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Peter F. Drucker

THE CHANGED WORLD ECONOMY

The talk today is of the “changing world economy.” I wish to argue that the world economy is not “changing”; it has *already changed*—in its foundations and in its structure—and in all probability the change is irreversible.

Within the last decade or so, three fundamental changes have occurred in the very fabric of the world economy:

- The primary-products economy has come “uncoupled” from the industrial economy.
- In the industrial economy itself, production has come “uncoupled” from employment.
- Capital movements rather than trade (in both goods and services) have become the driving force of the world economy. The two have not quite come uncoupled, but the link has become loose, and worse, unpredictable.

These changes are permanent rather than cyclical. We may never understand what caused them—the causes of economic change are rarely simple. It may be a long time before economic theorists accept that there have been fundamental changes, and longer still before they adapt their theories to account for them. Above all, they will surely be most reluctant to accept that it is the world economy in control, rather than the macroeconomics of the nation-state on which most economic theory still exclusively focuses. Yet this is the clear lesson of the success stories of the last 20 years—of Japan and South Korea; of West Germany (actually a more impressive though far less flamboyant example than Japan); and of the one great success within the United States, the turnaround and rapid rise of an industrial New England, which only 20 years ago was widely considered moribund.

Practitioners, whether in government or in business, cannot wait until there is a new theory. They have to act. And their actions will be more likely to succeed the more they are based on the new realities of a changed world economy.

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II

First, consider the primary-products economy. The collapse of non-oil commodity prices began in 1977 and has continued, interrupted only once (right after the 1979 petroleum panic), by a speculative burst that lasted less than six months; it was followed by the fastest drop in commodity prices ever registered. By early 1986 raw material prices were at their lowest levels in recorded history in relation to the prices of manufactured goods and services—in general as low as at the depths of the Great Depression, and in some cases (e.g., lead and copper) lower than their 1932 levels.¹

This collapse of prices and the slowdown of demand stand in startling contrast to what had been confidently predicted. Ten years ago the Club of Rome declared that desperate shortages for *all* raw materials were an absolute certainty by the year 1985. In 1980 the Carter Administration's *Global 2000 Report to the President: Entering the Twenty-First Century* concluded that world demand for food would increase steadily for at least 20 years; that worldwide food production would fall except in developed countries; and that real food prices would double. This forecast helps to explain why American farmers bought up all available farmland, thus loading on themselves the debt burden that now so threatens them.

Contrary to all these expectations, global agricultural output actually rose almost one-third between 1972 and 1985 to reach an all-time high. It rose the fastest in less-developed countries. Similarly, production of practically all forest products, metals and minerals has gone up between 20 and 35 percent in the last ten years—again with the greatest increases in less-developed countries. There is not the slightest reason to believe that the growth rates will slacken, despite the collapse of commodity prices. Indeed, as far as farm products are concerned, the biggest increase—at an almost exponential rate of growth—may still be ahead.²

Perhaps even more amazing than the contrast between such predictions and what has happened is that the collapse in the

¹ When the price of petroleum dropped to \$15 a barrel in February 1986, it was actually below its 1933 price (adjusted for the change in the purchasing power of the dollar). It was still, however, substantially higher than its all-time low in 1972–73, which in 1986 dollars amounted to \$7–\$8 a barrel.

² On this see two quite different discussions by Dennis Avery, "U.S. Farm Dilemma: The Global Bad News Is Wrong," *Science*, Oct. 25, 1985; and Barbara Insel, "A World Awash in Grain," *Foreign Affairs*, Spring 1985.

raw materials economy seems to have had almost no impact on the world industrial economy. If there was one thing considered "proven" beyond doubt in business cycle theory, it is that a sharp and prolonged drop in raw material prices inevitably, and within 18 to 30 months, brings on a worldwide depression in the industrial economy.³ While the industrial economy of the world today is not "normal" by any definition of the term, it is surely not in a depression. Indeed, industrial production in the developed non-communist countries has continued to grow steadily, albeit at a somewhat slower rate in Western Europe.

Of course, a depression in the industrial economy may only have been postponed and may still be triggered by a banking crisis caused by massive defaults on the part of commodity-producing debtors, whether in the Third World or in Iowa. But for almost ten years the industrial world has run along as though there were no raw material crisis at all. The only explanation is that for the developed countries—excepting only the Soviet Union—the primary-products sector has become marginal where before it had always been central.

In the late 1920s, before the Great Depression, farmers still constituted nearly one-third of the U.S. population and farm income accounted for almost a quarter of the gross national product. Today they account for less than five percent of population and even less of GNP. Even adding the contribution that foreign raw material and farm producers make to the American economy through their purchases of American industrial goods, the total contribution of the raw material and food producing economies of the world to the American GNP is, at most, one-eighth. In most other developed countries, the share of the raw materials sector is even lower. Only in the Soviet Union is the farm still a major employer, with almost a quarter of the labor force working on the land.

The raw material economy has thus come uncoupled from the industrial economy. This is a major structural change in the world economy, with tremendous implications for economic and social policy as well as economic theory, in developed and developing countries alike.

For example, if the ratio between the prices of manufactured

³The business cycle theory was developed just before World War I by the Russian mathematical economist, Nikolai Kondratieff, who made comprehensive studies of raw material price cycles and their impacts all the way back to 1797.

goods and the prices of non-oil primary products (that is, foods, forest products, metals and minerals) had been the same in 1985 as it had been in 1973, the 1985 U.S. trade deficit might have been a full one-third less—\$100 billion as against an actual \$150 billion. Even the U.S. trade deficit with Japan might have been almost one-third lower, some \$35 billion as against \$50 billion. American farm exports would have bought almost twice as much. And industrial exports to a major U.S. customer, Latin America, would have held; their near-collapse alone accounts for a full one-sixth of the deterioration in U.S. foreign trade over the past five years. If primary-product prices had not collapsed, America's balance of payments might even have shown a substantial surplus.

Conversely, Japan's trade surplus with the world might have been a full 20 percent lower. And Brazil in the last few years would have had an export surplus almost 50 percent higher than its current level. Brazil would then have had little difficulty meeting the interest on its foreign debt and would not have had to endanger its economic growth by drastically curtailing imports as it did. Altogether, if raw material prices in relationship to manufactured goods prices had remained at the 1973 or even the 1979 level, there would be no crisis for most debtor countries, especially in Latin America.⁴

III

What accounts for this change?

Demand for food has actually grown almost as fast as the Club of Rome and the *Global 2000 Report* anticipated. But the supply has grown much faster; it not only has kept pace with population growth, it has steadily outrun it. One cause of this, paradoxically, is surely the fear of worldwide food shortages, if not world famine, which resulted in tremendous efforts to increase food output. The United States led the parade with a farm policy of subsidizing increased food production. The European Economic Community followed suit, and even more successfully. The greatest increases, both in absolute and in relative terms, however, have been in developing countries: in India, in post-Mao China and in the rice-growing countries of Southeast Asia.

⁴ These conclusions are based on static analysis, which presumes that which products are bought and sold is not affected by changes in price. This is of course unrealistic, but the flaw should not materially affect the conclusions.

And there is also the tremendous cut in waste. In the 1950s, up to 80 percent of the grain harvest of India fed rats and insects rather than human beings. Today in most parts of India the wastage is down to 20 percent. This is largely the result of unspectacular but effective "infrastructure innovations" such as small concrete storage bins, insecticides and three-wheeled motorized carts that take the harvest straight to a processing plant instead of letting it sit in the open for weeks.

It is not fanciful to expect that the true "revolution" on the farm is still ahead. Vast tracts of land that hitherto were practically barren are being made fertile, either through new methods of cultivation or through adding trace minerals to the soil. The sour clays of the Brazilian highlands or the aluminum-contaminated soils of neighboring Peru, for example, which never produced anything before, now produce substantial quantities of high-quality rice. Even greater advances have been registered in biotechnology, both in preventing diseases of plants and animals and in increasing yields.

In other words, just as the population growth of the world is slowing down quite dramatically in many regions, food production is likely to increase sharply.

Import markets for food have all but disappeared. As a result of its agricultural drive, Western Europe has become a substantial food exporter plagued increasingly by unsalable surpluses of all kinds of foods, from dairy products to wine, from wheat to beef. China, some observers predict, will have become a food exporter by the year 2000. India is about at that stage, especially with wheat and coarse grains. Of all major non-communist countries only Japan is still a substantial food importer, buying abroad about one-third of its food needs. Today most of this comes from the United States. Within five or ten years, however, South Korea, Thailand and Indonesia—low-cost producers that are fast increasing food output—are likely to try to become Japan's major suppliers.

The only remaining major food buyer on the world market may then be the Soviet Union—and its food needs are likely to grow.⁵ However, the food surpluses in the world are so large—maybe five to eight times what the Soviet Union would ever need to buy—that its food needs are not by themselves enough to put upward pressure on world prices. On the con-

⁵ Although the African famine looms large in our consciousness, the total population of the affected areas is far too small to make any dent in world food surpluses.

trary, the competition for access to the Soviet market among the surplus producers—the United States, Europe, Argentina, Australia, New Zealand (and probably India within a few years)—is already so intense as to depress world food prices.

For practically all non-farm commodities, whether forest products, minerals or metals, world demand is shrinking—in sharp contrast to what the Club of Rome so confidently predicted. Indeed, the amount of raw material needed for a given unit of economic output has been dropping for the entire century, except in wartime. A recent study by the International Monetary Fund calculates the decline as one and one-quarter percent a year (compounded) since 1900.⁶ This would mean that the amount of industrial raw materials needed for one unit of industrial production is now no more than two-fifths of what it was in 1900. And the decline is accelerating. The Japanese experience is particularly striking. In 1984, for every unit of industrial production, Japan consumed only 60 percent of the raw materials consumed for the same volume of industrial production in 1973, 11 years earlier.

Why this decline in demand? It is not that industrial production is fading in importance as the service sector grows—a common myth for which there is not the slightest evidence. What is happening is much more significant. Industrial production is steadily switching away from heavily material-intensive products and processes. One of the reasons for this is the new high-technology industries. The raw materials in a semiconductor microchip account for one to three percent of total production cost; in an automobile their share is 40 percent, and in pots and pans 60 percent. But also in older industries the same scaling down of raw material needs goes on, and with respect to old products as well as new ones. Fifty to 100 pounds of fiberglass cable transmit as many telephone messages as does one ton of copper wire.

This steady drop in the raw material intensity of manufacturing processes and manufacturing products extends to energy as well, and especially to petroleum. To produce 100 pounds of fiberglass cable requires no more than five percent of the energy needed to produce one ton of copper wire. Similarly, plastics, which are increasingly replacing steel in

⁶ David Sapsford, *Real Primary Commodity Prices: An Analysis of Long-Run Movements*, International Monetary Fund Internal Memorandum, May 17, 1985, (unpublished).

automobile bodies, represent a raw material cost, including energy, of less than half that of steel.

Thus it is quite unlikely that raw material prices will ever rise substantially as compared to the prices of manufactured goods (or high-knowledge services such as information, education or health care) except in the event of a major prolonged war.

One implication of this sharp shift in the terms of trade of primary products concerns the developed countries, both major raw material exporters like the United States and major raw material importing countries such as Japan. For two centuries the United States has made maintenance of open markets for its farm products and raw materials central to its international trade policy. This is what it has always meant by an "open world economy" and by "free trade."

Does this still make sense, or does the United States instead have to accept that foreign markets for its foodstuffs and raw materials are in a long-term and irreversible decline? Conversely, does it still make sense for Japan to base its international economic policy on the need to earn enough foreign exchange to pay for imports of raw materials and foodstuffs? Since Japan opened to the outside world 120 years ago, preoccupation—amounting almost to a national obsession—with its dependence on raw material and food imports has been the driving force of Japan's policy, and not in economics alone. Now Japan might well start out with the assumption—a far more realistic one in today's world—that foodstuffs and raw materials are in permanent oversupply.

Taken to their logical conclusion, these developments might mean that some variant of the traditional Japanese policy—highly mercantilist with a strong de-emphasis of domestic consumption in favor of an equally strong emphasis on capital formation, and protection of infant industries—might suit the United States better than its own tradition. The Japanese might be better served by some variant of America's traditional policies, especially a shifting from favoring savings and capital formation to favoring consumption. Is such a radical break with more than a century of political convictions and commitments likely? From now on the fundamentals of economic policy are certain to come under increasing criticism in these two countries—and in all other developed countries as well.

These fundamentals will, moreover, come under the increasingly intense scrutiny of major Third World nations. For if

primary products are becoming of marginal importance to the economies of the developed world, traditional development theories and policies are losing their foundations.⁷ They are based on the assumption—historically a perfectly valid one—that developing countries pay for imports of capital goods by exporting primary materials—farm and forest products, minerals, metals. All development theories, however much they differ otherwise, further assume that raw material purchases by the industrially developed countries must rise at least as fast as industrial production in these countries. This in turn implies that, over any extended period of time, any raw material producer becomes a better credit risk and shows a more favorable balance of trade. These premises have become highly doubtful. On what foundation, then, can economic development be based, especially in countries that do not have a large enough population to develop an industrial economy based on the home market? As we shall presently see, these countries can no longer base their economic development on low labor costs.

IV

The second major change in the world economy is the uncoupling of manufacturing production from manufacturing employment. Increased manufacturing production in developed countries has actually come to mean *decreasing* blue-collar employment. As a consequence, labor costs are becoming less and less important as a “comparative cost” and as a factor in competition.

There is a great deal of talk these days about the “de-industrialization” of America. In fact, manufacturing production has risen steadily in absolute volume and has remained unchanged as a percentage of the total economy. Since the end of the Korean War, that is, for more than 30 years, it has held steady at 23–24 percent of America’s total GNP. It has similarly remained at its traditional level in all of the other major industrial countries.

It is not even true that American industry is doing poorly as an exporter. To be sure, the United States is importing from

⁷ This was asserted as early as 1950 by the South American economist Raúl Prebisch in *The Economic Development of Latin America and its Principal Problems* (E/CN.12/89/REV.1), United Nations Economic Commission for Latin America. But then no one, including myself, believed him.

both Japan and Germany many more manufactured goods than ever before. But it is also exporting more, despite the heavy disadvantages of an expensive dollar, increasing labor costs and the near-collapse of a major industrial market, Latin America. In 1984—the year the dollar soared—exports of American manufactured goods rose by 8.3 percent; and they went up again in 1985. The share of U.S.-manufactured exports in world exports was 17 percent in 1978. By 1985 it had risen to 20 percent—while West Germany accounted for 18 percent and Japan 16. The three countries together thus account for more than half of the total.

Thus it is not the American economy that is being “de-industrialized.” It is the American labor force.

Between 1973 and 1985, manufacturing production (measured in constant dollars) in the United States rose by almost 40 percent. Yet manufacturing employment during that period went down steadily. There are now five million fewer people employed in blue-collar work in American manufacturing industry than there were in 1975.

Yet in the last 12 years total employment in the United States grew faster than at any time in the peacetime history of any country—from 82 to 110 million between 1973 and 1985—that is, by a full one-third. The entire growth, however, was in non-manufacturing, and especially in non-blue-collar jobs.

The trend itself is not new. In the 1920s one out of every three Americans in the labor force was a blue-collar worker in manufacturing. In the 1950s the figure was one in four. It now is down to one in every six—and dropping. While the trend has been running for a long time, it has lately accelerated to the point where—in peacetime at least—no increase in manufacturing production, no matter how large, is likely to reverse the long-term decline in the number of blue-collar jobs in manufacturing or in their proportion of the labor force.

This trend is the same in all developed countries, and is, indeed, even more pronounced in Japan. It is therefore highly probable that in 25 years developed countries such as the United States and Japan will employ no larger a proportion of the labor force in manufacturing than developed countries now employ in farming—at most, ten percent. Today the United States employs around 18 million people in blue-collar jobs in manufacturing industries. By 2010, the number is likely to be no more than 12 million. In some major industries the drop will be even sharper. It is quite unrealistic, for instance, to

expect that the American automobile industry will employ more than one-third of its present blue-collar force 25 years hence, even though production might be 50 percent higher.

If a company, an industry or a country does not in the next quarter century sharply increase manufacturing production and at the same time sharply reduce the blue-collar work force, it cannot hope to remain competitive—or even to remain “developed.” It would decline fairly fast. Britain has been in industrial decline for the last 25 years, largely because the number of blue-collar workers per unit of manufacturing production went down far more slowly than in all other non-communist developed countries. Even so, Britain has the highest unemployment rate among non-communist developed countries—more than 13 percent.

v

The British example indicates a new and critical economic equation: a country, an industry or a company that puts the preservation of blue-collar manufacturing jobs ahead of international competitiveness (which implies a steady shrinkage of such jobs) will soon have neither production nor jobs. The attempt to preserve such blue-collar jobs is actually a prescription for unemployment.

So far, this concept has achieved broad national acceptance only in Japan.⁸ Indeed, Japanese planners, whether in government or private business, start out with the assumption of a doubling of production within 15 or 20 years based on a cut in blue-collar employment of 25 to 40 percent. A good many large American companies such as IBM, General Electric and the big automobile companies have similar forecasts. Implicit in this is the conclusion that a country will have less overall unemployment the faster it shrinks blue-collar employment in manufacturing.

This is not a conclusion that American politicians, labor leaders or indeed the general public can easily understand or accept. What confuses the issue even more is that the United States is experiencing several separate and different shifts in the manufacturing economy. One is the acceleration of the substitution of knowledge and capital for manual labor. Where we spoke of mechanization a few decades ago, we now speak

⁸ The Japanese government, for example, sponsors a finance company that makes long-term, low interest loans to small manufacturers to enable them to automate rapidly.

of "robotization" or "automation." This is actually more a change in terminology than a change in reality. When Henry Ford introduced the assembly line in 1909, he cut the number of man-hours required to produce a motor car by some 80 percent in two or three years—far more than anyone expects to result from even the most complete robotization. But there is no doubt that we are facing a new, sharp acceleration in the replacement of manual workers by machines—that is, by the products of knowledge.

A second development—and in the long run this may be even more important—is the shift from industries that were primarily labor-intensive to industries that, from the beginning, are knowledge-intensive. The manufacturing costs of the semiconductor microchip are about 70 percent knowledge—that is, research, development and testing—and no more than 12 percent labor. Similarly with prescription drugs, labor represents no more than 15 percent, with knowledge representing almost 50 percent. By contrast, in the most fully robotized automobile plant labor would still account for 20 or 25 percent of the costs.

Another perplexing development in manufacturing is the reversal of the dynamics of size. Since the early years of this century, the trend in all developed countries has been toward ever larger manufacturing plants. The economies of scale greatly favored them. Perhaps equally important, what one might call the "economies of management" favored them. Until recently, modern management techniques seemed applicable only to fairly large units.

This has been reversed with a vengeance over the last 15 to 20 years. The entire shrinkage in manufacturing jobs in the United States has occurred in large companies, beginning with the giants in steel and automobiles. Small and especially medium-sized manufacturers have either held their own or actually added employees. In respect to market standing, exports and profitability too, smaller and middle-sized businesses have done remarkably better than big ones. The reversal of the dynamics of size is occurring in the other developed countries as well, even in Japan where bigger was always better and biggest meant best. The trend has reversed itself even in old industries. The most profitable automobile company these last years has not been one of the giants, but a medium-sized manufacturer in Germany—BMW. The only profitable steel companies, whether in the United States, Sweden or Japan,

have been medium-sized makers of specialty products such as oil drilling pipe.

In part, especially in the United States, this is a result of a resurgence of entrepreneurship.⁹ But perhaps equally important, we have learned in the last 30 years how to manage the small and medium-sized enterprise to the point where the advantages of smaller size, e.g., ease of communications and nearness to market and customer, increasingly outweigh what had been forbidding management limitations. Thus in the United States, but increasingly in the other leading manufacturing nations such as Japan and West Germany as well, the dynamism in the economy has shifted from the very big companies that dominated the world's industrial economy for 30 years after World War II to companies that, while much smaller, are professionally managed and largely publicly financed.

VI

Two distinct kinds of "manufacturing industry" are emerging. One is material-based, represented by the industries that provided economic growth in the first three-quarters of this century. The other is information- and knowledge-based: pharmaceuticals, telecommunications, analytical instruments and information processing such as computers. It is largely the information-based manufacturing industries that are growing.

These two groups differ not only in their economic characteristics but especially in their position in the international economy. The products of material-based industries have to be exported or imported as "products." They appear in the balance of trade. The products of information-based industries can be exported or imported both as "products" and as "services," which may not appear accurately in the overall trade balance.

An old example is the printed book. For one major scientific publishing company, "foreign earnings" account for two-thirds of total revenues. Yet the company exports few, if any, actual books—books are heavy. It sells "rights," and the "product" is produced abroad. Similarly, the most profitable computer "export sales" may actually show up in trade statistics as an "import." This is the fee some of the world's leading banks,

⁹ On this see my book, *Innovation and Entrepreneurship: Practice and Principles*, New York: Harper & Row, 1985.

multinationals and Japanese trading companies get for processing in their home office data arriving electronically from their branches and customers around the world.

In all developed countries, "knowledge" workers have already become the center of gravity of the labor force. Even in manufacturing they will outnumber blue-collar workers within ten years. Exporting knowledge so that it produces license income, service fees and royalties may actually create substantially more jobs than exporting goods.

This in turn requires—as official Washington seems to have realized—far greater emphasis in trade policy on "invisible trade" and on abolishing the barriers to the trade in services. Traditionally, economists have treated invisible trade as a step-child, if they noted it at all. Increasingly, it will become central. Within 20 years major developed countries may find that their income from invisible trade is larger than their income from exports.

Another implication of the "uncoupling" of manufacturing production from manufacturing employment is, however, that the choice between an industrial policy that favors industrial *production* and one that favors industrial *employment* is going to be a singularly contentious political issue for the rest of this century. Historically these have always been considered two sides of the same coin. From now on the two will increasingly pull in different directions; they are indeed already becoming alternatives, if not incompatible.

Benign neglect—the policy of the Reagan Administration these last few years—may be the best policy one can hope for, and the only one with a chance of success. It is probably not an accident that the United States has, after Japan, by far the lowest unemployment rate of any industrially developed country. Still, there is surely need also for systematic efforts to retrain and to place redundant blue-collar workers—something no one as yet knows how to do successfully.

Finally, low labor costs are likely to become less of an advantage in international trade simply because in the developed countries they are going to account for less of total costs. Moreover, the total costs of automated processes are lower than even those of traditional plants with low labor costs; this is mainly because automation eliminates the hidden but high costs of "not working," such as the expense of poor quality and rejects, and the costs of shutting down the machinery to change from one model of a product to another. Consider two

automated American producers of televisions, Motorola and RCA. Both were almost driven out of the market by imports from countries with much lower labor costs. Both subsequently automated, with the result that these American-made products now successfully compete with foreign imports. Similarly, some highly automated textile mills in the Carolinas can underbid imports from countries with very low labor costs such as Thailand. On the other hand, although some American semiconductor companies have lower labor costs because they do the labor-intensive work offshore, e.g., in West Africa, they are still the high-cost producers and easily underbid by the heavily automated Japanese.

The cost of capital will thus become increasingly important in international competition. And this is where, in the last ten years, the United States has become the highest-cost country—and Japan the lowest. A reversal of the U.S. policy of high interest rates and costly equity capital should thus be a priority for American decision-makers. This demands that reduction of the government deficit, rather than high interest rates, becomes the first defense against inflation.

For developed countries, especially the United States, the steady downgrading of labor costs as a major competitive factor could be a positive development. For the Third World, especially rapidly industrializing countries such as Brazil, South Korea or Mexico, it is, however, bad news.

In the rapid industrialization of the nineteenth century, one country, Japan, developed by exporting raw materials, mainly silk and tea, at steadily rising prices. Another, Germany, developed by leap-frogging into the “high-tech” industries of its time, mainly electricity, chemicals and optics. A third, the United States, did both. Both routes are blocked for today’s rapidly industrializing countries—the first because of the deterioration of the terms of trade for primary products, the second because it requires an infrastructure of knowledge and education far beyond the reach of a poor country (although South Korea is reaching for it). Competition based on lower labor costs seemed to be the only alternative; is this also going to be blocked?

VII

The third major change that has occurred in the world economy is the emergence of the “symbol” economy—capital movements, exchange rates and credit flows—as the flywheel

of the world economy, in place of the “real” economy—the flow of goods and services. The two economies seem to be operating increasingly independently. This is both the most visible and the least understood of the changes.

World trade in goods is larger, much larger, than it has ever been before. And so is the “invisible trade,” the trade in services. Together, the two amount to around \$2.5 trillion to \$3 trillion a year. But the London Eurodollar market, in which the world’s financial institutions borrow from and lend to each other, turns over \$300 billion each working day, or \$75 trillion a year, a volume at least 25 times that of world trade.¹⁰

In addition, there are the foreign exchange transactions in the world’s main money centers, in which one currency is traded against another. These run around \$150 billion a day, or about \$35 trillion a year—12 times the worldwide trade in goods and services.

Of course, many of these Eurodollars, yen and Swiss francs are just being moved from one pocket to another and may be counted more than once. A massive discrepancy still exists, and there is only one conclusion: capital movements unconnected to trade—and indeed largely independent of it—greatly exceed trade finance.

There is no one explanation for this explosion of international—or more accurately, transnational—money flows. The shift from fixed to floating exchange rates in 1971 may have given an initial impetus (though, ironically, it was meant to do the exact opposite) by inviting currency speculation. The surge in liquid funds flowing to petroleum producers after the two oil shocks of 1973 and 1979 was surely a major factor.

But there can be little doubt that the U.S. government deficit also plays a big role. The American budget has become a financial “black hole,” sucking in liquid funds from all over the world, making the United States the world’s major debtor country.¹¹ Indeed, it can be argued that it is the budget deficit that underlies the American trade and payments deficit. A trade and payments deficit is, in effect, a loan from the seller of goods and services to the buyer, that is, to the United States.

¹⁰ A Eurodollar is a U.S. dollar held outside the United States.

¹¹ This is cogently argued by Stephen Marris, for almost 30 years economic adviser to the Organization for Economic Cooperation and Development (OECD), in his *Deficits and the Dollar: The World Economy at Risk*, Washington: Institute of International Economics, December 1985.

Without it Washington could not finance its budget deficit, at least not without the risk of explosive inflation.

The way major countries have learned to use the international economy to avoid tackling disagreeable domestic problems is unprecedented: the United States has used high interest rates to attract foreign capital and avoid confronting its domestic deficit; the Japanese have pushed exports to maintain employment despite a sluggish domestic economy. This politicization of the international economy is surely also a factor in the extreme volatility and instability of capital flows and exchange rates.

Whichever of these causes is judged the most important, together they have produced a basic change: in the world economy of today, the "real" economy of goods and services and the "symbol" economy of money, credit and capital are no longer bound tightly to each other; they are, indeed, moving further and further apart.

Traditional international economic theory is still neoclassical, holding that trade in goods and services determines international capital flows and foreign exchange rates. Capital flows and foreign exchange rates since the first half of the 1970s have, however, moved quite independently of foreign trade, and indeed (e.g., in the rise of the dollar in 1984–85) have run counter to it.

But the world economy also does not fit the Keynesian model in which the "symbol" economy determines the "real" economy. The relationship between the turbulences in the world economy and the various domestic economies has become quite obscure. Despite its unprecedented trade deficit, the United States has had no deflation and has barely been able to keep inflation in check; it also has the lowest unemployment rate of any major industrial country except Japan, lower than that of West Germany, whose exports of manufactured goods and trade surpluses have been growing as fast as those of Japan. Conversely, despite the exponential growth of Japanese exports and an unprecedented Japanese trade surplus, the Japanese domestic economy is not booming but has remained remarkably sluggish and is not generating any new jobs.

Economists assume that the "real" economy and the "symbol" economy will come together again. They do disagree, however—and quite sharply—as to whether they will do so in a "soft landing" or in a head-on collision.

The "soft-landing" scenario—the Reagan Administration is

committed to it, as are the governments of most of the other developed countries—expects the U.S. government deficit and the U.S. trade deficit to go down together until both attain surplus, or at least balance, sometime in the early 1990s. Presumably both capital flows and exchange rates will then stabilize, with production and employment high and inflation low in major developed countries.

In sharp contrast to this are the “hard-landing” scenarios.¹² With every deficit year the indebtedness of the U.S. government goes up, and with it the interest charges on the U.S. budget, which in turn raises the deficit even further. Sooner or later, the argument goes, foreign confidence in America and the American dollar will be undermined—some observers consider this practically imminent. Foreigners would stop lending money to the United States and, indeed, try to convert their dollars into other currencies. The resulting “flight from the dollar” would bring the dollar’s exchange rates crashing down, and also create an extreme credit crunch, if not a “liquidity crisis” in the United States. The only question is whether the result for the United States would be a deflationary depression, a renewed outbreak of severe inflation or, the most dreaded affliction, “stagflation”—a deflationary, stagnant economy combined with an inflationary currency.

There is, however, a totally different “hard-landing” scenario, one in which Japan, not the United States, faces an economic crisis. For the first time in peacetime history the major debtor, the United States, owes its foreign debt in its own currency. To get out of this debt it does not need to repudiate it, declare a moratorium, or negotiate a “roll-over.” All it has to do is devalue its currency and the foreign creditor has effectively been expropriated.

For “foreign creditor,” read Japan. The Japanese by now hold about half of the dollars the United States owes to foreigners. In addition, practically all of their other claims on the outside world are in dollars, largely because the Japanese have resisted all attempts to make the yen an international trading currency lest the government lose control over it. Altogether, Japanese banks now hold more international assets than do the banks of any other country, including the United States. And practically all these assets are in U.S. dollars—\$640 billion of

¹² Stephen Marris, *Deficits and the Dollar*, cited above, gives the clearest and most persuasive presentation of the hard-landing scenarios.

them. A devaluation of the U.S. dollar thus would fall most heavily on the Japanese.

The repercussions for Japan extend deep into its trade and domestic economy. By far the largest part of Japan's exports goes to the United States. If there is a "hard landing," the United States might well turn protectionist almost overnight; it is unlikely that Americans would let in large volumes of imported goods were the unemployment rate to soar. But this would immediately cause severe unemployment in Tokyo and Nagoya and Hiroshima, and might indeed set off a true depression in Japan.

There is still another "hard-landing" scenario. In this version neither the United States, nor Japan, nor the industrial economies altogether, experience the "hard landing"; it would hit the already depressed producers of primary products.

Practically all primary materials are traded in dollars, and their prices might not go up at all should the dollar be devalued (they actually went down when the dollar plunged by 30 percent between summer 1985 and February 1986). Thus Japan may be practically unaffected by a dollar devaluation; Japan needs dollar balances only to pay for primary-product imports, as it buys little else on the outside and has no foreign debt. The United States, too, may not suffer, and may even benefit as its industrial exports become more competitive. But while the primary producers sell mainly in dollars, they have to pay in other developed nations' currencies for a large part of their industrial imports. The United States, after all, although the world's leading exporter of industrial goods, still accounts for only one-fifth of the total. And the dollar prices of the industrial goods furnished by others—the Germans, the Japanese, the French, the British, and so on—are likely to go up. This might bring about a further drop in the terms of trade for the already depressed primary producers. Some estimates of the possible deterioration go as high as ten percent, which would entail considerable hardship not only for metal mines in South America and Zimbabwe, but also for farmers in Canada, Kansas and Brazil.

One more possible scenario involves no "landings," either "soft" or "hard." What if the economists were wrong and both the American budget deficit and American trade deficit continue, albeit at lower levels than in recent years? This would happen if the outside world's willingness to put its money into the United States were based on other than purely economic

considerations—on their own internal domestic politics, for example, or simply on the desire to escape risks at home that appear to be far worse than a U.S. devaluation.

This is the only scenario that is so far supported by hard facts rather than by theory. Indeed, it is already playing.

The U.S. government talked the dollar down by almost one-third (from a rate of 250 yen to 180 yen to the dollar) between summer 1985 and February 1986—one of the most massive devaluations ever of a major currency, though called a “re-adjustment.” America’s creditors unanimously supported this devaluation and indeed demanded it. More amazing still, they responded by increasing their loans to the United States, and substantially so. International bankers seem to agree that the United States is more creditworthy the more the lender stands to lose by lending to it!

A major reason for this Alice-in-Wonderland attitude is that the biggest U.S. creditors, the Japanese, clearly prefer even very heavy losses on their dollar holdings to domestic unemployment. And without exports to the United States, Japan might have unemployment close to that of Western Europe, nine to eleven percent, and concentrated in the most politically sensitive smokestack industries in which Japan is becoming increasingly vulnerable to competition from newcomers such as South Korea.

Similarly, economic conditions alone will not induce Hong Kong Chinese to withdraw the money they have transferred to American banks in anticipation of Hong Kong’s reversion to Chinese sovereignty in 1997. These deposits amount to billions. The even larger amounts—at least several hundred billion—of “flight capital” from Latin America that have found refuge in the U.S. dollar will also not be lured away by purely economic incentives such as higher interest rates.

The sum needed from the outside to maintain both a huge U.S. budget deficit and a huge U.S. trade deficit would be far too big to make this the most probable scenario. But if political factors are in control, the “symbol” economy is indeed truly “uncoupled” from the “real” economy, at least in the international sphere. Whichever scenario proves right, none promises a return to any kind of “normalcy.”

VIII

From now on exchange rates between major currencies will have to be treated in economic theory and business policy alike as a “comparative-advantage” factor, and a major one.

Economic theory teaches that the comparative-advantage factors of the “real” economy—comparative labor costs and labor productivity, raw material costs, energy costs, transportation costs and the like—determine exchange rates. Practically all businesses base their policies on this notion. Increasingly, however, it is exchange rates that decide how labor costs in country A compare to labor costs in country B. Exchange rates are thus a major “comparative cost” and one totally beyond business control. Any firm exposed to the international economy has to realize that it is in two businesses at the same time. It is both a maker of goods (or a supplier of services) and a “financial” business. It cannot disregard either.

Specifically, the business that sells abroad—whether as an exporter or through a subsidiary—will have to protect itself against three foreign exchange exposures: proceeds from sales, working capital devoted to manufacturing for overseas markets, and investments abroad. This will have to be done whether the business expects the value of its own currency to go up or down. Businesses that buy abroad will have to do likewise. Indeed, even purely domestic businesses that face foreign competition in their home market will have to learn to hedge against the currency in which their main competitors produce. If American businesses had been run this way during the years of the overvalued dollar, from 1982 through 1985, most of the losses in market standing abroad and in foreign earnings might have been prevented. They were management failures, not acts of God. Surely stockholders, but also the public in general, have every right to expect management to do better the next time around.

In respect to government policy there is one conclusion: don't be “clever.” It is tempting to exploit the ambiguity, instability and uncertainty of the world economy to gain short-term advantages and to duck unpopular political decisions. But it does not work. Indeed, disaster is a more likely outcome than success, as all three of the attempts made so far amply indicate.

In the first attempt, the Carter Administration pushed down the U.S. dollar to artificial lows to stimulate the American economy through the promotion of exports. American exports did indeed go up—spectacularly so. But far from stimulating the domestic economy, this depressed it, resulting in simultaneous record unemployment and accelerated inflation—the worst of all possible outcomes.

President Reagan a few years later pushed up interest rates

to stop inflation, and also pushed up the dollar. This did indeed stop inflation. It also triggered massive inflows of capital. But it so overvalued the dollar as to create a surge of foreign imports. As a result, the Reagan policy exposed the most vulnerable of the smokestack industries, such as steel and automobiles, to competition they could not possibly meet. It deprived them of the earnings they needed to modernize themselves. Also, the policy seriously damaged, perhaps irreversibly, the competitive position of American farm products in the world markets, and at the worst possible time. Worse still, his "cleverness" defeated Mr. Reagan's major purpose: the reduction of the U.S. government deficit. Because of the losses to foreign competition, domestic industry did not grow enough to produce higher tax revenues. Yet the easy and almost unlimited availability of foreign money enabled Congress (and the Administration) to postpone again and again action to cut the deficit.

In the third case the Japanese, too, may have been too clever in their attempt to exploit the disjunction between the international "symbol" and "real" economies. Exploiting an undervalued yen, the Japanese have been pushing exports—a policy quite reminiscent of America under the Carter Administration. But the Japanese policy similarly has failed to stimulate the domestic economy; it has been barely growing these last few years despite the export boom. As a result, the Japanese have become dangerously overdependent on one customer, the United States. This has forced them to invest huge sums in American dollars, even though every thoughtful Japanese (including, of course, individuals in the Japanese government and the Japanese central bank) has known all along that these investments would end up being severely devalued.

Surely these three lessons should have taught us that government economic policies will succeed to the extent to which they try to harmonize the needs of the two economies, rather than to the extent to which they try to exploit the disharmony between them. Or to repeat very old wisdom, "in finance don't be clever; be simple and conscientious." I am afraid this is advice that governments are not likely to heed soon.

IX

It is much too early to guess what the world economy of tomorrow will look like. Will major countries, for instance,

succumb to traditional fears and retreat into protectionism? Or will they see a changed world economy as an opportunity?

Some parts of the main agenda, however, are fairly clear by now. Rapidly industrializing countries like Mexico or Brazil will need to formulate new development concepts and policies. They can no longer hope to finance their development by raw material exports, e.g., Mexican oil. It is also becoming unrealistic for them to believe that their low labor costs will enable them to export large quantities of finished goods to developed countries—something the Brazilians, for instance, still expect. They would do much better to go into “production sharing,” that is, to use their labor advantage to become subcontractors to developed-country manufacturers for highly labor-intensive work that cannot be automated—some assembly operations, for instance, or parts and components needed only in relatively small quantities. Developed countries no longer have the labor to do such work, which even with the most thorough automation will still account for 15 to 20 percent of manufacturing work.

Such production sharing is, of course, how Singapore, Hong Kong and Taiwan bootstrapped their development. Yet in Latin America production sharing is still politically unacceptable and, indeed, anathema. Mexico, for instance, has been deeply committed since its beginnings as a modern nation in the early years of this century to making its economy less dependent on, and less integrated with, that of its big neighbor to the north. That this policy has been a total failure for 80 years has only strengthened its emotional and political appeal.

Even if production sharing is implemented to the fullest, it would not by itself provide enough income to fuel development, especially of countries so much larger than the Chinese “city-states.” We thus need a new model and new policies.

Can we learn something from India? Everyone knows of India’s problems—and they are legion. Few people seem to realize, however, that since independence India has done a better development job than almost any other Third World country: it has enjoyed the fastest increase in farm production and farm yields; a growth rate in manufacturing production equal to that of Brazil, and perhaps even of South Korea (India now has a bigger industrial economy than any but a handful of developed countries); the emergence of a large and highly entrepreneurial middle class; and, arguably, the greatest achievement in providing schooling and health care in the

villages. Yet the Indians followed none of the established models. They did not, like Stalin, Mao and so many leaders of newly independent African nations, despoil the peasants to produce capital for industrial development. They did not export raw materials. And they did not export the products of cheap labor. Instead, since Nehru's death in 1964, India has followed a policy of strengthening agriculture and encouraging consumer goods production. India and its achievement are bound to get far more attention in the future.

The developed countries, too, need to think through their policies in respect to the Third World—and especially in respect to the “stars” of the Third World, the rapidly industrializing countries. There are some beginnings: the debt proposals recently put forward by Treasury Secretary James A. Baker, or the new lending criteria recently announced by the World Bank for loans to Third World countries, which will be made conditional on a country's overall development policies rather than on the soundness of individual projects. But these proposals are aimed more at correcting past mistakes than at developing new policies.

The other major agenda item is—inevitably—the international monetary system. Since the Bretton Woods Conference in 1944, the world monetary system has been based on the U.S. dollar as the reserve currency. This clearly does not work any more. The reserve-currency country must be willing to subordinate its domestic policies to the needs of the international economy, e.g., risk domestic unemployment to keep currency rates stable. And when it came to the crunch, the United States refused to do so—as Keynes, by the way, predicted 40 years ago.

The stability supposedly supplied by the reserve currency could be established today only if the major trading countries—at a minimum the United States, West Germany and Japan—agreed to coordinate their economic, fiscal and monetary policies, if not to subordinate them to joint (and this would mean supranational) decision-making. Is such a development even conceivable, except perhaps in the event of worldwide financial collapse? The European experience with the far more modest European Currency Unit is not encouraging; so far, no European government has been willing to yield an inch for the sake of the ECU. But what else can be done? Have we come to the end of the 300-year-old attempt to regulate and stabilize money

on which, after all, both the modern nation-state and the international system are largely based?

We are left with one conclusion: economic dynamics have decisively shifted from the national economy to the world economy.

Prevailing economic theory—whether Keynesian, monetarist or supply-side—considers the national economy, especially that of the large developed countries, to be autonomous and the unit of both economic analysis and economic policy. The international economy may be a restraint and a limitation, but it is not central, let alone determining. This “macroeconomic axiom” of the modern economist has become increasingly shaky. The two major subscribers to this axiom, Britain and the United States, have done least well economically in the last 30 years, and have also had the most economic instability.

West Germany and Japan never accepted the “macroeconomic axiom.” Their universities teach it, of course, but their policymakers, both in government and in business, reject it. Instead, both countries all along have based their economic policies on the world economy, have systematically tried to anticipate its trends and exploit its changes as opportunities. Above all, both make the country’s competitive position in the world economy the first priority in their policies—economic, fiscal, monetary, even social—to which domestic considerations are normally subordinated. And these two countries have done far better—economically and socially—than Britain and the United States these last 30 years. In fact, their focus on the world economy and the priority they give it may be the real “secret” of their success.

Similarly the “secret” of successful businesses in the developed world—the Japanese, the German carmakers like Mercedes and BMW, Asea and Erickson in Sweden, IBM and Citibank in the United States, but equally of a host of medium-sized specialists in manufacturing and in all kinds of services—has been that they base their plans and their policies on exploiting the world economy’s changes as opportunities.

From now on any country—but also any business, especially a large one—that wants to prosper will have to accept that it is the world economy that leads and that domestic economic policies will succeed only if they strengthen, or at least do not impair, the country’s international competitive position. This may be the most important—it surely is the most striking—feature of the changed world economy.