Research Department
Federal Reserve
Bank of
San Francisco

March 13, 1981

Weekly Letter

Capital Formation and Competitiveness

Many analysts have cited the slowdown in U.S. productivity growth—and the related slowdown in capital formation—as a major source of the decline in the nation's competitive position in the world marketplace. According to this view, the nation could halt the deterioration in its international competitive position by promoting greater personal savings and hence a higher level of capital formation, so that the ensuing rise in labor productivity would stimulate U.S. exports while reducing its imports. In the process, the productivity gain would alleviate unemployment by preventing the loss of American jobs to foreign workers. In espousing these policies, observers have argued that the U.S. should emulate the performance of Germany and Japan—two countries which (supposedly) have maintained high rates of capital formation, and thus have promoted job creation through enhanced export performance.

But the Japanese and German advantage is not so clear-cut as sometimes believed. In particular, the purported relationship between capital formation and competitiveness has been less robust than claimed. A review of U.S. economic performance relative to Japan and Germany may, therefore, help correct certain misconceptions on this score, and thereby help improve policy formation in the 1980s.

Savings comparisons

Many critics have cited a reduced willingness to save as an important factor behind the deterioration in the U.S. competitive position. Indeed, the U.S. personal-savings rate—the ratio of savings to disposable income—averaged less than 7 percent in the 1970s. In contrast, the German and Japanese savings rates averaged 14 percent and 20 percent, respectively—and in fact increased over the decade, whereas the U.S. rate fell below its historic norm in the last half-decade. Surprisingly, the increases in German and Japanese personal savings rates went hand-in-hand with increases in the labor share of national income. This is surprising because, supposedly, property-income recipients normally save proportionately more than do wage earners.

Critics sometimes attribute this difference in savings behavior to alleged weaknesses in the American character, but there are more obvious economic reasons to account for the difference. One such factor is the tax advantage bestowed on Americans who own, rather than rent, their homes. But in addition, Americans are much more likely to invest in home purchases than their German or Japanese counterparts, simply on grounds of affordability—U.S. homes are priced much lower when measured in relation to lifetime earnings.

Moreover, the U.S. savings rate has actually been quite respectable after adjustment for the capital gains accruing from home-price appreciation. On that basis, the U.S. savings rate remained stable, at more than 13 percent, between 1975 and 1978, whereas the official measure showed a decline over that period, from 8.6 percent to 5.2 percent. Yet while Americans may perceive the appreciation of their homes as part of their personal savings, these "savings" are nonetheless not available for productive investments.

Capital formation and productivity

It should be emphasized that household savings represent only a portion of total private savings available for investment. A more suitable measure is gross private savings, which includes not only personal savings but also retained earnings of corporations plus depreciation of both business and household assets (the latter reflecting mainly depreciation of owner-occupied homes). Between the two decades, gross private savings as a proportion of gross domestic product (GDP) remained fairly stable for all three countries—but at much higher levels for Germany and Japan than for the U.S.

Research Department
Federal Reserve
Bank of
San Francisco
Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, nor of the Board of Governors of the Federal Reserve System.

On the basis of these higher reported savings rates, we would expect that Germany and Japan would outperform the U.S. in terms of capital formation and labor productivity. And indeed, in the past decade, the ratio of gross private fixed capital formation to total output averaged 23 percent in Germany and 25 percent in Japan—well above the U.S. ratio of 15 percent. Reflecting this higher level of capital formation, labor productivity increased at average annual rates of 3.4 percent and 4.5 percent in Germany and Japan, respectively—compared with the U.S. average annual rise of 1.1 percent. (In the manufacturing sector, labor productivity registered average annual increases of 5.2 percent in Germany, 7.4 percent in Japan, and 2.4 percent in the U.S.) Nonetheless, the trend growth rate in the capital/labor ratio fell in all three countries, leading to declines in labor productivity growth. In relative importance, the declines in Germany and Japan stemmed from a business-investment slowdown, whereas the U.S. decline reflected rapid labor-force growth. Between the two decades, the annual average increase in output per worker-hour dropped by 1.0 percentage points in Germany, 5.0 percentage points in Japan, and 0.9 percentage points in the U.S.

The business-investment slowdown in both Germany and Japan reflected a myriad of factors, including an accelerator response of investment to changes in output levels. The diminished growth in economic activity, stemming in part from OPEC price hikes, helped account for the fall-off in investment expenditures in both Germany and Japan during the 1970s. Many would argue, in addition, that enlarged fiscal deficits in all three countries contributed to reduced investment outlays. The ratio of the public-sector borrowing requirement (PSBR) to GNP reached 2.8 percent in Germany, 2.7 percent in the U.S., and more than 9 percent in Japan in the 1970-79 period—considerably above the average of the 1960s in each case. Because of this "crowding out" of private investment, all three countries experienced, in varying degrees, a capital spending slowdown in the 1970s. But there is an alternative argument—fiscal authorities in all three countries simply acted in response to depressed business conditions and slack investment activity during the 1970s. From this perspective, the widening of the public-sector borrowing requirement was a consequence, and not a cause, of reduced investment activity.

Productivity and competitiveness

Whatever the source of the declines in private business investment and labor productivity, there is a clear association between the two. The question that now needs to be addressed is whether or not the lower labor-productivity growth in the U.S., relative to Germany and Japan, has led to reduced international competitiveness. We should note, however, that higher labor-productivity growth and its beneficial effects on competitiveness may be more than offset by higher nominal wage settlements.

In fact, hourly compensation in manufacturing from 1970 to 1979 increased at annual rates of 14.5 percent in Japan and 10.9 percent in Germany, significantly higher than the 8.3 percent recorded in the U.S. over the same period. As a result, labor costs per unit of manufacturing output rose faster in Japan than in either Germany or the U.S., despite the higher productivity growth of Japanese workers (see chart). Any relationship between labor productivity growth and cost competitiveness is almost totally overwhelmed by the more moderate wage demands of American workers compared with their German and Japanese counterparts.

Of course, these cost comparisons implicitly assume that changes in the prices of raw materials are the same across countries. Until recently, the unwillingness of the U.S. to allow the domestic price of oil to rise to the world-market price would have provided domestic firms a competitive edge. But more importantly, these costs are measured in domestic currency units. The depreciation of the dollar against the Japanese and German

currencies during the 1970s should have greatly enhanced the cost competitiveness of American firms in world markets. Between 1970 and 1980, the German mark nearly doubled in value vis-a-vis the dollar, whereas the Japanese yen rose by two-thirds against the American currency, leading to a tripling of German and Japanese unit labor costs, measured in U.S. dollars. This compares with a 66-percent rise in U.S. unit labor costs over the same period (see chart).

Consistent with these movements in costs, the price competitiveness of U.S. manufacturers improved during the 1970s, as measured by the ratio of U.S. to foreign wholesale prices, adjusted for trade-weighted changes in exchange rates. According to this measure, the prices of U.S. manufactured goods in the 1970s fell by 13 percent against foreign-goods prices denominated in U.S. dollars. Partly as a result, the volume of U.S. manufactured exports rose by 86 percent from 1970 to 1979, while import volume increased by 70 percent. Over the same period, Japanese import growth roughly matched export growth, while the volume of German imports rose faster than exports by a difference of 33 percent.

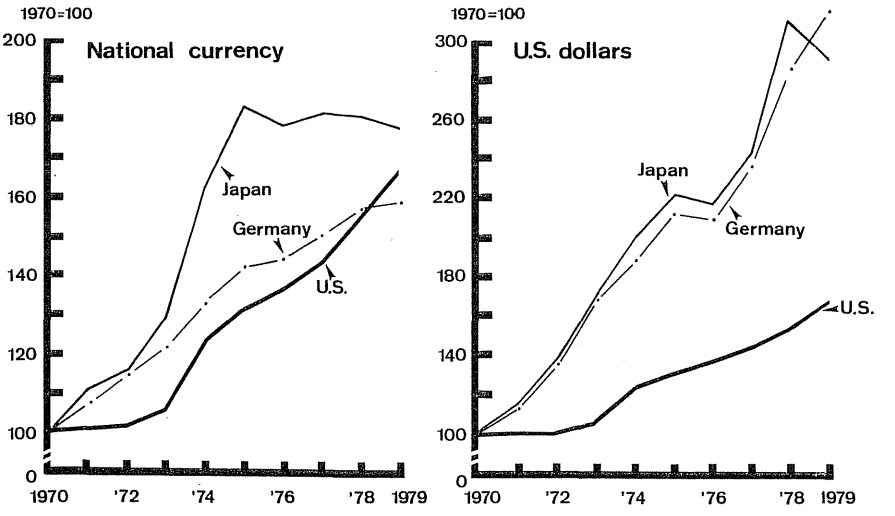
Competitive factors

Why, then, is it sometimes maintained that American industries have difficulty meeting the test of foreign competition? Our export-volume figures indicate that U.S. manufacturing in the aggregate has met the test, despite some well-publicized exceptions to the rule. The popular impression of deteriorating U.S. competitiveness is not supported by the facts. That impression is based either on out-dated information pertaining to a period of an overvalued U.S. dollar, or on partial information pertaining to certain industries and not to others.

These conclusions should not be interpreted as arguments against a policy of promoting incentives for personal savings and capital spending. Indeed, higher productivity growth resulting from greater capital accumulation should certainly lead to increased real wages and, hence, improved living standards for U.S workers.

Kenneth Bernauer

UNIT LABOR COSTS IN MANUFACTURING



Research Department
Federal Reserve
Bank of
San Francisco
Alaska • Arizona • California • Hawaii
Idaho • Nevada • Oregon • Utah • Washington

BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 2/25/81	Change from 2/18/81	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	146,445	− 317	8,100	5.9
Loans (gross, adjusted) — total#	124,075	− 298	8,093	7.0
Commercial and industrial	36,624	− 87	2,322	6.8
Real estate	51,144	78	6,429	14.4
Loans to individuals	23,568	4	− 889	− 3.6
Securities loans	1,237	− 255	187	17.8
U.S. Treasury securities*	6,689	− 10	− 238	− 3.4
Other securities*	15,681	− 9	245	1.6
Demand deposits — total#	39,162	−3,614	− 3,010	− 7.1
Demand deposits — adjusted	27,673	− 796	− 2,825	− 9.3
Savings deposits — total	29,227	− 274	1,373	4.9
Time deposits — total#	77,338	440	17,563	29.4
Individuals, part. & corp.	67,890	474	16,823	32.9
(Large negotiable CD's)	29,836	− 250	8,379	39.1

Weekly Averages of Daily Figures	Week ended 2/25/81	Week ended 2/18/81	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (−)	n.a.	n.a.	− 9
Borrowings	87	119	126
Net free reserves (+)/Net borrowed(−)	n.a.	n.a.	− 135

* Excludes trading account securities.

Includes items not shown separately.

Editorial comments may be addressed to the editor (William Burke) or to the author . . . . Free copies of this and other Federal Reserve publications can be obtained by calling or writing the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 544-2184.