ECONOMIC SURVEY
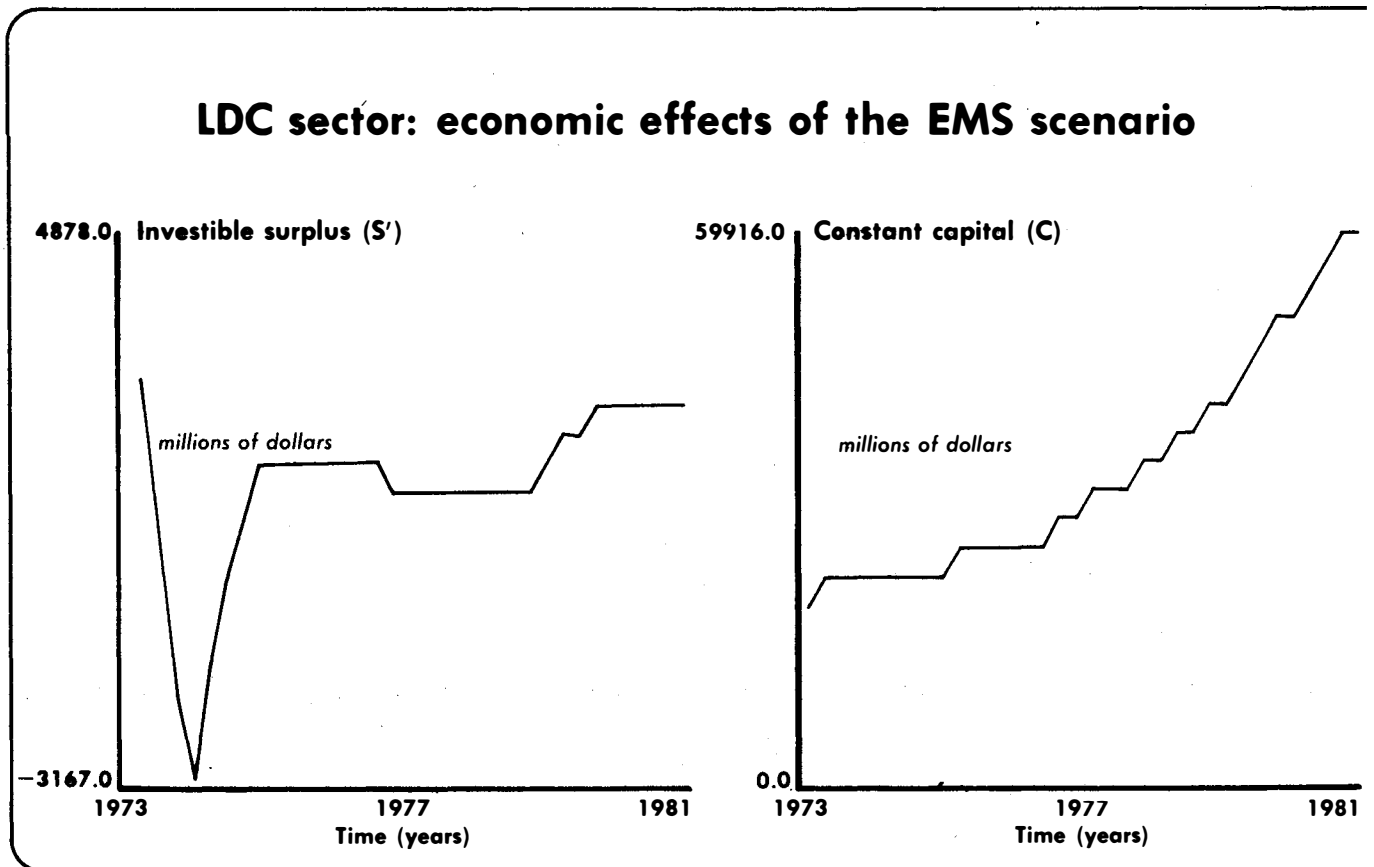
The impact of the $100 billion EMS investment program

Part II of the EIR's survey on energy and the world economy

LDC sector: economic effects of the EMS scenario

Investible surplus (S')
millions of dollars
4878.0
-3167.0
1973 · 1977 · 1981
Time (years)

Constant capital (C)
millions of dollars
59916.0
0.0
1973 · 1977 · 1981
Time (years)

The following survey, prepared by EIR *economics editor David Goldman, is based on a larger study on the world energy situation, "The Impact of Energy Prices on the World Economy," which is available from* Executive Intelligence Review *by special order for $100. The full study includes, in addition to the material presented in part 1 of this survey last issue and the article below, a more complete discussion of the inputs used in the study, as well as data for a larger number of national sectors.*

In organizing economic data, the LaRouche model starts from the physical productivity of the economy. The tangible output of each of the economies and aggregates studied in this report, as derived from industrial, population, and Gross National Product statistics published by the Statistical Office of the United Nations Secretariat, is divided into

c—maintenance of the economy's productive facilities, including replacement of machinery or improvements in land, and purchases of raw materials; "constant capital."

v—the tangible output of goods required to maintain the productive labor force at its current living standard, productive labor force defined by goods-producing workers plus agricultural labor force; "variable capital."

d—the economy's overhead cost, including the volume of tangible goods required to maintain non-goods-producing workers, as well as production that cannot be invested in any productive way, e.g., military production and office buildings.
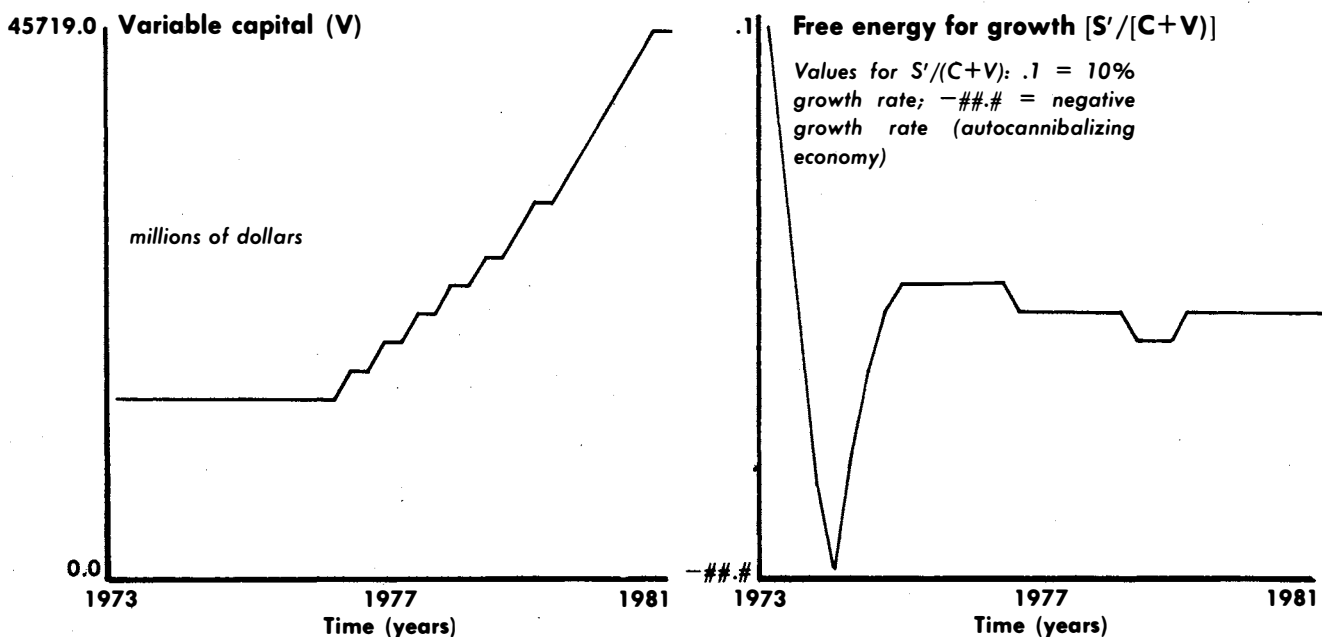
Any output of goods above and beyond maintenance levels is defined as surplus, or s. s-d, or surplus minus unproductively employed surplus, yields the productively reinvestible surplus, or s'.

Evaluation of EMS investment plans

In *Executive Intelligence Review*'s last issue, the LaRouche economic model was programmed to show the results of a world oil price increase of the level instituted at OPEC's Geneva meeting, under the assumption that the additional price burden would *not* be financed.

In this issue, we examine the impact of an oil price increase under the assumption that a $100 billion portion of the OPEC surplus is recycled through a development-oriented international institution of the type of the proposed European Monetary Fund. In other words, it is assumed that the $100 billion figure represents capital that could mobilize currently underutilized industrial capacity in the advanced sector, for the

(assumes average $20 per barrel oil prices beginning 1979, but reinvestment of $100 billion in international industrial development projects as per the European Monetary System proposal)

Variable capital (V)

45719.0

millions of dollars

0.0

1973   1977   1981

Time (years)

Free energy for growth [S'/[C+V]]

.1

Values for S'/(C+V): .1 = 10% growth rate; −##.# = negative growth rate (autocannibalizing economy)

−##.#

1973   1977   1981

Time (years)

production of the export goods required economic growth in the developing sector.

It is believed that the addition of this $100 billion to the investible surplus available to the world economy does not represent a hypothetical scenario in any way, because the surplus capacity does indeed exist to provide an increment of development goods of that magnitude. The accompanying graphs therefore show an accurate trend line for this scenario, if not accurate absolute values.

Other assumptions included in this scenario are:

1) That the additional burden of oil prices will be financed, over and above the $100 billion increase in development financing. For purposes of the model, therefore, the increment in oil prices, at $90 billion for the advanced sector or $19 billion for the developing sector, was treated as an increment to the overall spending requirements for raw materials, or constant capital, rather than—as in the previously published "worst case" scenario—a deduction from the investible surplus of the economy, or "d."
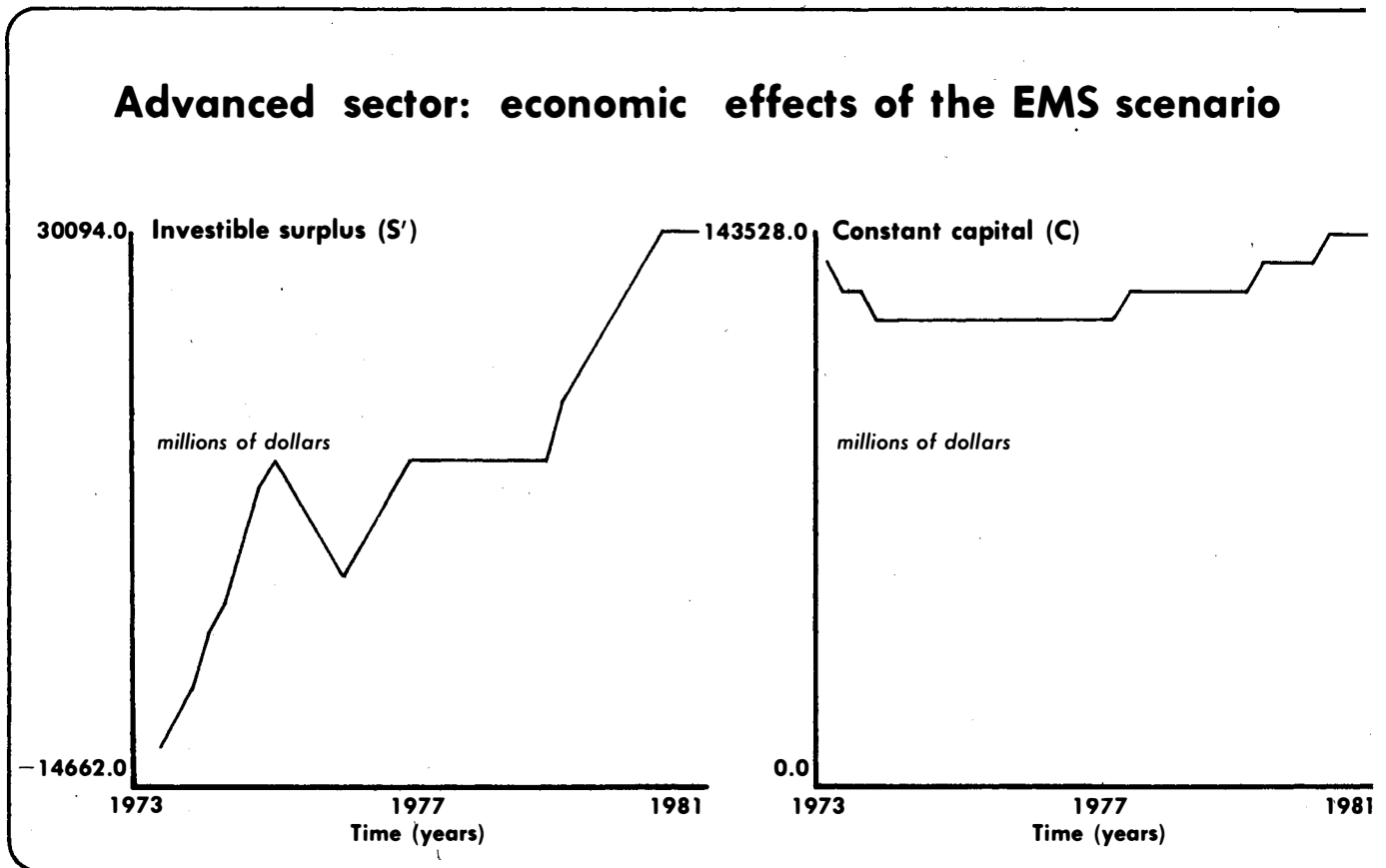
2) That productivity—as defined by the Riemannian model—would rise by 10 percent as a result of this scenario. It must be emphasized that the model's defi-

nition of productivity is not the standard output-per-manhour definition. Productivity is defined by the incremental *surplus product* produced by an additional input of productive labor. Roughly speaking, the curve of productivity under our definition would approximate a first-derivative curve of the function of productivity according to standard definitions.

3) That the basic composition of both the advanced and developing economies would remain constant.

4) That the division of the incremental surplus would be allocated 40 percent to the advanced sector and 60 percent to the developing sector.

Most of these assumptions are self-explanatory. An additional word needs to be said about the productivity question. In the historical data for productivity gathered by the *EIR* economics staff, it is evident that a tremendous collapse occurred as a result of the oil price increase. The delta ratio, which measures the change in surplus divided by the change in productive labor, fell by about 65 percent, much more than in the advanced sector. Empirically, it is believed that this result derives from the massive inefficiencies introduced into LDC economies when they are compelled to introduce economies of an extreme nature. For example, the oil price

Advanced sector: economic effects of the EMS scenario

Investible surplus (S′) — millions of dollars — 30094.0 to −14662.0, with 143528.0 marked; Time (years) 1973, 1977, 1981

Constant capital (C) — millions of dollars — 0.0; Time (years) 1973, 1977, 1981

increase last time around (and currently) produced such consequences as cutbacks in vital imports of raw materials for industry, the shutting down of essential transport facilities, and so forth. Therefore it is believed that a 10 percent rise in productivity under the definition already stated represents an extremely conservative assumption.

What the graphs show is that the world could not only sustain the oil price increase under what could be called the European Monetary Fund scenario, but that it would sustain an impressive economic boom. The most important special result derived from the computer results is the difference between the behavior of the advanced and developing sectors under this scenario. It is noticed that the increments in constant and variable capital in the advanced sector are relatively small, compared with the very fast rise of both surplus and the rate of surplus production, or "free energy" ratio. That is an intuitively comprehensible result: under the right conditions, small increments in the basic inputs into the world's most productive economies will produce very fast increases in growth potential.

What might not be intuitively obvious is the computer's result for the developing sector: although the growth of both variable and constant capital, or increments to the productive labor force and maintenance of productive facilities respectively, is spectacular, the generation of surplus and the rate of surplus production are both fairly sluggish. Under the interlinked two-sector model, the $100 billion in additional surplus is assigned mainly to the developing sector, producing the forecasted rate of increase in variable and constant capital. However, the indigenous rate of surplus production rises much more slowly. That is to say that there has been such a deficit both of expansion and upgrading of the labor force, as well as capital investment, in the developing sector, since the 1973 oil crisis especially, that considerable expansion is required before the LDCs will be able to generate substantial surplus on their own.

What is proven unquestionably is that the policies proposed in the context of the European Monetary Fund do, in fact, constitute a solution to the world's short-term economic problems.

(assumes average $20 per barrel oil prices beginning 1979, but reinvestment of $100 billion in international industrial development projects as per the European Monetary System proposal)

61649.0 **Variable capital (V)**

millions of dollars

1973   1977   1981
Time (years)

.1 **Free energy for growth** $[S'/(C+V)]$

Values for $S'/(C+V)$: .1 = 10% growth rate; $-\#\#.\#$ = negative growth rate (autocannibalizing economy)

$-\#\#.\#$

1973   1977   1981
Time (years)