

LaRouche's 'Triple Curve Collapse Function' models economic breakdown

Figure 1 shows the schematic first used by Lyndon LaRouche in Europe in 1995 to depict and forewarn of the process of economic collapse we now see unfolding. Since that time, *EIR* has published numerous feature-length, detailed studies of various interconnected aspects of this collapse process. Here we present a series of graphical snapshots of each of the three multiply-connected curves, to show "how far gone" the process is toward historic-scale blowout. As LaRouche discusses elsewhere in this *Feature*, the increasing disparity of the curves reaches the phase of shock-wave, which is where we stand today.

Hyperbolic rise of financial aggregates

Figures 2 through 4 show three of the more dramatic features of the bubble-state of financial valuations over the past 20 years. As shown in Figure 2, the Dow Jones (formerly) Industrial Average index, consisting of just 30 hand-picked corporate stocks, has levitated from an index level of 1,739 after the October 1987 crash, all the way up to over 11,000 as of this past June.

Figure 3 shows the soaring value of mergers and acquisitions of corporations internationally and in the United States, to the point of the \$2.5 trillion announced in 1998. In the first

six months of 1999, the pace has picked up to \$1.5 trillion of deals announced so far worldwide, during this calendar year. In the United States, in 1999, there were \$340 billion of deals in the first quarter, and \$540 billion in the second, making the second quarter the second-highest quarter ever, after the \$679 billion second quarter of 1998.

Figure 4 shows the rise in estimated level of the nominal value of financial derivatives contracts worldwide, a category of speculation that only emerged in the late 1980s, coincident with Alan Greenspan's appointment as chairman of the Federal Reserve System in 1987.

While examining these charts, keep in mind how various kinds of leveraging work and interconnect.

First, margin debt. Individuals and institutions borrow from brokers in order to play the stock market. From the end of 1992 to the end of 1998, customer margin debt borrowing jumped from \$44 billion to \$141 billion, a compounded annual growth rate of 21.4%. But from the end of 1998 to the end of May this year, customer margin debt borrowing rose from \$141 billion to \$178 billion, an increase of \$37 billion. *This is an annualized growth rate of margin debt for 1999 of*

FIGURE 1
A typical collapse function

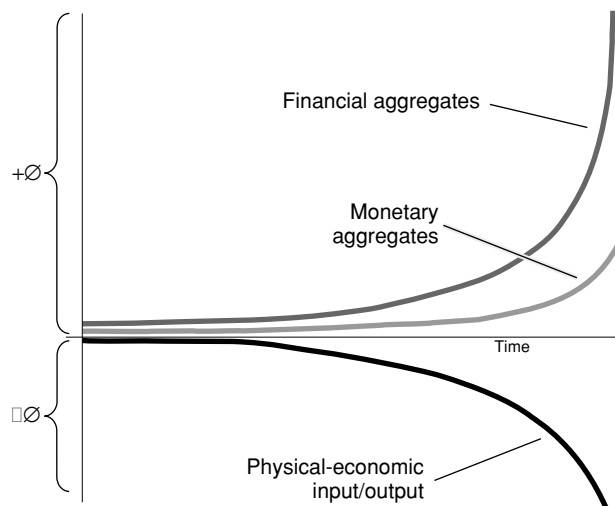
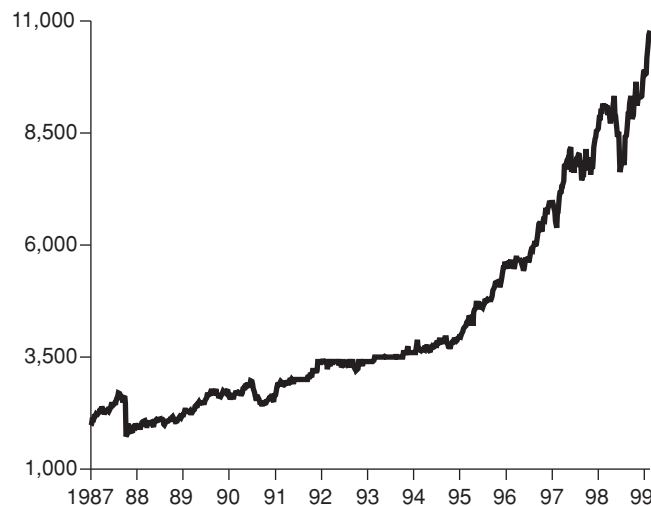


FIGURE 2
Dow Jones Industrial
(Average weekly closings, 1987-99)

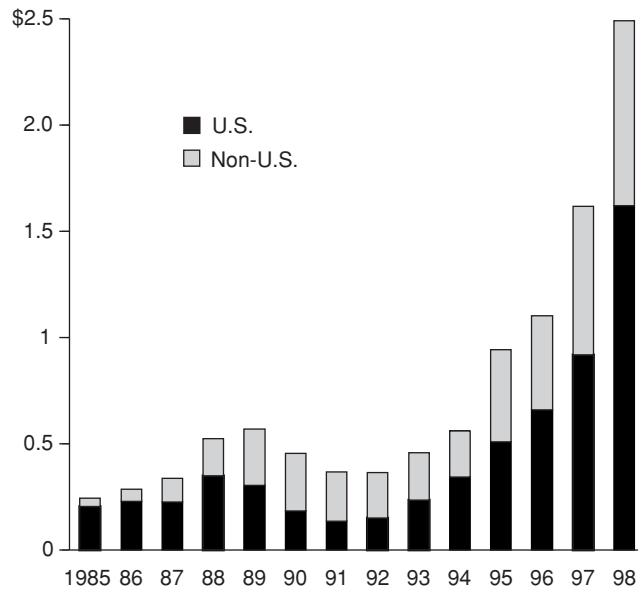


Source: Dow Jones.

FIGURE 3

Global cartelization escalates: value of announced mergers and acquisitions

(trillions \$)



Source: Securities Data Co.

74.9%, unprecedented in U.S. history.

A second form of leverage underpinning the stock market, is through mergers and acquisitions, in which buy-out firms can borrow \$5 for each dollar of their own money that they employ when they take over a firm—that is known as debt leverage.

Then, there are stock-based derivatives—such as the Standard and Poor’s 500 futures index—which are used to play and rig the stock market. The combined value of these stock-based derivatives is several trillions of dollars, out of the approximately \$175-plus trillion in world derivatives overall shown in Figure 4.

When “reverse leverage” strikes, broker margin loans are called in, or speculator/investors have to dump stocks to meet margin calls, and the derivatives bubble of options and futures collapses. De-leveraging in one sphere will trigger de-leveraging in another sphere, collapsing the system at lightning speed, because all these spheres are interconnected.

Even before the point of *all-out blowout*, the insanity of the present period is shown by its mega-mogul, Bill Gates, and his company Microsoft (see box, p. 33).

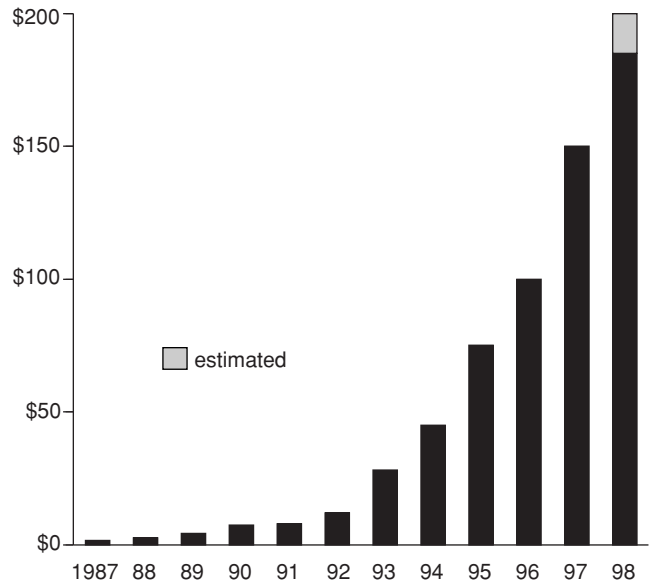
Monetary inflation

Figures 5 and 6 show just two monetary-related trends, integrally connected with the recent policy of promoting hyperinflation in attempts to keep the financial bubbles afloat. Figure 5 shows the rise in the level of the U.S. money supply,

FIGURE 4

Global derivatives holdings

(notional principal value outstanding, trillions \$)



Source: EIR.

called M-3, especially from 1995 to the present. Figure 6 shows the soaring rise, from 1997 to the present, in yen value of Japanese government bond issues, related to the pumping of liquidity into their hyperinflated financial sector.

Physical-economic inputs and outputs plunge

The next graphics show the process of economic contraction that has taken place in selected national economies, as part of the process of “feeding the bubble,” at the expense of developing and sustaining basic economic inputs and outputs. This is evident over the past two to three decades. Then, since summer 1997, when there began a blowout process in which whole sections of the global financial system’s bubbles became unsustainable, and went unpaid—inflated share values, hedges, futures, national debts, etc.—we went into a new, accelerating process, in which *basic economic activity* itself is shutting down—manufacturing, farming, fishing, water and power provision, health treatment, and so on.

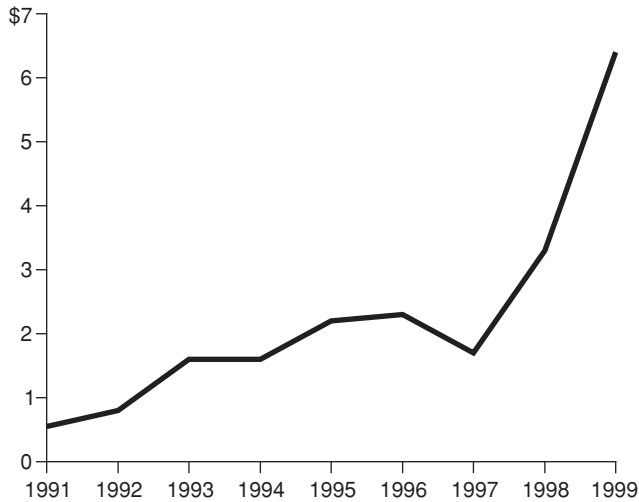
Figure 7, for the United States, illustrates the point that over the last 15 years, while funds have flowed into mergers and acquisitions, there has been no increase into investment for new plant and equipment. Moreover, the lower line would be negative, not just static, if the money going into computer and telecommunications investment were not included. During the past 15 years, investment in steel and metals, and facilities and equipment for all kinds of basic manufacturing, has *declined*.

Figure 8 and 9 indicate for two basic industrial categories

FIGURE 5

U.S. money supply (M3)

(trillions \$)

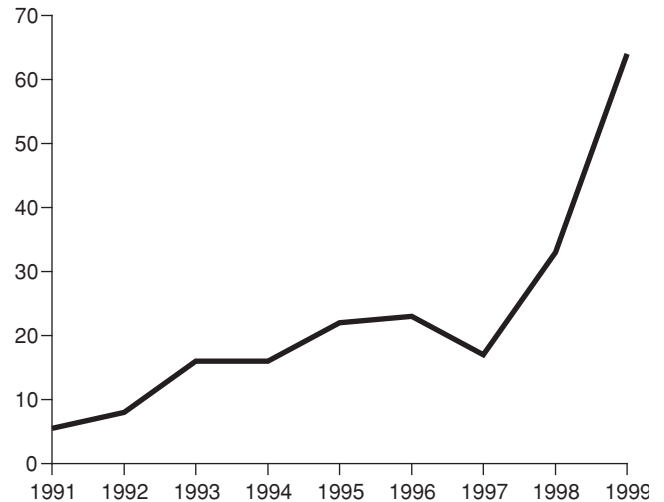


Source: Federal Reserve.

FIGURE 6

Japanese government bond issues

(trillions yen)



Source: Japanese Ministry of Finance.

ries—machine tools and farm equipment—how, since the 1997 break-out of global crisis, output levels are dropping sharply.

The same is true for Germany. **Figure 10** shows this in terms of the decline in the number of machine-tool workers declining from 1970 to 1995. Then came a precipitous decline in recent months in the German machine-tool sector.

The following brief survey, gives nation-by-nation headlines on the degree and scope of the current breakdown in basic production and consumption levels.

United States

During the 18 months since January 1998, the U.S. manufacturing workforce has lost 487,000 jobs. During 1998, some 265,000 manufacturing jobs disappeared. Over just the first six months of this year, 222,000 have gone, with 35,000 lost in June alone.

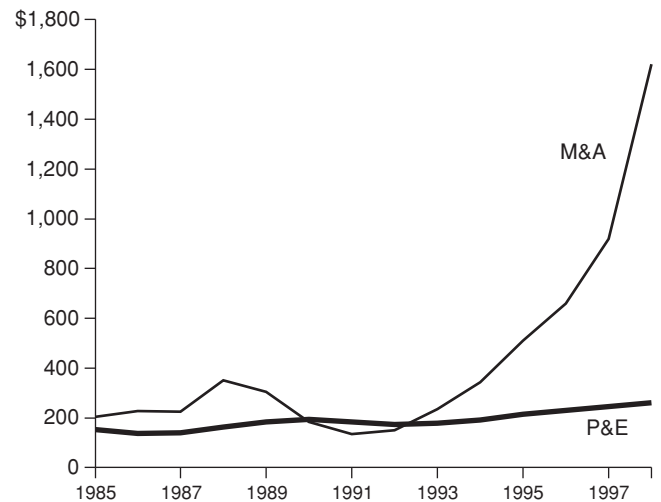
The machinery and equipment manufacturing sector is contracting drastically. On July 7, the world's biggest mining equipment maker, Harnischfeger Industries, which also makes huge paper-mill machines and earth-moving machines, filed for Chapter 11 bankruptcy. The firm, based in a Milwaukee suburb, said it had been hit hard by chain reactions of non-payments and cancellations beginning in Asia in 1997, and proceeding since.

Caterpillar, the world's largest maker of heavy construction and earth-moving equipment, reported that its orders and sales are down to the extent that profits fell 36.5% from the second-quarter of 1998 to the present, and prospects are wors-

FIGURE 7

Mergers and acquisitions vs. manufacturing expenditures for new plant and equipment

(billions \$)



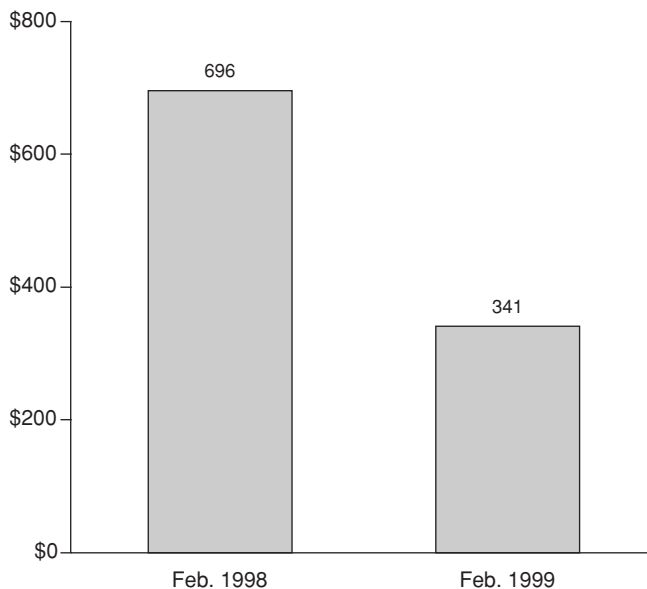
Source: Securities Data Co., Economic Report of the President, *EIR*.

ening still.

Deere & Co., the world's largest farm machinery builder, has imposed extended work furloughs this summer, and expects farm equipment sales to drop at least 18-20% from last

FIGURE 8
U.S. machine tool consumption collapses 51%, February 1998 vs. February 1999

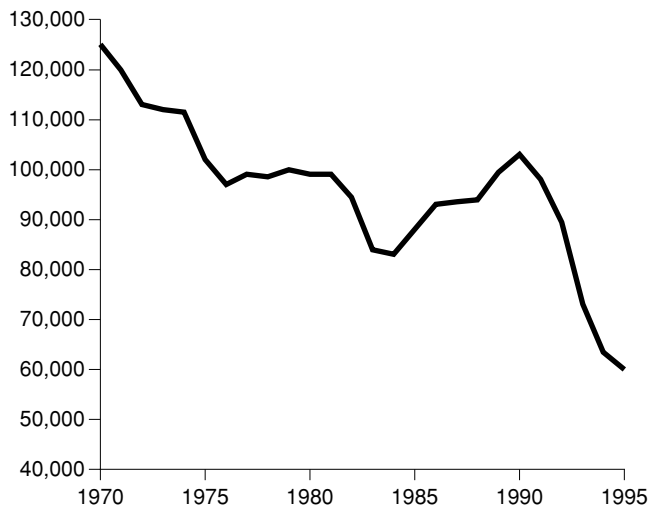
(millions \$)



Source: Association for Manufacturing Technology; American Machine Tool Distributors Association; *EIR*.

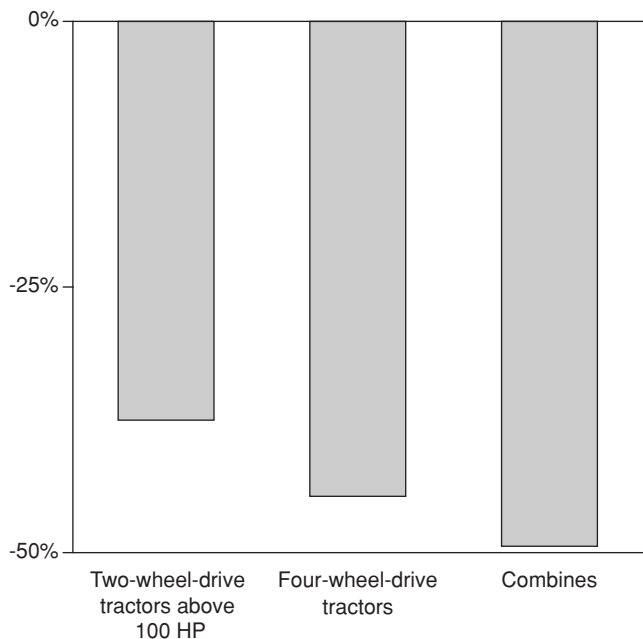
FIGURE 10
Employment in western Germany's machine tool sector

(number of employees)



Sources: VDW, *EIR*.

FIGURE 9
Fall in U.S. farm equipment shipments, March 1998 vs. March 1999



year. The New Holland farm machinery factory in Grand Island, Nebraska began laying off nearly all of its 630 employees in the first week in July, because sales are so low.

Japan

Orders for Japanese machine tools are crashing. According to preliminary figures published by the Japan Machine-Tool Builders' Association (JMTBA) on June 21, new orders received by Japan's machine-tool industry in June 1999 were down 34.5%, compared to the year before. Domestic orders had fallen by 32.3%, foreign orders by 36.3%. The June data marked the 16th consecutive month of year-on-year declines in new orders for the world's leading exporter of machine tools.

The fiscal year ending March 1999 had been a disaster for the Japanese machine-tool producers. The 35% fall in domestic orders resulted from 38% lower orders from the Japanese machine-building sector, 31% lower orders from Japan's automobile producers, and a 44% collapse of orders from Japan's electrical engineering companies.

Since October 1998, the collapse of domestic demand has been accompanied by falling orders from abroad. In particular, machine-tool orders from the United States had been down by about 40% in recent months, while orders from western Europe were also sharply falling. For the Japanese machine-tool producers, the United States is by far the most

TABLE 1

Japan's domestic orders for machine tools plunge

(billion yen)

Fiscal year	Total orders	Domestic orders	Foreign orders
1997-98	1137.5	629.9	507.6
1998-99	907.4	411.2	496.2
1999-2000*	745.5	327.9	417.6

* Projected

Source: Industrial Bank of Japan, May 1999 report on the Japan machine tool industry.

important export market, covering about 50% of all foreign orders in the fiscal year 1999-2000, followed by Europe with one-third, and Asia with one-tenth of overall Japanese machine-tool exports.

Until the Asian financial storms of 1997-98, South Korea had been the second-biggest export market for the Japanese machine-tool industry. However, in 1998, machine-tool exports to South Korea crashed by 75%.

In May 1999, the Industrial Bank of Japan presented a report on the Japan machine-tool industry, predicting that the rapid decline of domestic machine-tool orders would accelerate during the fiscal year 1999-2000. **Table 1** gives the figures, showing that domestic machine orders are expected to drop by half this fiscal year from two years ago, down from 629.9 billion yen, to 327.9 billion. As a consequence, Japan's machine-tool companies are downsizing their production facilities. According to the Industrial Bank of Japan, output in the present fiscal year will plunge to 60% of the 1990 level.

Eastern Europe

Besides core production contraction in Japan, Germany, and the United States, the rate of collapse throughout the Americas, eastern Europe, and other production centers is deadly.

Table 2 shows the drastic fall in steel output in nine countries of eastern Europe, during just the first half of 1999, compared with the same period in 1998.

Ibero-America

Defaults and crises are hitting all basic industrial and construction sectors.

Mexico: Figures 11 through **13** give a summary picture of the "Triple Curve" collapse for Mexico—indicative of the process taking down national economies generally.

In Figure 11, beginning in the 1980s, you see how debt climbed to unpayable levels, buttressed by the process of looting the real economy, as shown by the decline in manufacturing jobs, to one-half their 1980 level, and the decline in consumer goods produced by one-third.

TABLE 2

Steel production decline in eastern Europe, January-June 1999

(thousand tons)

	1998 (first half)	1999 (first half)	% decline
Bulgaria	1,239	866	-30.1%
Croatia	52	36	-30.8%
Czech Republic	3,499	2,829	-19.1%
Hungary	950	893	-6.0%
Poland	5,614	3,885	-30.8%
Romania	3,438	2,142	-37.7%
Slovakia	2,017	1,737	-13.9%
Slovenia	225	207	-8.0%
Yugoslavia	592	79	-86.6%

Source: IISI.

Figure 12 shows more about the decline in manufacturing employment from over 2.5 million in 1981, down to fewer than 1.5 million in 1998. The darkened area shows increasing employment in *maquiladoras*, the cheap-labor assembly plants on the border with the United States, but this is not rightly to be counted as part of the national workforce employment, because the *maquiladoras* are in fact "industrial plantations" for foreign outsourcing.

Figure 13 shows how, for dietary staples—beans, for example—production has declined from 20 kilograms per capita down to 7 kg, and is falling.

The physical-economic functioning of the nation is breaking down. Consumption of food staples (tortillas, oils, beans, dairy) fell by 20% from the first quarter of 1998 to 1999.

Mexico's flagship companies are in crisis, from the untenable financial looting of the "Triple Curve" type:

- *Grupo Dina*, Mexico's largest bus and truck maker, missed a \$6.6 million bond payment on July 15. To deal with the burden of debt, and lack of credit for production, in June the company sold a 61% stake in MCII Holdings, a motor coach company based in Des Plaines, Illinois, raising a reported \$125 million.

- *Bufete Industrial S.A.*, one of the country's largest construction firms, announced on July 15 that it could not meet a \$100 million Eurobond payment due then. In June, the company had announced that it was trying to re-work its short-term debt. *Bufete Industrial* specializes in such basics as oil rigs and electric power stations.

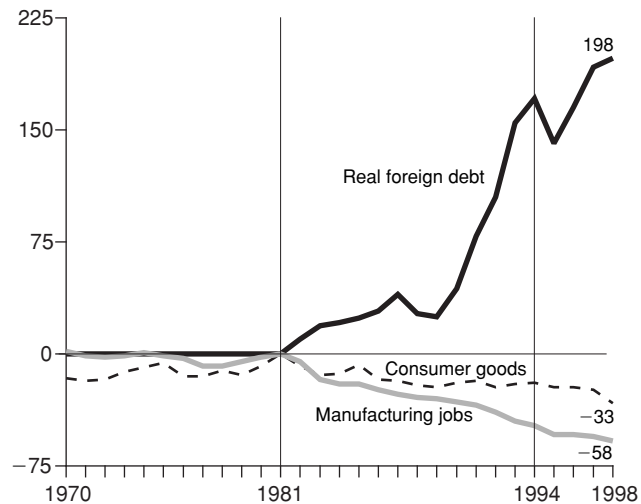
- *Grupo Tribasa S.A.*, Mexico's second-largest construction firm, could not make a \$26 million payment on a \$150 million bond in March. Over the months since, the company has tried to sell stock in order to reorganize its debt.

- *Altos Hornos de Mexico S.A.*, the country's largest steelmaker, announced in April that it could not make a \$39 million loan payment due then. Reportedly, it has a debt bur-

FIGURE 11

Mexico: a typical collapse function

(index 1981=0)

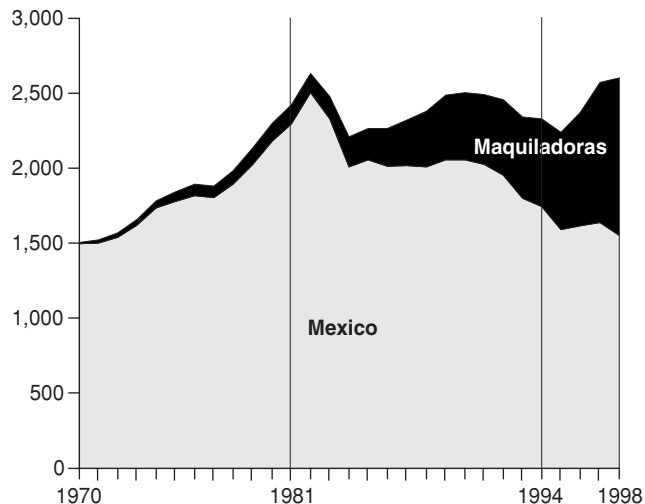


Sources: UN; FAO; ECLAC; World Bank; INEGI, Banxico, CONAPO, SEMIP, SARH, SHCP, SECOFI (Mexico); *EIR*.

FIGURE 12

Mexico: real employment in manufacturing

(thousands)



Sources: INEGI (Mexico); *EIR*.

den of \$1.8 billion.

Argentina: As of the first quarter of 1999 compared to same time in 1998, automotive manufacturing jobs were down by 50%, and overall industrial employment down by 9.5%. Official unemployment in May was 15%. As of May, food consumption had dropped 15% from a year earlier.

Brazil: For the same period, in São Paulo—the industrial heartland—electronic sector employment fell by 38%, and overall industrial employment was down 10.9%. The most recent figures put São Paulo’s official unemployment rate at 20.3%.

Venezuela: The sharpest drop of all was in Venezuela, where from December 1998 through the first quarter of 1999, industrial activity fell by 20%. As of April, the official unemployment rate was 20%. From April 1998 to April 1999, food consumption has dropped by 12%.

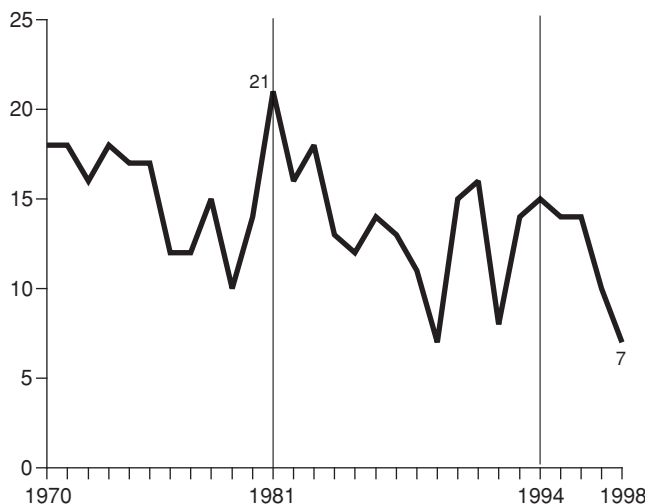
Colombia: Industrial activity was down 20% for the same time period. As of March, the official unemployment rate was 19.5%.

Peru: From February 1998 to February 1999, manufacturing activity fell by 11.4%. Construction activity fell 14.8% just from January to May 1999. The largest fishing concern in Peru, Pesquera Austral, saw the value of its stock plummet by 40.6% in mid-July, in response to rumors that it would not be able to meet debt payments on bonds it had issued. Pesquera Hayduk and Sipesa, the next-largest fishing companies after Austral, are in the same boat. Austral, the largest exporter of fishmeal—whose international price has plummeted—had multi-millions in losses the first half of this year. Fishing

FIGURE 13

Mexico: bean production

(kilograms per capita)



Sources: FAO; SARH, INEGI, Banxico (Mexico); *EIR*.

Industry leader Manuel Sotomayor says the industry debt is just “unpayable.”

The consequence of this, is sudden impoverishment, and unbearable hardship for millions of people. An upcoming *EIR Feature* will cover in detail, the scope of this Ibero-American collapse.