

# The LaRouche-Riemann Model charts Peru's economic development

by Peter Rush

Although presently sunk in a severe economic depression, Peru still retains the capacity to recover and become a semi-industrial country by the year 2000, on its way to full industrialization, according to a study just released by the *Executive Intelligence Review*. The study utilized the LaRouche-Riemann Economic Model, well-known in the United States for its accurate forecasting of the U.S. economy over the recent five years, and highly regarded in Mexico, Argentina, and India, where it has previously been applied to development planning.

At a seminar delivered on July 10 in Lima, Peru to the leadership of the Peruvian National Society of Industry, *EIR's* Dr. Uwe Parpart and Dennis Small presented the two options facing Peru today, a continued economic collapse under the program of the International Monetary Fund (IMF), or a difficult but feasible recovery based on overthrowing IMF austerity and carrying out an ambitious investment program in agriculture, electric power, transportation, and colonization of the Amazon region.

The "motor" identified in the *EIR* medium-term program for 1985-90 to pull the economy out of its slump was savings in foreign exchange resulting from the rapid expansion of agricultural output that *EIR* determined could be realized within a one to three year period. The expanded output would permit eliminating presently necessary imports of corn, rice, and other products, while expanding exports of cotton, various fruits, and other products, for a net "savings" of \$400 million in 1986 over present foreign trade balances, and almost \$1 billion by 1990. Combined with smaller savings in presently imported capital goods that can be made by Peruvian industry, this additional fund was sufficient to permit rising investment in electricity, capital goods, and agriculture.

Once the recovery has been so initiated, a rigorous education, research, and training program can begin to qualify the labor force for skilled jobs in an expanding capital goods industry, at the same time that Peru begins to tackle the daunting task of conquering both the high Andes mountain chain, and the nearly vacant expanse of Amazon plains and jungle.

While the present depression began in late 1982, Peru has been in a period of general economic decline since 1976, when the regime of General Velasco was overthrown in a

coup d'état and replaced by a new government which immediately began implementing an IMF-style austerity program. Although the total output returned to a new high in 1981-82 after falling from 1976

of the economy was severely weakened. As part of its study, *EIR* used the LaRouche-Riemann model to analyze the 1960-1983 period. **Graph 1** shows that total labor cost of the productive sectors of the economy (agriculture, mining, manufacturing, electricity, construction, and transportation) fell sharply after 1976, and never regained its high during the slight recovery of 1981-82. This meant that the post-1976 austerity permanently shifted a significant portion of national income out of the pockets of the productive workforce.

## IMF austerity wrecking the country

This effect was magnified by the increasing foreign debt problems, renewed pressure from the IMF, and natural disasters in late 1982 and 1983 causing the disastrous collapse shown for 1983 in **Graph 1**, a collapse which has initiated a self-feeding downward spiral in which loss of purchasing power forces layoffs which in turn lowers purchasing power.

However, the economy grew only in a lopsided, distorted way even before 1976, which helped pave the way for the later fall. As shown in **Graph 2**, consumer goods production rose hardly at all from 1970 to 1982,

1976, in line with the fall in incomes. The main growth sector was in intermediate goods, including the primary metals and chemical sectors. However, the rise was based on petroleum refining and shipping and construction of non-ferrous metals (copper, zinc, lead, and others), refining plants, and some chemical plants. These sectors added to foreign exchange, but had very little spin-off effect on the remainder of the economy. The result was to perpetuate the primary metals dependency that has characterized Peru since 1900, a dependency typical of a colonial-type economy.

The capital goods sector experienced significant growth until 1976, and has been stagnating or falling ever since. Between 1982 and 1984, the bottom has fallen out of this crucial sector. Many machinery-making plants are presently operating at 25% or less of capacity, and are facing bankruptcy, having laid off many of their workers.

The agricultural sector has been in continuous crisis since

the first years of the 1970s, based on a much-needed but badly designed and executed land reform beginning in 1969. While huge latifundia were broken up, they were replaced by various forms of cooperative farming that have not functioned well. As a result, skilled personnel and capital have fled the sector, resulting in falling yields for most crops since 1972, and more and more land area in the populated and irrigated coastal region going out of production for lack of investment.

### IMF versus EIR

In the midst of this crisis, the IMF has been demanding even stiffer austerity for an economy already dying from too much austerity. By contrast, *EIR* attempted to define a healthy growth trajectory for the economy, and then determine if it were possible for the Peruvian economy in its present condition to attain that trajectory.

**Graph 3** shows the two trajectories. The hypothetical trajectory modeled what could have been done had it not been for the 1982-84 depression, with healthy but conservative estimates for possible growth rates. This was based on a careful examination of the needs and resources that would exist in the year 2000, rough investment costs required for infrastructure, agriculture, and industry, and on the necessary labor costs under the assumption of gradual but continuous improvement in the standard of living.

The *EIR* trajectory was calculated by applying the "savings" deemed possible in agriculture, as defined above, to investments in agriculture itself, and to infrastructure and

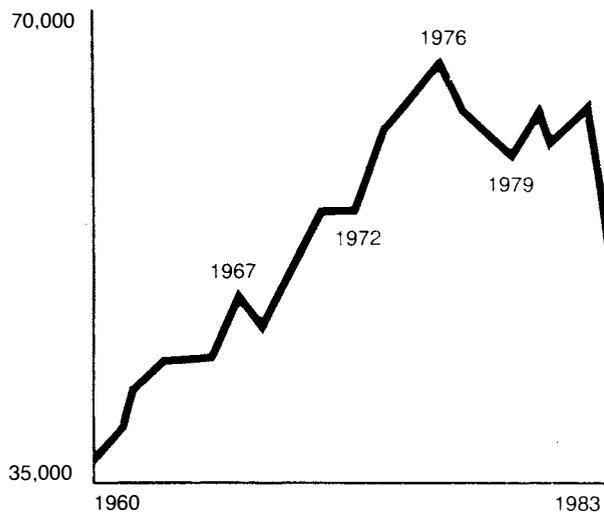
capital goods industry in the first five years of the program. These savings were based on the excellent potential that Peruvian agriculture has, despite the generally poor agricultural situation at present. Although the total land area of Peru's coastal area is small, under 2 million hectares, most of it is very fertile soil, and merely needs water to be highly productive. But until now, yields on the coast for potatoes and corn have remained at very low levels, compared with other countries, and cotton yields are significantly below what they easily could be. Also, with investments in the order of half a billion dollars spread over several years, several hundred thousand hectares of fertile land could be brought back into production.

Thus, with adequate fertilizer, tractors, farm machinery, and credits, and with investments in drainage and irrigation, a 20-30% increase in yields and a 15% increase in land area would simultaneously permit the cessation of most agricultural imports and the expanded export of several commodities, while providing for a slightly higher per capita consumption of major food items.

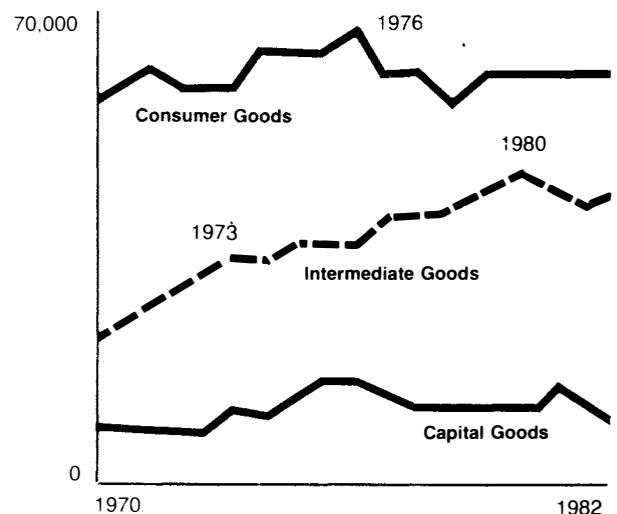
As can be seen in **Graph 3**, the *EIR* trajectory parallels the hypothetical path, albeit starting at a lower point. This indicates that while the loss of a year or two cannot be made up, the appropriate path can be charted to pull the country out of underdevelopment by the end of the century.

Contrasted to this is the result of the IMF austerity, as indicated in **Graph 4**. The steep decline of 1983 continues into 1984, to the point that starvation and mass unemployment will face much of the population by 1985-86.

GRAPH 1  
**V, or Total Labor Cost, of the Peruvian economy, 1960-83**  
(millions of 1973 soles)



GRAPH 2  
**Value Added in Manufacturing: Consumer, Intermediate and Capital Goods**  
(millions of 1973 soles)



In addition to modernizing and developing coastal agriculture in the short-term, the country faces the tremendous task of constructing roads across the high Andes to link the mountain and trans-Andean regions. This requires major engineering feats to build three or four major east-west highways through the best passes in the mountains. The sheer construction of these will tax the engineering skill of international contractors, but will truly unite the country for the first time in its history.

In electricity, 98% of the hydropower resources of the country are on the Amazon side of the Andes, far from existing population centers. The challenging but feasible development task is to construct the larger hydropower dams on the trans-Andean rivers, and then construct transmission lines back across the Andes to the coastal and mountain areas short of power today. As well, there is a major, \$1.2 billion project that must be begun immediately to pump water across the continental divide into the river that supplies Lima, both to provide net power and to replenish a diminishing water supply for Peru's capital.

Peru has a small capital-goods sector, but it has a sizeable labor force of relatively skilled workers, and has a good complement of draftsmen, technicians, and engineers. The country can, and must, focus on developing its capital-goods sector, both to supply more and more of its own investment demand, and to export to other countries under the emergent Ibero-American Common Market.

The Amazon basin on the east side of the Andes consists of dense jungle, whose development is many decades away,

and of higher plains on the skirts of the jungle. Over 10 million hectares of this region is ideal for agriculture, cattle, and forestry, and its rapid development must begin now. Needed is major road construction, followed by urbanization in the form of construction of entire new cities in regions being opened up. The challenge of conquering the tropical near-jungle areas is the solution for the over-concentration of population in the capital city of Lima (over 5 million out of 18 million people in the country) and other coastal areas, and the almost total absence of population in more than half the land area of Peru.

Finally, Peru must define several areas of scientific research in which it will train top scientists and assume leadership. Given the very varied agricultural regions of the country, a major agricultural and biotechnology institute should be created to competently plan the conquest of the Amazon and the proper utilization of the mountain areas. Given the continuing role that mining will play in Peru for well into the next century, an institute specializing in materials development to find new uses for Peru's metals, and to spearhead other industries in the country that can use domestically mined products, would have a major economic impact.

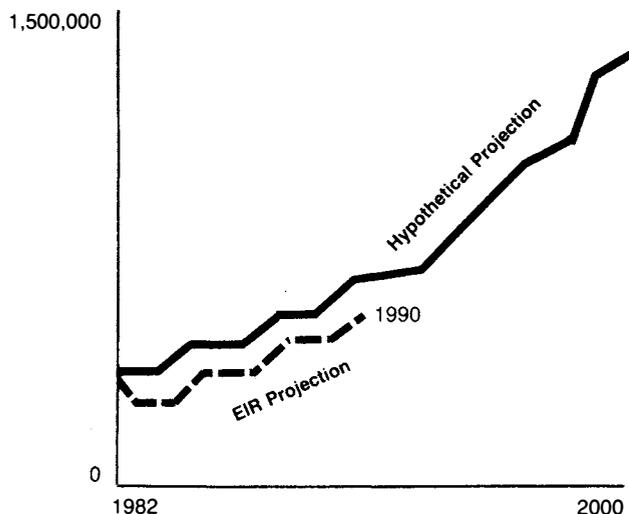
Third, the very rich fishing areas off Peru's coast would warrant expanding greatly the research effort into oceanography and marine biology.

Taken together, and barring the continued sabotage of the economy by external pressures, these measures can finally free Peru from a long legacy of economic stagnation and crisis.

GRAPH 3

### Gross Domestic Product of Productive Sectors: EIR Program Projection and Hypothetical Projection

(millions of 1973 soles)



GRAPH 4

### Gross Domestic Product of Productive Sectors: IMF Program

(millions of 1973 soles)

