Research Department
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Steel Imports

It is hardly news that the U.S. steel industry is in trouble. What *is* news is that last October the United States concluded an agreement with the European Economic Community (EEC) to limit steel imports from the EEC nations and the U.S. is currently negotiating with Japan to restrict steel imports from that nation too. Presumably, a large part of the U.S. steel industry's trouble is due to imports, and limiting imports is thought to be at least a partial solution to the industry's troubles.

This *Letter* will examine the extent to which imports have been responsible for the U.S. steel industry's woes and the extent to which import restrictions can help increase employment in the steel industry in particular and the U.S. economy in general.

The industry's woes

Conditions in the U.S. steel industry have grown desperate. Production in the industry was down to 49 percent of capacity in 1982 —well below an estimated "breakeven" level of 70 percent for most producers. As a result, according to one estimate, the seven largest steel producers lost an average of $95 per ton at the average price of $412 per ton last year. Similar losses are expected to continue well into 1983.

Cost-cutting efforts in the steel industry eliminated 100,000 jobs between January and September of 1982, with September being the 16th consecutive month of decline in steel employment. The American Iron and Steel Institute estimates that employment in the U.S. steel industry is now only one-half of its 1975-79 average.

The industry's distress reflects more than the current recessionary conditions troubling the entire economy. In the third quarter of 1982, steel production was half of its 1973 level, down from 28 million to 14 million net tons. By projecting a trend from the 1973 business-cycle peak to the 1981 peak and then beyond to 1982, one can estimate that about 55 percent of the 1973-82 decline in steel output was due to a downward secular trend and 45 percent to the 1981-82 recession. It is clear that the current recession merely aggravates the already severe problems of a declining industry.

Trade conflicts

The embattled industry blames import competition for a large share of its woes. Indeed, imported steel's share of the U.S. market rose steadily from 2 percent in the 1950's to 22 percent in 1982. Recently, the U.S. steel industry filed complaints with the Commerce Department and the International Trade Commission, charging the EEC countries and Japan with violating General Agreement on Trade and Tariffs rules.

Specifically, EEC producers were charged with exporting government-subsidized products, and Japanese producers with unfair pricing practices. In the first case, the Commerce Department ruled that subsidies from European governments did cause material injury to domestic industry. The subsidy levels were found to vary among countries: 20 percent of the average price charged for the United Kingdom, 14-20 percent for France, 13 percent for Belgium and 26 percent for Italy. In October 1982, an agreement was reached whereby the EEC must limit its steel shipments to the United States to an average of 5.5 percent of annual U.S. steel consumption for the next three years. This ceiling is only slightly above the 5.2 percent average for the decade 1972-81, but it is well below the 7.2 percent share the European countries obtained in the first ten months of 1982.

Proceedings against the Japanese are still in the preliminary phase. If American producers have their way, low-priced Japanese steel will be judged an "unreasonable burden" on U.S. commerce and, therefore, legally sub-

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ject to trade sanctions. The U.S. industry is seeking a 25 percent import surcharge to offset an "undervalued" yen, and restriction of Japanese imports to about one-third of the 7.2 percent share of U.S. consumption they currently hold.

However, it would be short-sighted to attribute rising steel imports entirely to actual or alleged unfair foreign trade practices. We need to look beyond by examining some basic factors.

Excess capacity

The U.S. steel industry's woes arose partly from excess capacity in the worldwide steel industry. From 1953 to 1973, world steel consumption grew rapidly at 6 percent per year. The boom attracted vast amounts of public and private investment. Steel production capacity expanded in both the industrial and the developing nations in order to keep pace with the growth in demand until 1973.

The boom ended in 1973. By 1981, consumption in the industrialized countries had dropped to 86 percent of its 1973 level, but the drop was offset by increases in the developing countries and in the planned economies so that the net result was zero growth in world consumption.

While the growth in worldwide demand stagnated, steel production capacity continued to expand. From 1973 to 1981, capacity increased by 10 percent in the developed countries and by 7 percent in the developing countries. The resultant worldwide excess capacity set the stage for increasingly fierce price competition that threatens the continued survival of less-efficient, high-cost producers.

Unfortunately, the U.S. steel industry has been among the less-efficient, high-cost producers in the world market, because of high labor costs and the use of outdated equipment, compared with those abroad.

Labor costs

Labor cost has increased rapidly in the U.S. steel industry. The hourly wage cost, including benefits, rose from $3.30 in 1956 to $25.20 in 1982. The 6.6 times rise relative to a 2.5 times increase in consumer prices has meant a substantial improvement in the living standard of steel-workers—at the expense of a profit squeeze in the U.S. steel industry and a deterioration in the industry's competitiveness compared to producers abroad.

The profit squeeze arose because the wage increases were not fully offset by productivity increases, and because the resultant rise in unit labor cost (labor cost per unit of output) could only be partially passed on to steel users through price increases. Between 1956 and 1982, labor productivity in the U.S. steel industry rose by only 5.5 percent. Given the 6.6 times rise in the wage rate, this has meant a 3.9 times increases in unit labor cost, compared to a 3 times rise in average steel prices. Since labor cost accounts for about 40 percent of total production cost in the U.S. steel industry, the development has meant sharply reduced profitability in that industry.

True, labor cost has also risen rapidly abroad and in some cases even faster than in the United States. For instance, from 1956 to 1982, unit labor cost rose 4.3 times in the Japanese steel industry, compared to the 3.9 times increase in the U.S. industry. However, the relative shift was not large enough to have put more than a dent in the absolute cost difference. By 1982, at $265 per ton, the U.S. unit labor cost was still substantially higher than the $144 per ton in Japan. Moreover, changes in labor cost only tell part of the story. The rapid expansion in production capacity abroad, noted above, has also meant improved quality and availability of a wide range of products to steel users in the U.S. market. To remain competitive, the U.S. steel producers would have had to limit labor cost increases to a much greater extent than they have been able to.

Outdated equipment

Numerous studies have focused on the reasons that U.S. productivity growth has lagged behind growth rates abroad. In the

steel industry, a major cause has been the continued use of relatively old plants and equipment. Steel experts generally agree that the most modern, efficient method of steel production is the so-called "continuous casting" process whereby molten steel is poured directly into molds. This process reduces the high energy and labor costs of the conventional practice of first casting steel and later reheating it for molding and rolling. According to experts, the more efficient process accounts for 71 percent of Japan's steel output, 45 percent of the EEC's and only 21 percent of the United States'.

But, why has the U.S. steel industry lagged so far behind in renovating its plant and equipment in comparison to other countries? One would think that, given the high labor cost, there should have been a strong incentive for the producers to economize on labor cost by substituting capital for labor. And, surely, there has been no lack of capital in the U.S. market relative to markets abroad.

Two explanations suggest themselves. First, as stated above, high labor cost has brought about a severe profit squeeze in the U.S. steel industry, thus reducing the incentive for investment in capital renovation. Second, the worldwide excess capacity and the enhanced import competition, also noted above, have made it even less attractive for investors to pour large amounts of capital into the industry.

Effects of protection

In the face of increasing import competition, U.S. steel producers have appealed to the government for protection and received various types of relief. For instance, "voluntary" agreements were concluded in 1969 with the EEC and Japan to restrict the growth of steel imports from those countries to no more than a five-percent annual rate. Since 1977, a "trigger-price mechanism" has been in place to impose duties on steel imports should the import price fall below the production and transportation cost of the most efficient foreign producer, Japan. These measures were intended to protect domestic steel producers against abrupt, massive shocks from abroad and to give them the time to generate the much-needed cash for modernizing their production facilities.

Studies, however, show that capital expenditures in the domestic steel industry declined in the five-year period after 1968 even though the voluntary restraints reduced imports by 25 percent from what they would otherwise have been in the same period. Between 1969 and 1974, in contrast, capital expenditures more than doubled in the Japanese and EEC steel industries. Studies also show that the trigger-price mechanism did not have any measurable impact on the market shares of U.S. domestic steel producers.

Even if import barriers had been effective in keeping out or reducing imports, thus providing short-run relief to the U.S. steel industry, their ultimate effect would have been to raise U.S. steel prices. Since steel is a major input in so many other industries, the higher steel prices would clearly have deleterious effects on the competitive positions of the U.S. automobile, machinery, home appliance, and other industries. Thus, it is not clear that total employment would have been helped by effective barriers against steel imports.

Conclusion

The U.S. steel industry's problems are deep-rooted. The steel producers' solution—import barriers—can no doubt stem the tide in the short run. Past experience, however, has shown that past barriers were no more than temporary palliatives that failed to address the steel industry's troubles at their many sources. Moreover, because steel is a major input in other industries, restricting steel imports would inevitably raise steel prices, thus adversely affecting the competitiveness of other U.S. industries. Although import restrictions can provide temporary relief to the steel industry, the wisdom of such a policy is questionable from the viewpoint of the economy as a whole.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 1/19/83	Change from 1/12/83	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	163,608	301	6,567	4.2
Loans (gross, adjusted) — total#	142,547	65	6,878	5.1
Commercial and industrial	45,335	514	3,841	9.3
Real estate	57,423	— 134	1,127	2.0
Loans to individuals	23,890	— 81	275	1.2
Securities loans	2,455	— 142	410	20.0
U.S. Treasury securities*	7,445	50	1,406	23.3
Other securities*	13,616	186	— 1,717	— 11.2
Demand deposits — total#	40,221	— 932	— 164	— 0.4
Demand deposits — adjusted	27,928	—1,023	— 151	— 0.5
Savings deposits — total	56,014	2,620	25,146	81.5
Time deposits — total#	79,195	—2,991	— 11,235	— 12.4
Individuals, part. & corp.	70,021	—2,635	— 11,383	— 14.0
(Large negotiable CD's)	26,851	—1,364	— 8,901	— 24.9
Weekly Averages of Daily Figures	Week ended 1/19/83	Week ended 1/12/83	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (—)	213	108	75	
Borrowings	0	33	21	
Net free reserves (+)/Net borrowed(—)	213	75	— 54	

* Excludes trading account securities.

Includes items not shown separately.

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