Data Appendix – UO Economics Working Paper, "Foreign Subsidization and the Excess Capacity Hypothesis" by Profs. Bruce Blonigen and Wesley Wilson.

The following provides greater detail on our data sources and variable construction.

Import Data

Collected from American Iron and Steel Institute's (AISI's) *Annual Statistical Report*, various volumes. We collect these data by the product categories reported in this source. However, for consistency over time, we combined a few product categories. In particular, all "plate" categories were combined, including "Plates – in coils" and "Plates – cut lengths". A number of categories, including "galvanized", "other metallic coated" and "electrical" were combined into a "Sheets & strip – Other" category. Likewise, a number of pipe categories, including "Stainless pipe and tubing", "Nonclassified pipe & tubing", "Structural pipe & tubing", and "Pipe for piling", were combined "Other pipe and tubing" category. See table A.1 below for a list of our 37 product categories. The 22 countries included in our sample are those listed in Table 1 of the paper, as well as Austria (1979-2000), Finland (1979-1999), and Greece (1979-1987) for which data do not span the entire sample period. These steel import data are reported in net tons and we use the log of the sum of the variable + "1" as our dependent variable.

Antidumping and Countervailing Duty (AD//CVD) Rates

AD/CVD rate data were obtained from http://www.brandeis.edu/~cbown/global_ad/. These data were then matched up to AISI product categories using an approximate concordance in "Appendix D: Definitions of Certain Terms and Descriptions of Products Subject to the Investigation" in Office of Industries, USITC. (April 1995) *Steel Semiannual Monitoring Report: Special Focus: U.S. Industry Conditions.* Washington, DC: USITC Publication 2878.

For AD rates, we assumed that the initial dumping margins remain until order revoked. In other words, we do not adjust margins as administrative reviews occur. The rationale is that dumping margins only change as companies must respond to the initial dumping margin and raise prices. The impact on imports should be similar whether the dumping margin is collected or not collected due to the firm raising prices. With CVD rates, we adjusted these as they changed with administrative reviews.

The following rule governed how we recorded data on AD/CVD decisions into an annual observation: If the decision comes out prior to August 1, it is applied as the rate for the entire year. If the decision comes out on Aug. 1 or later, it gets applied to the following year.

Often AD/CVD rates may only apply to part of the product category. Since we do not have information on composition, we cannot prorate the AD/CVD rate. In a few instances, a product category becomes subject to more than one AD/CVD rate. To account for this, we sum the applicable rates. We add "1" to these variables and log for our statistical analysis

Safeguard Tariffs

Safeguard tariffs were placed on select steel products (primarily flat-rolled products, plate, bar, rod, and fittings) effective March 20, 2002 by order of President Bush. Most developing

countries, as well as Canada and Mexico were exempted from these measures. We use the USITC publication *Steel: Monitoring Developments in the Domestic Industry (Investigation No. TA-204-9) and Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures (Investigation No. 332-452) (Publication 3632, September 2003),* pp. 1-5 and 1-6, to determine safeguard tariff coverage across our sample of countries and products. We add "1" and log this variable for our statistical analysis

VRA coverage (product and country combinations) from 1983 through 1993

We use Table 7 of Michael O. Moore's National Bureau of Economic Research working paper no. 4760, "Steel Protection in the 1980s: The Waning Influence of Big Steel?", June 1994, as well as, p. i of preface to *Monthly Report on Selected Steel Industry Data: Report to the Subcommittee on Ways and Means on Investigation Number 332-163 Under Section 332 of the Tariff Act of 1930,* published by the U.S. International Trade Commission, February 1986, to determine whether a product category from a particular foreign country import source was subject to a VRA or not. This variable is a pure indicator variable and is therefore not logged.

Steel Price

As mentioned in the text, we primarily rely on Producer Price Indexes from the Bureau of Labor Statistics (BLS) for our data on steel prices. For a robustness check we also use steel price data from *Purchasing Magazine* provided by Benjamin Liebman at St. Joseph's University. The following table concords our steel product categories to the steel price series we have available from these two sources.

Table A.1: Concordance for our product-level U.S. price data

Product Code (pcode)	BLS Price Index	Steel Purchasing Price Index [5]
1 – (Rigid) Conduit	PCU331111331111B	Average Price Series
2 – Barbed Wire	PCU3311113311119	Average Price Series
3 – Bars, Cold-finished	PCU331111331111F	Average Price Series
4 – Bars, Hot-rolled	PCU3311113311117	Average Price Series
5 – Bars, Shapes Under 3 In.	Footnote 1	Average Price Series
6 – Black Plate	PCU3311113311117	Hot-rolled Plate Series
7 – Reinforcing Bar	PDU3312#425	Rebar Series
8 – Grinding Balls	PCU3311113311113	Average Price Series
9 – Ingots, Blooms, Billets, Slabs	PCU3311113311113	Average Price Series
10 – Line Pipe	PCU331111331111B	Average Price Series
11 – Mechanical Tubing	PCU331111331111B	Average Price Series
12 – Nails and Staples	PDU3315#2	Average Price Series
13 – Oil Country Goods	PCU331111331111B	Average Price Series
14 – Other Pipe and Tubing	PCU331111331111B	Average Price Series
15 – Pipe and Tube Fittings	PDU3498#	Average Price Series
16 – Plates	PCU3311113311117	Hot-rolled Plate Series
17 – Pressure Tubing	PCU331111331111B	Average Price Series
18 – Rail and Track Accessories	PDU3312#C/Footnote 2	Average Price Series

19 – Sashes and Frames	PCU3311113311117	Average Price Series
20 – Shapes, Cold-Formed	PCU331111331111D	Average Price Series
21 – Sheet Piling	PCU3311113311117	Average Price Series
22 – Sheet, Cold-rolled	PCU331111331111D	Average Price Series
23 – Sheet, Hot-rolled	PCU3311113311115	Hot-Rolled Sheet Series
24 – Sheets & Strip, Other	Footnote 3	Galv. Sheet Series
25 – Standard Pipe	PCU331111331111B	Average Price Series
26 – Strip, Cold-rolled	PCU331111331111D	Average Price Series
27 – Strip, Hot-rolled	PCU3311113311115	Hot-Rolled Sheet Series
28 – Struc. Shapes – Plain	PCU3311113311117	Wide Beams Series
29 – Struc. Shapes – Fab.	PCU3311113311117	Wide Beams Series
30 – Terne Plate (Tin Free)	PCU3311113311117	Hot-rolled Plate Series
31 – Tin Plate	PCU3311113311117	Hot-rolled Plate Series
32 – Wheels and Axles	PDU3312#C/Footnote 2	Average Price Series
33 – Wire – Nonmet. Coated	PCU3311113311119	Average Price Series
34 – Wire Rods	Footnote 4	Wire Rod Series
35 – Wire Rope	PCU3311113311119	Average Price Series
36 – Wire Strand	PCU3311113311119	Average Price Series
37 – Wire Fabric	PCU3311113311119	Average Price Series

[1] Average of PCU3311113311117 and PCU331111331111F.
[2] Used price series for "Blast furnaces and steel mill products – PDU3312#" for the years after 1997 due to data availability.
[3] Average of PCU331111331111D and PCU3311113311115.
[4] PDU3312#219 for years before 1998 and PDU3312#21611 for years after 1997.
[5] "Average price series" is a weighted average of price series for wire rod, hot-rolled sheet, hot-rolled plate, galvanized sheet, rebar, and wide beams. Data for these price series are only available from 1980 through 1999. They are monthly data and were averaged on an annual basis.

In our statistical analysis we derive a price variable by multiplying these U.S. price series by an exchange rate that converts into the foreign currency and then deflate using the country's GDP Deflator to convert into real terms. Finally, we log the variable.

Our primary source for the GDP deflator series for each country is the International Monetary Fund's *International Financial Statistics*, CD-ROM, June 2005.

Our exchange rate data (foreign currency per U.S. dollar) come from a few different sources. For **Argentina, Brazil, China, Greece, Korea, Mexico, Netherlands, South Africa, Taiwan,** we downloaded annual exchange rates through 1999 from the Economic History Services website www.eh.net/hmit/exchangerates, which also gives conversion to new currencies over time. We then added exchange rates from 2000-2004 using data from Werner Antweiler's PACIFIC Exchange Rate Services website: http://fx.sauder.ubc.ca/. Full citation on for the Economic History Services information is:

Lawrence H. Officer, "Exchange rate between the United States dollar and forty other countries, 1913-1999," Economic History Services, EH.Net, 2002. URL: www.eh.net/hmit/exchangerates
For earlier years for **China, Greece and Korea (1970-early80s)** we use the IMF's *International Financial Statistics* data. For dates prior to 1984 for **Taiwan**, we use the website, http://intl.econ.cuhk.edu.hk/exchange_rate_regime/index.php?cid=11, and for years for **Taiwan** after 1999, we use Werner Antweiler's PACIFIC Exchange Rate Services website.

For **Australia, Austria, Belgium (Lux), Canada, Germany, Finland, France, Italy, Japan, Spain, Sweden and U.K.,** we use historical data from Werner Antweiler's PACIFIC Exchange Rate Services website: http://fx.sauder.ubc.ca/.

Industrial Production Indexes
Our primary source for these three variables is the International Monetary Fund's *International Financial Statistics*, CD-ROM, June 2005. The IFS does not provides these data for any years for the countries of Taiwan and China. For these three countries, we generate industrial production indexes by calculating an index of real GDP for industry. For Taiwan, our source for these data is official statistics of the Taiwanese Directorate – General of Budget, Accounting and Statistics, available online at: http://eng.dgbas.gov.tw/mp.asp?mp=2. Our Chinese data source is statistic available at the Economic Research Service of the U.S. Department of Agriculture: http://www.ers.usda.gov/data/china/. This variable is logged for use in our analysis.

The following table provides summary statistics of these main variables in the base specification of our statistical analysis.

Table A.2: Summary Statistics of Key Variables in Base Specification Reported in Columns 1 and 2 of Table 2 in the Text.

Variable (in logs)	Mean	Standard Deviation	Minimum	Maximum
Imports	0.09	1.90	-11.68	14.59
U.S. Price	-0.01	0.13	-0.44	0.94
Foreign Demand (Industrial Production Index)	0.02	0.05	-0.30	0.22
Foreign Demand*High Foreign Demand	0.03	0.04	-0.01	0.22
Antidumping Duty	0.02	0.36	-5.13	5.21
Countervailing Duty	0.003	0.19	-3.67	4.56
Voluntary Restraint Agreement	0	0.27	-1	1
Safeguard Tariff	0.03	0.33	0	3.43