

America's physical economy is rapidly disappearing

by Richard Freeman

Thirty-two years after British intelligence's Permindex murdered President John F. Kennedy in November 1963, the U.S. physical economy has deteriorated so badly that one would need an archaeological dig to find it. The defining cause of this collapse is the successful 1960s move by the British oligarchy to foist the Malthusian paradigm of the post-industrial society upon the United States.

Since the mid-1970s, the U.S. physical economy has contracted at a yearly rate of 2%. This contrasts starkly with the claim that in the 1990s, the U.S. economy, measured in Gross Domestic Product (GDP), has grown at a rate in excess of 3% per year.

The use of GDP as a measure of the economy is axiomatically and fatally flawed: GDP indiscriminately mixes together productive economic activity, such as steel and machine tool production, with non-productive, wasteful, and speculative activity. Prior to the mid-1960s, when the economy at least produced something, GDP, in a limited way, reflected production and reality. Today, two-thirds of GDP is comprised of purely non-productive activity. Moreover, inflation, triggered by the explosion in worldwide speculative financial aggregates,

has vastly inflated GDP, and other dollar-based measures of the economy, by approximately a factor of 10.

This article examines the U.S. physical economy's disintegration during the last 30 years: First, the change in productive workers as a percentage of the U.S. labor force. Second, the drop in America's productive investment in new plant and equipment.

Third, it will look at a category entitled "value added by the goods-producing sector," which is part of the GDP accounts. This category allegedly represents, in dollar terms, the real wealth added to the economy. By contrasting this "value-added" category to *EIR's* market basket index, a generalized measure of inflation can be developed. Applying this measure, one finds that, far from rising at an explosive rate of growth (as the Conservative Revolution's Newt Gingrich claims), U.S. budget expenditures, in physical terms, are actually falling precipitously. Combined with dropping revenues, this defines the real reason for the U.S. budget debacle.

Post-industrial society

But first, in order to give a thumbnail sketch of what happened in policymaking to

cause the physical economic collapse of the past three decades, we look at the House of Windsor's policy called the "post-industrial society."

Following World War II, the United States lived off the capital of the war mobilization, and its sequel, the Korean War mobilization. Under President Dwight Eisenhower (1952-60), the U.S. economy headed into a serious recession in 1957-58. President Kennedy pulled the United States out of that economic breakdown. His investment tax credit, and the Apollo space program, which provided a "science driver" for the economy, produced significant rates of physical-economic growth. But after Kennedy's murder, the British intensified their promotion of the post-industrial society policy.

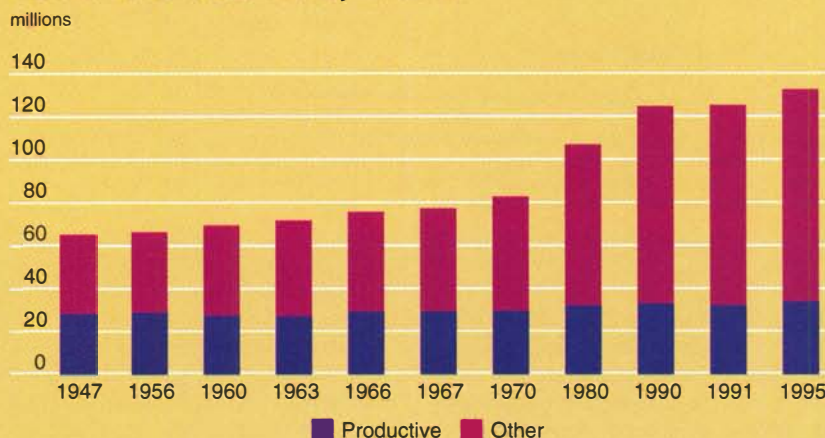
The key characteristic of the post-industrial society is its emphasis on speculation over production: Technological progress is targeted for destruction, and speculation skyrockets, causing manufacturing and agriculture to wither. In the 1960s, speculation first intensified in the offshore, unregulated Eurodollar market. Then, with the disastrous August 1971 decision to take the United States off the gold standard, petrodollar recycling exploded. During 1973-75, there was the first oil hoax, which was followed in 1978-79 by the second oil hoax. In 1979, Federal Reserve Board Chairman Paul Volcker sent interest rates up over 20%, fueling even greater speculative madness.

The fervid speculation sucked the lifeblood out of the physical economy.

The labor force

Figure 1 shows the U.S. labor force from 1947 through 1995. In 1947, nearly half (47.2%) of America's labor force of 60.9 million were productively engaged. In Figure 1, we included essential workers under the productive worker category, but the distinction is important. Man exists through the power of his creative ideas, which he applies to the scientific alteration of nature, to produce the means for man to exist, and to alter his

FIGURE 1
Size of U.S. labor force, 1947-95



species self, to create ever higher-order ideas so that he may live at successively higher cultural and material levels of existence. This not-entropic form of development is represented by a rising rate of relative potential population density. Productive workers include those engaged in agriculture, manufacturing, construction, mining, public utilities, transportation, and so forth. They alter nature; they produce the physical goods inputs, in the form of consumer and capital goods, to reproduce the human species. In a healthy economy, they are employed in the most advanced capital-intensive, energy-intensive mode of production.

Essential workers constitute those engaged in vital soft infrastructure, such as doctors, nurses, teachers, scientists. They do not alter nature directly, but transmit knowledge or essential services to those who do. All other workers, with some important exceptions, can be classed as overhead.

From 1947 to 1995, America's labor force more than doubled, with 71.7 million new entrants, increasing from 60.9 million, to 132.6 million workers. But nearly all of the 71.7 million workers took jobs representing an overhead expense to the economy. Whereas, in 1947, productive workers represented 47.2% of the total labor force, over the years, they represented a progressively smaller share: In 1960, they represented 40.4% of the total labor force; in 1970, 36.4%; in 1980, 30.4%; and today, 25.9%. Today, only one in four workers is productively engaged; the other three work in overhead. Whereas, in 1947, each productive worker was needed to produce enough to support two families (his own and the family of someone engaged in overhead), today, every productive worker is called upon to produce enough goods for his family and the families of 3.0 overhead workers. With 2.6 persons per American household on average, the productive worker must produce enough to support 10.4 people. Were productivity levels rising, because of the introduction of new technology, that might be possible, but the post-industrial society policies forestalled most technological advance.

Figure 2 shows the picture for manufacturing starting in 1956. The right-hand bars show the percentage that manufacturing workers represent of the total U.S. labor force. The left-hand bars represent manufacturing's new productive investment in plant and equipment, expressed as a percentage of GDP. This latter measure—the expenditure to replace worn-out machinery and to technologically upgrade for the future—is a crit-

FIGURE 2

Manufacturing investment and employment

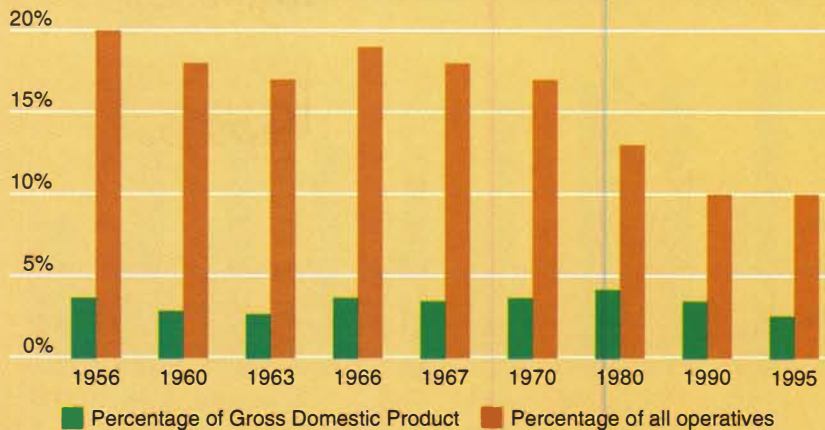


FIGURE 3

Agriculture investment and employment

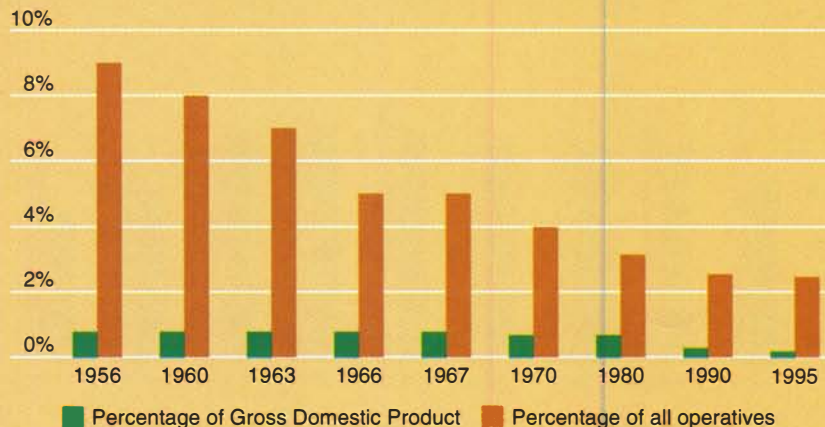


FIGURE 4

Mining investment and employment

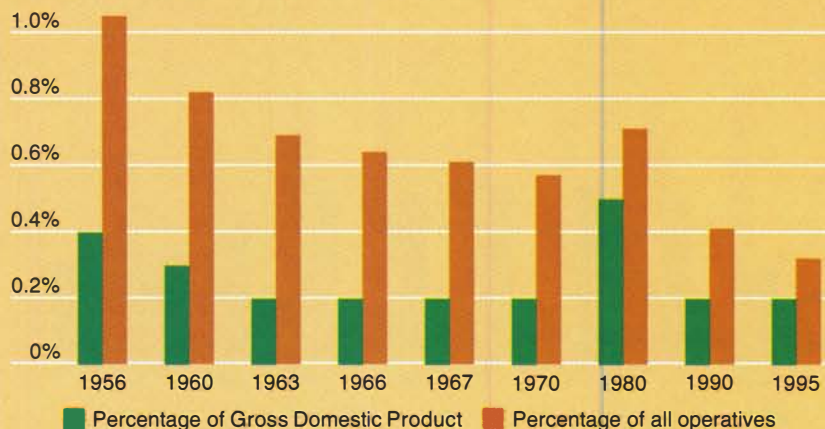


FIGURE 5
Construction investment and employment

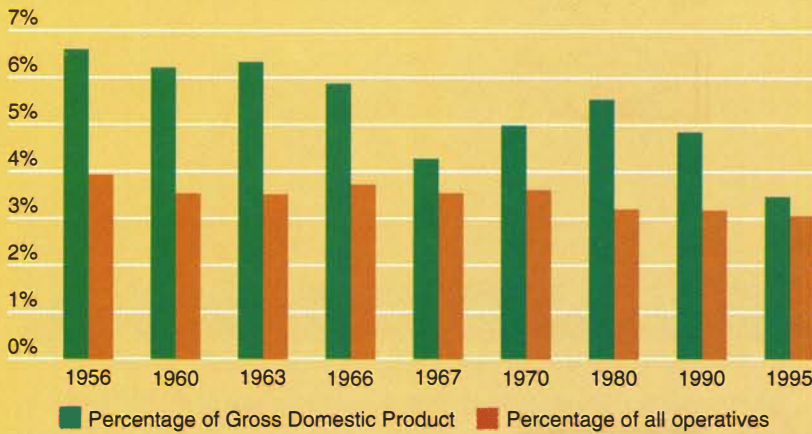


FIGURE 6
Transportation investment and employment

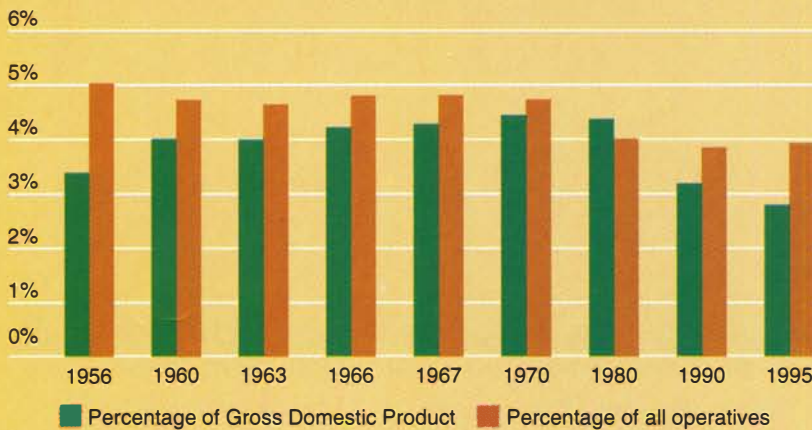
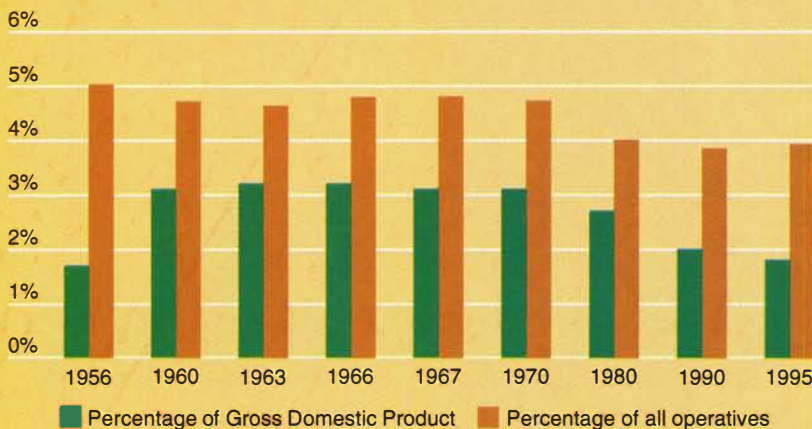


FIGURE 7
Basic physical infrastructure investment and employment



ical parameter, indicating what stock manufacturing puts in its own future and that of the economy. As such, it is a measure of manufacturing's capital intensity.

Manufacturing, of course, produces the vast majority of all intermediate and finished industrial goods in the economy. (In dealing with manufacturing as well as mining, construction, and transportation and public utilities workers, we are dealing only with those whom the Department of Labor classifies as "non-supervisory production workers.") In 1956, some 20% of the labor force (one out of five workers) worked in manufacturing. For that year, that sector's investment in new plant and equipment, as a monetary amount, was equal to 3.7% of the U.S. economy's GDP. By 1995, things had changed radically. Manufacturing workers as a percentage of the total labor force was halved, falling to 10% of the total workforce. New investment in plant and equipment in manufacturing, which had held steady or even risen until about 1980, plunged sharply. By 1995, it was one-third lower than the 1956 level.

Figure 3 documents that from 1956 to 1995, the number of farmers declined from 9% to 2% of the total labor force. Much of the decline from the 1940s through the 1960s was a healthy trend, reflecting farmers coming off the land as the increased use of fertilizers and other farm inputs increased farm productivity per hectare. But the reduction of the farm workforce during the 1970s and 1980s, involved looting of the farm sector. Ominously, the amount of new investment in plant and equipment in the farm sector, expressed as a percentage of GDP, fell from 0.8% in 1956, to 0.2% in 1995—one-quarter of its level of 40 years ago.

Figure 4 shows the mining sector, which produces the 50 minerals and metals out of which two-thirds of all manufactured goods are made. In 1956, mine workers constituted 1.1% of the total U.S. labor force. In 1995, they were 0.3% of the labor force. In 1980, the mining sector's investment in new plant and equipment as a percentage of GDP, rose, reflecting the oil and gas drilling boom of the early 1980s. But by 1995, this percentage had fallen to a level two-thirds below that of 1956.

Figures 5 and 6 exhibit the picture for construction and transportation, respectively. The figures parallel the downward trajectories of manufacturing, agriculture, and mining.

Figure 7 depicts investment and employment in the hard infrastructure sector. The construction sector represents workers who are engaged primarily in construction of

homes and commercial properties. The physical infrastructure sector includes workers building and tending the essential infrastructure of the country—railroads, waterworks, mass transit, harbors and river channels, dams, power plants and distribution, and so forth. As a percentage of the total U.S. labor force, the hard infrastructure sector's employment fell from 5% in 1956, to 3.9% in 1995. Even more ominous, the level of capital intensity of the sector, after rising from 1956 to 1966, then fell by 45% by 1995.

Figure 8 looks at soft infrastructure, which comprises medicine, education, science, and engineering. It represents what would appear to be a trend counter to all the other sectors we have looked at thus far. The employment in soft infrastructure, as a percentage of the total labor force, rose from 4.4% in 1956, to 6.2% in 1995. However, this is due entirely to the increase in medicine and health care employment, which is shown in **Figure 9**. From 1950 to 1992, this rose as a percentage of the total labor force, from 0.6%, to 3.3%, which entirely accounts for the increase in soft infrastructure employment.

The transformation of the health and hospital sector says something about the economy as a whole. Next to retail sales, this is the fastest growing sector of the economy. On the one hand, there is growth in the number of doctors and nurses (see **Figures 10 and 11**), in part because of the increased number of elderly who are being treated, especially in nursing homes and care centers. To this must be added employment in job categories which previously did not exist; for example, the technicians who operate the various diagnostic equipment which has been developed over the past two decades. However, the biggest part of the increase in medical employment is not for skilled medical personnel, but for cheap labor. In 1992-93, out of 9.699 million people working in the health and hospital sector, 3.912 million, or 40%, were accountants, clerks, cooks, maids, laundry workers, etc.

Moreover, it should be kept in mind that, while the number of doctors is rising, this does not mean that there is equal access to doctors. Some areas, especially large cities such as New York or Chicago, have a dwindling number of doctors per 10,000 population for the increasing poor and middle-income layers of the population.

Women enter workforce en masse

There was still another change for the worse in the labor force, a rise in the labor

FIGURE 8
Soft infrastructure workers, as a percentage of the total workforce

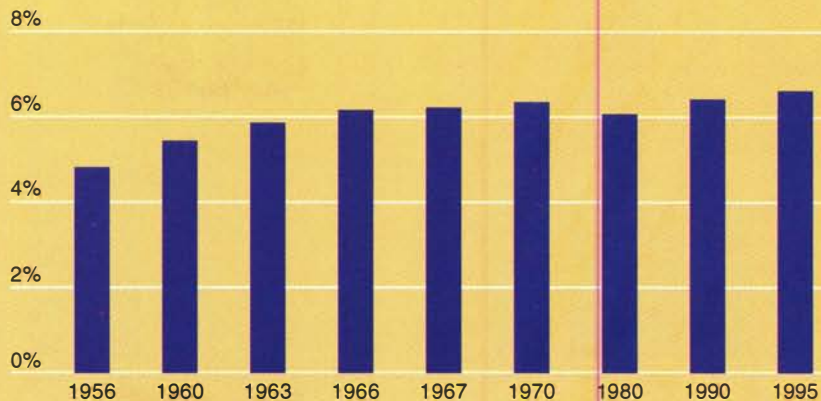


FIGURE 9
Health care employment
percent of total population

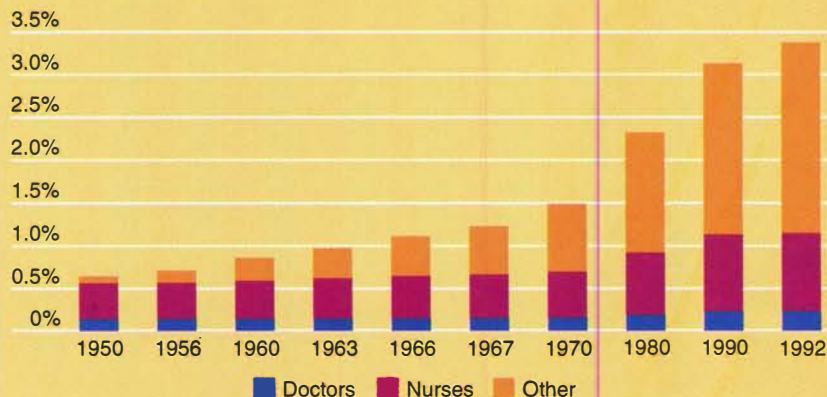


FIGURE 10
Working physicians, as percentage of total population

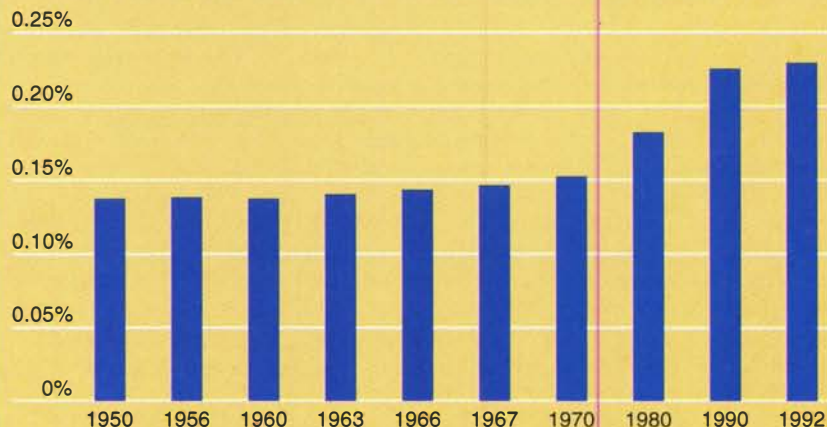


FIGURE 11

Working nurses, as percentage of total population

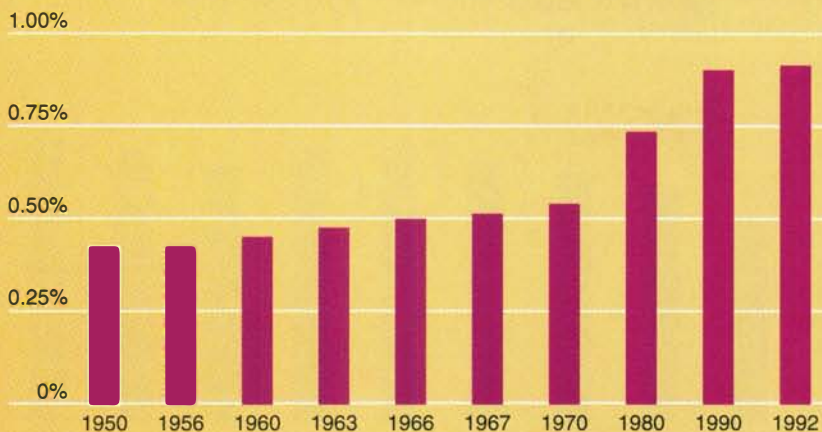
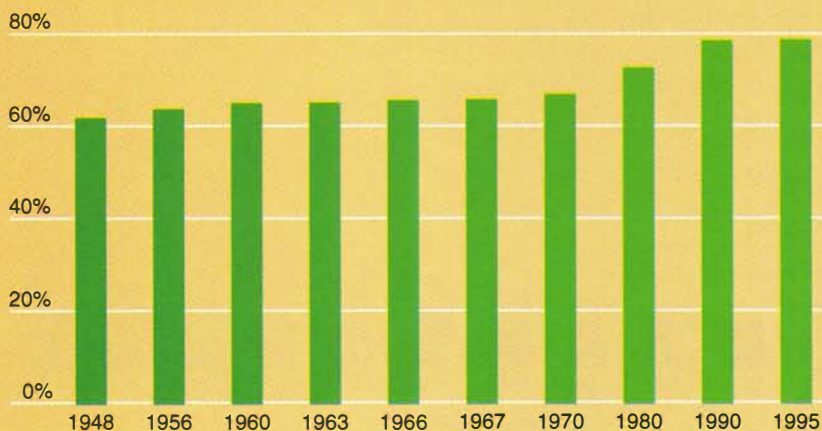


FIGURE 12

Participation rate of persons age 20-64 in the labor force



force participation rate, precipitated by the abrupt fall in wage levels that sent women into the labor force en masse. In 1948, roughly 62% of the population in the 20- to 64-year-old age bracket (which comprises the majority of the workforce) was in the labor force. The percentage increased modestly through the mid- to late-1960s (see **Figure 12**), when it began rising sharply. This is the era when incomes, as measured in physical purchasing-power terms, started to collapse. By 1994, the labor force participation rate was 79%, some 17 percentage points higher than it was in 1948. This is entirely due to women entering the labor force.

If a woman chooses to work, for independence, the mental challenge, sense of accomplishment, or whatever, she should be encouraged to do so. But most women in

this period were forced to work, because of collapsing family incomes. This had a direct impact on U.S. fertility and birth rates, which plunged from 1970 onward. If both husband and wife work, it is very difficult, on average, for a family to raise more than one or two children.

The breakdown in the economy was further exemplified by the 40-50% fall in the market basket (see p. A5).

These trends, including the shift out of productive jobs in manufacturing, construction, agriculture, mining, etc., into non-productive, non-essential jobs, most of which are service industry jobs, or dead-end jobs at McDonalds or K-Mart, had major implications for federal, state, and local budgets. According to the Department of Labor, these jobs pay one-third less than manufacturing jobs. This translates into one-third, actually

closer to 40% less tax revenues from most of the 71.7 million workers added to the economy since 1948. There is additional lost tax revenue because of the millions of unemployed, and many tens of billions of dollars more tax revenue lost because of closed-down farms and factories. It is clear that, relative to where they would have been had the post-industrial society not taken over, tax revenues have plummeted. The problem is on the revenue, not the spending side, of the budget problem.

EIR's market basket index

In this light, it is absurd that members of both major U.S. political parties, the U.S. Federal Reserve System board of governors, virtually all of academia, as well as the financial and business media, still talk of growth in the U.S. economy. They cite figures in GDP growth, from a level of \$513.4 billion in 1960, to \$7,113 billion in 1995. They debate whether between now and the end of the year 2005, the GDP-compounded annual real growth rate will be 2.5%, 3%, or 3.5%.

Worsening the absurdity of the debate about whether "the budget can be balanced by year X," depending on the rate of rise of tax revenues based on the GDP growth rate, is that the government fakes its figures.

Thus, we will expose the government's GDP indicator on the economy. We will define a generalized rate of inflation, or price deflator, and use this generalized inflation indicator to show that a major problem of the U.S. budget, alongside falling revenues, is falling expenditures—quite the opposite of what Gingrich and his coterie contend. This puts the budget debate in a new light.

As a starting point, we compare the government's concept of "value added by the goods-producing industries," to *EIR's* market basket index. Both measure the same process, but how do the two compare?

The concept of "value added by the goods-producing industries" is a subsection of the U.S. government's GDP accounts, which is calculated by the Department of Commerce's Bureau of Economic Analysis. The Commerce Department attempts to calculate the new wealth, expressed in dollar terms, that each sector of the economy is contributing to the total economy. It does this for every sector, including goods-production; finance, insurance, and real estate; non-government services; and so forth. Within the goods-producing sector, it calculates value added by each of the subsectors—manufacturing, mining, construction, etc.

The Commerce Department says it wants to avoid double-counting, so, to determine the value added, if something is counted as output in the mining sector, it should not be counted a second time as value added in the manufacturing sector, and then counted as value added a third time in the construction sector, and so forth. Thus, the department takes the final total product in a sector, which is that sector's total shipments expressed in dollar terms, and subtracts from it the cost of raw materials inputs for that sector. The raw material input costs of the manufacturing sector would be, in large part, the value added by the mining sector, so they are subtracted out. Thus, value added is roughly defined by final shipments minus the cost of raw materials and supplies.

Another way of describing value added, is that it is the new value that has been added by the labor force in a particular sector in the course of working up raw materials into a finished good within that sector. In this way of looking at it, value added equals a sector's total shipments minus the cost of raw materials inputs for that sector.

The amount of new value-added wealth which the Commerce Department says the goods-producing sector has been adding to the U.S. economy over the years, is displayed, for selected years, in **Figure 13**. In 1960, the value of all value added by the goods-producing (or productive) side of the U.S. economy was \$184 billion. By 1990, the Commerce Department says that value added by the goods-producing side of the U.S. economy was worth \$1,326 billion. This represents the goods-producing portion

of GDP. Based on these figures, the economy has grown by 7.2 times. Even correcting for inflation, using the government's inflation measure, the government would claim that the goods-producing side of the U.S. economy, expressed in constant dollars, has roughly tripled since 1960.

EIR's market basket index, on the other hand, measures the amount of newly created physical product, for a particular year, flowing through the U.S. economy. This is new physical product produced and/or consumed (whichever is higher) expressed on a *per household, per capita, and per hectare* basis. Another way of stating it, is that *EIR's* market basket index measures the physical flow-through of the economy's consumer and capital goods inputs, *per household, per capita, and per hectare*. Thus, it, too, measures the productive side of the U.S. economy, only unlike the value added of the Commerce Department, it does so accurately.

The calculations for the various years are then indexed to 1967, when the flow-through was highest. So, the 1967 market basket index equals 1 (see article, p. A5, for a fuller explanation). Looking at critical years, in 1960, the *EIR* market basket index was 0.873, meaning that the 1960 flow of consumer and capital goods, per household, was 87.3% of the 1967 level. The index rose until 1967, when it equaled 1, and then started plummeting. By 1990, the index stood at 0.603, meaning that it was 39.7% below 1967 levels, and 31.1% below 1960 levels. From 1990 onward, it fell at a 2% annual rate.

Thus, while the value added of the goods-producing part of GDP is rising threefold, in reality, the physical market basket, measuring the exact same thing, has fallen, cumulatively, since 1960, by now more than 40%. The government's fantasy statement about "goods-producing value added" is debunked by *EIR's* market basket approach.

But this discrepancy allows us to derive a rough, first approximation measure of inflation.

Since the two measures—the Commerce Department's "value added by the goods-producing sector" and *EIR's* market basket index—are measuring the same process, one can set them equivalent to one another. This is done by dividing one by the other, in this case, by dividing the Commerce Department's "value added by the goods-producing sector," by *EIR's* market basket index. Because *EIR's* market basket index is the denominator in this equation, the division yields *what it costs to buy the physical equivalent* of one unit of *EIR* market basket.

One unit of *EIR* market basket is the unit of new physical goods flow-throughs, per household, for every household in the U.S. economy, in 1967. To make this process of division clearer, if one buys one-third of a pound of bananas for 10 cents, then the cost of a full pound is 30 cents—by dividing the cost of the bananas by the amount of pounds, one finds out the price per pound.

Figure 14 shows the results of the calculations. In 1960, the division yields a figure of \$210 billion. In 1990, the division yields a figure of \$2,198 billion. Since both division products are equivalent to the same unit—what it costs to buy the same physical goods flow-through per household that existed in 1967—then this tells us that in 1990, it cost 10 times more in value-added dollar terms to buy the same annual flow of physical goods than it cost in 1960. This is a rough, generalized measure of inflation, or a price deflator. Relative to 1960, inflation is ten times higher.

This means that not only is the dollar content of value added overstated today by 10 times, but any dollar figure attached to what can be bought, relative to 1960, is overstated by ten times. When politicians or economists talk of the economy's "growth," as this example shows, they are, in reality, talking about monetary growth, not an increase in physical output.

What introduced this ten-fold inflation into the U.S. economy? In part, it was the structural shift of the economy, from one in which nearly half the workforce was engaged in productive work, to an economy in which only 25% of the workforce is

FIGURE 13
Value added by goods-producing sector

billions \$

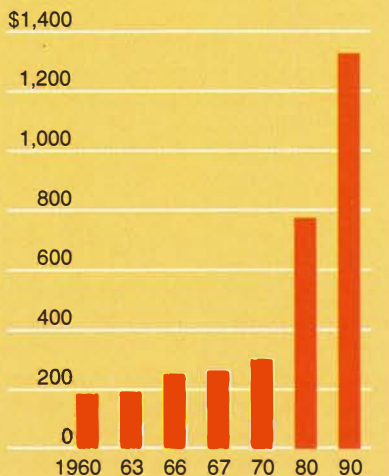


FIGURE 14
Inflation hidden in value added

billions \$

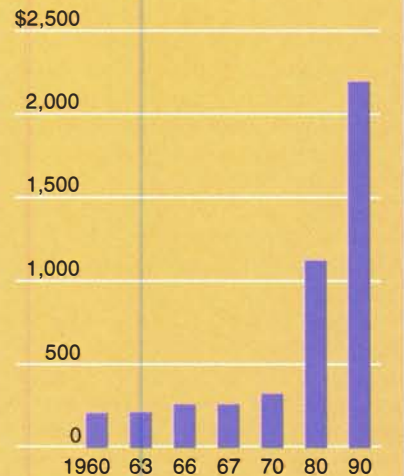
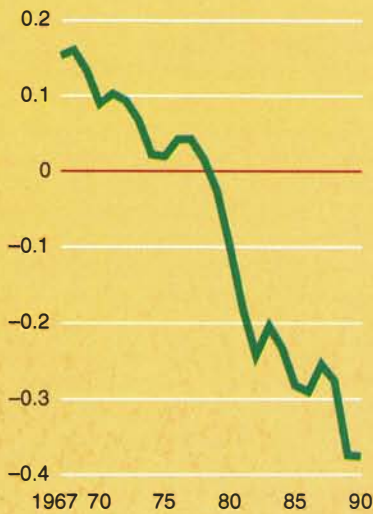


FIGURE 15

Financial profit ratio of the U.S. economy



engaged in productive work. The spiraling cost of overhead was, in part, recouped by companies raising prices. The hyperbolic growth of speculative financial aggregates, creating a worldwide financial bubble, especially during the last 15 years, was an even greater influence, importing monetary inflation from outside the physical system, into the physical system. The potential for inflation to grow even higher because of the explosive growth in the speculative bubble, is very great.

This means that the “official” inflation rate provided by the U.S. government, is a fake. (This is not to discount the fact that various deflationary forces, caused by the economic depression, are also operating in the U.S. economy.)

A further indication of the unreliability of and hidden inflation in the government’s “value added by the goods-producing sector” measure, is that it does not take into account the cost of the economic process required to produce this value added, nor does it take account of the high cost of overhead now associated with the U.S. economy. Thus, over time, “value added” might seem to rise, at least in dollar terms, but it does not reflect what is happening in the physical economy.

Figure 15 depicts the rate of profit, or free energy ratio, of the U.S. economy for the period 1967 through 1990, stated in monetary-dollar terms. The same ratio, but calculated in physical terms, is shown in Figure 2 on p. A2. (The two statements of the free energy ratio, Figures 14 and 15,

draw from entirely different data bases; one is based on measurement of physical goods, the other based on measurement of monetary expressions of wages, etc.)

In the monetary statement of the free energy ratio, one starts with “value added by the goods producing sector,” which represents the new wealth created in the economy, during one economic cycle. From it, one subtracts overhead, called “d,” which is comprised of administrative overhead plus debt service costs. The denominator of the expression is the energy of the system, that is, the input costs required to maintain the equipotential of the economy, stated in dollar terms. Thus, the free energy ratio of the system represents an economy’s “output minus its input,” corrected for overhead, divided by its required inputs. An economy’s durable survival is constrained by the need of a rising rate of growth for the free energy ratio.

The U.S. economy’s rate of profit, or free energy ratio, in physical and monetary terms, show a sharp plunge downward (the ratio stated in dollar terms shows a time lag because of the distortion that monetary terms introduce). “Value added,” taken by itself, does not reflect this, because it does not represent what is happening in the economy.

Collapsing government expenditures

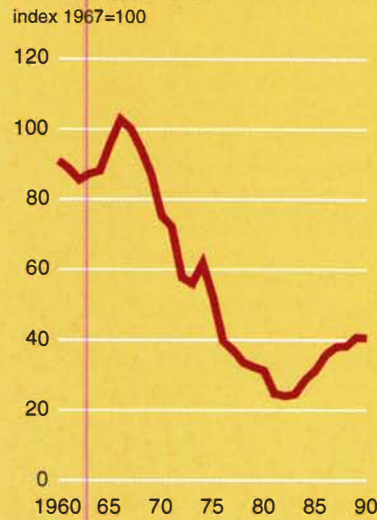
The Robespierre of the Conservative Revolution, House Speaker Newt Gingrich, claims that the U.S. government budget is unbalanced because expenditures are “exploding out of control” due to “liberal over-spending.” But, contrary to Gingrich’s claims, based on what has been developed above, one can prove that vital expenditures are falling, apart from any cuts that have been imposed. This is disguised because the government’s figures for inflation are so understated.

Take such budget-items as education or health care. Are they really zooming upward? The dollar amount in the budget may be increasing, but the physical product that the dollar buys is drastically shrinking.

In 1960, the combined spending of federal, state, and local governments for education was \$135 billion. In 1990, it was \$1,837 billion. On the face of it, over 30 years, government spending for education increased 13.5 times. But did the content of education increase by 13.5 times? If one adjusts this figure by the rough inflation measure developed above—that inflation has increased approximately ten times since 1960—then

FIGURE 16

New school construction per household



the combined government spending for education increased by 3.5 times from 1960 through 1990. But even that may be overstated, raising the question whether the inflation measure developed above is itself understated.

What would the spending for education go for? Teachers’ salaries? According to the U.S. government inflation index, from 1960 through 1990, the wages of teachers rose, but by a rather modest amount.

Perhaps, then, the spending was for new school plant and equipment? Figure 16 shows the physical amount of new school floor space constructed, per household, since 1960. It is set to an index in which 1967 equals 1. Its level in 1990 is 60% below the level of 1967, and 56% below the level of 1960. Overall, little if anything in education has increased.

The same story is repeated for most line items for essential hard and soft infrastructure in the budget. The real scandal of the federal, state, and local budget situation, is that expenditures, measured in physical terms, are falling. Combined with falling revenues, this is creating a debacle.

This problem cannot be solved by any short-term expedient, such as more budget-cutting or some monetarist monetary reform, which would allegedly restore the purchasing power of the dollar. Americans must open their eyes, and recognize that the origin of the collapse of the physical economy is located in the fact that America succumbed to post-industrial society policies 35 years ago.