large part of the labor force were un- and underemployed.

A strategy based on industrial production for export could have achieved many of the Revolution's goals, if started in 1969. Even if adopted to counter the crisis in 1975, such a strategy could have brought growth towards equilibrium rather than inflation and recession with balance only in the external accounts. Unless Peru reorients its growth strategy in a way that preserves balance between the sectors that demand and supply foreign exchange, the present situation will cyclically recur.

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INTRODUCTION

October 1978 will mark ten years since the "Peruvian Experiment" began. Much has happened in Peru since then; even more, undoubtedly, has failed to happen, as that promising Peruvian vision of structural reform has in fact ended up in the worst economic, social and political crisis that the country has seen in the XX century: record unemployment figures, workers and peasants in the streets violently protesting the dismissal or imprisonment of their leaders, desperate entrepreneurs attacking the government for its lack of economic leadership, increasing inflation at the same time that a generalized recession paralyzes the economy, huge deficits in the public budget and the balance of payments, and severe loss of political authority by the Revolutionary Military Government. The great objectives of 1968 have not been reached. What was once called an "ambiguous" but promising revolution, has become undermined, perhaps fatally, by its failures of economic policy.

This paper will attempt a comprehensive appraisal from the economic point of view of Peru's course in the last ten years, within the context of Peru's national history. We think that such an economic analysis may help explain many of the ambiguities in the Peruvian process.

Our analysis will have four parts. I, the record: what the military government wanted to do, given the situation in the late 60's, what they really did (in the different "phases" of the regime), and what results were obtained. II, the causes of the present economic crisis: the extent to which credit or blame can be put on the development strategy adopted before as compared to after 1968, on decisions taken by the government as compared to other economic agents, on endogenous causes as compared to

exogenous aggravating factors. III, the range of alternatives: a rerunning of history that will show us the growth and income distribution potential of a quite different economic policy that was possible in the last ten years. IV, the future: the alternatives that are now open, and the results that can be projected in the short run and in the long run for Peru.

Our findings and conclusions are not likely to please the conventional interventionist "progressive" approach of many Latin American pensadores, and they are also unlikely to please the traditional, conservative approach of the economic establishment. The Peruvian Experiment, which in fact puzzled both groups from the beginning, keeps being an elusive and contradictory subject when it is analyzed. It has now, however, an important economic lesson to give, to Peruvians and to foreigners as well, in order to understand the meaning of real socioeconomic change, and to help to prevent future efforts to promote economic development from failing.

I. THE RECORD

A comprehensive appraisal of the economic experience of the last ten years should take into account not only the chronology of events but also the intentions of the government and of the most important groups in Peruvian society, as they can be traced through the various laws, manifestos, declarations, etc. Such an appraisal would establish what failed to occur as well as what actually occurred. Moreover, a better understanding of the economic objectives and results of the Peruvian Experiment requires that we examine Peru's economic experience in the years before 1968, as well as during the two different, and to some extent opposed, phases of 1968-75 and 1976-78.

A. The Heritage in 1968

Peru was just beginning to pull out of an economic crisis in October 1968. Real product per capita was declining for the second consecutive year, inflation was at the all-time high of 19% p.a., the balance of payments on current account was not quite in balance after having been strongly negative the previous year, and the fiscal deficit was 3.4% of GNP.¹

However, previous to the 1967-68 crisis, the country had achieved a very respectable growth rate, 5.4% per year from 1945 to 1966, somewhat higher than the Latin American average of 5.2%.² All the same, Peruvian

¹See Cuentas Nacionales del Perú, 1960-1969, Banco Central de Reserva (B.C.R.), Lima.

²U.N. Cuadernos de la CEPAL, "Series Históricas del Crecimiento de América Latina," Santiago, 1978.

product per capita in 1968 was still 18% less than the Latin American average, and its distribution has been claimed to be one of the most uneven in the continent.¹ Growth of output and substantial migratory movements had not greatly narrowed the disparities between regions and social groups; particularly striking was the poverty of the rural area and the growing number of underemployed in the cities. Symptomatic of these latter conditions was the growth of squatter settlements ("Barriadas") around Lima and other cities, which started growing with Odría in the 50's, and reached almost 20% of the urban population in the mid-60's.

Within the rather satisfactory aggregate growth performance a number of economic disequilibria began growing in Peru in terms of sectoral differences in output, prices, costs, and labor productivity. Some of the consequences of these disequilibria will be explored in Part II of this paper. Here we only wish to sketch the most important manifestations of the cumulative disequilibration process.

Through 1968, agriculture was the largest sector of the economy in terms of the volume of its labor force (57% of all Peruvian workers in 1950, 47% in 1968, with an absolute increase of more than 370,000 workers during those 18 years),² and in terms of its share of the domestic consumption basket (50% for the majority of the population with medium and low incomes). However, the rural area as a region and agriculture as a productive sector (with the exception of export crops: sugar and cotton) had always been systematically neglected. In the 50's and 60's there had

¹Richard Webb, Government Policy and the Distribution of Income in Peru, 1963-1973, Harvard University Press, 1977, p. 7.

²See Banco Central de Reserva, Cuentas Nacionales 1950-65, and 1960-69, Table 11.

been no law for agricultural development, as there had been for mining, industry, oil and electricity; domestic price controls were systematically biased against agriculture, and Belaúnde, who during his political campaign along the interior of the country had made an emotional defense of "los pueblos olvidados" and had promised that "the last would be the first," in fact tightened the price controls on many basic foodstuffs (flour, meat, milk, rice, sugar, etc.) aggravating price-cost differentials that diminished the possibilities of food supply growth and the improvement of rural incomes, the lowest in the economy. Shortages in domestic food production forced the country to make food imports worth 150 million dollars in 1968 (21.8% of total imports that year).¹

Industry received top priority in terms of investment incentives and tariff protection. This allowed a high rate of growth of manufacturing production, but weakened this sector in terms of competitiveness and capacity to generate foreign exchange (anti-export bias), and also led towards overcapitalization (anti-labor bias) as the price of capital was systematically cheapened in relation to labor. It should be noted that part of that high increase in industrial output value was due to artificially high prices.

Table 1 shows the evolution of four key sectors from 1950 to 1968. The first three, primary sectors, were foreign exchange producers (although most of agricultural output is consumed domestically); manufacturing was foreign exchange demanding for imported machinery and inputs (although initially it also saved some foreign exchange as it substituted domestic production for goods previously imported). Moreover, by the mid-60's,

¹See "Exposición del Ministro de Hacienda," November 25, 1968.

Table 1. GNP by Sectors (1950-1968)

	In millions of soles at constant 1963 prices					Annual Rate of Growth (in %)			
	1950	1955	1960	1965	1968	50-55	55-60	60-65	65-68
Agriculture	8,790	11,190	13,386	14,875	14,350	4.9	3.6	2.1	-1.2
Fishing	160	333	1,041	1,513	2,074	15.8	25.6	7.8	11.1
Mining	1,768	2,667	4,585	5,325	5,701	8.6	11.4	3.0	2.3
All Primary	10,718	14,190	19,012	21,713	22,125	5.7	5.6	2.6	0.5
Manufacturing	5,286	7,681	10,642	16,330	19,284	7.8	6.7	8.9	5.7
Other Sectors	22,852	30,194	34,521	50,103	53,944	5.7	2.7	7.7	2.5
Total GNP	38,956	52,065	64,175	88,146	95,353	6.0	4.3	6.6	2.7

Source: B.C.R. Lima, Cuentas Nacionales 1950-1965 and 1960-1969.

manufacturing was more than one fifth of GNP, and was growing much more rapidly than the primary sectors.

While this unbalanced growth of output occurred in the different sectors of the Peruvian economy, the employment situation was becoming ever more serious.

Productive employment opportunities in the rural as well as in the urban sectors of the economy did not increase in proportion to the expansion of the labor force; in the cities the supply of labor was growing at 5.3% a year in the late 60's, as a lagged effect of the reduction of infant mortality rates in the 40's and 50's, together with massive migratory movements from the rural areas, and growing participation of women in the labor force.¹

The economy was characterized by a duality:² The backward or traditional sector was originally mostly in the rural areas, where the high labor/land coefficient made it difficult to raise the average productivity of labor; then migration towards the cities increased the urban labor force, but only part of this increase could find a job in the formal or modern (capital intensive) sector. In the 60's the traditional-informal urban sector (independent, occasional, marginal activities) began to experience an extraordinary increase, which lowered the annual rate of growth of urban labor productivity to 0.5%.

Table 2 documents this situation by showing the Peruvian economy divided into four sectors: Sector 1 is the rural area, as defined

¹See El Problema del Empleo y los Desequilibrios de la Economía Peruana, Instituto Nacional de Planificación, Lima, October 1977.

²On this point see also E.V.K. Fitzgerald, The State and Economic Development, Peru since 1968, Cambridge Univ. Press, 1976, p. 9.

Table 2. Trends in Product, Labor Force and Productivity in Peru (1950-1968)

TOTAL	Y	r	LF	r	Y/LF	r
1950	38,960	-	2'580	-	15,100	-
1960	64,180	5.1	3'140	2.0	20,440	3.1
1968	95,350	5.1	3'970	3.0	24,020	2.0
SECTOR 1	Y ₁	r	LF ₁	r	Y ₁ /LF ₁	r
1950	7,400	-	1'480	-	5,000	-
1960	10,340	3.4	1'590	0.7	6,500	2.7
1968	11,440	1.3	1'650	0.5	6,930	0.8
SECTOR 2	Y ₂	r	LF ₂	r	Y ₂ /LF ₂	r
1950	5,150	-	320	-	16,090	-
1960	7,700	4.1	430	3.0	17,910	1.1
1968	11,450	5.1	650	5.3	17,620	-0.2
SECTOR 3	Y ₃	r	LF ₃	r	Y ₃ /LF ₃	r
1950	14,340	-	430	-	33,350	-
1960	22,710	4.7	610	3.6	37,230	1.1
1968	35,270	5.7	920	5.4	38,340	0.4
SECTOR 4	Y ₄	r	LF ₄	r	Y ₄ /LF ₄	r
1950	12,070	-	350	-	34,490	-
1960	23,430	6.9	510	3.8	45,940	2.9
1968	37,190	5.9	750	4.9	49,590	1.0
URBAN (U = 2 + 3 + 4)	Y _U	r	LF _U	r	Y _U /LF _U	r
1950	31,560	-	1'100	-	28,510	-
1960	53,840	5.5	1'550	3.5	34,740	2.0
1968	83,910	5.7	2'320	5.2	36,170	0.5

Source: I.N.P. "El Problema del Empleo y los Desequilibrios de la Economía Peruana", Lima, Oct. 1977.

Notes: Y = GNP in millions of soles, at constant (1963) prices.

LF = Labor force, in thousands of workers, including those non fully employed.

Y/LF = Labor productivity in soles, at constant (1963) prices.

r = annual average rate (in %) from 1950 to 1960, and from 1960 to 1968.

by the 1961 Census, that is, population scattered in very small towns, whose output is agricultural (excluding sugar), along with some artisan products and commercial activity. The other three sectors are urban. Sector 2 is the traditional-informal sector, in units of production of less than five workers (usually one or two): artisan workshops, construction ("albañilería"), petty commerce and services. Sector 3 is the traditional-formal sector, labor intensive like Sector 2, but in production units of medium and large size: public administration, construction, commerce, and professional services. Sector 4 is the modern, capital intensive sector: industry, mining, transportation, energy, fisheries, and all traditional export activities.

As Table 2 shows, three trends come out as fundamental and unquestionable features of the evolution of the Peruvian economy in the last two decades: First, a high and increasing rate of growth of the labor force, lagged with respect to the rate of growth of the population and pushing massive migration towards the cities. Second, the growth of output has not kept pace with the increased growth of the labor force. Rural output stagnates, and urban output becomes more and more "dual" with an over-extended informal urban sector. Third, and as a final consequence, labor productivity growth has a declining trend; the national average is still high in the 50's but in the latter decade it is explained by geographical migration rather than by improvements in the same type of economic activity. By the mid-60's the challenge was not only to solve the poverty of the rural area, but also to deal with the new and growing urban under-employment.

Although some of these disequilibria resulted from deep-rooted, structural situations (such as the scarcity of arable land, demographic pressures,

etc.), which are exogenous to any government's action and difficult to change in the short run, others resulted from the development strategy adopted.

Through the 50's the overall conduct of the economy was basically liberal, based on a free trade ideology and characterized by moderate state intervention (Odría, and Prado-Beltrán).¹ In the 60's, new and growing social pressures from urban sectors demanded a different approach from Belaúnde. The underlying model was akin to ECLA guidelines: Given a "peripheral" economy below full employment the cause of its problems could be found in structural insufficiency of demand; the government should adopt an import substitution strategy with fixed exchange rates and trade restrictions to reduce dependence on the rest of the world and become industrialized. As consumption and investment fall short of the level required to absorb unemployed labor, it is necessary to increase public expenditure, which through the multiplier effect will push the economy towards full employment equilibrium; inflation is a lesser evil, and will not be due to excess demand so long as unemployed labor exists, but rather to structural rigidities which will gradually disappear through controls and planned public expenditure.² Two characteristic and highly related features of this ECLA mentality were to mistrust market mechanisms and to disregard the foreign balance in the development process.

Belaúnde certainly did not adopt the ECLA doctrine in its entirety. Industrialization was pushed, and protection was raised continuously but

¹To some, this situation meant a privatization of power, e.g. F. Wils, Industrialists, Industrialization and the Nation State in Peru, CISEPA, Lima, 1975, C. Malpica, Los Dueños del Peru, Ed. Ensayos Sociales, 1968, and writings of Cotler, Quijano, and Bourricaud. Others regarded such a policy as eminently desirable, e.g. R. A. Ferrero, "Economic Development of Peru" in Economic Development Issues. Latin America, CED, New York, 1967.

²See Celso Furtado, Economic Development of Latin America, 2nd edition, Cambridge Univ. Press, 1976, Ch. 22.

considerable reliance was still placed on the price mechanism. Inflation was ignored for several years but then recognized as a very real danger to the administration's achievements, while the balance of payments was only ignored as long as Alliance for Progress and other loans were easy to come by. ECLA-type views, however, prevailed in many academic circles and were certainly not ignored at the CAEM (Centro de Altos Estudios Militares) where growing attention was being paid to the problems of national security and national development.

Unfortunately, unconcern with price and balance of payments developments continued long enough to become uncontrollable without the resolute backing of an opposition dominated congress. The result was the crisis of 1967-68 and the eventual replacement of traditional democracy by the military government in 1968.¹

B. The Peruvian Experiment, Phase One (1968-1975)

The explicit economic objective of the Revolutionary Military Government was clearly stated in their Estatuto (October 3, 1968): "To promote to superior living standards, compatible with human personal dignity, the least favored sectors of the population, changing the economic social and cultural structures of the country."² If by "revolution" we mean a deep and lasting change, the explicit goal was revolutionary. With surprisingly nationalistic and socialistic expressions (unusual in institutional military coups d'etat) the Peruvian military announced from the start

¹ See Pedro P. Kuczynski, Peruvian Democracy under Economic Stress, Princeton Univ. Press, 1977.

² Estatuto del Gobierno Revolucionario de la Fuerza Armada (D.L. 17063).

their firm determination to transform Peru's structure, and in the next years reaffirmed their intention to stay in power until this revolutionary process had become "irreversible." That they meant more than words was obvious when after only six days in power they seized the International Petroleum Company installations, and shortly thereafter introduced a series of reforms affecting almost all spheres of society: Agrarian Reform (1969), reorganization of the Public Administration and creation of new Public Enterprises (since 1969), new banking and financial regulations (with increased government ownership), Industrial Reform (1970), Reform in Education (1971), etc. From 1969 to 1974 the military enjoyed strong political power, as the old political parties (including Acción Popular and the APRA) were discredited as "derechistas" and widely viewed as incapable of carrying out the necessary reforms that their leaders had promised for so many years.

The intentions of the Revolutionary Military Government may be found in several official documents,¹ and for each sector in the "considerandos" of each Reform Law; the means or the concrete ways to accomplish these purposes are expressed in the "artículos" (or "parte dispositiva") of those Reform Laws. Matching one with the other, it is difficult to see what the economic model of the Revolutionary Military Government was; they did not even seem to have a clear understanding of some of the basic mechanisms by

¹For basic political documents, see: Manifiesto, Estatuto, and Bases Ideológicas (October 1968 and March 1975), as well as official speeches of President Velasco. On economic and social issues, see "Lineamientos de la Política Económico-Social del Gobierno Revolucionario," Lima, July 1969, and "Plan Nacional de Desarrollo, 1971-1975," Instituto Nacional de Planificación (INP), 1971.

which the economy worked.¹ Being hardly able to perceive the economic structures of the country, they were certainly unable to transform them. Politics, and political insight, prevailed over economic knowledge. Unfortunately, the former is a complement but never a substitute for the latter.

Table 3 shows the sectoral growth pattern during "Phase One." The same trends that prevailed in the past are observed from 1970 to 1975: stagnation or decline in the primary sectors (with the added dramatic results of the anchovy crisis), continued growth of industry (although at a slightly slower rate), and continued expansion of the tertiary sectors (which were obliged to absorb most of the increases in the urban labor force).

The stagnation of supply of the primary sectors, which the development strategy of the Peruvian Revolution had confirmed as the only providers of foreign exchange for the economy, can be seen in Table 4.

In real terms, from 1968 to 1975 the total national product increased by 55%; industrial product grew by 75%; but export quantum declined by 21%. The growing needs of foreign exchange to keep industry, and the whole economy, moving now had to be obtained from favorable international prices

¹This lack of a coherent scheme that would have helped to understand the economy of the country and then to change it, is also obvious in many chapters of the "Plan Inca," allegedly written by Velasco and his closest companions in 1968 before the Revolution, but published only on July 30, 1974. Each brief chapter has only three parts: "Situación" (a very sharp, precise description), "Objetivo" (highly idealistic), and "Acciones" (that offer little assurance of reaching the "Objetivo"). All the economic problems seem to be due to the lack of control by the State; therefore the "acción" most commonly found in the Plan Inca is "crear los organismos públicos necesarios." See, for instance, Ch. 7: Industry, Ch. 12: Commerce, Ch. 20: Housing. (The latter has, as Action Three, "Eliminar los tugurios." The Plan Inca, of course, does not say how. In fact a Ministerio de Vivienda was created, and the "tugurios" as well as "Pueblos Jóvenes" almost doubled in 10 years.)

Table 3. GDP by Sectors (1970-1975)

	In billions of soles, at constant (1970) prices						Annual Rates of Growth (in%)		
	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1950-60</u>	<u>1960-70</u>	<u>1970-75</u>
Agriculture	36.2	37.3	37.6	38.5	39.4	39.8	4.3	2.0	1.9
Fishing	6.6	5.7	3.0	2.3	3.1	2.6	16.3	9.3	-17.0
Mining	19.8	19.0	20.4	20.3	21.0	18.7	10.0	4.0	-1.1
Manufactures	57.2	62.1	66.7	71.6	77.0	80.6	7.2	7.5	7.1
Other Sectors	120.9	128.9	140.1	151.7	163.4	172.3	4.2	6.3	7.3
G.D.P.	240.7	253.0	267.8	284.4	303.9	314.0	5.3	5.6	5.5

Source: B.C.R., Lima, Memoria 1973 and 1976, Anexo XXXVIII.

Table 4. Peruvian Traditional Exports, in Thousands of Tons

	Average 1961-63	Average 1967-69	Average 1973-75
Cotton	127	76	45
Sugar	607	475	492
Coffee	37	46	43
Wool	7	7	4
Fish products	1,104	2,040	560
Oil	606	463	222
Copper	178	201	176
Gold (thousands of kg)	2	1	2
Silver "	10	10	11
Lead	136	153	152
Zinc	192	305	412
Iron	3,370	5,571	4,769

Source: B.C.R., Lima, Memoria 1975, Anexo XXV

for primary products in relation to the price of imports, or from foreign loans. In 1975 Peru's external dependence was more marked than ever before (see Table 5).

Low levels of investment and damped growth of economic activity held imports down until 1972; in 1973 and 1974 exports enjoyed an extraordinary upward cycle in their prices, followed by a severe fall in 1975; by then investment, and the prices of imports had caught up, and Peru had in her Current Account balance the most serious deficit on record. Long-run capital inflows prevented a more serious drain of reserves, while on the internal front consumption had maintained a high rate of expansion, and investment had grown in real terms by 66% from 1972 to 1975 through capital intensive projects with high import component and low labor absorption (see Table 6).

The high propensity to consume, and the external deficit, can better be seen in proportion to the level of each year's product, as shown in Table 7. In 1970 the investment coefficient was very low (13% of the product) and there was a surplus of exports of goods and services over imports. Five years later, investment (public investment to a large extent, as we will see) had regained a level of one-fifth of the product, but consumption was nine-tenths of it, and the foreign trade gap, consequently, was no less than one-tenth of the national product. Foreign public debt increased from 2.2 billion dollars in 1974 to 3.1 billion in 1975, but these figures were not known at the time. Everything was "normal," including the employment situation: In 1969 there were 243,000 unemployed, and 1,901,000 underemployed; in 1975 the unemployed were 248,000 and the underemployed 2,142,000. But then, there is no chapter

Table 5. Balance of Payments (1970-1975)

(in millions of U.S. \$)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Exports F.O.B.	1,034	889	945	1,112	1,503	1,290
Imports F.O.B.	700	730	812	1,033	1,909	2,390
Commercial Balance FOB	334	159	133	79	-406	-1,100
Services & Transfers	-150	-193	-165	-270	-402	-439
Current Account	184	-34	-32	-191	-808	-1,539
Long-run Capital	24	-28	115	383	895	1,135
Private	-77	-43	-2	70	202	342
Official	101	15	117	313	693	793
Errors & Omissions and Short-run Capital	49	-14	-33	-178	194	-173
Compensatory Movement	-257	76	-50	-13	-282	577

Source: B.C.R., Memoria 1973 and 1976, p. 15 and p. 19 respectively.

on "employment" among the 31 chapters of the Plan Inca, and the few pages that deal with it in the "Plan de Desarrollo 1971-75" were included at the last minute upon the insistence of INP economists.¹

The Peruvian military sincerely wanted to change and to develop the country, to make Peru a more unified society, a nation less dependent on foreign pressures; and they wanted to achieve this while favoring those who were the poorest.²

At the political level there were several ambiguities both in theory and in practice hidden under the negative slogan,

¹In the analysis of goal and policy formation in this period it is necessary to clearly distinguish the top level of political decision (i.e., the Military, and during Phase One General Velasco and his closest military associates) from the other public institutions (INP, Sinamos, etc.).

²This social drive was certainly true at least during "Phase One," 1968-1975; we will discuss "Phase Two" later in this paper.

"ni capitalismo ni comunismo,"¹ and under the practical gradualism or incrementalism of the process. But, at the economic level, there was a complete vacuum in place of a theoretical model, and a practical amalgam of everything: four sectors of property (five, if we add the Cooperatives' sector) with different ownership systems and different and often conflicting rules of behavior. The State Sector was to grow stronger and be the controller and the leader, the Reformed-Private Sector was to remain dynamic in industry and was still the largest sector in 1975, the new Social Property Sector was supposed to be "hegemónico," and the Small-Private-Property Sector was to develop also since it had the largest share of the labor force. No attention was paid to the macroeconomic total all this added up to, particularly in balance of payments terms. Nor was attention paid to the intersectoral coordination problems that would arise and to their implications for supply of effort (of laborers as well as entrepreneurs), quality of management, allocation of resources, employment, output and prices. The lack of understanding of economics at the top of the Military Revolutionary Government and their political advisors made them believe that they were changing the economic structures of the country. When the economic crisis exploded in 1975 they could not understand it; they thought it was political sabotage.² Governments and politicians have rarely been characterized by their understanding of economics, but it is surprising that many social scientists, and more than one economist among

¹ Although some civilian public officials had marxist views, it is certain that the Armed Forces never considered communism as their goal. At times Velasco sought strategic political support from communist (pro-Moscow) groups, but communists themselves were often critical of the government plans and policies.

² And so they sent to prison, or to exile, those who published about it; the official explanation was that our problems were due to a world-wide crisis of international capitalism.

them, considered in 1975 that the Peruvian economy had really changed, and changed for the better; they believed that, in fact, the military government "had unquestionably closed one chapter of Peru's history and opened another, (because they had) brought profound transformations to the economic, political, and social life of Peru";¹ "the progress so far (June 1975), for all its shortcomings, does represent an important example of how a small dependent export economy can achieve a substantially greater degree of autonomous economic development by determined state intervention in the economy."²

As it was, the structural reforms introduced by the military put spectacular emphasis on the redistribution of property (that is, wealth, but not necessarily income, for wealth generates income in direct proportion to the manner in which it is used), left empty-handed the poorest 60% of the population, and did not change the essential rules of behavior of the economy. They meant a transitory political success, and an economic (and finally also political) failure. This economic failure was unavoidable as long as the Military Revolutionary Government did not see (and of course did not solve) the structural disequilibria of the Peruvian economy which had been accumulating since before 1968.

The Agrarian Reform distributed 10 million Hectares of latifundia to 340,000 families; but the number of Peruvian peasant families was 1'200,000, and so 72% of the total, that is 860,000 families, with the poorest of all among them, received nothing. Furthermore, the price policy which had been urban-biased in the 60's, became even more so from 1972 on, when very tight

¹Julio Cotler, "The New Mode of Political Domination in Peru," in The Peruvian Experiment, edited by A. Lowenthal, p. 44.

²E.V.K. Fitzgerald, The State and Economic Development: Peru since 1968, Cambridge Univ. Press, 1975, p. 2.

price controls were imposed on all food production and marketing ("JUNAPRE," Junta Nacional de Precios).¹ The decision to keep unchanged the domestic prices of food reached the absurd limit of paying subsidies on imported foods (adding severe pressures to the external and fiscal balances). The Agrarian Reform was undertaken explicitly to establish social justice in the rural area and to increase production and productivity. The first goal cannot be said to have been achieved: only the Sugar Cooperatives' beneficiaries moved up from the fourth to the second decile in the income distribution of the country, and to what extent a lasting qualitative change in the rural power structure occurred remains to be seen. The second goal was a clear failure: agricultural output grew at 1.9% a year from 1970 to 1975, hardly an improvement from the 2.0% of the 60's.

The Industrial Reform provides perhaps a more dramatic case of economic mistake from the social-revolutionary point of view, that is, from the point of view of changing effectively the industrial sector of the Peruvian economy to the benefit of society as a whole.² Its purpose was to achieve "permanent, self-sustained, national independent industrial development." To reach this goal, industrial priorities were defined, not in terms of any dynamic comparative advantage or economic consideration, but mostly in terms of the physical sequence of elaborating industrial product, with the State to be given all the "basic" industries. Generous tax incentives were accorded even those industries of third priority, to encourage reinvestment and the importation of capital goods and inputs.

¹The sharp increase in the price of fertilizers at the end of 1973 made it imperative to readjust the domestic price of agricultural products; but Velasco angrily rejected the technical report supporting those price readjustments: "We have given them the land. What else do they want?"

²See "Ley General de Industrias," D.L. No. 18350, July 27, 1970.

Minister Dellepiane in 1970 was considered one of the most "leftist" in the government, and he sharply criticized the capitalistic mentality of entrepreneurs. These were frightened by the socialistic rhetoric of the Minister, and by the Industrial Community,¹ but this Law and its Regulations gave them more tax exemptions than had any traditional government, and the highest protection they ever dreamt of (viz., a total ban on the importation of any good that was produced domestically); they could have, besides, "cheap" dollars (at a fixed, overvalued exchange rate) and flexible output price ceilings in soles. If they submitted to the new and complex bureaucratic regulations, they could easily obtain high short-run profits, and many certainly did. The growth pattern of the industrial sector in the 70's is very much the same as the one followed in the 60's, but with more serious disequilibria:² a higher degree of oligopoly within the industrial sector, greater overcapitalization, even more limited labor absorption, and the limitation of output due to a severe shortage of foreign exchange. The word "export" does not appear even once in the 39 pages of the Industrial Reform Law.

One of the essential features of the Peruvian Experiment was the new role of the State in the economy. "The overcoming ('superación') of the dependent capitalist model and underdevelopment requires the State to undertake a role of active participation as promoter and leader of national development, through its direct and indirect intervention in economic,

¹"Comunidades Laborales" were established in these sectors: Industry, Fishing, Mining, and Tele-Communications. In 1975 the total number of workers who belonged to the Comunidades was less than 6% of the total labor force.

²See Roberto Abusada-Salah, "Capital Utilization: A Study of Peruvian Manufacturing," Doctoral Dissertation, Cornell University, 1976, and "Políticas de Industrialización en el Perú, 1970-1976," in Economía, Universidad Católica, Lima, No. 1, 1978.

socio-cultural and political activity" said the Plan Nacional de Desarrollo 1971-1975.¹ New Ministries were created (Industry, Commerce, Transports and Communications, Food, etc.) and new controls and regulations were established. At the same time, Public Enterprises were created or reorganized as a result of nationalization of foreign firms (Petroperú, Centromin, Hierroperú, Enterperú, Enafer, etc.), or of taking over a whole sub-sector of economic activity (Pescaperú, Electroperú, Induperú, Epsa, etc.). Gerschenkron has pointed out the important role of the State in the development process of "late-comers"; Peru had been noted for having one of the "weakest" public administrations and public sectors in Latin America. One basic element of what went wrong in the Peruvian Experiment was that this new role of the State in the economy after 1968 was undertaken without regard to the most basic principles of economic management. Public officials believed that by establishing "controls" they would effectively direct the economic activity of the country; in fact they made it only more complicated, slower, and more inclined than ever to by-pass regulations. Public investment grew to offset sluggishness in the private sector; the problem was that, by a political decision, the government did not want to raise more taxes, and so the economic deficit of the treasury increased from 382 million soles in 1969 to 30,591 million in 1975 (see Table 8). On the other hand, public enterprises paid little attention to efficient economic management, being assured of financial support from the Banco de la Nación, or forced by the government to sell their products at very low prices. One of the most dramatic cases was that of Petroperú, which in May 1975 was selling gasoline at a lower price than in September 1968, in

¹Plan Nacional de Desarrollo 1971-1975, pp. 76 and 77.

Table 8. Central Government Budget (1969-1975)

(in billions of soles)

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Current Revenue	34.0	38.8	41.4	45.6	53.4	68.6	88.9
Current Expenditure	28.0	32.2	36.9	40.3	52.0	62.4	90.5
Current Savings	6.0	6.6	4.5	5.3	1.4	6.1	-2.6
Capital Expenditure	6.4	9.9	12.5	14.1	15.4	20.2	28.0
Economic Deficit	-0.4	-3.3	-8.0	-8.8	-14.0	-14.1	-30.6
Financing:							
External	1.6	1.5	-1.0	1.8	6.9	10.8	16.8
Internal	-1.2	1.8	9.0	7.0	7.1	3.3	13.8

Source: B.C.R., Lima, Memoria 1973 and 1976, p.42 and p.38 respectively.

spite of the fact that one-third of that oil was imported at an international price that had more than tripled since the end of 1973. Shane Hunt, sympathetic to the new role of the public sector in Peru, had, however, warned in 1974: "In the next decade the Peruvian economy will prosper or atrophy according to the effectiveness with which the new public enterprises are managed."¹ They did not provide any surplus to the State, in order to finance the social services of the public sector (health, education, etc.); some did not even cover their own costs,² and at no moment did they care to integrate their activities into the planning system. In 1967 the public sector in Peru was small and weak; in 1975 it was big and bankrupt.

C. The Peruvian Experiment, Phase Two (1976-1978)

On August 29, 1975, General Velasco was removed and General Morales Bermúdez became President, with important changes in several cabinet posts. Political analysts will find 1975 a tumultuous year, from the riots of early February, to repressive measures of May to July, the fall of Velasco in August, the renewed "socialist" stance of Morales, and the fall of Graham and Leonidas Rodríguez at the end of the year. From the economic point of view, "Phase Two" starts only in 1976, and it means a substantial change in economic policies.

The country was facing serious deficits on every front: foreign imbalance, fiscal deficit, inflationary pressures, and growing unemployment. Without an economic model of their own, and under pressure from the

¹Shane J. Hunt, "Direct Foreign Investment in Peru: New Rules for an old Game," in A. Lowenthal, ed., The Peruvian Experiment, Princeton Univ. Press, 1975.

²Before takeover they not only covered costs but made profits and paid taxes.

international banking community, the military had to accept a whole new set of ideas and explanations: the economic gospel according to the International Monetary Fund. The essence of this message is that closing the gaps (in the balance of payments, in the fiscal budget, and in the price level) is painful but necessary and healthy. The Peruvian economy is suffering from "excess demand," and therefore it is necessary to reduce public and private expenditures; financial disorder has been introduced by State intervention, and therefore it is necessary to return to free market mechanisms, especially in the foreign sector.¹ The required set of policies, then, had to be the following:

1. To devalue, so as to reduce imports (and to some extent increase exports) and thus eliminate the external deficit. Starting from a seriously unbalanced situation and heavy debt service, the saving of foreign exchange has to be considerable.
2. To reduce the rate of increase in money supply, in order to cut down the rate of inflation and to dampen the pressure upon the balance of payments. Tight money is a necessary complement to successful devaluations.
3. To reduce public expenditure (and to increase fiscal revenues) in order to cover the fiscal deficit, as well as to restrain total demand in the economy.
4. Finally, to eliminate subsidies and controls on prices, wages, etc., so that the economy could function properly, that is, freely, and all markets could be cleared. (There will probably

¹Remember, by contrast, the previous strategy (1963-75) which assumed "insufficient demand" and encouraged protectionism, price controls, increased public expenditures, etc.

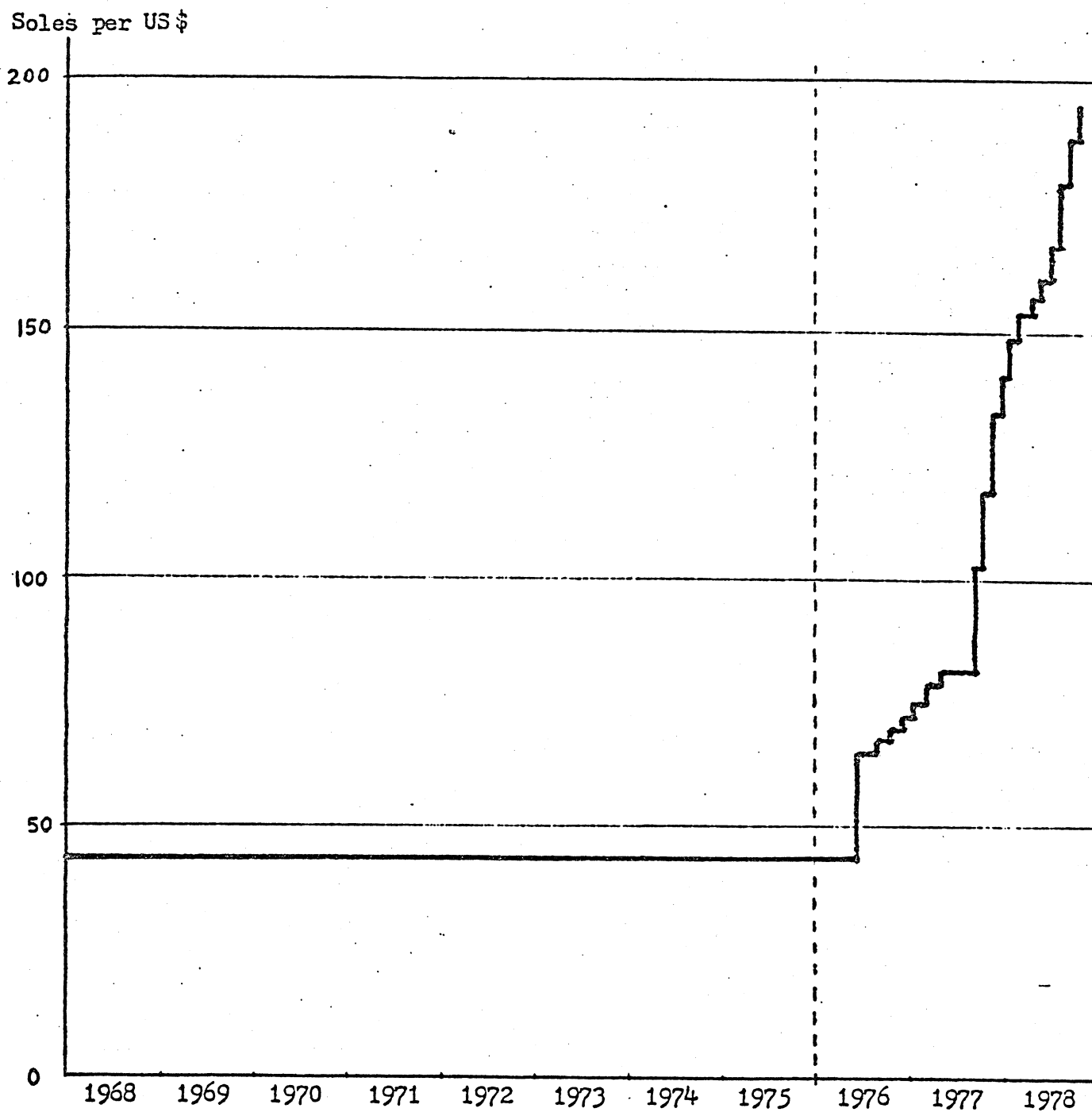
be an increase in unemployment; but this will be transitory, until the economy returns to its equilibrium point.)

The Peruvian government has not been quick to accept either the diagnosis or the medicine provided by the IMF, but finally has accepted both. The rate of exchange has had an extraordinary change that can be seen in Graph 1: a 350% devaluation within 30 months; there has been severe restraint on the expansion of the money supply, and downward readjustments in the fiscal budget; since 1977 there have been repeated relaxations of controls, and the elimination of almost all subsidies on consumption goods.

The results that have been obtained, and that can be compared with the situation in 1975, are shown in Table 9: a very severe recession, with a drop in income per capita (0.2% rate of growth in 1976, -4.0% in 1977, -6.0% expected in 1978); continued deficit in the balance of payments (and therefore continued drain in net reserves, now at -1.3 billion dollars), although the present annual gap in the current account is less large than in 1975; imports sharply reduced, but exports not expanded significantly; continued deficit in the public budget, with lower public expenditure in real terms, but lower public revenues as well. The inflation rate (not due now to expansionary monetary policies, but devaluation-induced inflation) may reach 80% in 1978.

The most dramatic result, however, is the massive and growing unemployment of the labor force, even in the industrial sector, where installed capital is now being used well below its normal level. Table 10 shows that in 1978 54.1% of the population were unemployed or underemployed. This is an increase of 6.9 percentage points over 1975. When the reduction in participation rates is taken into account the deterioration rises to 9.6 percentage points, 805,000 additional people without adequate employment

Graph 1. Rate of Exchange (1968-1978)



Note: By the end of 1975, the "free" (black market) exchange rate was 30% above the official exchange rate level (that is, around 55 soles); by the end of 1978, the huge amount of the devaluations, together with the scarcity of soles, had succeeded in eliminating that difference.

Table 9. Gross Domestic Product (1975-1978)

(in billions of soles, at constant 1970 prices)

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978*</u>	Annual Rates of Growth (in %)		
					<u>1976</u>	<u>1977</u>	<u>1978</u>
Agriculture	39.8	41.1	41.2	40.3	3.3	0.1	-2.2
Fishing	2.6	3.1	2.1	2.0	19.9	-32.3	-4.8
Mining	18.7	20.4	25.6	26.5	8.4	25.4	3.5
Manufactures	80.6	84.0	80.0	75.6	4.2	-4.7	-5.5
Construction	18.6	18.1	15.9	14.2	-2.8	-12.2	-10.7
Services	153.7	156.8	154.7	150.3	2.1	-1.3	-2.8
TOTAL GDP	314.0	323.6	319.5	308.9	3.0	-1.3	-3.3
Consumption	275.9	283.1	281.4	269.6	2.6	-0.6	-4.2
Investment	65.3	57.9	45.0	39.5	-11.2	-22.3	-16.7
Exports	36.5	37.5	45.6	46.8	2.9	21.6	2.6
Imports	63.6	55.0	52.5	47.0	-13.5	-4.5	-10.5
Consumption/GDP (in %)	87.9	87.5	88.1	87.3			
GDP per capita (in S/.)	20,297	20,342	19,532	18,366	0.2	-4.0	-6.0

*Projected

Source: B.C.R., Lima, Memoria 1976, and M.E.F.

Table 10. Employment, Underemployment, and Unemployment of the Labor Force

In thousands of workers:	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u> ¹	<u>1977</u>	<u>1978</u>
EMPLOYED	1'980	2'102	2'259	2'357	2'577	2'647	2'674	2'511	2'368	2'426
UNDEREMPLOYED	1'901	1'961	1'959	2'019	1'953	2'050	2'142	2'196	2'458	2'480
UNEMPLOYED	243	201	194	192	198	196	248	260	298	381
TOTAL	4'124	4'264	4'413	4'568	4'728	4'893	5'065	4'967	5'125	5'287
Composition (%):										
EMPLOYED	48.0	49.3	51.2	51.6	54.5	54.1	52.8	50.6	46.2	45.9
UNDEREMPLOYED	46.1	46.0	44.4	44.2	41.3	41.9	42.3	44.2	48.0	46.9
UNEMPLOYED	5.9	4.7	4.4	4.2	4.2	4.0	4.9	5.2	5.8	7.2
TOTAL	100	100	100	100	100	100	100	100	100	100

Source: From 1969 to 1975, Ministerio de Trabajo, Informe 1975, Cuadro I-1.
From 1976 to 1978, Ministerio de Trabajo, D.G.E.

¹ 1976, 1977 and 1978 statistics show a very important downward readjustment of the supply of labor force. According to the age structure of the population, its localization, its educational level, and the participation rates observed in the '60s and '70s, the volume of labor force expected for 1976, 1977 and 1978 was 5'243,000, 5'428,000, and 5'621,000 (See "Lineamientos del Plan Global de Ocupación, 1975-1978", Ministerio de Trabajo, Lima, April 1974). However, surveys made in 1976 and 1977 provided the figures shown in the Table. Since there has been no cataclysm that has reduced the volume of the population, or a massive emigration to foreign countries, what has happened is a strong and involuntary reduction in the participation rates, that is, a substantial increase of "hidden unemployment" as a result of the economic crisis. It is frustrating, and expensive in terms of bus fares for people in the "Pueblos Jóvenes", to keep looking for a job after several months; they no longer "search actively", and so, statistically, they have been eliminated from the labor force (more than 300,000 women beyond 35 years of age, and youngsters of both sexes, age 15 to 24).

opportunities. With the economy in this critical situation, not a single group (urban or rural, entrepreneurs or workers, from the right or from the left) supports the government (although there is widespread tolerance of it). The "revolutionary" and "social" goals have been silenced, as the crisis has certainly hit with particular force those who were, and still are, the poorest.

During 1976 many civilian political advisors and supporters of "Phase One" were gradually removed from their jobs; many of them had worked hard to build up the most promising Experiment of Latin America in the '70s, and certainly deserved better success for their efforts. But their oversights and mistakes in handling the economy proved to be fatal for them and for the proyecto itself. New faces and names appeared in key public positions, with some temporary support from private groups; the new strategy (basically à la IMF) did not entirely please domestic entrepreneurs, who would have preferred continued domestic expansionary policies, but pleased much less those who could not find employment, or those whose real salaries were decreasing as inflation accelerated. In 1977 industrial output declined, as well as construction and services; nobody believed any more in the social property sector or in the public enterprises; the crisis in the fishing sector moved the government to return it to the private sector. At the top level of the government there were officials trying to understand and to solve the crisis, uncertain about the restrictive and unpopular policies they had to impose, and deeply worried about an imminent default on foreign debts (see Table 11).

Table 11. External Debt (as of December 31, 1977)

(in millions of U.S. \$)

<u>Long term</u> (original maturity of over one year term):	<u>6,139.7</u>
Public Sector	4,813.9
Central Government	(2,572.8)
Public Enterprises	(1,606.9)
Other Public Sector	(8.1)
Central Reserve Bank	(626.1)
Private Sector	1,325.8
Domestic and Mixed Enterprises	(447.7)
Foreign Enterprises	(878.1)
<u>Short term</u> (original maturity of less than one year term):	<u>2,133.9</u>
Import Credits	706.3
Export Credits	259.0
Financial Credits	236.4
Banking System	932.2
Central Reserve Bank	(274.9)
Bank of the Nation	(488.9)
Commercial Banks	(166.4)
Development Banks	(2.0)
<u>TOTAL EXTERNAL DEBT</u>	<u>8,273.6</u>

Source: Ministerio de Economía y Finanzas, and B.C.R.

D. The Structural Disequilibria of the Peruvian Economy

In the preceding subsections it has been argued that the tragedy of the Peruvian Experiment was that it failed to deal with the economic disequilibria of Peru, because it did not have a coherent economic model that would have enabled the government to see the distortions of the economy and to reorient the development strategy in order to reach the objectives of the Revolution.

Table 12 summarizes the results obtained in output and productivity of the labor force, at the national level and by regions (rural and urban). Table 13 presents similar data by the same sectoral divisions as in Table 2. In the last 10 years, the continuation and aggravation of negative trends seen during 1950-68 are unmistakable.

In Table 12 we see that the annual rate of growth of the national average productivity per worker (Y/LF) declined from 2% during the 1960-68 period to only 1.7% per year during Phase One (1968-75) and became negative, -2.1%, during Phase Two (1975-78). If we consider the situation by regions, we see that in the rural and urban areas the actual rates were 1.1% and 0.4% in Phase One, and 0.0% and -2.7% in Phase Two. The countryside, which had always been economically neglected, fell into total stagnation, but the crisis hit particularly in the cities, where the number of workers had increased by more than one million (from 2'320,000 to 3'350,000) during Phase One alone.

The distortions of employment and productivity can better be seen in Table 13:¹ Sector 1 (traditional rural) has not suffered major reorganization due to the structural reforms of the Peruvian Experiment (remember that sugar belongs to Sector 4) nor by any significant income redistribution

¹See p. I-7 for detailed definition of sectors.

Table 12. Trends in Product, Labor Force and Productivity
in Peru (1950-1978)

TOTAL	Y	r	LF	r	Y/LF	r
1950	38,960	-	2'580	-	15,100	-
1960	64,180	5.1	3'140	2.0	20,440	3.1
1968	95,350	5.1	3'970	3.0	24,020	2.0
1975	136,870	5.3	5'050	3.5	27,100	1.7
1978	134,420	-0.6	5'280	1.5	25,460	-2.1
RURAL	Y _R	r	LF _R	r	Y _R /LF _R	r
1950	7,400	-	1'480	-	5,000	-
1960	10,340	3.4	1'590	0.7	6,500	2.7
1968	11,440	1.3	1'650	0.5	6,930	0.8
1975	12,700	1.5	1'700	0.4	7,470	1.1
1978	12,850	0.4	1'720	0.4	7,470	0.0
URBAN	Y _U	r	LF _U	r	Y _U /LF _U	r
1950	31,560	-	1'100	-	28,510	-
1960	53,840	5.5	1'550	3.5	34,740	2.0
1968	83,910	5.7	2'320	5.2	36,170	0.5
1975	124,170	5.8	3'350	5.4	37,070	0.4
1978	121,570	-0.7	3'560	2.0	34,150	-2.7

(See Source and Notes of Table 2, page I-6.)

Table 13. Trends in Product, Labor Force and Productivity by Sectors (1950-1978)

SECTOR 1	Y_1	r	LF_1	r	Y_1/LF_1	r
1950	7,400	-	1'480	-	5,000	-
1960	10,340	3.4	1'590	0.7	6,500	2.7
1968	11,440	1.3	1'650	0.5	6,930	0.8
1975	12,700	1.5	1'700	0.4	7,470	1.1
1978	12,850	0.4	1'720	0.4	7,470	0.0
SECTOR 2	Y_2	r	LF_2	r	Y_2/LF_2	r
1950	5,150	-	320	-	16,090	-
1960	7,700	4.1	430	3.0	17,910	1.1
1968	11,450	5.1	650	5.3	17,620	-0.2
1975	17,100	5.9	1'140	8.4	15,000	-2.3
1978	15,840	-2.5	1'270	3.4	12,470	-6.0
SECTOR 3	Y_3	r	LF_3	r	Y_3/LF_3	r
1950	14,340	-	430	-	33,350	-
1960	22,710	4.7	610	3.6	37,230	1.1
1968	35,270	5.7	920	5.4	38,340	0.4
1975	51,880	5.7	1'260	4.6	41,170	1.0
1978	49,880	-1.3	1'320	1.6	37,790	-2.8
SECTOR 4	Y_4	r	LF_4	r	Y_4/LF_4	r
1950	12,070	-	350	-	34,490	-
1960	23,430	6.9	510	3.8	45,940	2.9
1968	37,190	5.9	750	4.9	49,590	1.0
1975	55,190	5.8	950	3.5	58,090	2.3
1978	55,850	0.4	970	0.7	57,580	-0.3

(See Source and Notes of Table 2, page I-6.)

policy (through infrastructure, or the introduction of social services: health, education, etc.). 1967 and 1968 were exceptionally bad years for agriculture in Peru, because of adverse climatic condition; from this abnormally low base Y_1 increased its annual rate of growth from 1.3% to 1.5% in the early 70's before reaching almost total stagnation by 1978. Migration towards the cities increased in absolute and relative amounts.

Sector 2 (urban traditional-informal) explodes from 1968 to 1975. It was not touched by any of the structural reforms of the Revolution or by the legal salary increases because most of the workers in this sector are "independent" or under salary but with no labor union power; but this sector was favored indirectly by the urban consumption subsidies and demand expansionary policies of Phase One. Its labor force grew by 8.4% per year, pushing up the rate of growth of Y_2 to 5.9% (the highest rate by sector in the last 10 years) in an explosion of ambulatory commerce, unregistered and temporary squatter manufacturing activities, and all kinds of marginal services which lowered the average productivity of this sector below the level of 1950 (in real terms) although it was still in 1975 twice the average level of income of the rural area. In the last three years this sector was the most severely hit by the "stabilizing" policies of Phase Two, as the workers of Sector 2 and their families have little or no defense against price increases (food, transportation, etc.) and overall demand contraction.

Sector 3 (urban traditional-formal) depends heavily upon the public budget (Administration) and the level of activity of Sector 4. During Phase One it increased at a high rate, but then it declined sharply as tight fiscal policies were imposed and contraction in demand occurred from the modern capital-intensive sector.

Sector 4 finally (urban modern) expanded its output, although not so much its labor force, from 1968 to 1975; this sector, the most favored by the structural reforms and by the development strategy adopted, became the most distorted of the economy, as the foreign-exchange generating sub-sectors (agricultural exports, fisheries and mining) stagnated and the foreign-exchange demanding sub-sectors (industry and transportation) increased steadily, as we have seen in Table 3. Manufacturing, which had expanded at an annual average rate of 7.1% during 1970-75, slowed its growth rate to 4.2% in 1976, and then contracted (-4.7%, -5.5%) in 1977 and 1978. The positive, although very small, rate of growth of 0.4% for Y_4 during Phase Two has been obtained by increases in mining: a substantial jump of almost 40% from 1975 to 1978; but mining today is still less than 9% of the national product and it employs less than 2% of the labor force. The foreign exchange it generates is not enough to reequilibrate the trade account, and certainly not enough to close the deficit in the Balance of Payments when the capital account is also considered. Sector 4, the urban modern sector, is paralyzed by shortage of foreign exchange, and lack of liquidity and domestic demand in the internal market.

The essential features of the structural disequilibria of the Peruvian economy can then be summarized: Extreme poverty and stagnation in the rural area; massive migration to the cities, where the "formal" sectors (3 and 4) do not absorb enough workers; the number of people working in marginal activities in the urban traditional-informal Sector 2 almost doubles from 1968 to 1978: They were 28% of the urban labor force in 1968, they are 36% of it after these 10 years of Peruvian Experiment. Sectors 3 and 4 had an unbalanced growth until 1975, and now they are also paralyzed by a lack of foreign exchange and internal liquidity. Unemployment and

underemployment of the labor force increase every year, at the same time that existing installed capital remains idle in ever higher proportions. This most severe recession goes together with a record inflation, induced by drastic and global devaluations, which do not solve the foreign imbalance as the preexisting price distortions in many cases remain, and aggravate the recession as global tight monetary policies to reduce "excessive demand" are applied.

The economic disequilibria (involving price distortions, misallocation of resources and intersectoral unbalanced paths of growth), reduced considerably the amount of national product that could have been obtained in the last two decades, and made the income distribution more skewed. The Peruvian Experiment in Phase One put more emphasis on redistribution and reform than on growth; neglecting economics, some "growth" was obtained at the cost of public sector and foreign balance deficits, as well as a bit of income redistribution. In Phase Two, economics could no longer be neglected, but painful and inefficient policies have been applied, trying to eliminate the deficits without solving the structural disequilibria that have tied up the supply side of the Peruvian economy.

What was the origin of these "structural disequilibria" in the Peruvian economy that existed but were not detected before and after 1968? Why did the "structural reforms" of Phase One not provide a solution? Why, under Phase Two and with quite a different set of policies, has the situation deteriorated to the point that the ambiguous but still promising revolution of the early 70's has produced such widespread disillusion in 1978? To these questions we turn in the next section.

II. CAUSES OF THE CURRENT CRISIS

The previous section has shown the dimensions of the current crisis; in this section we will explore its causes. Coming as it did very soon after the end of Phase One of the Peruvian Revolution, it is tempting to conclude "post hoc ergo propter hoc," that it was Phase One which caused the later blow-up. However, causality as usual is more complex. There can be no question that policies undertaken after 1968 contributed to the crisis, but what the revolution inherited also played a significant part. Furthermore, the severity of the crisis is at least due in part to the successful effort to postpone it with an aggressive foreign debt policy. Finally, substantial misdiagnosis of the nature of the crisis led during Phase Two to the adoption of remedies which were counterproductive, making the crisis worse than it needed to be. But let us discuss the various individual causes and elements before putting the whole picture together.

A. The Development Strategy: Industrialization for the Domestic Market

The Peruvian Revolution inherited from Belaúnde a development strategy based on industrial growth. A fundamental element in the implementation of the strategy was industrial protection, which during the Belaúnde years had taken the form of ever higher tariffs. The policy had been successful during the sixties: industrial growth was substantial, imports of things that Peru could produce decreased, and the Peruvian import bill changed in composition, with a substantial reduction in the share of import of finished goods and a large increase in the import of raw materials and intermediate goods. However, as noted in Section I, the Revolution also

inherited some problems which had arisen from an attempt to grow too fast, mainly in the area of infrastructure. The resulting inflation and overheating of the economy led to the devaluation of 1967, which was not yet wholly digested by the economy when the Revolution came to power.

The industrialization strategy adopted by Belaúnde was very congenial to the Revolution. Industry signified modernity. Import substituting industrialization was equated to independence from the rest of the world. Industry promised to generate employment. Importing less industrial goods also implied less dependence on the external terms of trade which were believed to be continuously deteriorating. The Revolution not only adopted Belaúnde's development strategy but carried it to extremes: import duties were reinforced by quotas and the National Registry of Manufactures, which prohibited the import of anything that was produced domestically; the implantation of "basic" industries was elevated to a fundamental dogma of the Revolution, etc.

Unfortunately, the Peruvian Revolution bought the old ECLA import-substitution doctrine lock, stock and barrel. Yet, by 1969 a look at earlier ISI practitioners would have shown some of the problems with this strategy.¹ Industrialization does mean modernity, however import substituting industrialization does not generate independence from balance of payments problems. All that happens is that rather than importing consumption goods that one can do without, one ends up importing raw materials and intermediate goods, which one cannot cease to buy without paralyzing part of the domestic industrial system. Nor does import substituting industrialization solve the employment problem. Neither does it counter

¹ See, for example, Little, I.M.D., T. Scitovsky and M.F.C. Scott, Industry and Trade in Some Developing Countries: A Comparative Study, Oxford Univ. Press, 1970.

any secular deterioration of terms of trade that may exist. Rather, any loss of purchasing power translates itself to worse consequences in view of the new dependence of domestic economic activities on imported inputs. But above all, the strategy of industrialization for the domestic market contains an inherent inconsistency which leads inexorably to serious difficulties.

Import substituting industrialization has as central tenet for industry to grow at a faster rate than the primary sectors of the economy. Since industry requires imported raw materials as an input, its rapid growth means that the demand for imported inputs and hence for foreign exchange will also grow very rapidly. The supply of foreign exchange, however, is provided by the primary sectors, which grow more slowly. For a time this divergence in rates of growth of the demand and supply of foreign exchange is sustainable. In part this is so because industry grows from a much smaller base than the primary sectors, and in part it is so because of the foreign exchange savings which the import substitution process itself generates. The time comes, however, when the level of demand of raw materials has become such that the fast rate of growth of industry completely outstrips the ability of the primary sectors to supply the foreign exchange needs thus generated. At that point, a balance of payments crisis arises and industry must stop growing.

The self-limiting nature of the import substituting strategy is unfortunately also self-perpetuating. Since the central policy element in the strategy is protection, the prices of industrial products in such an economy are above those in the international market. When only goods used by final users are involved, no serious structural consequences result. As industrialization proceeds, however, and intermediate goods begin to be

produced in the economy, the higher prices obtained by these producers, who operate behind protective barriers, raise the cost of successive stages of transformation. As a result, the more mature the import substitution process the higher the industrial cost level of the industrial system compared to world cost levels. When the balance of payments crisis caused by the divergent growth rates occurs, the country cannot easily begin to earn foreign exchange through industrial exports, since costs are too high. In consequence, it turns to further import substitution. However, this is more of the same with further increase in the industrial cost structure, as well as greater fall in the productivity of investment and in the saving of foreign exchange until complete paralysis ensues.¹

At the policy level, the successive phases of import substitution policy are reinforced by an illusion that industry is even more inefficient than it is in reality. This "industrial inefficiency illusion" arises from a simple-minded comparison of domestic cost of production with world prices by dividing the former through the exchange rate. However, such an operation ignores the fact that the industrial producers do not buy their inputs at costs comparable with world prices. Rather, the exchange rate affecting their inputs is supplemented by the cost-raising effect of import duties or other import restrictions. When the industrial costs are translated into dollars at exchange rates which incorporate the import regime, the dollar cost of domestic industrial production appears much lower. No doubt some real inefficiency still remains, however it is by no means as strong as the simple-minded calculation makes it appear. The industrial inefficiency

¹See Diamand, Marcelo, Doctrinas Económicas, Desarrollo e Independencia, ed. Paidós, Buenos Aires, 1973, D. M. Schydrowsky, "International Trade Policy in the Economic Growth of Latin America," in Trade and Investment Policies in the Americas, S. Guisinger, ed., SMU Press, 1973.

illusion has impact on policy making because nobody wishes to support the export efforts of an industry which is hopelessly inefficient. However, without export support Peruvian industrial producers are hard put to sell abroad, precisely because of the cost-raising policies which have affected their inputs. But as long as industry does not export, this absence of exports appears to be a positive confirmation of industrial inefficiency, thereby strengthening the position of those who claim that industry does not deserve support for export. Naturally, in the absence of industrial export growth, import substitution is the only alternative and thus is the policy which must be adopted.¹

The development strategy, then, has been one which inexorably leads to balance of payments crises, and while it was a strategy inherited from the previous regime, it was pursued with gusto and full conviction by the revolutionary government.

B. Reform of Management and Decision-Making

The Peruvian Revolution prided itself on a major reform of the economic decision-making agents in the country in pursuit of its goal of a society and economy "neither capitalist nor communist." The government would become the principal motor of development. It would step up investment in infrastructure and in productive facilities.

For the latter purpose, a large government-owned production sector was created, partly by nationalizing previously existing enterprises. Many of

¹D. M. Schydrowsky, "Policy Making for National Economic Growth in Latin America," Ch. IX in Beyond Cuba: Latin America Takes Charge of the Future, L. Einaudi, ed., Crane, Russak & Co., 1974.

these enterprises were entrusted to the care of people who had previously had public administration experience but no business experience. Inevitable management learning costs ensued. In addition, however, there was a complete lack of awareness of the need for cost control and microeconomic efficiency in a public enterprise, both in the enterprises themselves and in the ministries which supervised them. The result was the evaporation of the profits these enterprises had previously made and the bankrolling of their ambitious investment programs through deficit financing (mostly foreign debt). Finally, the sectorialization of the economy by supervisory ministry created pernicious barriers to horizontal communication and cooperation.

The Revolution further created a "reformed private sector" in which workers were to acquire a share of the equity through their "industrial community." This resulted in regulations which to a large extent hamstrung entrepreneurs in the day-to-day running of their enterprises, but at the same time preserved their discretion in matters of investment and purchasing. The result was (i) investment only to defend existing property by making use of the reinvestment provision of the industrial community legislation (i.e., postponing the day when workers would have 50% ownership), and (ii) import purchase of new equipment as a major vehicle for the export of capital through over-invoicing. The net result was that government incentives and government desires were clearly operating at cross-purposes: while the purpose was to improve equity, expand industry and police the undesirable actions of entrepreneurs, the result was the furthering of an aristocracy of workers, the deviation of entrepreneurial effort to finding ways around the system, the increase in capital flight and the dearth of new job creation.

The agrarian reform not only created a new group of owners. It also resulted in extensive decapitalization of existing agricultural enterprises as many of the new owners believed that these good times would not last and proceeded to consume as quickly as possible. (It is ironic to note that they were right!) Fortunately output does not seem to have suffered too much in the large enterprises but investment (even for replacement of old capital stock) did.

The "social property" sector also represented a major innovation but was too small to affect the immediate economic situation to a significant degree, although it did have a major and negative impact on the business climate.

Concurrent with these reforms of economic control, there was unlimited protection of all import-competing economic activities, through import licensing and import restrictions. Food, however, was excepted, for the policy was to keep prices down, importing whatever volume was needed to do so and selling through the government food corporation at ever more subsidized prices.

The net effects of these reforms of decision making were threefold: In the first place, enormous inefficiency resulted. The economy performed at a vast underutilization of labor and capital and misused the foreign exchange it had. Entrepreneurs paid little attention to the efficient running of industrial plants, and systematic misallocation of investment resources (private and public) occurred. The second effect was on government finances. A greater state role required a larger staff, both in existing and in new ministries and agencies. The number of government employees about doubled and, of course, government current expenditure increased accordingly. Yet investment on government account was slated to

rise as well. However, the tax base had shrunk due to nationalization, and the government's own enterprises yielded large losses. So government savings fell far short of being sufficient to finance government expenditure. An ever growing fiscal deficit was the inevitable consequence, and foreign borrowing was one "easy" way to cover the deficit. The third effect directly affected the balance of payments. Demand for foreign exchange increased, both to pay for the real cost of imported inputs, imported food, and imported capital equipment and to cover the over-invoicing which was a major vehicle for capital exports. At the same time, the growth of the supply of foreign exchange was reduced, as producing units became less efficient and were not able to export the same quantities as previously or did not succeed in negotiating the same prices as a result of less expertise in marketing technique.

The impact of the reforms of the decision-making model thus very significantly aggravated the balance of payments crisis which was in the process of gathering momentum as a result of the development strategy. What is equally important, however, is that it also significantly reduced the quality of management to the point of impairing the economy's ability to respond to any economic policy, thus to a large extent setting the stage for the economic disorganization in Phase Two, when the crisis really hit.

C. Side Effects of the Reforms

In addition to the changes of decision-making mode, the reform package had a number of side effects which have had significant bearing on the outcome observed:

1. Reduced growth in the primary sector: a price policy systematically biased against agriculture was bound to eventually dampen the growth rate of food production. Yet in a country which has always imported some food to supplement domestic production, a reduction in food production signifies more imports and hence will have a major impact on the balance of payments. The price policy was reinforced in its effect by the reduction in x-efficiency resulting from the transfer of decision-making power to individuals devoid of experience in the art of managing agricultural enterprises. Furthermore, investment in existing agricultural enterprises dropped precipitously, and while the government did invest in massive irrigation projects (Chira-Piura, Majes, etc.) the sector nonetheless was decapitalized for the short and medium term, with the consequent reduction of the output potential over this horizon.

The situation in metallic mining was not much better. Almost all large mines became government enterprises and did not expand output significantly. Foreign private investment, with one notable exception (Cuajone) did not participate in major new ventures. Domestic private investment showed little dynamism, too, particularly in the small mining sector, where price and other conditions made investment unattractive.

In oil, a number of companies were initially drawn in on the "Peru-model" contract (actually an adaptation of the Indonesian model) but little commercially exportable oil was found. Eventually only Occidental remained in Peru, albeit on terms alleged to be much better than the "Peru model."

In sum total, the primary sector provided a lower rate of growth of foreign exchange revenue and an increase in the amount of the food bill which needed to be satisfied from abroad. On both the export and the import side, the balance of payments was thus weakened.

2. Increase in the capital intensity of investment and current production: The capital requirement of new economic activity engaged in by Peru in this period increased markedly. In the private reformed sector, this was the natural result of the incentives provided in the industrial law, particularly through the establishment of the industrial community. Owners who wished to defend their property rights, i.e. who wished to postpone the day when workers would own half the enterprise, needed to invest. Since they wished to keep their labor problems to a minimum, such investment needed to be in as automatic machines as possible. The laborers of the enterprise had exactly the same interests. The more the entrepreneur invested, the more the absolute size of the profits available for distribution would be. The more capital intensive the investment, i.e. the less new laborers would need to be hired around those machines, the larger the share of each individual worker currently on the payroll. Hence the workers too were in favor of investment but not in favor of hiring new laborers. Rarely has legislation generated such congruence between the interests of labor and capital to the detriment of the society as a whole.

In the government sector, projects that were intensive in capital and unlikely to employ much labor were the natural outcome of three elements: (i) the size of the enterprises, which were a requirement in part of the kind of enterprise that the government wanted to further, but also resulted from scarcity of government management (each enterprise needs at least one manager, even if it is small), (ii) the desire to have "modern" enterprises, which meant automatic large production line machines, and (iii) the policy decision to develop "basic" industry, which almost always is very capital intensive (e.g. petrochemicals, steel).

But higher capital intensity in Peru means an increase in demand for imported machinery. It often also means an increase in demand for particular kinds of imported raw materials and intermediate goods on a sustained basis. Additional demand for imports in turn implies an aggravation of the existing tendency for the demand for foreign exchange to outrun its supply, inherent in the development strategy.

3. Complementarity of imports to domestic production: The import system which was implemented early on by the Revolution had the effect of telescoping import substitution into a few years. The way in which this was achieved was by simple prohibition of importing anything which the country was producing. Thus almost overnight all imports which came in became things which the economy could not do without. At the same time, the infinite protection which the provision implied generated production activities of inordinate inefficiency since cost increases could easily be passed on to the public.

The consequence of these measures was that the flexibility of imports was virtually eliminated. By policy and legislation, the reduction in imports had to come about through the reduction of domestic industrial output, or through eating less food, or through investing less. Thus, the rigidities which had taken other import-substituting countries some number of years to achieve were put in place quite rapidly by Peru with the energetic application of its import control policy.

Reviewing these side effects together shows a major strengthening of the elements of the development strategy which would propel the country into a balance of payments crisis. The growth of the provision of foreign exchange was being slowed down, the growth of the demand of foreign exchange was being speeded up and the rigidities which tied the output of the economy to its import bill were energetically put into place.

D. The Income Distribution Policy

There is no doubt that the Peruvian Revolution implemented an extensive income distribution policy. While designed to help the poor, it appears to have redistributed income from the top 5% to the next 15%. The by-product was to create a markedly larger middle class whose new members immediately increased their demand for industrial goods. However, industrial goods are made with imported inputs and thus the unexpected consequence of the income redistribution which took place was to strongly raise the level of industrial output and thereby the demand for foreign exchange. That this contributed to aggravating the growing divergence between demand and supply of foreign exchange does not need to be belabored.

E. Foreign Debt Policy

The policy regarding foreign indebtedness from 1971 on was one which can only be characterized as borrowing to the hilt. The Peruvian government clearly had the willingness to borrow for all projects for which somebody was willing to lend. The justification given was often in terms of the importance (not the quality) of the investment projects themselves.

However, the real need to borrow many times resulted from the need to cover growing fiscal deficits arising either in the central government or in the public enterprises. Eventually, borrowing became a simple matter of covering a payments gap.

At the same time, the government came into possession of channels which made borrowing much easier. It acquired enterprises which had established credit lines and foreign banking connections; it took over a number of banks which had correspondent relationships; and, of course, it had its traditional established lines for development indebtedness.

On the other side of the market, banks and others were willing to lend freely to Peru. In part this result from an aura of fiscal responsibility and order which the Revolution cultivated in its first years, in part it resulted from temporarily rising export prices and in part from the forecasts which the government was putting out showing large future increases in foreign exchange earnings due to oil allegedly available in the Amazon region. Finally, world lenders were free with their money due to the large growth in the eurodollar market which required an outlet for the savings deposited therein.

As a result of willingness on both sides of the market to increase Peru's debt, Peru increased its public foreign debt to more than \$3.5 billion by 1975. Evidently that made it possible to finance the foreign exchange using development strategy in its aggravated form as implemented by the Revolution. By the same token, it delayed the inevitable crisis implicit in that strategy by three or four years. At the same time, however, it also made the crisis much worse when it finally hit.

Whereas in the absence of this extensive borrowing, all that would have caused the crisis was the current account deficit, with the debt

which had been acquired, the country could now be faced with an abrupt turnaround of capital flow and would have to finance capital account movement several times the magnitude of the current account deficit. Thus the borrowing spree not only postponed an inexorable crisis but made it much worse.

F. Exogenous Factors

Not all the elements which contributed to the crisis were related to the policy that preceded it. Some elements were totally or partially out of the control of the Peruvian authorities.

One such element was the requirement for national defense. While documentation on the extent of the foreign exchange requirements of the armaments program is not available, there is no doubt that it was considerable.¹ The extent to which such a program would have been undertaken under any other government in view of the existence of military governments in almost all neighboring countries, particularly Chile, is difficult for us to assess. It is reasonable to suppose that some (but not necessarily as much) expenditure on armaments would have taken place regardless of the nature of the Peruvian government. This element is therefore partially autonomous and it certainly contributed to raising Peru's import bill.

The second exogenous factor is constituted by world prices. With the exception of fish meal, Peru has virtually no control over the prices at which its exports sell. Export prices went up strongly for Peru from 1968 to 1974 and then started to fall, just as the oil price increase was pushing up the cost of Peru's imports. Thus the timing of the turnaround of Peru's terms of trade could not have been worse.

¹ Available estimates put the figure at \$1.5 to \$2 billion.

The third and very important element which was exogenous to the policy consisted in the change of the fish meal harvest. For reasons that may be related both to climatic changes and to previous over-fishing, the anchovy catch fell drastically during 1972. As a result, export revenue from fish meal fell from \$331 million in 1970 to \$136 million in 1973. That this hurt Peru's balance of payments is obvious.

G. Summary

The development strategy adopted by the Peruvian Revolution would have by itself carried the country into the crisis which it is currently undergoing. This has been the experience of every country that has followed such an import substituting industrialization strategy. We need only look at Argentina, Chile, Uruguay, Brazil before 1964 and Colombia before 1967 to see ample evidence of this. Moreover, if the Peruvian revolutionary government had followed this strategy only with the intensity of the previous government, the crisis would still have occurred; however, since it followed this strategy more vigorously and in a more extreme fashion, the crisis appeared more quickly and was more severe than it would otherwise have been. To some extent, therefore, the crisis is independent of the revolutionary character of this government: anybody following an import substitution policy would have come the same cropper (as indeed other governments in other countries did). However, it took a revolutionary and autocratic government to follow the chosen line with such "purity" and steadfastness. To this extent the crisis is due to the nature of the government. An administration less convinced of its rightness and righteousness and/or one more diffuse in its power structure would have

strayed from the path leading to the crisis much earlier. Moreover, the mere choice of development strategy was obviously not the whole story.

The revolutionary government's policies accelerated the speed and increased the intensity with which the development strategy was accumulating its basic inconsistency. Destruction of part of the managerial system of the country and disorganization of the remainder; reduction in growth of the primary, foreign exchange producing sectors; increase in capital and foreign exchange intensity of investment, current production and final demand; elimination of most of the flexibility in the import bill; inflation of the balance of payments problem through excessive borrowing; all these elements aggravated the situation considerably. So did the exogenous factors at work.

The contributing policy elements producing the disastrous outcome (whatever their other merits) were a central part of the Revolution's contribution to changing the face of Peru. Furthermore, the debt policy represented a gamble that a regime subject to parliamentary questioning would have been unable to undertake.¹ Thus all these causal elements of the crisis are ascribable directly to the nature of the Peruvian Experiment.

H. Compounding the Problem: Counterproductive Stabilization Policies

If Phase One of the revolutionary government in one way or another caused the current crisis by its policies, Phase Two aggravated its pain manifold by its choice of remedies in its attempt at a cure.

Consider the situation. Here was a crisis due basically to imbalance in the productive capacities of primary and secondary sectors: to operate

¹For example, the secrecy surrounding the extent of the oil finds was only maintainable under a military government.

industry at normal capacity use required much more imports of raw materials and intermediate goods than could be paid for with agricultural and mining exports while still keeping up investment. As a result, the foreign debt had been run up. True, the problem was aggravated by managerial disorganization and government red tape. However, there was no generalized excess demand. Indeed, not much of a dent had been made in the chronic underutilization of capacity in industry¹ and services. Nor could it be argued that lack of saving was the problem: after all, to put new capital in place when you don't even fully use the existing stock is a very questionable matter. The simple fact is that in 1975 Peru's foreign lenders were no longer willing to see the country's debt grow exponentially and wanted to see at least some loans paid off. However, there are only two ways to produce a net reduction in foreign debt: Either you spend less foreign exchange or you earn more (you may, of course, do some of both). The first alternative means a fall of imports and concurrently a reduction of investment (growth), industrial output and possibly food consumption. In other words, lower imports imply a deflation. The second alternative, earning more foreign exchange, requires having greater volume to sell, particularly in the short run. Yet an increase in Peru's traditional exports was not a likely event in the short term: (i) mining projects have a gestation period of several years and require large initial investment; (ii) agriculture requires a level of managerial capability found only in small parts of the sector after the agrarian reform. Only industry was capable of a rapid response and in industry excess capacity coexisted with underemployed and unemployed labor, thus potential supply was available.

¹See Abusada-Salah, R., "Utilización de Capital Instalado en el Sector Industrial Peruano," Boston, August 1975 (mimeo).

However, industry had high money costs, due in part to the high costs of inputs (recall the inefficiency illusion discussed previously) which would have to be compensated to make at least part of Peruvian industrial production competitive on world markets.

If the balance of payments crisis was to be solved at a minimum social and economic cost, policy needed to be targeted to breaking the foreign exchange constraint primarily from the supply side, by exporting more, i.e. by exporting industrial goods. Deflation should constitute a complementary line of defense transitorily countering the shortfall of foreign exchange only gradually being covered by new and growing export revenue¹ and the debt roll-over backed by that new revenue. A vigorous export promotion policy would have to be the centerpiece of any effort to contain the costs of balance of payments stabilization.²

However the revolutionary government did no such thing. The Phase Two administration adopted a mix of Phase One and IMF strategies to deal with the situation. From Phase One they borrowed tighter import controls. That this would also hurt potential exporters didn't occur to them: any such side effect would only demonstrate the need for even better and tighter foreign exchange rationing. From the IMF they took an aggregative analysis that diagnosed the situation as one of demand exceeding productive capacity and of savings being too small (particularly in the public sector).

The policies they adopted were devaluation, tighter import controls and tight money. Recession ensued, so did a massive inflation and an increased government deficit. None of this should have been surprising.

¹Note that marketing industrial products abroad is not an instantaneous matter. However, depressive policies aren't instantly effective either. The economy always has some inertial resistance to policy measures.

²See Section III for the scope that existed for such a policy.

A general devaluation was bound to have minimal effectiveness in promoting exports of manufactures, because costs of inputs go up with the exchange rate. Besides, the exchange licensing system starved export producers of imported inputs quite as much as everyone else. On traditional exports, on the other hand, devaluation had little effect because supply elasticity there was very low in the short run anyhow. So devaluation yielded no increase in foreign exchange earnings of any consequence.

On the import side, price responsiveness was also low. Imported food and with it all other food rose in price with the exchange rate; import volume fell as consumers' real income fell, not because people switched from imported grains and oils to something else. Industrial raw materials were so tightly rationed, a higher price couldn't squeeze them lower; but a fall in economic activity could and did reduce them. Capital goods imports depended on government expenditure and could be cut directly, albeit at the loss of some foreign aid disbursements. Thus imports could respond to devaluation only insofar as that devaluation provoked a recession. However, lower real spending could only come as a result of reduced purchasing power caused by price increases. "Fortunately," the devaluation did push prices up: of imported food and of domestic food, of all imported inputs and of all goods whose sellers did not wish to suffer from the price rises in things they purchased. In short all prices rose, and everyone's real income fell. However, income receivers did attempt to reestablish their purchasing power and as a result an inflationary spiral was set off, between incomes and the exchange rate, in a race in which balance of payments improvement depended on the exchange rate always staying ahead of nominal incomes to keep aggregate demand down. Inflation and depression

were the essential ingredients in getting the external accounts under control.¹

The government deficit did not narrow significantly during this process since depression reduced tax revenue. The ever larger nominal deficits fed inflationary expectations, thus aggravating the price spiral. At the same time, the progressive tightening of credit to the private sector aggravated the depression, thus lowering tax revenue.

As this policy took hold, the country sank into a morass of depression with inflation; of public unrest and government perplexity at the crisis it didn't know how to handle.

Yet at bottom, the problem with the stabilization policy had its root in a false diagnosis: there was no shortfall of productive capacity compared to demand, nor was there excess consumption compared to income. There was a shortfall in the provision of foreign exchange which was throttling production thus causing a reduction in output, taxes, and savings. The natural cure was to expand the supply of foreign exchange, not to generate a massive depression and an inflation without precedent.

The policy adopted has an additional and very grave drawback. Insofar as it is effective in reestablishing external equilibrium and creditworthiness, it also lays the groundwork for the next crisis. For as long as the sectoral imbalance of foreign exchange production and usage persists, normal growth will entail a balance of payments crisis. Yet recession only masks the symptoms; a cure requires the reorientation of industry to earn its own foreign exchange through exports.

¹Income receivers were unsuccessful in the attempt to maintain their real incomes constant and therefore domestic recession ensued and the current account improved.

The faulty diagnosis and the counterproductive policy converted a balance-of-payments crisis into a full-fledged economic crisis and into a "crise de regime." The result that one can already see is a return of political power to civilians. Whether there will also be an economic reorganization destined to put the economy on a balanced growth path remains to be seen.

III. RERUNNING HISTORY

Criticizing what was done is not enough. Could the objectives of the Revolution have been pursued better and how? How difficult would it have been? A complete answer is not possible, but it is essential to find a possible alternative and to simulate its consequences. Otherwise one is always left with a suspicion that history, bad as it was, may well have been the only alternative available.

In this section, we present two alternative scenarios for Peruvian developments in the last decade. The first relates to long-term development strategy and is set in 1969. This scenario is based on a strategy which would have explicitly countered the self-limiting nature of import substituting industrialization by making industry into a foreign exchange earning sector alongside agriculture, mining and fishing. In that way, industrial development would have become independent of the growth of the primary sectors. In consequence, a basic contradiction in Peru's development policy would have become resolved and the crisis the country is currently living through would not have taken place. While this would undoubtedly have conferred substantial benefits on all income levels, it is important to ask specifically what the employment and income distribution consequences of such a policy would have been. It is also essential to know what kind of economic policy it would have been necessary to adopt and to explore how this policy would fit in with the revolutionary objectives.

The second scenario deals with the stabilization problem. It is set in 1975 and assumes that developments in 1969-75 were as they in fact occurred. Our purpose in this case is to show the extent to which the costs of stabilization were containable.

A. Capacity Utilizing Export Led Growth

The Peruvian Revolution did not inherit from the past only a development strategy. It also inherited about a quarter of a million unemployed and almost two million underemployed laborers, and what is more remarkable, it also inherited a substantial stock of unutilized capacity. On average, the industrial sector of Peru worked about a shift and a quarter when the Revolution took over. Moreover, on average the factories were closed 20% of the days of the year.¹

Such capital waste in the midst of capital scarcity had numerous causes. One fundamental cause was factor costs. Capital had been kept cheap as a specific policy through the control of interest rates and the low taxation and liberal availability of imports of capital goods. On the other hand, labor had been made expensive through an extensive and advanced social legislation. Since working many shifts on the same machine is an alternative to working with more machines, the relative prices of capital and labor evidently affect the extent of capacity utilization.

Tax policy did its bit to reaffirm the private profitability of low utilization by providing tax write-offs for reinvested profits that were used to buy machinery and equipment, and by making the depreciation rates independent of capacity utilization, thus taxing second and third shift profits more highly than first shift profits. These measures amounted to reducing the cost of investment, provided it took the form of fixed assets.

Foreign exchange policy operated in the same direction as well. While tariffs were the main import restricting device, capital goods were subject to lower tariffs and often exempt. When under the military government

¹See Abusada-Salah, R., "Utilización de Capital Instalado en el Sector Industrial Peruano," Boston, August 1975 (mimeo).

quotas became the rule, investment goods had preferential access to foreign exchange. Furthermore, when time came to assign import licenses for current imports, the amount of installed capacity obviously was a consideration which weighed heavily. Thus, profitability depended on being able to produce, and production required imported inputs; accumulating a stock of capital was therefore a good way of assuring that one got the imports one needed.

Entrepreneurial imitation also played its role. Peruvian industrialists adopted the "tried and true" production procedures of the countries from whence the capital goods came. However, these countries were typically economies in which capital is plenty and labor is scarce and in which it therefore makes sense to operate in single shifts with many machines. Application of these same techniques and organizational forms to an economy with radically different factor availabilities obviously would yield results which fell far short of those desired.¹

While putting so much capital in place to be used so little of the time was obviously a waste, the fact that the capital was there and could be used signified a major resource which could significantly increase the level of welfare of the Peruvian population at large. Were the existing excess labor put to work on the existing excess capital, a large amount of output could be generated. Naturally, it would be necessary to find a market for that output, it would be necessary to obtain the imported

¹On causality of underutilization of capacity much has recently been written. See, for example, Betancourt, R. and C. Clague, "An Economic Analysis of Capital Utilization," Southern Economic Journal, July 1975; Millan, P., "The Intensive Use of Capital in Industrial Plants: Multiple Shifts as an Economic Option," Ph.D. Dissertation, Harvard U., 1975; Schydrowsky, D. M., "On Determining the Causality of Underutilization of Capacity: A Working Note" (mimeo), May 1973; Abusada-Salah, R., "A Statistical Shift-Choice Model of Capital Utilization," CLADS Discussion Paper #15, Boston, Nov. 1975.

inputs complementary to that production and it would be necessary to finance the working capital to get the factories going.

In part, an extensive capacity utilization program would generate its own market for the output since concurrently with the generation of additional product, wages and profits would be paid out, which would boost the buying power of the population. While this increased buying power would match the increased supply of goods in the aggregate, no such equality would obtain at the sectoral level. In particular, increased demand would occur for agricultural goods, the supply of which would not have expanded concurrently.¹ This implies that additional import demand would arise for this type of commodity. Concurrently, some of the industrial supply would not be placeable in the domestic market, precisely because people are not prepared to spend all their income on industrial products. A market therefore would need to be found for industrial production abroad, backed by the support measures essential to make the exports competitive from a price point of view.

On the import side, demand would exist for intermediate goods and raw materials to supply an increase in industrial production and in addition there would be a demand for agricultural imports. These would have to be paid for with the foreign exchange earned from the export of the industrial production not absorbed in the domestic market.

¹This is not to say that a supply response from agriculture would be entirely absent; only that in the short run at least not all the new demand could be satisfied from increased domestic production.

Finally, the working capital needed could be financed out of the savings generated by the additional output itself, although some transitory credit resources might be necessary.¹

While the output effects of capacity utilization export led growth are clear, the equity effects are more mixed. An activation of the kind envisaged would undoubtedly create very significant increase in employment and therefore in wage payments. However, it would also make existing industry more profitable and increase the return to capital. Thus there is no doubt that in absolute terms the poor would gain, a rather desirable outcome in itself. Whether they would also gain in relative terms depends on the growth of the wage bill as compared to the profit bill and on the distribution of income within each of these categories.

Using existing installed capacity with existing idle labor provides a one-time gain, albeit a considerable one. In addition, however, a growth effect arises if new investment is also used henceforth on a multiple shift basis. Then not only is the per capita income raised once and for all but growth proceeds at a higher rate from this higher base. The cumulative effect of these two elements is quite considerable.

B. Some Figures

The previous paragraphs laid out what might be in conceptual terms. We now need to examine the empirical magnitudes to see if they are such as to make these possibilities a real and interesting alternative. The data

¹For an algebraic formulation of these interactions see Millan, P. and D. M. Schydrowsky, "Macroeconomic Consequences of Multiple Shifting." Read to IV Conference on Utilization of Capacity in Industry, Caracas, January 1973 (mimeo). Also, D. M. Schydrowsky, "Capital Utilization, Growth, Employment and Balance of Payments and Price Stabilization," CLADS Discussion Paper #22, Boston, Dec. 1976.

to be used in what follows is drawn largely from work done by Luis Valdivieso, based on earlier work by Patricio Millan, Roberto Abusada and one of the authors.¹ We only attempt here to give an overview of some of the magnitudes. For more detailed information, the reader is referred to the earlier works.

1) Degree of excess capacity

Information on capacity utilization is available in the Peruvian industrial statistics although they have not usually been tabulated. Data available are for 1971, and we have reason to believe that the situation in 1969 was no better. Table III-1 shows the proportion of hours not worked during the day and of days not worked during the year on a sector-by-sector basis. These are average figures and depend in part on the weighting system used. Nonetheless it is impressive to note how many sectors are idle more than 40% of the day. Likewise, it is astonishing to see that almost no sector works more than 80% of the days of the year!

Table III-2 shows that about 65% of the plants are single shift ones, and some 20% triple shifters. Single shifters occupy about 45% of the labor force and triple shifters only 36%, despite the fact that by triple shifting each plant naturally occupies proportionately more workers. In production terms, however, the triple shifters produce about 50% of industrial output while the single shifters produce only about one-third. This indicates that the multiple shifters are more capital intensive than the single shifters. By the same token, multiple shifting could have a

¹Valdivieso, Luis, "The Distributive Effect of Alternative Policies to Increase the Use of Existing Industrial Capacity," Ph.D. Dissertation, Boston Univ., July 1978; Millan, P. and Schydrowsky, D. M., op. cit., 1973; Abusada, op. cit., 1975.

TABLE III-1

PERU: CAPACITY IDLENESS BY INDUSTRIAL SECTOR 1971

(percentages)

<u>SECTOR</u> (ISIC)	<u>DAILY</u> ^{a/}	<u>ANNUAL</u> ^{b/}
20	25	18
21	33	16
22	50	22
23	29	24
24	66	29
25	50	26
26	66	22
27	21	19
28	50	12
29	66	20
30	46	25
31	42	25
32	22	4
33	37	13
34	8	19
35	54	22
36	58	29
37	62	25
38	54	29
39	33	21

a/ Proportion of hours not worked out of 24 hours/day.

b/ Proportion of days not worked out of 365 days/year.

Source: Utilización del Capital Instalado en el Sector Industrial Peruano, Roberto Abusada-Salah, Mimeo, Tables I and II.

TABLE III-2

SHIFT WORK IN PERU

	NUMBER OF PLANTS	WORKERS		BLUE COLLAR WORKERS		PRODUCTION		VALUE ADDED	
		NUMBER	%	NUMBER	%	MILLIONS SOLES	%	MILLIONS SOLES	%
One shift	769	55.420	46.4	40.026	44.8	24.7	29.6	14.2	33.3
Two shifts	192	21.066	17.7	16.240	18.2	15.8	18.9	7.9	18.5
Three shifts	231	42.885	35.9	32.994	37.0	43.0	51.5	20.6	48.2
TOTAL	1192	119.341	100.0	89.260	100.0	83.5	100.0	42.7	100.0

8-III

Source: Ministry of Industry and Commerce, Industrial Statistics for 1971.
 (From P. Millan, "An Empirical Study of Multiple Shifting in the Manufacturing Sector of Peru,"
 Table I)

more than proportionate impact on employment, since it is the labor intensive firms that would move to more shifts.

Table III-3 shows the same information on a more disaggregated basis. One can see that virtually all sectors have single, double and triple shifters. This indicates that the shifting decision is not industry specific but reflects more basic considerations.

These data, taken together, leave no doubt that the amount of output and employment achievable on the existing capital stock is far in excess of what the economy is in fact obtaining.

ii) Output, balance of payments and fiscal potential of utilization

The output effect of the utilization policy is felt in two sectors. Industry increases output directly because of the multiple shifting itself. Then services increase in output as the derived demand from industrial income has a multiplier effect in that sector. Thus, the combined output effect will be greater than the direct impact of industrial output. Table III-4 shows the increased value added obtainable in 1969 by moving to a generalized two and three shifts, on the assumption that 1969 had the same pattern of utilization as 1971. Shown in addition are the major elements of the functional income distribution, i.e. remuneration, profits and depreciation, and tax revenues. Of particular note are the percentage increases involved:¹ value added increases by 25% to two shifts and 54% to three shifts. Wages increase by 30% and 64% respectively etc. Note that wages and taxes increase proportionately more than returns on capital.

¹ Measured against the base of observed magnitudes in the nonprimary sectors in 1969.

TABLE III-3

PERU: SHIFT WORK BY INDUSTRIAL SECTORS 1971

<u>Industrial Sectors</u>	<u>Number of Plants</u>	<u>Total Workers</u>	<u>Produc- tion Workers</u>	<u>Produc- tion¹</u>	<u>Value¹ Added</u>
<u>10: Food</u>	<u>145</u>	<u>12639</u>	<u>9137</u>	<u>13336.7</u>	<u>4255.1</u>
one shift	68	3276	2356	1984.4	809.7
two shifts	34	2931	2307	2765.7	1076.7
three shifts	43	6432	4474	8586.6	2368.7
<u>11: Sugar</u>	<u>13</u>	<u>4119</u>	<u>3641</u>	<u>4828.7</u>	<u>3153.4</u>
one shift	2	76	64	26.5	14.8
two shifts	1	546	389	200.1	156.1
three shifts	10	3497	3188	4602.1	2982.5
<u>12: Beverages</u>	<u>43</u>	<u>5247</u>	<u>3739</u>	<u>5389.8</u>	<u>3860.3</u>
one shift	33	1970	1327	1413.3	965.0
two shifts	4	737	525	440.3	342.1
three shifts	6	2540	1887	3536.2	2553.2
<u>13: Tobacco</u>	<u>3</u>	<u>680</u>	<u>460</u>	<u>1985.1</u>	<u>1673.9</u>
one shift	2	369	201	700.7	586.6
two shifts	1	311	259	1284.4	1087.3
three shifts	-	-	-	-	-
<u>14: Textiles</u>	<u>182</u>	<u>21191</u>	<u>17265</u>	<u>11022.5</u>	<u>5111.9</u>
one shift	59	4628	3611	1230.7	553.1
two shifts	60	7388	6055	4270.6	1954.6
three shifts	63	9175	7599	5521.2	2604.2
<u>15: Footwear</u>	<u>29</u>	<u>3915</u>	<u>3135</u>	<u>1204.8</u>	<u>824.2</u>
one shift	29	3915	3135	1204.8	824.2
two shifts	-	-	-	-	-
three shifts	-	-	-	-	-
<u>16: Wearing Apparel</u>	<u>54</u>	<u>4040</u>	<u>3268</u>	<u>1033.1</u>	<u>566.4</u>
one shift	51	3800	3061	949.4	529.0
two shifts	2	186	163	75.9	33.8
three shifts	1	54	44	7.8	3.6
<u>17: Wood and Cork</u>	<u>27</u>	<u>1920</u>	<u>1539</u>	<u>615.7</u>	<u>338.9</u>
one shift	22	1207	926	350.5	148.8
two shifts	2	182	152	63.4	40.7
three shifts	3	531	461	201.8	149.4

Cont'd

TABLE III-3 (Cont'd)

PERU: SHIFT WORK BY INDUSTRIAL SECTORS 1971

<u>Industrial Sectors</u>	<u>Number of Plants</u>	<u>Total Workers</u>	<u>Produc- tion Workers</u>	<u>Produc- tion¹</u>	<u>Value¹ Added</u>
<u>18: Furniture</u>	<u>47</u>	<u>3076</u>	<u>2483</u>	<u>748.6</u>	<u>423.4</u>
one shift	46	3042	2462	729.7	412.4
two shifts	1	34	21	18.9	11.0
three shifts	-	-	-	-	-
<u>19: Paper</u>	<u>22</u>	<u>2926</u>	<u>2284</u>	<u>3116.2</u>	<u>1319.7</u>
one shift	9	781	608	311.6	122.4
two shifts	1	124	87	68.0	19.8
three shifts	12	2021	1589	2736.6	1177.5
<u>20: Printing</u>	<u>65</u>	<u>4429</u>	<u>2522</u>	<u>1793.5</u>	<u>1071.9</u>
one shift	44	2501	1349	946.1	524.7
two shifts	18	1709	1064	740.8	497.1
three shifts	3	154	109	106.6	53.1
<u>21: Leather</u>	<u>21</u>	<u>1280</u>	<u>1037</u>	<u>662.1</u>	<u>231.2</u>
one shift	20	1203	976	603.6	211.5
two shifts	1	77	61	58.5	19.7
three shifts	-	-	-	-	-
<u>22: Rubber Products</u>	<u>14</u>	<u>2047</u>	<u>1490</u>	<u>1764.4</u>	<u>1177.6</u>
one shift	11	1259	927	783.0	548.4
two shifts	2	166	129	38.3	26.6
three shifts	1	622	434	943.3	602.6
<u>23: Chemicals</u>	<u>133</u>	<u>12220</u>	<u>7068</u>	<u>7993.5</u>	<u>4680.3</u>
one shift	88	7216	3580	4192.1	2611.1
two shifts	12	949	682	852.3	479.0
three shifts	33	4055	2806	2949.1	1590.2
<u>24: Petroleum & Coal</u>	<u>8</u>	<u>1882</u>	<u>719</u>	<u>6022.3</u>	<u>2924.6</u>
one shift	5	143	75	647.3	423.3
two shifts	-	-	-	-	-
three shifts	3	1739	644	5375.0	2501.3
<u>25: Nonmetallic Mineral Products</u>	<u>74</u>	<u>8168</u>	<u>6777</u>	<u>3345.9</u>	<u>2238.2</u>
one shift	55	4473	3801	1084.1	779.7
two shifts	5	473	383	173.8	116.4
three shifts	14	3222	2593	2088.0	1342.1

Cont'd

TABLE III-3 (Cont'd)

PERU: SHIFT WORK BY INDUSTRIAL SECTORS 1971

<u>Industrial Sectors</u>	<u>Number of Plants</u>	<u>Total Workers</u>	<u>Production Workers</u>	<u>Production¹</u>	<u>Value¹ Added</u>
<u>26: Iron & Steel</u>	<u>8</u>	<u>3387</u>	<u>2560</u>	<u>1501.3</u>	<u>626.3</u>
one shift	5	570	476	149.5	72.4
two shifts	1	138	116	194.4	75.2
three shifts	2	2679	1968	1157.4	478.7
<u>27: Nonferrous Metal</u>	<u>6</u>	<u>3209</u>	<u>2870</u>	<u>4847.2²</u>	<u>1391.9</u>
one shift	2	84	76	N/A	25.7
two shifts	2	268	218	244.0	118.6
three shifts	2	2857	2576	4577.5	1247.6
<u>28: Metal Products</u>	<u>63</u>	<u>4406</u>	<u>3554</u>	<u>2131.8</u>	<u>1060.4</u>
one shift	49	3054	2417	1233.0	644.8
two shifts	13	1037	857	741.9	327.1
three shifts	1	315	280	156.9	88.5
<u>29: Nonelectrical Machinery</u>	<u>42</u>	<u>3448</u>	<u>2704</u>	<u>1289.5</u>	<u>915.1</u>
one shift	37	2723	2084	1035.4	700.3
two shifts	4	420	342	81.5	92.0
three shifts	1	305	278	172.6	122.8
<u>30: Electrical Machinery</u>	<u>43</u>	<u>4103</u>	<u>2995</u>	<u>2771.4</u>	<u>1581.7</u>
one shift	37	3381	2490	2037.9	1163.8
two shifts	6	722	505	733.5	417.9
three shifts	-	-	-	-	-
<u>31: Transport Equipment</u>	<u>41</u>	<u>4385</u>	<u>3199</u>	<u>4052.8</u>	<u>1481.5</u>
one shift	37	2798	2120	1914.3	750.9
two shifts	4	1590	1079	2138.5	730.6
three shifts	-	-	-	-	-
<u>32: Miscellaneous</u>	<u>109</u>	<u>6666</u>	<u>4814</u>	<u>3039.1</u>	<u>1746.5</u>
one shift	58	2931	1904	1214.8	764.3
two shifts	18	1078	846	567.1	279.8
three shifts	33	2657	2064	1257.2	702.4

¹Millions of Soles.²Approximate Value.

Source: Ministry of Industry and Commerce. Industrial Statistics 1971.
 (From P. Millan, "An Empirical Study of Multiple Shifting in
 the Manufacturing Sector of Peru")

TABLE III-4

PERU 1969: TOTAL IMPACT OF MULTIPLE SHIFTWORK ON THE FUNCTIONALDISTRIBUTION OF INCOME OF THE NONPRIMARY* SECTORS

(In Millions of Soles)

<u>Basic Model with Depreciation</u>			<u>Generalized 2 Shifts</u>		<u>Generalized 3 Shifts</u>	
	<u>1969</u>	<u>%</u>	<u>1969*</u>	<u>%</u>	<u>1969*</u>	<u>%</u>
Value Added	129525	100	161303	100	198871	100
Wages	50482	39	65657	41	82600	42
Profits and Depreciation	59628	46	71161	44	85500	43
Taxes	19415	15	24485	15	30771	15

*Includes Sectors 10-40 of INP Input Output Table

Assumptions: 35 Marginal Tax on Gross Profits

Percentage Increases

	<u>Generalized 2 Shifts 1969</u>	<u>Generalized 3 Shifts 1969</u>
Value Added	24.5	53.5
Wages	30.2	63.6
Profits and Depreciation	19.3	43.4
Taxes	26.1	58.5

Source: Valdivieso, op. cit., p. 180, Table 19.

The balance of payments effects naturally are the result of increased export revenue from the new industrial exports, less the increased imports of competitive goods (food, as well as those industrial products for which increase in demand exceeds the increase in supply) and complementary imports (raw materials and intermediate goods). Table III-5 shows the magnitude of the numbers involved. It is interesting to see that the net balance is strongly positive, by about \$120 million for generalized second shift and about \$210 million for generalized third shift.

In turn, the fiscal balance is a result of additional tax collections on imports as well as on the additional incomes generated, less the additional expenditure necessary to make exports for industrial goods competitive on the world market. Table III-6 shows the magnitudes involved. Again, the fiscal effects are positive for both levels of shifting.

iii) Employment effects

Additional employment as a result of multiple shifting takes place in industry itself, as well as in the service sectors which have experienced increased output as a result of the derived demand from industry. Table III-7 shows the increase in employment generated as a result of the multiple shift policy. It will be noted that the supervisory, skilled and semiskilled categories show the highest increase. This is due to the expansion of the sectors that are more intensive in these kinds of labor because they have lower capacity utilization. However, unskilled labor increases as much as directors and managers and more than the white collar groups.

TABLE III-5

PERU 1969: BALANCE OF PAYMENTS EFFECT OF MULTIPLE SHIFTWORK: BASIC AND WAGE

PREMIUM MODELS

(In millions of dollars)

	BASIC MODEL	
	Generalized 2nd Shift	Generalized 3rd Shift
1) Additional Export Revenue (AE) FOB	367.1	757.2
2) Additional Competitive Imports (AMC) CIF	179.8	381.5
3) Additional non competitive (complementary) imports (AMC) CIF	68.6	156.8
NET BOP EFFECT	<u>118.7</u>	<u>218.8</u>
[1 - (2+3)] NET		

* In international prices.

Source: Valdivieso, op. cit., p. 203, Table 36.

TABLE III-6

PERU 1969: FISCAL EFFECT OF MULTIPLE SHIFTWORK: BASIC AND WAGE PREMIUM MODELS

(In millions of Soles)

	BASIC MODEL	
	Generalized 2nd Shift	Generalized 3rd Shift
1. Additional Fiscal Revenue (ΔF_c)	8459.5	17371.2
tariffs M^c	(3087.7)	(5662.9)
tariffs M^{nc}	(642.9)	(1372.3)
taxes	(4728.9)	(10335.8)
2. Additional expendi- ture export subsidies (ΔF)	3974.1	9099.2
3. Net Fiscal Effect (1 - 2) ΔFE	4485.4	8272.

Source: Valdivieso, op. cit., p. 205, Table 37.

TABLE III-7

THE EMPLOYMENT EFFECT OF MULTIPLE SHIFTING

	1969 Employment <u>Total</u>	Generalized 2 Shifts <u>Total</u> <u>% Increase</u>		Generalized 3 Shifts <u>Total</u> <u>% Increase</u>	
Directors & Managers	37843	49947	32.0	63642	68.2
Professionals	13197	17086	39.5	21650	64.1
Technicians	27188	35116	29.2	44669	64.3
Office Workers	133371	173611	30.2	218969	64.2
Sales People	46749	59901	28.1	73686	57.6
Supervisors & Foremen	4907	7360	50.0	9958	102.9
Skilled	18029	130451	48.2	175232	99.1
Semiskilled	240492	325023	35.1	414639	72.4
Unskilled	<u>286445</u>	<u>375569</u>	31.1	<u>478376</u>	67.0
Total	878221	1174064		1500821	
Increase		295843	33.7	622600	70.1

Source: Valdivieso, op. cit., Table 21, page 183.

iv) Income distribution

What the foregoing employment effect means for the distribution of labor income depends in large measure on the level of income the unemployed had before. One would think that by definition the unemployed have no income whatsoever; however, since there is no effective unemployment insurance in Peru, people without income are dead. Thus unemployment takes the form of underemployment with the available work being shared by the existing labor force. Thus everybody has some income although it may well be very low. By the same token, when employment rises, everybody's income goes up, with people becoming employed a larger fraction of the time. We show in Tables III-8 and III-9 what happens to labor income under multiple shifting when it is assumed that the unemployed either have an income of practically zero or alternatively an income equal to the average of rural income earners, which for 1969 was Soles 10,000 a year, i.e. some \$300. The latter alternative to our mind represents the upper bound of incomes the underemployed may plausibly have had. The changes in the distribution of labor incomes clearly jumps at the reader from the printed page. The second and third quartiles increase their participation markedly under both alternatives, while the top 1% and 5% decrease their share quite significantly.

However, labor income is only part of all income and Table III-10 puts together labor income with capital income and shows the total distribution. Table III-10 shows results based on the assumption that unemployed labor had no income (Case I) as well as on the assumption that it had the average rural income. We find strong shifts from the lowest stratum to the second lowest, with the third stratum gaining somewhat as well. These gains are at the expense of the top of the distribution in one case while

TABLE III-8

PERU 1969: TOTAL IMPACT OF MULTIPLE SHIFTWORK ON THE DISTRIBUTION OF

LABOR INCOME
Case I *
(In Percentage)

Quantiles of 20%	1969	Basic	
		Can. 2 Shifts	Can. 3 Shifts
I. Poorer	.74	.6	3.7
II.	.77	10.5 5.1	21.4 11.0
III.	9.0	15.7	15.5
IV.	25.6	23.4	21.1
V. Richer	64.3	55.3	48.7
Top 5%	(31.2)	(26.3)	(22.8)
Top 1%	(12.0)	(9.6)	(8.0)
Total I to V	100%	100%	100%

*Unemployed labor has virtually no income.

Source: Valdivieso, op. cit., p. 188, Table 25.

TABLE III-9

PERU 1969: TOTAL IMPACT OF MULTIPLE SHIFTWORK ON THE DISTRIBUTION OF

LABOR INCOME
Case II *
(In Percentage)

Quantiles of 20%	1969	Basic	
		Can. 2 Shifts	Can. 3 Shifts
I. Poorer	6.28	5.19	5.22
II.	6.67	12.95 6.89	26.68 10.78
III.	9.60	14.6	15.26
IV.	21.8	21.8	20.79
V. Richer	55.4	51.5	47.94
Top 5%	(26.93)	(24.51)	(22.38)
Top 1%	(10.32)	(8.96)	(7.87)
Total I to V	100%	100%	100%

* Unemployed have income equal to the average of the rural income earners.

Source: Valdivieso, op. cit., p. 189, Table 26.

TABLE III-10

PERU 1969: TOTAL IMPACT OF MULTIPLE SHIFTWORK ON THE DISTRIBUTION OF PRIVATE INCOME
(WAGES + PROFITS + DEPRECIATION) OF THE NONPRIMARY SECTORS

	1969			Gen. 2 Shifts 1969			Gen. 3 Shifts 1969		
	Labor Income (%)	Capital Income (%)	Total Income (%)	Labor Income (%)	Capital Income (%)	Total Income (%)	Labor Income (%)	Capital Income (%)	Total Income (%)
A. Case I									
Income Levels Soles/Year									
0 - 48000	84.23	3.7	40.6	79.07	3.7	39.9	73.1	3.7	37.8
48001 - 84000	10.28	9.2	9.7	13.78	9.2	11.4	17.81	9.2	13.4
84001 - 146400	3.52	15.5	10.0	4.6	15.5	10.3	5.88	15.5	10.8
146001 - or more	<u>1.98</u>	<u>71.6</u>	<u>39.7</u>	<u>2.55</u>	<u>71.6</u>	<u>38.5</u>	<u>3.21</u>	<u>71.6</u>	<u>38.0</u>
Total Income (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Income (000)	50482	59628	110110	65657	71161	136818	82600	85500	168100
Relative Shares	46%	54%	100%	48%	52%	100%	49%	51%	100%
B. Case II									
0 - 48000	84.23	3.7	43.6	79.07	3.7	39.9	73.1	3.7	37.8
48001 - 84000	10.28	9.2	9.7	13.78	9.2	11.4	17.81	9.2	13.4
84001 - 146400	3.52	15.5	9.6	4.6	15.5	10.3	5.88	15.5	10.8
146001 - or more	<u>1.98</u>	<u>71.6</u>	<u>37.1</u>	<u>2.55</u>	<u>71.6</u>	<u>38.5</u>	<u>3.21</u>	<u>71.6</u>	<u>38.0</u>
Total Income (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Income (000)	58515	59628	118143	65657	71161	136818	82600	85500	168100
Relative Shares	49.5%	50.5%	100%	48%	52%	100%	49%	51%	100%

Common Assumptions:

- 1-Unemployed earn almost zero income before shifting takes place (Case I); earn average of rural workers (Case II).
- 2-Zero variance of intrasectoral intraskill distribution of income.
- 3-No changes in relative participation on capital income by income levels.

Source: Valdivieso, *op. cit.*, p. 194, Table 29 (Case I), and Annex Tables (Case II).

there are gains in this segment in the other.¹ Moreover, it is remarkable that the shifts in distribution are not merely redistributing the same size pie; rather, as noted before, income has risen markedly in the process. Thus these increases are the result of very strong changes in the marginal distribution of income which are big enough to affect the average observed after the utilization policy.

v) Growth effects

The growth effects fundamentally depend on the lowering of the capital output ratio as well as on dissolution of the foreign exchange constraint which puts a ceiling on the level at which the economy can operate.

A reasonable estimate² is that generalized second shifting on new investment would add .9% to the annual per capita growth rate. Generalized triple shifting would add 3.8% to the annual per capita growth rate. By the year 2000 these higher growth rates would mean that Peru would have a per capita income one-third higher under double shifting and three times as high under triple shifting! The combination of a higher one time increase in base, a lower capital/output ratio and compound interest is a powerful one indeed.

C. Policies for Capacity Utilizing Export Led Growth

Since the causal elements generating underutilization of capacity are many and interact in various and complex ways, achieving a higher level of

¹Note that when rural underemployed are absorbed within the industrial labor force as in Case II, the remaining rural workers experience an increase in employment, income, and welfare. This improvement does not appear in the table.

²See D. M. Schydrowsky, "Capital Utilization, Growth, Employment, Balance of Payments and Price Stabilization," CLADS Discussion Paper #22, December 1976.

utilization also requires a complex policy package. Moreover, changing utilization patterns involves crossing a threshold. Giving incentives to utilization that fall just short of changing behavior are equivalent to no policy at all. In this instance "a narrow miss is no better than a wide miss."

The major policies to promote capital utilizing export led growth fall into five areas:

1) Trade policy

Making industrial exports competitive in the world market is an essential purpose of the policy. This objective requires export support in the form of compensation for high cost of domestic production arising from import regulations, labor laws, tax regime, etc., as well as a removal of the red tape holding exports back. Such support can be provided by compensatory export subsidy for individual goods or by means of a compensated devaluation, in which exchange rate and import restrictions are modified concurrently in offsetting directions.¹ Both these policies keep the prices of imports virtually unchanged and thus have minimal cost-push effects.

On the import side, the policy must make the availability of raw materials automatic. This implies that export production cannot have its inputs subject to import licensing, otherwise the uncertainty of obtaining the needed inputs for production could make the undertaking of export commitments impossible. In other words, any existing QR systems must be

¹For details, see Schydrowsky, D. M., "International Trade Policy in the Economic Growth of Latin America," Ch. III in Trade and Investment Policies in the Americas, S. E. Guisinger, ed., SMU Press, 1973; also Schydrowsky, D. M., "From Import Substitution to Export Promotion for Semi-Grown-up Industries: A Policy Proposal," Journal of Development Studies, July 1967; and "Short Run Policy in Semi-Industrialized Economies," Economic Development and Cultural Change, April 1971.

replaced by tariffs, or, alternatively, it is necessary to institute automatic licensing for inputs into export production.

ii) Domestic tax policies

The central idea is to extend the incentives usually available only for expansion of the capital stock to its utilization. This implies generating direct incentives for production of output. In particular, depreciation rates can be made proportional to the number of shifts worked, and the tax exemption available for reinvestment in capital goods can be made extensive to increasing output from more intensive use of existing capital or replaced by an allowance for greater capacity utilization. Furthermore, the tax system can be used to offset high labor costs on second and third shifts by allowing an additional credit for multiple shift labor expenses in calculating the tax liability of the companies involved. Finally, other direct measures can also be used: the corporate tax rate can be raised for single shifters and lowered for double and triple shifters.

iii) Labor policies

The hallmark in this area is equalization of shift work costs to first shift costs and flexibility of tenure regulations on the higher shifts. With regard to the first item, it must be recognized that legislated shift premia constitute a discouragement for the employment of additional labor on second and third shifts. With the market wage being already higher than the marginal social cost of labor, the additional tax on labor use in the form of a higher afternoon or night wage aggravates an already undesirable situation. Tenure regulations also have a major

effect, particularly in transition periods towards multiple shifting. When labor cannot be fired once it has been hired, expanding the labor force involves a major risk for the entrepreneur.

iv) Entrepreneurial environment

Entrepreneur willingness to innovate must be encouraged and rewarded; lack of such qualities can be made to cause loss of standing. All this involves flexibility in rules, and requires creating a psychological atmosphere in which dynamic entrepreneurs feel appreciated and undynamic ones are pulled and pushed into becoming dynamic.

v) Foreign private investment

Export marketing channels are often in the hands of multinational enterprises. These become very interested in sourcing from a particular country if they have an enterprise in that country. Hence investment on the part of enterprises which may source in Peru is an important complementary policy. Support for the export endeavors of such foreign investors already in the country is obviously of equal importance.¹

D. Capacity Utilizing Export Led Growth and the Peruvian Revolution, Phase One

Let us come back now to our starting point. How would the export led growth rate have jibed with the revolution purpose and thrust?

¹The nationalistic approach of the Revolutionary Military Government, which is evident in the Plan Inca, did not keep them from looking for and concluding important agreements with multinational enterprises in mining, oil and banking. However, foreign investment in industry was not equally sought after. Yet, ironically enough, the size and power of multinationals in this sector would have been much smaller and the possibility of gains for Peru much greater.

i) Dynamic and self-sustained industrial development

The export led growth strategy would have allowed the Revolution to achieve this goal. In fact, there is no other way in which it could be achieved by a small country such as Peru. Taiwan, Korea, Singapore, Israel are all examples of what can be achieved with an export orientation for industry. Even Brazil, half a continent, found itself unable to grow only inward. In the expansion and strengthening of the industrial sector Peru's chosen path led to disaster; Peru's possible path would have crowned the Peruvian Revolution with achievement.

ii) Equity

The export led strategy appears as one which is pro-entrepreneurial and encourages profits to be made. In fact, it is one which is willing to distribute a share of the increased output as a fee to the managers that propel the system onwards and upwards. In the process the poor grow rich faster than the rich (see Tables III-8, III-9, III-10). While it is clear that there is an improved income distribution in the nonprimary sector, agriculture also benefits indirectly: (1) through withdrawal of surplus workers, (2) through an enlarged domestic market. Thus the real incidence of this growth strategy is very different from its appearance: entrepreneurs are the tool to achieve a better lot for the workers.

Moreover, the appropriate comparison is with the dismal outcome of the import substituting path in fact followed: distribution and per capita income both worsened!

iii) Independence

The essence of independence is freedom of choice. Such freedom requires flexibility which in turn is assured only by participating in many markets and dealing through many channels.

An export oriented economy suffers less if any particular one of its export prices falls or if any one market becomes inaccessible. The large number of other options available reduces vulnerability.

The independence afforded by export diversification is equally effective vis-à-vis a foreign country, a multinational enterprise or an international agency. Only when the foreigner is indispensable does he have bargaining power. With export led growth reliance on any one foreign partner is minimized.

Peru has rarely been subject to the kind of foreign dictation it has experienced in the last two years. Export led growth surely would have preserved at least this much independence.

iv) Strong government

Lest it be thought that export led growth could have been implemented by any government, however weak, let it be recalled that what is involved is: (1) a major break with past policy, (2) a major break with past tradition in management, (3) a virtual revolution in the labor market with the possibility of full employment drastically affecting union power, (4) a major confrontation with GATT and other countries over export supports.

Turning an industry accustomed to easy sales behind tariffs into an industry actively competing in world markets is no easy task, even with financial export supports. Converting essentially imitative management into innovative export oriented multiple shifters is no small challenge.

Integrating the drive and demands of a doubled industrial labor force into the overall welfare dictates of the nation is an assignment of no small dimension. Persuading GATT and the importing nations of the justification of the country's export supports is no small diplomatic mission. A weak government could not have pulled it off; a strong one would find more than enough to keep its muscles busy.

But what of the major reforms? Centralized decision making on economic activity via exchange control and sectoral laws would not have been consistent with export led growth. But they would have also been unnecessary. Worker participation in management would also have made success in this strategy difficult. For in its Peruvian form, at least, worker participation meant capital intensity, labor and management sloth, risk aversion and pressure for government patents of monopoly via the exchange control rules. Agrarian reform was the reform most consistent with export led growth yet its purpose could much more easily have been achieved with less disruption in the context of fast growth. Finally, nationalization of foreign enterprises would not have been feasible as a generalized or systematic phenomenon. The IPC could have been taken over as an isolated case, but other transnational companies would have been welcomed in a context assuring their contribution to Peru's export led growth.¹

Thus all in all it is fair to say that export led growth would have served the Revolution admirably.

Of course Peru did try some timid export promotion through use of the CERTEX, (Certificate for the Reimbursement of Taxes upon Export), which

¹After all, there are well-known ways of making an investor's and a country's interests compatible. Even Peru under Phase I One found some.

was put in force in January of 1969, in other words practically from the beginning of the revolutionary government. Unfortunately, the Minister who implemented the CERTEX, General Valdivia, was fired shortly after its implementation. Thereafter it languished to a considerable extent despite the best effort of the functionaries entrusted with its care in the Ministry of Industry.

The use of the CERTEX has been typically timid. Its rates have usually been too low to accomplish its purpose. Its form of application was designed for a long time to make it impossible for specialized commercial exporters to benefit from the incentive and thus disconnected the commercialization channels from producers. In addition, the CERTEX was uncoordinated with the rest of the commercial policy. Thus, the import licensing system was not tied into export promotion at all. In consequence, it was perfectly feasible for a producer to have an export market, to have obtained a CERTEX sufficient to be competitive but not to obtain the import licenses to buy the raw materials to produce the output. Coordination was also lacking for the credit system, with the producers often having import licenses to import the raw materials but not the credit to finance the working capital and vice versa.

All in all, export support was regarded more as a fiscal drag, to be minimized, and as an unnecessary transfer of income to capitalists than as a tool which would activate the whole economy and generate larger and more equitably distributed incomes for everyone. Concurrently, from the narrow fiscal view the emphasis was always on the amount of expenditure export support would entail without ever taking into account the fact that the higher level of output generated by those exports would lead to significant income for the treasury, which was so much in need of funds to finance

public social services as well as to promote regional and agricultural development.

E. Stabilizing and Activating the Economy in 1975

The preceding subsections reran history from 1969 to portray what might have been accomplished in terms of the goals of the Revolution with a different type of economic strategy. In this subsection we are concerned with rerunning history after the crisis hit. Would it still have been possible to save the situation in 1975 by a radical reorientation of policy? Could the costs of stabilization be contained while effectuating a cure of the underlying problems of sectoral imbalance? We cannot provide a fully definitive answer in the confines of this paper; however, we can show enough of the potential of an industrial export based stabilization strategy to provide some sense of the possibilities.

1) The scope for action

In 1975, the current account deficit stood at \$1.5 billion and the fiscal deficit was 30.6 billion soles (10% of GNP). To these magnitudes any stabilization effort needed to relate.

In Section III.B we showed that a three-shift strategy in 1969 could have added some 70 billion soles to GNP, some \$750 million to exports and some S/.17 billion to fiscal revenue. However, such an economic expansion would also have caused imports to go up and export support to be required from the treasury. On a net basis, a three-shift strategy would have meant a BOP surplus of \$220 million and a fiscal surplus of S/.8 billion. At first sight, these amounts fall far short of the yawning deficits of 1975. But in the intervening years two crucial things happened: prices

rose and the economy grew. Thus the 1969 estimates have to be readjusted to the 1975 situation.

Adjusting the 1969 figures for price changes is not simple, for the appropriately disaggregated price indices are not readily available. The cost of living in 1975 stood some 90% above that of 1969, while world prices of industrial goods went up only about half as much. It would seem appropriate therefore to revalue all sales projections by 90% and all foreign trade accounts by 45%.¹ Carrying out these operations leads us to the following results:

1969 Three-shift mobilizable economic
potential at 1975 prices

GDP	S/. 133 billion
Exports	\$ 1090 million
BOP surplus	\$ 320 million
Tax revenue	S/. 32 billion
Fiscal surplus	S/. 12 billion

Now, growth needs to be taken into account. In the 1969-75 period, installed capacity approximately doubled, but output grew only by about half, which means that unutilized capacity grew to a level three times that of 1969.² Incorporating this growth effect, we get the following result:

¹Note, however, that the underlying model--and macroeconomic consistency--requires the BOP and fiscal surpluses to be equal. Furthermore, export supports must rise as domestic inflation exceeds world inflation thus lowering the fiscal surplus from its extrapolated value. Hence the fiscal surplus has been readjusted by 45%.

²The calculation is simple enough. In 1969 capacity was 100, utilized capacity was 66 and unutilized capacity was 34. In 1975 capacity was 200 (growth of 100%), utilized capacity was 100 (growth of 50%) and unutilized capacity was 100 (200 - 100), which means a growth of 200% compared to the base in 1969 of 34.

Three-shift mobilizable economic potential
in 1975 (in 1975 prices)

GDP	S/. 400 billion
Exports	\$ 3.1 billion
BOP surplus	\$ 1 billion
Tax revenue	S/. 100 billion
Fiscal surplus	S/. 36 billion

We can now compare this potential to the size of the problem:

BOP deficit:	\$ 1.5 billion	Potential BOP surplus:	\$ 1 billion
Fiscal deficit:	S/. 30.6 billion	Potential fiscal surplus:	S/. 36 billion

It would appear that if Peru could have gone to three-shift output instantaneously, it could have solved its 1975 economic crisis with no deflation whatsoever! Naturally, no such instantaneous transformation would have been possible so these figures represent only a potential. However, before we discuss what phased implementation might have meant, it is useful to mention three sources of underestimation of the potential.

The first source of underestimation comes from not considering in the excess capacity the days on which factories are closed. Yet in Table III-1, we showed that the proportion of days not worked in the year is above 20%. On this count alone, our estimates of the economic potential of capacity utilization is low by 25%.¹ The second source of underestimation comes from not considering all the increases in output that arise from better and more effective use of capital as output rises, i.e. from underutilization within shifts. Surely this would add another 10% to 20%. The third source of underestimation comes from assuming in the projection that there are no new monetary savings in the private sector. Yet with the rise in GNP would

¹ 20% not worked equals 25% of the 80% of days worked.

have gone an increase in the demand for money and an increase in current savings levels in the form of other financial assets, mainly time and savings deposits. Hence our estimated economic stabilization potential for 1975 represents an underestimate of the true figure by 40% to 60%. Yet even with this underestimate it is sufficient to cover the country's deficits.

Moreover, a further cushion still remains: The estimates of the net BOP and fiscal effects are based on the assumption that all consumer goods demanded at current prices come in freely. If the price of food were raised, to eliminate the subsidy, or if tariffs on items competing with domestic production were raised, the BOP and fiscal surpluses would both be greater, and in addition there would be some increase in food production, to the extent that it was dampened by price controls and subsidized imports.

Let us look now at the phasing issue. The crux of the problem is placing \$3.1 billion annually of industrial exports. Surely this would have to take some number of years. Let us assume that it could have been achieved over a period of five years: \$500 million in 1975, \$1 billion in 1976; \$1.8 billion in 1977, \$2.5 billion in 1978, and, finally, \$3.1 billion in 1979. While this would have been fast growth, it would still have fallen well short of Korean performance. The BOP and fiscal surpluses attendant to this pattern would have been the following:

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Exports	\$ 500 m.	1 b.	1.8 b.	2.5 b.	3.1 b.
BOP surplus	\$ 160 m.	320 m.	580 m.	800 m.	1 b.
Fiscal surplus	S/. 6 b.	12 b.	21 b.	29 b.	36 b.

It is obvious that with this phasing 1975-79 would have shown current account deficits despite the new industrial export policy. These deficits would have required a number of policy measures to cover them, to wit:¹

- (a) moratorium on investment: an inexpensive stop-gap while capital was in any case underutilized. It could have saved \$500-600 million a year.
- (b) moderation on arms imports--could have saved from \$200 million on a declining scale per year.
- (c) correction of relative prices of food and fuel: removal of subsidies on a gradual basis--could have yielded from \$150 million upwards.

The annual figures with these savings would have been the following:

(in billions)	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Initial deficit ²	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5
3-shift surplus	.2	.3	.6	.8	1.0
Moratorium investment	.5	.5	.5	.5	.5
Arms moderation	.2	.1	.1	-	-
Relative prices	<u>.1</u>	<u>.3</u>	<u>.5</u>	<u>.7</u>	<u>.8</u>
Final deficit (surplus)	.5	.3	(.2)	(.5)	(.8)

It appears that with the measure outlined a surplus would have appeared by 1977 and only \$800 million would have been needed in new debt over the two intervening years. Starting in 1977 surpluses would have been available to repay debt and phase out the investment moratorium. Notice also that throughout this period GNP would have been rising due to increasing capacity utilization, while employment would have been growing

¹Some of these measures were part of the stabilization package in fact adopted, but the setting in which they worked was totally different.

²The deficit does not grow from year to year due to the investment moratorium.

for the same reason. Thus price increases of the subsidized items (food and fuel) would have occurred against the backdrop of an improving private economy and rising employment. Furthermore, the government could well have released some of its 400,000 or so employees to the export oriented growth sectors, thus providing relief to the exchequer.

In sum, it would appear that a successful stabilization from the supply side was economically possible in 1975. It would have brought the economy onto an even keel by 1979 or 1980 through a process of growth towards equilibrium, rather than contraction towards balanced external accounts and greater overall disequilibrium (higher unemployment, larger idle capital, and rampaging inflation) as actually happened.

ii) The policies to stabilize from the supply side

For industrial export led stabilization to occur in 1975 a synchronized macroeconomic and microeconomic policy would have been necessary. At the macro level it would have been necessary to ensure that (a) Peruvian export prices were competitive; (b) the demand for imported inputs was met without delay or bureaucratic obstacles, and (c) working capital was available to finance the period of production.

In turn, the micro policy level required (a) control of the entrepreneur over his plant, (b) a minimization of fixed costs for the new output so that the risk of loss due to failure was kept low, and (c) a return of entrepreneurial attention to the management of the production and sales process and away from protection of property and "form of regime" type of preoccupations.

The macro policy requirements represent a significant and not easy departure from the policy in force at the time. The CERTEX would have

required revitalization and a large increase; the exchange control regulations would have required the injection of a large dose of automaticity to accommodate an expeditious handling of inputs into export production, and the priorities for credit allocation would have had to be reordered away from the public sector. In all likelihood, however, both a high CERTEX and a flexible import control would have been hard to achieve; the first because of the problem of countervailing duties, the second because of the difficulty of reversing half a decade of controlist attitudes as well as because of the sheer administrative difficulties involved. The appropriate policy would therefore have been to replace the CERTEX by a Certificate for Import and Export (CERTIMPEX), in effect a transferable import entitlement given to the exporter. The premium the CERTIMPEX would have commanded for the importation of very scarce goods would have provided the exporter with the bonus to make his prices competitive; the flexibility inherent in being able to import license-free would have allowed exporters to use their own or others' CERTIMPEX to bring in whatever inputs they needed. In addition to the CERTIMPEX it would probably have been desirable to start on a slow exchange rate crawl to prevent further overvaluation of the exchange rate and over time reduce the overvaluation existing in 1975.

At the micro level, even greater changes would have been required. Control by the entrepreneur over the work process in his plant, also known as "industrial discipline," would certainly have required modification if not repeal of the industrial community legislation as well as reestablishment of the possibility to fire workers (repeal of the Ley de Estabilidad Laboral). This measure would have been necessary to minimize fixed cost (and risk) and to absorb more employment. Reorientation of entrepreneurial

attention to business concerns would have required a modification of the regime's rhetoric, from anti-business to pro-business.

It is conceivable that the legal modifications needed in the industrial community and labor tenure regulations could have been made applicable only to new output and employment and still effectuated the desired incentive effect. Whether entrepreneurs would have responded to such an incremental measure would probably have depended in good measure on their perception of the general attitude of the government towards the business sector. The labor movement, on the other hand, would have accepted this change in strategy as soon as the positive results in employment and income distribution would have been evident.

iii) The meaning of supply-based stabilization for Phase Two

In actual fact, Phase Two has constituted a vivid demonstration of the failure of the Military government. It has forced an embarrassing retirement of the armed forces to their barracks and has laid the basis for instability within the armed forces and for tension between soldiers and civilians over the responsibility for the present and future economic problems of the country. Stabilization-cum-recession (or stabilization from the demand side) has had exceedingly high social costs in terms of unemployment and inflation. Moreover, Phase Two has undone many of the reform measures of Phase One: the industrial community legislation was amended out of recognition; the labor tenure law was dealt with likewise, public enterprises have been returned to private hands, the social property sector was quietly starved of funds and personnel, etc.; but all these political changes and costs have not produced any positive results for lack of a correct economic strategy.

A Phase Two based on a capacity using export drive in industry would have been a completely different chapter in Peruvian history. Rather than a 10% per capita decline in GNP, there would have been growth. Rather than a 30-50% fall in real wages with increasing un- and underemployment, there would have been an increase in individual earnings, despite a small fall in average real wages,¹ combined with a large expansion of employment. The balance of payments would have been brought into equilibrium at a much higher export level and the debt service ratio would have been brought down considerably.

What is perhaps more fundamental, however, is that the balance of payments manifestation of the economy's illness--imbalance between sectors --would have been cured rather than just repressed.

The political costs would have been no greater than those in fact incurred; Phase Two in any case amended the industrial community and labor stability regimes out of recognition. On the other hand, great political capital could have been made out of stabilizing without inflation and with a very substantial increase of employment.

In sum, with a policy of stabilization from the supply side, Phase Two could have handed over a country in economic health in 1980.

¹Pay for any given job would have fallen, but the tighter labor market would have produced extensive promotion up the job ladder, thus raising individuals' incomes. On the other hand, total national income would have been 50% higher, and the proportion of wages within this income would have grown more than profits. Compare this with the present situation of a repressed economy and a level of real wages below the 1970 level.

IV. THE FUTURE

In this fourth and last part of our paper we will attempt to summarize the key lessons that, from the economic point of view, can be learned from the Peruvian Experiment, and the paths which are open to the Peruvian economy in the future, in both the short-run and the long-run. At the same time we will try to clarify some basic points about the relationship between economic strategy and performance, on the one hand, and sociopolitical conditions and goals, on the other.

A. The Economic Lessons from the Past

Intersectoral disequilibria in prices and resource allocation since the early 60's slowed down the rate of growth of the Peruvian economy, worsened the income distribution, and created an increasingly serious unemployment problem. "Phase One" (1968-1975) had ambitious social objectives and strong political power, but did not come to grips with the economic issues and even made things worse: There was not only mismanagement of the economy; there was lack of a recognition of basic economic interrelations. A partial shuffle of fixed assets ownership did not change the old unbalanced trends of sectoral growth; interventionist rhetoric and controls hindered but did not transform the behavior of the economy, rather they reinforced the preexisting intersectoral disequilibria; public sector expansion was artificial because it was not built upon sound economic grounds; and intensive inward-looking industrialization together with heavy borrowing from abroad led to the widest foreign exchange gap in recent Peruvian history. "Phase Two" (1976-1978) started from a broken economy and had to apply, reluctantly and piece by piece, conventional (à la IMF)

cures that have proved to be worse than the disease: After almost three years of across-the-board devaluations and monetary restrictions, the foreign exchange gap and the fiscal deficit remain, and inflation and recession are today much worse than in 1975. Social goals have been put aside as the Revolutionary Military Government tries desperately to solve a crisis that they did not foresee and never did understand.

Compared to the present (1975-1978) crisis, that of 1967-1968 seems very minor indeed. The payments deficit on current account in 1967 was \$125 million; in 1975 it was \$1.5 billion; the foreign public debt 10 years ago was \$742 million, now it is \$6.1 billion; inflation was 19% in 1968, this year it is expected to exceed 70%.

Peru's economic experience in the last 10 years is a particularly intense example of a phenomenon which is by no means exclusively Peruvian. Under slightly different circumstances we find this same "stop and go" macroeconomic pattern in many other countries, particularly in Latin America. Thus, for example, Argentina has a long and frustrating history of successive periods of investment and expansion of demand that inevitably led to chronic balance of payments deficits, then to devaluation and painful restrictive policies. When the foreign exchange gap is closed, the economic authorities reflate the economy, real wages and profits rise and a brief new period of expansion follows, until the next foreign deficit comes, and with it the unpleasantness of adopting a new round of restrictive policies. Neither foreign financial experts, nor the local authorities, will ever solve the basic problems of the Argentinian economy so long as they ignore intersectoral disequilibria and insist on global, restrictive policies from the demand side.¹

¹Marcelo Diamand, Doctrinas Economicas, Desarrollo e Independencia, Buenos Aires, 1973.

Precisely because there existed alternatives which would have meant a real structural change in the development patterns of Peru and Latin America, different from both pseudo-socialistic protectionism and laissez-faire capitalism, the two types of macroeconomic strategy that Peru has experienced during the two phases of military government may both be characterized as wrong-headed, bad strategies. The alternatives involve directly tackling the problem of reequilibrating the different productive sectors, thus breaking down the bottlenecks that asphyxiate the supply side of the economy. They require an effective change of the rate of utilization (and not only the amount) of Peru's scarcest and most wasted resource, capital, and by doing so provide the country's most abundant and important resource, labor, the means to have productive employment and income. To keep idle more than one-half of the installed capital capacity, and to have unemployed or underemployed a vast share (maybe 50%) of the labor force, is the most absurd situation that one could imagine.

The valiant nationalistic spirit, the merits of latifundia redistribution, the new lines of educational reform, etc., pale into insignificance when confronted with the soaring inflation and the deep recession that Peru is suffering today. In Section II we saw how this crisis came about as an inevitable result of a long-followed but misguided import substituting industrialization, aggravated by disorganization of public and private management systems and the side effects of the various reforms, and how the crisis was made worse by the exchange rate and monetary policies adopted.¹ In Section III we outlined an alternative strategy that would have achieved the economic goals of the Revolution by pushing the economy towards its production possibility frontier (full utilization of existing

¹Some devaluation and some tightness of money were surely unavoidable, however of quantitative magnitudes far below those actually experienced.

capital stock and fuller employment of the labor force), overcoming the bottlenecks that paralyze the economy.

The economic policy of "Phase One" did not fail because it emphasized State intervention, but because it applied wrong and inefficient controls, ignored the importance of the foreign sector (i.e., both the possibilities of foreign demand and the requirements of foreign supply), and neglected the most basic principles of economics and management regarding prices, productivity and income. "Phase Two" is not failing now because it gives special attention to the foreign sector and tries to reintroduce some free market mechanisms, but because it considers the basic illness to be "excessive demand" and applies global, restrictive, monetary measures. In fact, the Peruvian economy is suffering from constrained supply and massive unemployment caused by a lack of foreign exchange which cannot be overcome unless specific sectoral policies are adopted (different from across-the-board devaluations and tight domestic money) in order to correct the present distortions in Peruvian trade policy and to absorb the excess capacity in industry.

B. Projecting the Future (1979 - 1990)

In 1990 Peru will be a country of 23'320,000 people, with a labor force of eight million workers (working or looking actively for a job) out of 12'970,000 persons in the age bracket of 15-64 years.¹ The rural population, which in almost every country tends to decline in absolute numbers, will still grow to reach approximately 6.4 million in Peru,² and the urban

¹ According to Preparatory Documents for the Long-Run National Development Plan (1978-1990), INE, and INP.

² Given the present high rates of rural infant mortality which will decline in the next years and the age structure of the population, and in spite of increasing migratory movements towards the cities.

population will be close to 17 million, of which 8'180,000 will be in Lima (35% of the population of the country in 1990). These levels of population and labor force, their distribution by regions and sectors, and mostly their socioeconomic standard of living, will depend upon the development strategy that Peru will have in the next 12 years.¹

Two alternatives may be considered:

(1) If Peru were to follow the old strategy of the 60's and 70's, more incentives for investment in industry will be given (although a great proportion of that installed capital will not be fully utilized), higher tariffs and quotas will be established (because our industry in all its branches will still be "infant industry" in 1990 and later on, too), huge projects in mining will be tried through direct foreign investment (although the oligopolistic power of transnational corporations in mining is stronger than in industry) in order to get, with increasing difficulty, the foreign exchange that the country will need. The foreign trade balance will be affected by the chronic fluctuations of prices of raw materials, and the long-run trend of real growth of exports will only be 4% per year. Sector 4 (urban modern) will therefore be constrained by the external bottleneck: Its labor force will grow from 970,000 workers (in 1978) to 1'370,000 (in 1990), but in proportion of the urban labor force it will diminish from 27% today to 22% in 1990. The other three sectors will have an heterogeneous evolution: Sector 1 (rural), even improving to 2% the annual rate of growth of its output, will not meet the growing domestic demand for food and

¹The Peruvian government approved in August 1976 an excellent document, "Lineamientos de la Política de Población en el Perú," which established guidelines in education and health services for free, responsible parenthood of the families in a context of structural social change. The success of this Population Policy will affect (and, at the same time, will depend upon) the overall development of the Peruvian society, although its results may not be noticeable in the short run.

increased food imports will be required; rural poverty will not be solved, as their income per capita in 1990 will still be less than one-third of the average urban income of 40 years before. Sector 3 (urban traditional formal) will have a sluggish growth, by lack of public funds and lack of private sector dynamic demand in construction, commerce and formal services; severely hit during the 1975-78 crisis, its recuperation will be slow and almost imperceptible in real per capita terms. Sector 2 (urban traditional informal) will be the one that will increase most its product and labor force, which by 1990 will reach 2'700,000 (that is, 44% of the urban labor force), with a tragic deterioration of its product into marginal activities difficult to distinguish from outright mendicity, and a loss of real average productivity of -1.9% per year.

The rate of growth of the national product from 1978 to 1990 would be 4% (from 1960 to 1978 it has been 4.2%), but the rate of growth of labor productivity will only be 0.5% (a great decline from the 1960-1978 average, which was 1.2%). By sectors, however, the distortions will be more pronounced: In Section 1, rural labor productivity may grow by 1.4% per year, not enough to solve the poverty of the countryside nor to reduce dependency on imported food; at the other extreme, workers in Sector 4 (urban modern) will also rise their productivity by 1.4% a year from their present high level (with growing capital/labor coefficient, and waste of installed capital), whereas Sector 3 will show almost no improvement and Sector 2 (urban traditional informal) will sink into very low levels of generalized underemployment. See Tables IV-1 and IV-2.¹ All these projections in real terms will take place in an economy that grows slowly,

¹These projections take into account preliminary studies on investment, output and employment, made at the National Planning Institute, in preparation of the 1978-1990 development plan.

Table IV-1. Trends in Product, Labor Force and Productivity, by Regions
(1950 - 1990)

TOTAL	Y	r	LF	r	Y/LF	r
1950	38,960	-	2'580	-	15,100	-
1960	64,180	5.1	3'140	2.0	20,440	3.1
1968	95,350	5.1	3'970	3.0	24,020	2.0
1975	136,870	5.3	5'050	3.5	27,100	1.7
1978	134,420	-0.6	5'280	1.5	25,460	-2.1
A) 1990	215,210	4.0	7'960	3.5	27,040	0.5
B) 1990	315,780	7.4	8'180	3.7	38,600	3.5
RURAL	Y _R	r	LF _R	r	Y _R /LF _R	r
1950	7,400	-	1'480	-	5,000	-
1960	10,340	3.4	1'590	0.7	6,500	2.7
1968	11,440	1.3	1'650	0.5	6,930	0.8
1975	12,700	1.5	1'700	0.4	7,470	1.1
1978	12,850	0.4	1'720	0.4	7,470	0.0
A) 1990	16,240	2.0	1'850	0.6	8,780	1.4
B) 1990	21,050	4.2	1'760	0.2	11,960	4.0
URBAN	Y _U	r	LF _U	r	Y _U /LF _U	r
1950	31,560	-	1'100	-	28,510	-
1960	53,840	5.5	1'550	3.5	34,740	2.0
1968	83,910	5.7	2'320	5.2	36,170	0.5
1975	124,170	5.8	3'350	5.4	37,070	0.4
1978	121,570	-0.7	3'560	2.0	34,150	-2.7
A) 1990	198,970	4.2	6'110	4.6	32,560	-0.4
B) 1990	294,730	7.7	6'420	5.0	45,910	2.5

Notes: Y = GNP in millions of soles, at constant (1963) prices.

LF = Labor Force in thousand of workers, including those not fully employed.

Y/LF = Productivity per worker, in soles, at constant (1963) prices.

r = rate of growth, in % per year, in the preceding period (1950-60, 1960-68, etc.)

1990 Projections: A) Old strategy } (see page IV-)
B) New strategy }

Source: "El Problema del Empleo y los Desequilibrios de la Economía Peruana",
I.N.P., Lima, Marzo 1978.

Table IV-2. Trends in Product, Labor Force and Productivity, by Sectors
(1950 - 1990)

SECTOR 1	Y_1	r	LF_1	r	Y_1/LF_1	r
1950	7,400	-	1'480	-	5,000	-
1960	10,340	3.4	1'590	0.7	6,500	2.7
1968	11,440	1.3	1'650	0.5	6,930	0.8
1975	12,700	1.5	1'700	0.4	7,470	1.1
1978	12,850	0.4	1'720	0.4	7,470	0.0
A) 1990	16,240	2.0	1'850	0.6	8,780	1.4
B) 1990	21,050	4.2	1'760	0.2	11,960	4.0
SECTOR 2	Y_2	r	LF_2	r	Y_2/LF_2	r
1950	5,150	-	320	-	16,090	-
1960	7,700	4.1	430	3.0	17,910	1.1
1968	11,450	5.1	650	5.3	17,620	-0.2
1975	17,100	5.9	1'140	8.4	15,000	-2.3
1978	15,840	-2.5	1'270	3.4	12,470	-6.0
A) 1990	26,900	4.5	2'700	6.5	9,960	-1.9
B) 1990	29,510	5.3	1'570	1.8	18,800	3.5
SECTOR 3	Y_3	r	LF_3	r	Y_3/LF_3	r
1950	14,340	-	430	-	33,350	-
1960	22,710	4.7	610	3.6	37,230	1.1
1968	35,270	5.7	920	5.4	38,340	0.4
1975	51,880	5.7	1'260	4.6	41,170	1.0
1978	49,880	-1.3	1'320	1.6	37,790	-2.8
A) 1990	78,940	3.9	2'040	3.7	38,700	0.2
B) 1990	109,850	6.8	2'540	5.6	43,250	1.1
SECTOR 4	Y_4	r	LF_4	r	Y_4/LF_4	r
1950	12,070	-	350	-	34,490	-
1960	23,430	6.9	510	3.8	45,940	2.9
1968	37,190	5.9	750	4.9	49,590	1.0
1975	55,190	5.8	950	3.5	58,090	2.3
1978	55,850	0.4	970	0.7	57,850	-0.3
A) 1990	93,130	4.4	1'370	2.9	67,980	1.4
B) 1990	155,370	8.9	2'310	7.5	67,260	1.3

Notes and Source: See Table IV-1.

affected by deep socioeconomic disequilibria, with short periods of relief when a new project in mining (or oil) comes into operation, but with a severe foreign imbalance (forcing large and inefficient devaluations, which will generate increasing internal inflation each time) and with a structural employment problem that becomes worse every year.

(2) A new development strategy, according to the guidelines presented in Section III of this paper, would correct the structural disequilibria of the Peruvian economy. Sector 4 (urban modern) would also be the key sector, but now with two essential features: full use, within reasonable proportions, of its installed capital, and openness to the world market, so that industry will be able to compete in foreign trade and to produce at least part of the foreign exchange it needs for itself and for the whole economy.

In Section III of this paper it was shown that a full use of installed industrial capacity (generalized triple shift) obtained in a relatively short period of time (three or four years) would yield a 50% increase in nonprimary national product as compared to the alternative, old strategy. Assuming now a less optimistic achievement both in the utilization of capital and in the exporting of manufactures (that is, generalized second shift¹), the Peruvian economy would reach in 1990 the results that can be seen in Table IV-1 by regions, and in Table IV-2 by sectors.

From 1979 to 1990 Y_4 may have an average rate of growth of 8.9%, and its labor force may have an annual expansion of 7.5% (instead of 4.4% and 2.9% with the old strategy). The internal composition of this Urban Modern Sector is presented in Table IV-3. Industrial output would be 29.6% of GNP (instead of only 20.1% of a much smaller GNP with the old strategy);

¹But including also special efforts on agriculture and regional development, as well as added investment for medium- and long-run projections.

Table IV-3. Sector 4 ("urban modern") in 1990: Two Alternative Situations.

	A) <u>Old Strategy</u>	B) <u>New Strategy</u>	<u>Difference</u>	
			<u>Absolute</u>	<u>Relative</u>
<u>Product</u> (in millions of soles, at 1963 prices)				
Total GNP	215,210	315,780	100,570	47%
Y_4	93,130	155,370	62,240	67%
Y_4 / GNP	43.3%	49.2%		
<u>Labor Force</u> (in thousands of workers)				
Total LF	7'960	8'180	220	3%
LF_4	1'370	2'310	940	69%
LF_4 / LF	17.2%	28.2%		
<u>Y_4 Composition</u> (in millions of soles of 1963)				
Exports	33,600	67,900	34,300	102%
Traditional	30,100	34,200	4,100	14%
Non-traditional	3,500	33,700	30,200	863%
Industrial	2,800	27,800	25,000	893%
Others	700	5,900	5,200	743%
Exports / GNP	15.6%	21.5%		
Industrial Production	43,200	93,470	50,270	116%
Exported Industr. Prod.	2,800	27,800	25,000	893%
Non-exported Industr. Prod.	40,400	65,670	25,270	63%
Industrial Production / GNP	20.1%	29.6%		
Exported Ind. Prod. / Ind. Prod.	6.5%	29.7%		

Source: "El Problema del Empleo y los Desequilibrios de la Economía Peruana",
I.N.P., Lima, Marzo 1978.

industrial exports would add up to 1.3 billion dollars at 1963 prices,¹ and industrial production for the domestic market would be 65 billion soles (instead of only 40 billion with the old strategy).² Even traditional exports would be 14% higher, because several mining projects that have been postponed for lack of public funds could now, with a balanced and growing public budget, be undertaken before 1990 (such as Quellaveco, Cerro Verde II, etc.). But the most important feature of Table IV-3 is that the labor force of Sector 4 would be 2'310,000 workers (instead of only 1'370,000 with the old strategy); in Sector 3 Peru would have an additional half-million workers, and thus the extreme underemployment of Sector 2 would diminish substantially.

Comparing the old and the new strategies, total value added by sector would increase by 40% in Sector 3, and by 67% in Sector 4. The within-the-city "migration" of workers towards the formal sectors (and especially towards Sector 4, reducing the amount of wasted capital), would allow greater, and now productive, migration from the rural area to the cities. In 1990, with the new strategy, almost 22% of the Peruvian labor force would still be in agriculture, but by the year 2000 this proportion would drop to less than 15%, with no loss of agricultural output and much higher rural income per capita.

In the near future, if the present commitment of the Armed Forces to call for general elections in 1979 holds true, Peru will have a civilian

¹Which, taking into account that from 1963 to 1978 the prices of industrial goods in the world market have increased by more than 5.6% per year, means that the "target" of exporting 3 billion dollars at present prices (of paragraph E, Section III of this paper) would certainly be met in the next 12 years.

²Thus showing how fallacious is the argument of those who are opposed to this new strategy, saying that "if we exported shoes, we would have to go barefoot". See, for instance, "Actualidad Económica," año 1, N. 9, Lima, October 1978.

government. There is, however, no guarantee that this transfer of political power will mean a real change in the development strategy. If we remember what happened before 1968, and if we hear what political leaders of all tendencies are saying today, we find little reason to be optimistic. The lack of economic vision of the Peruvian Military Government was by no means an exclusive fault of theirs, and to overcome it they were certainly helped neither by the ideologues of Phase One nor by the financial experts who are putting pressure on them today. Unless a new generation of economic technicians is able to convince a new generation of political leaders, Peru seems doomed to a "stop and go" process with continuing dependency and bottlenecks.

C. Some Concluding Remarks

Many people feel that Third World countries should not follow the "outward looking orientation" sketched in Sections III and IV of this paper, but should have "inward looking policies" ("crecimiento hacia adentro"). One argument used to support this position is that export development will cause a decline in the terms of trade or a surge of protectionism in the importing countries. So it might, although the danger of declining prices is substantially reduced by basing export development on industrial rather than primary products while the danger of protectionism can be minimized by diversifying the industrial export bill. Nevertheless, the feasibility of a trade-oriented development policy, if it is generalized to all LDCs, may require moving towards a new international economic order. In the meantime, a small country like Peru can take advantage of her size and verify the importance of being unimportant. Such a policy will also involve taking into account the existence of transnational corporations. They cannot be ignored, and every effort has to be made to establish

policies making their behavior compatible with the social and economic development goals of the country. This challenge could not be avoided either, however, if the country were instead to pursue "crecimiento hacia adentro."

Does this mean then that we propose a development policy that could be labeled as "Taiwanizar el Peru"? (This phrase has been used in Lima to discredit outward looking policies.) Would the only solution to Peruvian problems be the export of products based on cheap labor, i.e., "cholo barato"? Taiwan has had her own "experiment," which cannot be Peru's in every respect, although the broad features of her economic strategy closely coincide with Section III of this paper and the results achieved in income distribution and growth (5.3% annual increase in real per capita product over more than two decades) would be desired by many countries. The suggestion of such terms is that labor-intensive exports are degrading. Yet we know that the only alternative has to be a minority of "cholo caro" and plenty of "cholo desempleado." Even more: Peru's manufactures have not been competitive in the world market not because its labor has had higher salaries and better living standards than foreign workers, but because its wrong rate of exchange and misguided trade policy restrictions made its industry "expensive" abroad and distorted the whole economy. The role of the State is to correct those distortions that have in fact weakened industry and impoverished Peru's labor force with widespread underemployment. If the old strategy were pursued in the 1980's, a repressive type of government would become unavoidable to maintain law and order in the face of an ever more underemployed labor force; the new strategy calls for a reordering of the economy that will increase labor income and will reach the development goals of the country.

The Peruvian Revolution was certainly inspired by humanistic principles. It set high social goals for the country as a "national project," specifically to favor those who until 1968 had been "marginados." Unfortunately, they are still marginados because, on top of political shortcomings and weaknesses, there came a vacuum of economic strategy and a series of economic mistakes in both "Phase One" and "Phase Two." The Peruvian Experiment, however, will not have been a complete failure if we retake the fundamental social objectives and follow an efficient way to reach them, having understood, thanks to these 10 years of experience, what went wrong and why.

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