

tends to be inflationary. The profits of a machine tool firm, in the form of a certain volume of machine tools above and beyond the number of units required to pay the labor and depreciation costs of the firm, represent a margin of actual expansion.

Fraumeni and Jorgenson ignore those questions. Although their basic point concerning technical change is of great value, the impressive statistical battery they assemble tells us no more than we knew at the start about what rates of increase in capital, labor, or technical change are *necessary* to end inflation, restore the capital stock to previous health, produce the skilled labor we will need in the future, get high-technology solutions to the energy crisis on line, or other basic questions.

In their analysis there is no causal relationship between the "factors," only values "imputed" after the fact from income schedules. Furstenberg uses this absence of causal features in their model to propose a shift in capitalization from homes to industry, not inquiring whether this will disrupt the causal basis of productivity in the first place.

### Free energy

As the authors are only too well aware, the basic difficulty in taking the measure of technological change as the residue after capital and labor are accounted for is that any change in technology changes the valuation of all other factors. New equipment knocks down the value of old equipment. The elaborate depreciation schedule they have built, based on the vintage of plant and equipment is only meaningful to the extent that technological change in the American economy since 1948 has been so negligible that its effect on the valuation of capital can be safely ignored!

What has been done in the LaRouche-Riemann model is to treat the issue of productivity, which derives from technology, as causally primary. Instead of treating the absolute quantities of output as independently meaningful scalar magnitudes, we consider as primary the way in which technological change alters the proportions within that output. Tangible wealth, as Alexander Hamilton insisted two centuries ago, only mediates between one state of productivity and another; it is there to be consumed. What it produces is productivity.

The measure of the rate of change of productivity, or the economic "free energy ratio," the ratio of investible surplus to maintenance requirements, is primary. Of course, the same bookkeeping headaches remain that Fraumeni and Jorgenson struggle with, particularly given the abysmal state of available data. But this methodology, in contrast to the old production function, puts us inside the problem in a way that permits of solution.

## Austerity leads to 'double-dip' 1981 collapse

Econometric simulation of the expected behavior of the American economy through the second half of 1980 and through 1981 shows that the present combination of Federal Reserve and administration policies will not produce a recovery at any time in the foreseeable future. The pattern shown by the computer is a "double-dip recession," i.e., a brief trend towards recovery during the first half of 1981, followed by a renewed collapse before even half the losses of 1980 have been regained.

We do not present this scenario as a forecast so much as a guide to the problems ahead during the next 18 months. Assuming that the policy environment defined by Federal Reserve Chairman Paul Volcker prevails through the coming period, this is a "best-case" scenario. What it tells us is that, contrary to what Mr. Volcker, Reagan adviser Alan Greenspan, and others have contended, austerity will not produce recovery. At best, lowering living standards will produce a short-lived false recovery, followed by a second sharp downturn.

Lower living standards created an artificial, temporary increase in productivity sufficient to lift the economy momentarily. However, the task of economic analysis is to determine whether this "lift" is sufficient to compensate for the overhead burdens of a depressed economy or other factors reducing productivity.

The dropoff in living standards raises productivity by shifting investment from low-productivity industries in the consumer sector to high-productivity industries, principally in the capital goods sector. That is the explicit recommendation of most of the "reindustrialization" planners such as George von Furstenberg, whose book is reviewed in this report, and Amitai Etzioni. A shift in the composition of the economy will raise average productivity in output-per-manhour terms.

Such a shift is strongly implied in the first-half profit results for major corporations, as reported by Computat:

The major losers are associated with the collapse of auto and housing, except for airlines, suffering the effects of deregulation. Trucking will show up in the minus column for the third quarter of 1980, due to the sudden

implementation of deregulation under the quasi-legal direction of the Interstate Commerce Commission.

Change from First Half 1979	
GAINERS	LOSERS
Oil Services and Supply . . . . .+41%	Steel . . . . .-57%
Natural Resources .+32%	Savings and Loan .-88%
Services . . . . .+31%	Tire and Rubber ..-94%
Banks . . . . .+21%	Airlines . . . . . Net Loss
	Automotive . . . Net Loss

What is most disturbing, however, is the extent to which oil and its supply industries dominate the plus side of the first-half profit picture. *Business Week* has devoted its two most recent issues to major public anxiety over the extent to which oil and related industry profits have built up at the expense of manufacturing in general. What this means for productivity, we will discuss below.

A transfer of resources from the consumer sector provides a one-shot improvement in productivity. However, it does nothing to compensate for the long-term decline in productivity.

Viewing the output of an individual sector, we must distinguish between the productivity with which it is produced, and its effect on the productivity of the economy as a whole. This distinction is fundamental to making sense out of the last several years' economic performance. Ignoring intangibles, we find that the product mix of the American economy has shifted in such an adverse fashion from the standpoint of national productivity that the *EIR's* productivity measure, as calculated by the LaRouche-Riemann econometric model, has *fallen* by four percent per year during the past four years.

*EIR's* measure of productivity is far more accurate than the Bureau of Labor Statistics' output-per-man-hour series. Of what avail to the national economy is a method which allows men who have been digging holes in the ground and filling them up again to dig and fill in holes twice as fast?

Our alternate measure of productivity takes the *tangible value added* of the economy (the value added in deflated 1972 dollars for the manufacturing and other goods-producing sectors of the economy) and divides it by the gross consumption of goods-producing workers. I.e., the economy must devote a certain portion of its total resources toward maintaining the households of goods-producing workers at some acceptable living standard; the total goods produced in the economy is some multiple of this sum. What counts is the multiple of goods produced above and beyond capital and labor inputs, or gross surplus in Ricardian terms.

That ratio has fallen by four percent annually since 1976, from roughly 2.4 to about 2 at present. That does not, and need not, match the comparable productivity

figures calculated in output-per-manhour terms. As *EIR* showed in its April survey, entitled "Energy Conservation: Building Inflation into the Economy," what is important is how the economy's product is realized in future production.

To summarize the results of that survey: the American economy has borne an *overhead cost* to industry in the form of expenditures for energy conservation which has drained resources away from investments in productive areas of the economy. These include a switch away from nuclear power, the most cost-efficient means of producing energy; the immense cost of downsizing automobiles for conservation purposes; and retro-fitting of energy-saving equipment. In addition, investment has shifted towards non-goods-producing areas and labor-intensive goods-producing areas, away from energy-intensive fields. The result is a fall in productivity by our measure.

*EIR* further showed in its May 6 economic survey, which introduced a groundbreaking new index of real depreciation, that the net deficit of capital investment in

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the American economy has risen to \$50 billion per year as of 1979.

These adverse trends have "built in" a 4 percent yearly rate of decline in productivity. A sweeping reversal of the energy, regulatory, and credit policies of the past several years along lines *EIR* has suggested would be required to turn this collapse around. However, the Federal Reserve and its co-thinkers outside government do not choose to do this, although they pay some lip-service to the requirements of industrial investment. Their central proposal is what we identified above, i.e., shift the output and investment mix towards the higher-productivity end of the spectrum.

The problem is that total economic productivity is not the simple sum of the productivity of individual economic sectors. Shifting economic weight toward sectors of high individual productivity can accomplish a one-shot increase in productivity. However, the economy's basic problem is the unproductive use of much of the economy's tangible product.

**Projection of  
double-dip recession  
for 1981 and 1982**  
(billions of constant 1972 dollars)

Figure 1  
Total economic surplus (S)

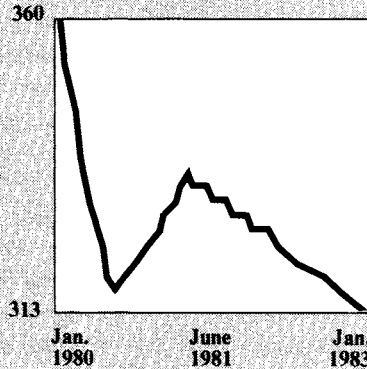
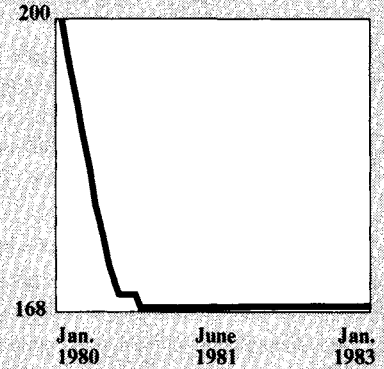


Figure 2  
Variable capital (C)



In terms of the LaRouche-Riemann econometric model, the result of such a shift can be expressed as follows: the production of consumables will fall while other production will not, corresponding to a fall in living standards. Personal income data shows a 13 percent annual rate of decline since last October. The LaRouche-Riemann model calculates a 10 percent reduction in tangible-goods consumption of goods-producing workers' households with respect to 1979 levels, or a 20 percent per annum rate of fall.

That will lead to a rise in the multiple of tangible value added, or gross surplus, to this tangible consumption, or variable capital in the Ricardian terminology. The productivity rate,  $S/V$ , will therefore rise.

We are saying, in other words, that the decline of the consumption-goods industries and the relative cheapening of labor costs through lower living standards will give a fillip to the rest of the economy. This is the *causal* reason for the anticipated uptrend in the economy. British commentators tend to recognize this with greater frankness than American ones, with a few exceptions.

One American exception was a recent optimistic report in *Financial Digest*, reported by Manufacturers Hanover Trust, which said that U.S. unit labor costs had risen more slowly than those of any other major industrial country, even though productivity—a major determinant of unit labor costs—had risen the slowest of any industrial country save Britain. The reason for this reassuring result, the bank reported, was the even slower growth, or rather the decline, in American living standards.

What must then be measured is whether this one-shot rise in productivity, deleterious as it is for future productivity, will compensate for two other factors: 1) the economy's overhead burden, and 2) the decline in productivity due to non-productive expenditures by

industry and industrial obsolescence.

In the forecast presented herewith, *EIR* projected the new productivity rate established by the trend in falling living standards against the economy's large overhead burden, and the baseline decline of productivity by our measure. Overhead includes non-productive activities, necessary or not, such as the military, education, health, football stadiums, gambling casinos, and so forth.

The results we see in the following series of graphs.

The current rate of decline of living standards is only sufficient to push our measure of gross surplus from \$315 billion (in constant 1972 dollars) to a top of \$334 billion in mid-1981, before falling off again; this sum stood at \$360 billion at the beginning of 1980 (see Figure 1).

The forecast includes the assumption, shown in Figure 2, that tangible consumption by goods-producing households will level off during the fourth quarter of 1980 and stabilize, following a sharp fall from about \$200 billion (in constant 1972 dollars) to \$168 billion.

Intermediate goods utilization, Figure 3 shows, will remain stagnant at a level of \$433 billion (again in 1972 dollars), down from \$468 billion at the start of 1980. The reason that intermediate goods do not rise along with gross surplus is that the scenario contains the assumption of a shift into industries using less energy-costly raw materials, away from steel and auto, i.e. industries with a higher value-added per labor input.

Figure 4 shows the *potential growth rate*, or free energy index, for the economy. At the sharp peak of this graph, the growth rate registered on the left-hand scale is a mere 0.011, or 1 percent per year, before turning down. This is the LaRouche-Riemann's model's key indicator. The potential growth rate is expressed as the volume of surplus minus overhead divided by labor and capital inputs required to maintain the economy at

Figure 3  
Crude and intermediate materials ( $C_1$ )

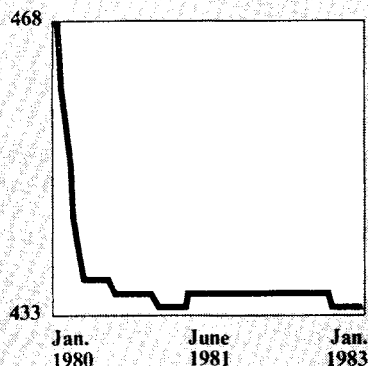


Figure 4  
Free energy ratio ( $S'/C+V$ )

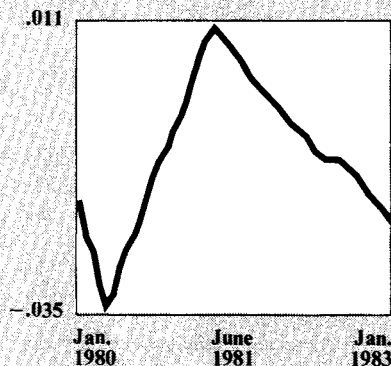
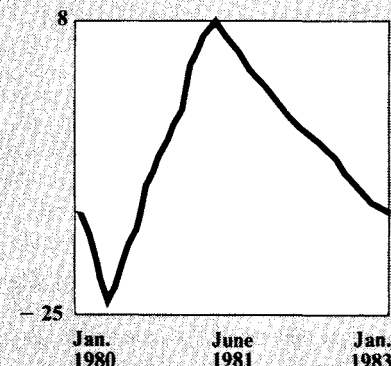


Figure 5  
Surplus available for productive investment ( $S'$ )



pre-existing levels of output. What this shows is that the economy, except momentarily, is incapable of climbing out of the red.

Figure 5 shows the absolute volume of net investible surplus, which rises from a negative \$25 billion in constant 1972 dollars, i.e., a net loss for the economy as a whole, to an insignificant positive \$8 billion, before falling off again. In fact, the data series for this computer study were not adjusted to show real depreciation, only the Commerce Department's highly inadequate depreciation scale. The real depreciation, which would show the economy operating closer to \$90 billion in the red at the start of 1980, was not included in these figures, because it operates on the economy through a long-term erosion effect on productivity. It was taken into account through the above-mentioned projection of productivity.

What do these results imply for "reindustrialization"? In the first place, there is little expectation that any significant volume of capital investment will take off—with a few exceptions—before sometime in 1982. The exceptions are overwhelmingly energy-related, including the current all-time record for oil drilling, railway investment in coal-carrying routes, and the beginning of investment in synthetic fuels, which could balloon much faster than some industry analysts expect. The major exception is in electronics, where the semiconductor industry could well septuple its size during the 1980s at current rates of investment.

However, the volume of actual physical surplus required to maintain this pattern, let alone carry it into actual recovery, is huge. In our May 6 survey, we showed that the economy will reach a point of no return sometime around the turn of the year, after which America will no longer be able to generate sufficient tangible wealth to compensate for the productivity-eroding deterioration of its physical capital stock. The

annual falloff in productivity will have become irreversible. That implies that no matter what the "opportunity price" of synthetic fuels and similar costly and wasteful investments, the "opportunity cost" of putting down mines, track, plumbing and so forth will *always be higher*.

To what extent do our policymakers realize this? We have shown, that, on its own merits, the austerity policy they have put into effect does not work. Unlike the introduction of new technologies into the nation's economy, which tend to diffuse productivity throughout the economy, the reduction of living standards yields only a one-shot, temporary rise in productivity. As we discuss elsewhere in this survey, the decline in living standards will eventually have an adverse effect on the availability of skilled labor; and, among an array of imposing bottlenecks, the shortage of skilled labor is the worst of all.

Nonetheless, the Carter administration and corporations operating under its economic environment seem determined to drill themselves deeper into the earth. A possible precedent was set last week when the United Rubber Workers Union president negotiated a 13 percent wage cut (close to 30 percent in real terms) with the chairman of near-bankrupt Uniroyal Tires. This is roughly double the rate of decline of living standards registered so far. Like loan-sharking, the not-so-distant ultimate consequences of this policy are horrifying to consider.

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EIR now offers an economic consulting service to individual clients, including quarterly econometric forecasts and related political and economic analysis, and conducts special analyses using the LaRouche-Riemann model on a contract basis.

For further information, contact Mr. Peter Ennis, Director of Special Services.