

Table 1 Employment in the steel industry (thousands)

<b>Country/group</b>	<b>1974</b>	<b>1990</b>	<b>1999</b>
Austria	44	21	12
Belgium	69	26	20
Denmark	2	1	1
Finland	10	10	7
France	158	46	38
Germany <sup>a</sup>	232	125	78
Greece	0	3	2
Ireland	1	1	0
Italy	96	56	39
Luxembourg	23	9	4
Netherlands	25	17	12
Portugal	4	4	2
Spain	89	36	22
Sweden	51	26	13
United Kingdom	194	51	31
<b>European Union</b>	<b>998</b>	<b>434</b>	<b>280</b>
Australia	42	30	24
Brazil	118	115	59
Canada	77	53	57
Japan	459	305	208
South Africa	100	112	55
South Korea	n.a.	67	64
United States	521	204	153
Yugoslavia <sup>b</sup>	42	69	15
<b>Total for all listed countries</b>	<b>2,357</b>	<b>1,388</b>	<b>836</b>

n.a. = not available

a. West Germany in 1974.

b. Varying definitions.

Source: International Iron and Steel Institute (2001b).

Table 2 Overcapacity in the world steel industry, 1998  
(million metric tons)

Country or group	Production	Overcapacity <sup>a</sup>
European Union	157	50
China	115	n.a.
United States	98	15
Japan	94	17
Russia and Ukraine	68	25
Korea	40	n.a.
Brazil	26	n.a.
India	24	n.a.
Taiwan	17	n.a.
Canada	16	n.a.
Mexico	14	n.a.
Turkey	14	n.a.
Rest of world	95	168
<b>World</b>	<b>776</b>	<b>275</b>

n.a. = not available

a. Overcapacity figures are approximate.

*Sources:*

*For production:* International Iron and Steel Institute,  
[http://www.worldsteel.org/trends\\_indicators/countries.html](http://www.worldsteel.org/trends_indicators/countries.html).

*For overcapacity:* US Department of Commerce, International  
Trade Administration, *Global Steel Trade*, 2000,  
<http://www.ita.doc.gov/media/steelreport726.htm>.

Table 3 US steel imports and antidumping actions, 2000-01

Country or group	AD/CVD actions <sup>a</sup> (as of June 2001)	Imports <sup>b</sup> (in thousand metric tons, 2000)
European Union	36	6,510
China	7	1,531
Japan	20	1,981
Russia and Ukraine	8	4,590
Korea	14	2,457
Brazil	10	6,402
India	6	1,012
Taiwan	14	1,158
Canada	4	5,079
Mexico	6	3,097
Argentina	5	423
Venezuela	1	1,864
South Africa	6	1,275
Australia	1	825
Indonesia	4	379
Malaysia	2	135
Philippines	1	9
Thailand	3	494
Czech Republic	1	87
Poland	2	320
Romania	4	442
Belarus	1	96
Kazakhstan	1	474
Latvia	1	230
Moldova	1	357
Rest of world	0	2,186
<b>Total</b>	<b>159</b>	<b>43,413</b>

a. AD/CVD (antidumping/countervailing duty) actions refer to the number of products subject to antidumping orders or investigations or suspension agreements. About 95 percent of actions are AD actions and only 5 percent are CVD actions. If an AD/CVD action applies to a product from more than one country, it is counted multiple times.

b. Imports include all products under SITC code 67, "Iron and Steel".

*Sources:*

*AD/CVD actions:* Fax correspondence with Willkie Farr & Gallagher, June 2001.

*Imports:* US International Trade Commission (2001).

Table 4 Variables in the computable partial equilibrium model

Variables	Notation <sup>a</sup>	Value
<b>Elasticity parameters and market shares</b>		
Value share of domestic demand	$S_d$	0.67
Value share of import demand	$S_m$	0.33
Elasticity of substitution between imported and domestic steel <sup>b</sup>	$\sigma$	3.00
Price elasticity of total demand	$E_{dt}$	-1.00
Elasticity of domestic demand	$E_{dd}$	-1.66
Elasticity of import demand	$E_{mm}$	-2.34
Cross-price elasticity for domestic steel	$E_{dm}^{md}$	1.34
Cross-price elasticity for imported steel	$E_{dm}^{md}$	0.66
Elasticity of domestic supply <sup>c</sup>	$E_s$	3.00
<b>Intercept terms</b>		
For domestic demand schedule	$\ln^a$	10.48
For domestic supply schedule	$\ln^b$	-1.29
For import demand schedule	$\ln^c$	10.10
<b>Industry characteristics</b>		
c.i.f. price of imported steel (dollars per metric ton)		441
Landed price of imported steel (dollars per metric ton)		448
Imported volume (million metric tons)		43.4
Price of domestic steel (dollars per metric ton)		379
Domestic production (million metric tons)		104.5
Weighted average of imported and domestic steel prices (dollars per metric ton)		402
Domestic steel employment (thousands)		152
<b>Estimated welfare effects from the Steel Revitalization Act of 2001</b>		
Consumer loss (billions of dollars)		3.5
Producer gain (billions of dollars)		0.9
Quota rent (billions of dollars)		2.2
Efficiency loss (billions of dollars)		0.4
Industry employment gain (number of jobs)		9,737
Consumer cost per industry job gained (thousands of dollars)		360
Landed price of imported steel (dollars per metric ton)		518
Imported volume (million metric tons)		31.7
Price of domestic steel (dollars per metric ton)		387
Domestic production (million metric tons)		111.2

c.i.f. = cost, insurance, freight

a. Notation is consistent with that found in Hufbauer and Elliott (1994), 36-37.

b. François and Baughman (2001), 29.

c. A high supply elasticity is adopted, based on Robert Crandall's suggestion that mini mills can expand output at constant costs (conversation with Robert Crandall, June 2001).

Table 5 Profile of displaced workers in the steel industry compared with all manufacturing workers, 1979-99

	<b>Steel</b>	<b>All manufacturing</b>
Median age at displacement	39.6	38.6
Mean education (years)	12.0	12.3
Mean job tenure (years)	10.6	6.5
Percent female	11.6	36.9
Percent minority	16.3	17.6
Share displaced from full-time jobs (percent)	98.0	95.6
Mean jobless period (weeks)	30.6	18.2
Percent reemployed	61.0	65.0
For those reemployed, mean percent earnings loss	34.8	12.1
Percent with:		
Earnings loss above 30 percent	50.0	25.0
No earnings loss or earnings gain	25.0	35.0

*Source:* E-mail correspondence with Lori Kletzer, June 2001; calculations from *Current Population Surveys, Displaced Workers Surveys, 1984-2000*.

Table 6 Assumptions for calculating wage insurance  
and legacy costs

Average annual earnings of steel workers <sup>a</sup>	\$44,000
<b>Wage insurance make-up</b>	
Steel workers displaced, 1997-2000	23,500
Of which, estimated number reemployed <sup>b</sup>	14,000
Annual earnings loss per reemployed steel worker <sup>c</sup>	\$15,300
Wage insurance per displaced steel worker who was then reemployed <sup>d</sup>	\$11,500
<b>Total wage insurance for workers displaced, 1997-2000 (millions of dollars)</b>	<b>\$161</b>
<b>Wage insurance prospects, 2001-10</b>	
Steel workers displaced per year <sup>e</sup>	5,000
Steel workers who subsequently find jobs per year <sup>f</sup>	3,750
Wage insurance per displaced worker <sup>g</sup>	\$23,000
Wage insurance cost per year (millions of dollars)	\$86
<b>Legacy costs</b>	
Health care and pension benefits, per ton of steel produced in integrated mills	\$30-65
Steel produced by integrated mills, 2000 (million tons)	5.6
Total legacy costs (billions of dollars)	\$1.7-3.6
Estimated legacy costs associated with closed capacity (millions of dollars annually)	\$170-360
<b>Total prospective wage insurance and legacy costs,<sup>h</sup> (millions of dollars annually)</b>	<b>\$351</b>

a. The earnings figure does not include fringe benefits. By contrast, compensation is the sum of earnings and fringe benefits. Hourly compensation of all steel workers, according to the Bureau of Labor Statistics (BLS) is \$36, while hourly earnings are \$22. The calculation assumes 2,000 hours of work annually for steel workers (compared with BLS figure of 2,400 hours for regular and overtime work in all goods producing industries).

b. Assuming 61 percent were reemployed; see table 5.

c. The calculation assumes that the average displaced steel worker who subsequently finds a job incurs an earnings loss of 34.8 percent; see table 5.

d. Assuming that make-up wage insurance pays 75 percent of the earnings loss for one year.

e. Assuming 10 percent of integrated steel production closes each year between 2001 and 2010.

f. Assuming that wage insurance raises the reemployment rate from 61 percent to 75 percent.

g. Assuming that wage insurance pays 75 percent of the earnings loss for two years.

h. Assuming wage insurance of \$86 million a year and legacy costs of \$265 million a year.

*Sources:* E-mail correspondence with Lori Kletzer, June 2001; presentation titled "The Steel Problem: Causes, Effects, and Solutions," Willkie Farr & Gallagher, June 2001, Washington.