

KOREA'S STEEL INDUSTRY

From Infant to Giant

Korea has become the 6th biggest steel production country in the world 20 years after it built its first integrated steel-mill in Pohang. Korea's crude steel production was only 0.5 million tons in 1970. Since then, steel production has passed 8 million tons in 1980, 23 million tons in 1990, and 33 million tons in 1993, with a continual expansion of steel facilities to meet the increasing domestic demand. At the same time steel exports have rapidly increased.

Meanwhile, the Korean steel industry has strongly positioned itself in the international market. Korea's share in world steel production has been rising fast: from 0.1% in 1970, to 1.3% in 1980,

to 3.0% in 1990, and to 4.7% in 1994. Korea's world ranking in steel production jumped up from 35th in 1970 to 6th in 1994. Korea's share in world steel exports also rose from 3% in the 1980s to the 4~5% level in the 1990s.

Current Status of Korean Steel Industry

Korea has 71 steel makers which include one integrated steel maker, 12 E.A.F steel makers, and 58 rolling makers. In the 1970s, when the steel industry began to develop, domestic steel manufacturing technology was so undeveloped that operating technology had to be acquired from foreign countries. The Korean steel industry

Trends of Crude Steel Demand and Supply in Korea

(10,000 ton, %)

	1970	1980	1990	1993	1994
production	50.4	855.8	2,312.5	3,302.6	3,374.5
share	0.1	1.2	3.0	4.5	4.7
ranking	35	18	7	6	6
import	127.6	277.8	595.0	514.0	841.5
domestic demand	167.3	608.1	2,146.1	2,671.0	3,218.8
export	13.7	525.5	761.4	1,145.6	997.2
share	0.1	3.2	4.3	5.1	4.4
ranking	36	8	8	8	8

source: KISA, Steel Statistical Yearbook, 1994.

note: Share and ranking in production and exports are those in World Steel Industry.

which grew through technology transfers from advanced countries is more competitive than any other nation in the flat products of ordinary steel. For example, the manufacturing cost of a cold rolled sheet of POSCO is lower than Japan by 20%. In addition, Korea is equal to Japan with respect to continuous casting ratio and steel yields, although it falls a little behind Japan with respect to quality and high value-added technology

The competitiveness of Korea's long product, however, falls behind competing countries due to the skyrocketing price of scrap. Especially, in the case of special steel, such as bar and wire rod, Korea is significantly inferior to competing countries not only in price but also in non-price competitiveness, such as the number of products, degree of standardization for products, and the frequency of poor quality products.

The Korean Steel Industry: Problems and Possible Solutions

There are several problems facing the Korean steel industry. First, the balance of trade for Korea's steel products has gotten worse since 1994 owing to the severe shortage of steel, particularly the shortage of flat products such as plates and hot coil. Thus, in spite of superior competitiveness, flat products which account for more than 80% of steel exports have been placed in a bad situation resulting in decreases in exports and increases in imports. The reason for the steel shortage is the slow growth in steel production in relation to rapidly increasing domestic demand.

International Comparison of Manufacturing Cost for C.R. Sheet (Feb.1994)

(dollar/ton)

	POSCO	JAPAN	TAIWAN
labor	80	170	125
materials	295	311	302
main	134	125	137
auxiliary	161	186	165
depreciation	90	82	70
financial cost	20	24	11
manufacturing cost	485	587	508

source: WSD, World Steel Dynamics

note: The costs of Japan and Taiwan are averages of major makers

Second, the monopolistic market structure in flat products impedes raising the value-added of steel products, diversifying of products, and expanding exports. In addition, the domestic market monopoly allows makers to become insensitive to diversified and high quality products demand, and risky export marketing.

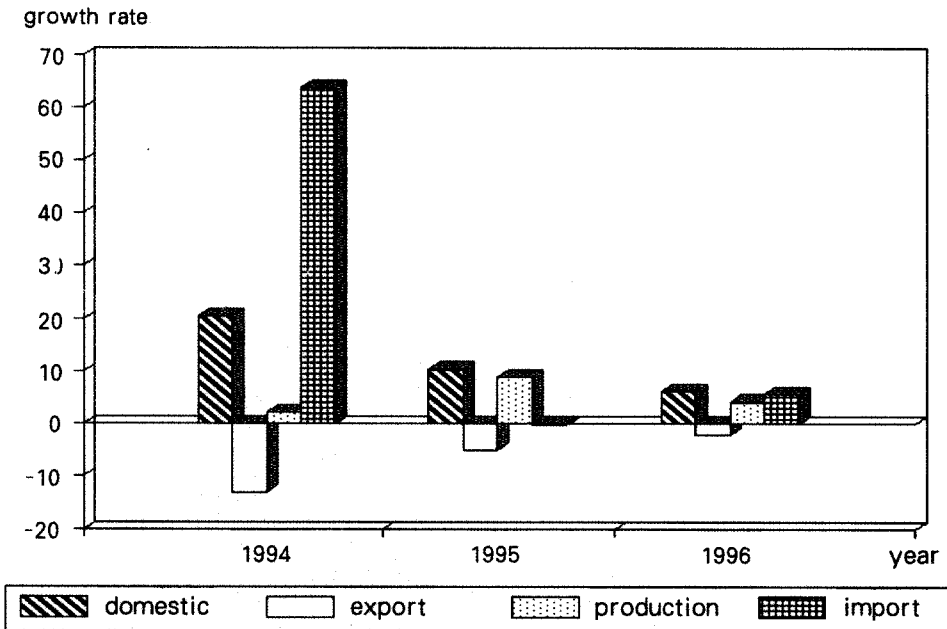
Third, the value-added by Korea's steel industry is low, due to the ordinary steel oriented production structure. Special steel, a high value-added product, occupies only 10% of total steel production, while this share is 18% in Japan and Germany. In the case of flat products, the export share of low value-added hot coils is high.

To strengthen the competitiveness of the Korean steel industry, it is necessary to expand the

supply capacity and modernize production structure by removing entrance barriers in the integrated steel mill industry. The promoting of competition is the shortcut to strengthening competitiveness in a full open market with the beginning of the WTO era, strict environmental controls, and demand for high-quality products. **VIP**

(Young-Bae Chae)

Current Status and Prospect for Demand and Supply in the Korean Steel Industry



source: Hyundai Research Institute estimates