

**Data Appendix for :**  
**The North American Free Trade Agreement after Ten Years:**  
**Its Impact on Minnesota and a Comparison with Wisconsin**  
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**Trade Data (O.1-O.117):**

Series	Description	Unit	Source
O.1	U.S. Total Imports	mil. USD	DOTS
O.2	U.S. Imports from Canada	mil. USD	DOTS
O.3	U.S. Imports from Mexico	mil. USD	DOTS
O.4	U.S. Imports to China	mil. USD	DOTS
O.5	U.S. Imports from Belgium-Luxembourg	mil. USD	DOTS
O.6	U.S. Imports from Belgium	mil. USD	DOTS
O.7	U.S. Imports from France	mil. USD	DOTS
O.8	U.S. Imports from Germany	mil. USD	DOTS
O.9	U.S. Imports from Italy	mil. USD	DOTS
O.10	U.S. Imports from Luxembourg	mil. USD	DOTS
O.11	U.S. Imports from the Netherlands	mil. USD	DOTS
O.12	U.S. Imports from the United Kingdom	mil. USD	DOTS
O.13	U.S. Imports from Ireland	mil. USD	DOTS
O.14	U.S. Imports from Denmark	mil. USD	DOTS
O.15	U.S. Imports from Greece	mil. USD	DOTS
O.16	U.S. Imports from Spain	mil. USD	DOTS
O.17	U.S. Imports from Portugal	mil. USD	DOTS
O.18	U.S. Imports from Austria	mil. USD	DOTS
O.19	U.S. Imports from Sweden	mil. USD	DOTS
O.20	U.S. Imports from Finland	mil. USD	DOTS
O.21	U.S. Imports from Switzerland	mil. USD	DOTS
O.22	U.S. Imports from Norway	mil. USD	DOTS
O.23	U.S. Imports from Iceland	mil. USD	DOTS
O.24	U.S. Total Exports	mil. USD	DOTS
O.25	U.S. Exports to Canada	mil. USD	DOTS
O.26	U.S. Exports to Mexico	mil. USD	DOTS
O.27	U.S. Exports to China	mil. USD	DOTS
O.28	U.S. Exports to Belgium-Luxembourg	mil. USD	DOTS
O.29	U.S. Exports to Belgium	mil. USD	DOTS
O.30	U.S. Exports to Germany	mil. USD	DOTS
O.31	U.S. Exports to France	mil. USD	DOTS
O.32	U.S. Exports to Luxembourg	mil. USD	DOTS
O.33	U.S. Exports to Italy	mil. USD	DOTS
O.34	U.S. Exports to the United Kingdom	mil. USD	DOTS
O.35	U.S. Exports to the Netherlands	mil. USD	DOTS
O.36	U.S. Exports to Ireland	mil. USD	DOTS
O.37	U.S. Exports to Denmark	mil. USD	DOTS
O.38	U.S. Exports to Spain	mil. USD	DOTS
O.39	U.S. Exports to Portugal	mil. USD	DOTS
O.40	U.S. Exports to Greece	mil. USD	DOTS
O.41	U.S. Exports to Sweden	mil. USD	DOTS
O.42	U.S. Exports to Finland	mil. USD	DOTS
O.43	U.S. Exports to Austria	mil. USD	DOTS
O.44	U.S. Exports to Switzerland	mil. USD	DOTS
O.45	U.S. Exports to Norway	mil. USD	DOTS
O.46	U.S. Exports to Iceland	mil. USD	DOTS

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O.47	WI Exports to Canada	mil. USD	MISER
O.48	WI Exports to Mexico	mil. USD	MISER
O.49	WI Total Exports	mil. USD	MISER
O.50	MN Exports to Canada	mil. USD	MISER
O.51	MN Exports to Mexico	mil. USD	MISER
O.52	MN Total Exports	mil. USD	MISER
O.54	MN Exports to Mexico of SIC 1	mil. USD	MISER
O.55	MN Exports to Mexico of SIC 2	mil. USD	MISER
O.56	MN Exports to Mexico of SIC 8	mil. USD	MISER
O.57	MN Exports to Mexico of SIC 9	mil. USD	MISER
O.58	MN Exports to Mexico of SIC 10	mil. USD	MISER
O.59	MN Exports to Mexico of SIC 12	mil. USD	MISER
O.60	MN Exports to Mexico of SIC 13	mil. USD	MISER
O.61	MN Exports to Mexico of SIC 14	mil. USD	MISER
O.62	MN Exports to Mexico of SIC 20	mil. USD	MISER
O.63	MN Exports to Mexico of SIC 22	mil. USD	MISER
O.64	MN Exports to Mexico of SIC 23	mil. USD	MISER
O.65	MN Exports to Mexico of SIC 24	mil. USD	MISER
O.66	MN Exports to Mexico of SIC 25	mil. USD	MISER
O.67	MN Exports to Mexico of SIC 26	mil. USD	MISER
O.68	MN Exports to Mexico of SIC 27	mil. USD	MISER
O.69	MN Exports to Mexico of SIC 28	mil. USD	MISER
O.70	MN Exports to Mexico of SIC 29	mil. USD	MISER
O.71	MN Exports to Mexico of SIC 30	mil. USD	MISER
O.72	MN Exports to Mexico of SIC 31	mil. USD	MISER
O.73	MN Exports to Mexico of SIC 32	mil. USD	MISER
O.74	MN Exports to Mexico of SIC 33	mil. USD	MISER
O.75	MN Exports to Mexico of SIC 34	mil. USD	MISER
O.76	MN Exports to Mexico of SIC 35	mil. USD	MISER
O.77	MN Exports to Mexico of SIC 36	mil. USD	MISER
O.78	MN Exports to Mexico of SIC 37	mil. USD	MISER
O.79	MN Exports to Mexico of SIC 38	mil. USD	MISER
O.80	MN Exports to Mexico of SIC 39	mil. USD	MISER
O.81	MN Exports to Mexico of SIC 91	mil. USD	MISER
O.82	MN Exports to Mexico of SIC 92	mil. USD	MISER
O.83	MN Exports to Mexico of SIC 95	mil. USD	MISER
O.84	MN Exports to Mexico of SIC 99	mil. USD	MISER
O.87	WI Exports to Mexico of SIC 1	mil. USD	MISER
O.88	WI Exports to Mexico of SIC 2	mil. USD	MISER
O.89	WI Exports to Mexico of SIC 8	mil. USD	MISER
O.90	WI Exports to Mexico of SIC 9	mil. USD	MISER
O.91	WI Exports to Mexico of SIC 10	mil. USD	MISER
O.92	WI Exports to Mexico of SIC 12	mil. USD	MISER
O.93	WI Exports to Mexico of SIC 13	mil. USD	MISER
O.94	WI Exports to Mexico of SIC 14	mil. USD	MISER
O.95	WI Exports to Mexico of SIC 20	mil. USD	MISER
O.96	WI Exports to Mexico of SIC 22	mil. USD	MISER
O.97	WI Exports to Mexico of SIC 23	mil. USD	MISER
O.98	WI Exports to Mexico of SIC 24	mil. USD	MISER
O.99	WI Exports to Mexico of SIC 25	mil. USD	MISER
O.100	WI Exports to Mexico of SIC 26	mil. USD	MISER
O.101	WI Exports to Mexico of SIC 27	mil. USD	MISER
O.102	WI Exports to Mexico of SIC 28	mil. USD	MISER
O.103	WI Exports to Mexico of SIC 29	mil. USD	MISER
O.104	WI Exports to Mexico of SIC 30	mil. USD	MISER

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O.105	WI Exports to Mexico of SIC 31	mil. USD	MISER
O.106	WI Exports to Mexico of SIC 32	mil. USD	MISER
O.107	WI Exports to Mexico of SIC 33	mil. USD	MISER
O.108	WI Exports to Mexico of SIC 34	mil. USD	MISER
O.109	WI Exports to Mexico of SIC 35	mil. USD	MISER
O.110	WI Exports to Mexico of SIC 36	mil. USD	MISER
O.111	WI Exports to Mexico of SIC 37	mil. USD	MISER
O.112	WI Exports to Mexico of SIC 38	mil. USD	MISER
O.113	WI Exports to Mexico of SIC 39	mil. USD	MISER
O.114	WI Exports to Mexico of SIC 91	mil. USD	MISER
O.115	WI Exports to Mexico of SIC 92	mil. USD	MISER
O.116	WI Exports to Mexico of SIC 95	mil. USD	MISER
O.117	WI Exports to Mexico of SIC 99	mil. USD	MISER

**Other Data (O.118-O.141):**

Series	Description	Unit	Source
O.118	U.S. GDP	mil. USD	IFS
O.119	GDP Deflator	1995 = 100	IFS
O.120	U.S. Population Ages 15-64	thousand	WDI
O.121	U.S. Employment	thousands	BLS
O.122	MN Employment	Thousands	BLS
O.123	WI Employment	Thousands	BLS
O.124	MN Total Population	Thousands	Census
O.125	WI Total Population	Thousands	Census
O.126	MN Total GSP	mil USD	BEA
O.127	MN GSP in Agriculture	mil USD	BEA
O.128	MN GSP in Mining	mil USD	BEA
O.129	MN GSP in Manufacturing	mil USD	BEA
O.130	WI Total GSP	mil USD	BEA
O.131	WI GSP in Agriculture	mil USD	BEA
O.132	WI GSP in Mining	mil USD	BEA
O.133	WI GSP in Manufacturing	mil USD	BEA
O.134	MN Total GSP	mil 1996 USD	BEA
O.135	MN GSP in Agriculture	mil 1996 USD	BEA
O.136	MN GSP in Mining	mil 1996 USD	BEA
O.137	MN GSP in Manufacturing	mil 1996 USD	BEA
O.138	WI Total GSP	mil 1996 USD	BEA
O.139	WI GSP in Agriculture	mil 1996 USD	BEA
O.140	WI GSP in Mining	mil 1996 USD	BEA
O.141	WI GSP in Manufacturing	mil 1996 USD	BEA

**State Demographic Data (O.142-O.375):**

Source	Description		Unit	Source
O.142	Wisconsin Population 1990, Males and Females	15 years	thousands	Census
O.143	Wisconsin Population 1990, Males and Females	16 years	thousands	Census
O.144	Wisconsin Population 1990, Males and Females	17 years	thousands	Census
O.145	Wisconsin Population 1990, Males and Females	18 years	thousands	Census
O.146	Wisconsin Population 1990, Males and Females	19 years	thousands	Census
O.147	Wisconsin Population 1990, Males and Females	20 to 24 years	thousands	Census
O.148	Wisconsin Population 1990, Males and Females	25 to 29 years	thousands	Census
O.149	Wisconsin Population 1990, Males and Females	30 to 34 years	thousands	Census
O.150	Wisconsin Population 1990, Males and Females	35 to 39 years	thousands	Census
O.151	Wisconsin Population 1990, Males and Females	40 to 44 years	thousands	Census
O.152	Wisconsin Population 1990, Males and Females	45 to 49 years	thousands	Census
O.153	Wisconsin Population 1990, Males and Females	50 to 54 years	thousands	Census
O.154	Wisconsin Population 1990, Males and Females	55 to 59 years	thousands	Census
O.155	Wisconsin Population 1990, Males and Females	60 to 64 years	thousands	Census
O.156	Wisconsin Population 1990, Males and Females	Total population	thousands	Census
O.157	Minnesota Population 1990, Males and Females	15 years	thousands	Census
O.158	Minnesota Population 1990, Males and Females	16 years	thousands	Census
O.159	Minnesota Population 1990, Males and Females	17 years	thousands	Census
O.160	Minnesota Population 1990, Males and Females	18 years	thousands	Census
O.161	Minnesota Population 1990, Males and Females	19 years	thousands	Census
O.162	Minnesota Population 1990, Males and Females	20 to 24 years	thousands	Census
O.163	Minnesota Population 1990, Males and Females	25 to 29 years	thousands	Census
O.164	Minnesota Population 1990, Males and Females	30 to 34 years	thousands	Census
O.165	Minnesota Population 1990, Males and Females	35 to 39 years	thousands	Census
O.166	Minnesota Population 1990, Males and Females	40 to 44 years	thousands	Census
O.167	Minnesota Population 1990, Males and Females	45 to 49 years	thousands	Census
O.168	Minnesota Population 1990, Males and Females	50 to 54 years	thousands	Census
O.169	Minnesota Population 1990, Males and Females	55 to 59 years	thousands	Census
O.170	Minnesota Population 1990, Males and Females	60 to 64 years	thousands	Census
O.171	Minnesota Population 1990, Males and Females	Total population	thousands	Census
O.172	Minnesota Population 2000, Males	15 years	thousands	Census
O.173	Minnesota Population 2000, Males	16 years	thousands	Census
O.174	Minnesota Population 2000, Males	17 years	thousands	Census
O.175	Minnesota Population 2000, Males	18 years	thousands	Census
O.176	Minnesota Population 2000, Males	19 years	thousands	Census
O.177	Minnesota Population 2000, Males	20 years	thousands	Census
O.178	Minnesota Population 2000, Males	21 years	thousands	Census
O.179	Minnesota Population 2000, Males	22 years	thousands	Census
O.180	Minnesota Population 2000, Males	23 years	thousands	Census
O.181	Minnesota Population 2000, Males	24 years	thousands	Census
O.182	Minnesota Population 2000, Males	25 years	thousands	Census
O.183	Minnesota Population 2000, Males	26 years	thousands	Census
O.184	Minnesota Population 2000, Males	27 years	thousands	Census
O.185	Minnesota Population 2000, Males	28 years	thousands	Census
O.186	Minnesota Population 2000, Males	29 years	thousands	Census
O.187	Minnesota Population 2000, Males	30 years	thousands	Census
O.188	Minnesota Population 2000, Males	31 years	thousands	Census
O.189	Minnesota Population 2000, Males	32 years	thousands	Census
O.190	Minnesota Population 2000, Males	33 years	thousands	Census
O.191	Minnesota Population 2000, Males	34 years	thousands	Census
O.192	Minnesota Population 2000, Males	35 years	thousands	Census
O.193	Minnesota Population 2000, Males	36 years	thousands	Census
O.194	Minnesota Population 2000, Males	37 years	thousands	Census







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O.360	Wisconsin Population 2000, Females	50 years	thousands	Census
O.361	Wisconsin Population 2000, Females	51 years	thousands	Census
O.362	Wisconsin Population 2000, Females	52 years	thousands	Census
O.363	Wisconsin Population 2000, Females	53 years	thousands	Census
O.364	Wisconsin Population 2000, Females	54 years	thousands	Census
O.365	Wisconsin Population 2000, Females	55 years	thousands	Census
O.366	Wisconsin Population 2000, Females	56 years	thousands	Census
O.367	Wisconsin Population 2000, Females	57 years	thousands	Census
O.368	Wisconsin Population 2000, Females	58 years	thousands	Census
O.369	Wisconsin Population 2000, Females	59 years	thousands	Census
O.370	Wisconsin Population 2000, Females	60 years	thousands	Census
O.371	Wisconsin Population 2000, Females	61 years	thousands	Census
O.372	Wisconsin Population 2000, Females	62 years	thousands	Census
O.373	Wisconsin Population 2000, Females	63 years	thousands	Census
O.374	Wisconsin Population 2000, Females	64 years	thousands	Census
O.375	Wisconsin Population 2000, Females	Total	thousands	Census

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## SIC Codes:

SIC Code	Description
1	AGRICULTURAL PRODUCTION-CROPS
2	AGRICULTURAL PRODUCTION-LIVESTOCK
8	FORESTRY
9	FISHING, HUNTING, AND TRAPPING
10	METAL MINING
12	BITUMINOUS COAL & LIGNITE MINING
13	OIL AND GAS EXTRACTION
14	NONMETALLIC MINERALS, EXCEPT FUELS
20	FOOD AND KINDRED PRODUCTS
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
24	LUMBER AND WOOD PRODUCTS
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
30	RUBBER AND MISC. PLASTICS PRODUCTS
31	LEATHER AND LEATHER PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	INDUSTRIAL MACHINERY, COMPUTER EQUIPMENT
36	ELECTRONIC, ELECTRIC EQUIP, EXC COMPUTER
37	TRANSPORTATION EQUIPMENT
38	INSTRUMENTS AND RELATED PRODUCTS
39	MISC. MANUFACTURING INDUSTRIES
91	SCRAP AND WASTE
92	USED OR SECOND-HAND MERCHANDISE
95	CHARITY, MILITARY AID, SHIPMENTS
99	SPECIAL CLASSIFICATION PROVISIONS, NSPF

### Source Notes:

DOTS denotes the International Monetary Fund's *Direction of Trade Statistics* CD-ROM, 2004

BEA denotes the U.S. Bureau of Economic Analysis website, available at [www.bea.gov](http://www.bea.gov).

BLS denotes the U.S. Bureau of Labor Statistics website, available at [www.bls.gov](http://www.bls.gov)

Census denotes the U.S. Census Bureau's website. The data state demographic data from the 1990 and 2000 census are available at [factfinder.census.gov](http://factfinder.census.gov).

IFS denotes the International Monetary Fund's *International Financial Statistics* CD-ROM, 2004.

MISER denotes the Massachusetts Institute for Social and Economic Research's state export database. The data used are from the origin of movement series, classified by the 2-digit Standard Industrial Classification.

WDI denotes the World Bank's *World Development Indicators* CD-ROM, 2002.

## Constructed Series:

Series	Description	Unit	Construction
C.1	U.S. Exports to EU	mil USD	sum of O.28 through O.46
C.2	U.S. Real GDP	mils. 1995 USD	O.118/O.119*100
C.3	MN Population ages 15-64		see note below
C.4	WI Population ages 15-64		see note below
C.5	MN GSP in Agriculture, Mining and Manufacturing	mils. USD	sum of O.127 through 129
C.6	WI GSP in Agriculture, Mining and Manufacturing	mils. USD	sum of O.131 through 133
C.7	MN GSP in Agriculture, Mining and Manufacturing	mils. 1996 USD	sum of O.135 through 137
C.8	WI GSP in Agriculture, Mining and Manufacturing	mils. 1996 USD	sum of O.139 through 141

## Construction of State Population Ages 15-64:

To construct state population ages 15-64 for the years 1991-1999, we multiply total population estimates by the average share of population ages 15-64 in total population for 1990 and 2000.

For Minnesota, this share is:

$$\text{sum}(O.157:O.170)/O.171 * 0.5 + (\text{sum}(O.172:O.221) + \text{sum}(O.223:O.272))/(O.222+O.273) * 0.5$$

and is equal to 0.66. This fraction is multiplied by O.124 to create C.3.

For Wisconsin this share is :

$$\text{sum}(O.142:O.155)/O.156 * 0.5 + (\text{sum}(O.274:O.323) + \text{sum}(O.325:O.374))/(O.324+O.375) * 0.5,$$

and is equal to 0.65. This fraction is multiplied by O.125 to create C.4.

## Figures:

**Figure 1:** The solid line is  $(O.24-O.25-O.26)/O.24$ , the long-dashed line is  $O.25/O.24$  and the short-dashed line is  $O.26/O.24$ .

**Figure 2:** The solid line is  $O.121/O.120$ , the long-dashed line is  $O.123/C.4$  and the short-dashed line is  $O.12/C.3$ .

**Figure 3:** The solid line is  $C.2/O.121$ , the long-dashed line is  $O.138/O.123$  and the short-dashed line is  $O.134/O.122$ .

**Figure 4:** The solid line is  $(O.49-O.48-O.47)/O.49$ , the long-dashed line is  $O.47/O.49$  and the short-dashed line is  $O.48/O.49$ .

**Figure 5:** The solid line is  $(O.52-O.51-O.50)/O.52$ , the long-dashed line is  $O.50/O.52$  and the short-dashed line is  $O.51/O.52$ .

**Figure 6:** These plots are constructed from O.54-O.84 for Minnesota and O.87-O.117. The workbook “LeastTradedMN-NAFTA.xls” shows the calculations used to create Figure 6. To construct Figure 6 we use all SIC codes except codes 91, 92, 95 and 99, which cover non-market or non-produced transactions, though these 4 codes are used in computing total exports. The remaining codes are sorted according to their value in 1990. We calculate the cumulative share of trade, starting from the least-traded goods, in the column labeled “1990 share.” The column “summation factor” for good  $j$  is equal to 1.0 if the cumulative share of the set of goods ending with code  $j$  is less than 0.1, and is equal to 0.0 if the set’s cumulative share is greater than 0.1. If the share of good  $j$  is greater than 0.1, but the share of good  $j-1$  is less than 0.1, we assign a summation factor such that multiplying the value of good  $j$  by the summation and adding to the set of goods yields a share of exactly 0.1. For example, for Wisconsin exports to Mexico, we added only 5.01 percent of good 37 to make up a set of least traded goods whose share of total trade is exactly 0.1. The least traded goods are in red font. Calculating the share of the least traded goods in year  $t$  is a matter of taking the dot product of the data in year  $t$  and the summation factor multiplied by 100.