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The domestic steel industry is in a period of transition. The centralized, fully integrated industry is changing to one that is more decentralized, diversified, and competitive. This transition has already been marked by a decline of the large, integrated producers in terms of market share, profitability, and employment. Their place in the market is being taken by smaller, nonintegrated domestic steelmakers and by imports. The transition is driven by a combination of factors, such as low growth in demand and intense competition. We expect that these underlying factors will continue to operate and that the contraction will therefore continue. My remarks today will present a general overview of these events and describe the prospects for the industry over the coming decade.

#### THE DECLINE OF THE INTEGRATED STEEL PRODUCERS

The domestic integrated iron and steel industry is slowly but steadily contracting. Total demand for steel products in the United States did not increase during the 1970s, and domestic integrated producers lost markets to domestic nonintegrated producers and to imports. The integrated producers held roughly 83 percent of the domestic market from 1970 through 1975, but their share fell to about 72 percent by 1981. To some extent, the decline of the integrated producers has been counterbalanced by

the growth of the nonintegrated firms, which attained a market share of 12 percent in 1981. The nonintegrated producers cannot, however, entirely compensate for the contraction of integrated producers, because they cannot economically expand into flat-rolled product lines, which comprise about two-thirds of the domestic steel market.

Lower profits for the integrated producers accompanied the decline in market share. Since 1970, aggregate return on invested capital has averaged 6.8 percent for steel firms compared with 14.6 percent for all domestic manufacturing industries. When income from non-steel subsidiaries is excluded, return on invested capital in steel has been between 3 and 6 percent. Traditionally, the industry has depended on substantial profits in good years to compensate for low profits during periods of low demand. But in the most recent upswing, profits did not recover, and the downturns have been more frequent and deeper. As a result, some firms may be financially unable to survive the lean years ahead. The industry's cyclical nature and low profitability also injects an element of risk that reduces its overall attractiveness to the investment community. The stock market has not been slow to notice this, and a typical share of stock in an integrated steel company sells for less than 40 percent of its book value.

This financial decline has been accompanied by a low rate of investment in basic steelmaking. If a firm loses profitability, it also loses

the ability to generate funds to invest, and thereby finds it more difficult to be profitable in the future. Just to maintain facilities--or to replace them as they physically depreciate on a 25-year cycle--requires capital expenditures in steelmaking of between \$4 billion and \$5 billion per year, by the industry's estimate. Because of poor prospective returns, the integrated industry has not attained this level of investment since 1970.

The decline of the integrated steel industry has caused reduced employment. In the decade before 1974, employment in the industry varied between 500,000 and 550,000; but it had fallen to about 390,000 by 1981, a drop of about 3.8 percent per year. Lack of growth in steel demand and increases in productivity contributed to this. In contrast, employment by nonintegrated producers increased to about 30,000 as they expanded their capacity.

#### CAUSES OF DECLINE

The decline of the integrated producers during the past decade has its roots in several factors, which I will address in turn.

### The Demand for Steel

World demand since 1974 has been flat because of slow economic activity, price increases, and the substitution of other products for steel. Steel use in developed nations has declined relative to real GNP by about 21 percent between 1970 and 1981. Most producers did not foresee this decline and continued to expand capacity during the period. As a result of the current recession, the free world's aggregate capacity utilization is less than 60 percent, and has not exceeded 75 percent since 1974. Because many producers cannot operate profitably at such low rates, price competition has been intense.

### Foreign Competition

The overcapacity problem is most acute in Europe because demand there is depressed, and European steelmakers have lost many traditional export markets in developing countries to new producers. As a result, the United States has become the Europeans' largest export market. Most European steelmakers have been unprofitable in every year since 1974. They have poor access to markets and raw materials, as well as high labor costs and low productivity. Much evidence suggests that the price of European steel landed at United States ports has been below the average

cost of European producers. In many cases, it appears that the European producers have cut prices of exports below their production costs in order to sell their products and maintain employment in their mills.

Production costs, including transportation, of European producers have tended to be above those of U. S. producers in most years. Costs of United States producers have usually been above those of Japan and Canada. However, the range of costs is fairly narrow and they are often dominated by movements in exchange rates or in capacity utilization.

Subsidies in various forms have become increasingly important in the last eight to ten years, and tend to preserve the ability of European steelmakers to sell exports below cost. These subsidies are a continual element of public and political debate in Europe. Since 1976, European countries have spent about \$14 billion in steel subsidies--equivalent to about \$46 per ton produced. For example, in February 1982, the European Economic Community approved a coordinated subsidy program by its member governments worth an additional \$1.4 billion during 1982. The subsidies have enabled European producers to operate with heavy losses and have depressed the prices and profit margins of more efficient producers all over the world.

Although considerable ambiguity surrounds most cost data, some general conclusions can still be drawn. First, the historic advantage of the United States in raw materials costs no longer exists. Material costs for U. S. steelmaking are now higher than those in West Germany and Japan, due primarily to their exploitation of new ore reserves and to lower shipping costs. Second, foreign producers have lower labor costs than domestic steelmakers. Although labor input per ton produced in West Germany and Japan is similar to that in the United States, the wage rates for steelworkers are lower in those countries. Third, U. S. steelmakers remain competitive in domestic markets because of lower financing costs and because they pay no transportation charges to reach the United States. The low financing costs are due to relatively low debt levels of domestic producers, and to low levels of capital investment.

### Domestic Competitors

Imports have not been the only source of competition. Nonintegrated domestic steelmakers have prospered at the expense of the integrated firms. These companies buy scrap iron and remelt it in electric furnaces to make steel. The integrated process is highly energy-intensive and reflects the costs of iron ore and coking coal. By contrast, the nonintegrated process

uses much less energy and reflects mostly the cost of scrap. During most of the 1970s, the costs of integrated processes have exceeded those based on scrap steel.

The nonintegrated mills have built new facilities in regions where (1) scrap was available, (2) demand for basic products (such as construction materials) was growing, (3) no integrated mills existed, and (4) electricity and labor rates were low. Most of these mills used nonunion construction and operating personnel and installed highly efficient but flexible processes to produce steel for the regional markets--particularly those in the South and Southwest. These mills succeeded in capturing markets for certain products from both integrated mills and imports. As a result, the nonintegrated firms have grown while the integrated mills have contracted.

#### Labor Costs

In addition to price competition, labor costs have been an important factor in the decline of the integrated steelmakers. Productivity growth since 1966 was not only slower in basic steel than in any other industry in the United States (except other primary metals), but steel wages also rose faster. By 1980, compensation for steelworkers averaged 176 percent of the



average manufacturing wage. Much of this is due to the workers' skill and experience, and their hazardous working conditions; nevertheless, the wage differential has become a major cost disadvantage to domestic producers. Labor costs in the United States in 1981 are estimated to be about \$184 per ton shipped, compared to estimates of \$143 per ton in West Germany and \$111 per ton in Japan. Domestic nonintegrated producers were able to produce steel products at labor costs of \$100 to \$130 per ton.

If the U. S. industry had continued the productivity gains it achieved during the growth period of 1950 to 1970, the high wage rates would not have resulted in competitive disadvantage. But productivity increases after 1970 slowed considerably, in part because world capacity exceeded demand, and new investment slowed.

#### Other Factors

Clearly, a number of additional factors have adversely affected the integrated industry. Until 1981, domestic tax policy was less stimulative for industries with long-lived assets than were tax policies in most competitor nations. Passage of the Economic Recovery Tax Act has placed the U. S. industry on a more equal basis.

Steel company management has been criticized for its slow adjustment to a number of trends during the last 10 to 15 years. It has not been able to constrain labor costs, and has appeared reluctant to innovate or to invest in new product lines.

Finally, environmental and safety regulations have clearly absorbed substantial funds that would otherwise have been available for investment. Moreover, foreign competitors also bear high pollution control costs, and in some cases their investment per ton of output may have exceeded that of U. S. firms.

#### OUTLOOK FOR THE FUTURE: STEEL IN THE 1980s

World overcapacity is likely to be a dominant factor in steel markets over the coming decade. If a recovery in the demand for steel accompanies the general economic recovery, competitive pressures in world steel markets may abate somewhat; but competition from imports is likely to remain intense.

Net imports will probably increase during the decade because of continued overcapacity in the major steelmaking nations. Domestic ship-

ments of steel will probably continue at levels slightly above those of recent years, but the share of domestic production taken by the nonintegrated producers will increase markedly. As a result, the domestic market share of integrated producers is likely to fall from its 1981 level of 72 percent to between 61 and 66 percent by 1990.

Under optimistic assumptions, the integrated steel industry would probably be able to invest enough in the next decade to maintain its current financial status and competitive position, although its capacity would be somewhat smaller than at present. Under pessimistic assumptions, investment would be much lower, but CBO does not foresee a major abandonment of the industry. Under either set of assumptions, it is unlikely that shipments by the integrated producers during the decade will drop much below the levels of 1980-1981.

The work force of the integrated producers will undoubtedly decline from its 1981 strength of 390,000 due to productivity improvements. The annual rate of decline will probably average from 2 to 3 percent per year; however, this decline will have strong regional implications, and certain communities will be seriously affected. By contrast, employment in the nonintegrated firms will rise from 30,000 in 1981 to around 50,000 in 1990.

A final concern--the ability of the integrated steelmakers to compete in new, fast-growing markets--is less subject to quantitative estimates. As the economy evolves, it demands increasingly sophisticated products from the steel industry. Among these are coated sheet steel, seamless alloy pipes, corrosion-resistant plates, and wide-diameter pipes. Domestic producers have been unable to provide a number of new products in recent years and do not seem to be investing to provide them in the future. In time, the nation may become more dependent on imports for high-quality products, so that foreign industries that embody high-quality steel in their products will have a further advantage over domestic industries.

## CONCLUSION

In summary, Mr. Chairman, the coming decade will see the transition of the domestic steel industry continue. The integrated producers are likely to continue their decline, which will be offset in part by the gains of the nonintegrated steelmakers. Exchange rates for international currency, a factor beyond the industry's control, will continue as a principal determinant of competitive advantage. In many ways, this situation parallels that faced by much of U. S. basic industry.

How are we to interpret these trends? On the one hand, the contraction of the integrated producers will have severe impacts in many localities where steel mills may be forced to close. Since the nonintegrated firms tend to be in other localities, they are unlikely to be a large factor in smoothing the transition. On the other hand, general trade protection for the steel industry would probably increase steel costs for domestic manufacturers in other industries using large quantities of steel in their products. This could affect the competitive position of these manufacturers.

This suggests that an important goal of policy would be reduction of the subsidies that many nations grant their steel industries. In the absence of such subsidies, the global contraction of steelmaking would take place at the expense of the high-cost producers. The United States would not bear the burden alone, although some contraction of U. S. integrated firms would still occur. This, in turn, suggests another goal of policy: smoothing the transition of the integrated firms toward a smaller, more efficient steel industry.

The CBO has not made a detailed assessment of alternative ways to achieve these goals. However, several lines of inquiry would appear to be fruitful for this Subcommittee:

- o Are there ways to streamline the application of existing trade law, short of general protection, so as to recognize and respond more quickly to events such as foreign subsidization of steel production?
- o Are there ways to relieve the economic impact upon workers of declining employment in the steel industry, especially in a manner that encourages the flow of labor and resources into the most productive sectors of our economy?
- o Are there ways to encourage innovation and investment in the production of new steel products for emerging markets?

This concludes my prepared remarks. I would be happy to answer any questions.