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Measuring the Cost of Protection in Japan, 1990

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1. Introduction

Last year, the Countries who join the APEC declared the complete achievement of trade liberalization until 2010 for the developed countries and 2020 for the developing ones. However, this is just the political pledge and does not depend on the detailed information about the trade and investment among the APEC countries. It is necessary for the success of this pledge to make the realizable plan which is based on the theoretical justice and the empirical understanding. Additionally, the revitalization of APEC is cooperative and voluntary. It is necessary for each countries to show the actual achievement thorough the empirical data. It would be the important first step for the achievement of the free trade area that all participants know the achievements and the objectives each other.

PECC [1995] already have shown the results of their achievement in trade and investment among APEC regions. This report shows the several data about the trade and investment on the common industry or commodity category. There are some rooms to improve. First, the common product category is too rough to make a plan in actual. It is necessary to show the relationship between the several types of protection and its effect on the economy or trade flows based on the detailed product classification. Second, this report does not show the empirical analysis about the cost of several types of protection. The protection have great influence on the efficiency of market and the distribution of income. Moreover, its effect spread among all kind of industries or participants in its economy.

We have already shows the degree and effects of trade protection in Japanese economy (see Sazanami, Urata and Kawai[1995]). We measured the degree of trade protection based on the price differentials on the very detailed commodity level which is consistent for the trade and production data. Moreover, we estimated its effect on the efficiency and the distribution of income through the computable partial equilibrium model. But our previous research actually have several restrictions.

The first objective of this paper is to measure the effect of the distortion in Japanese economy through the price differentials. Our estimates of price differentials have some range which come from several kinds of price data and other researches of the IDE research project.

We would make some analysis showing the relationship between the price differentials and the distortion (policy restriction, monopolistic power, and retailers behavior et al.).

The second objective of this paper is to estimate the effect of distortions on the efficiency and income distribution in the Japanese economy. We estimate its effect through the simple computable general equilibrium model. which is able to add the interindustry effect of some specific sectors. It is necessary for this calculation to estimate the several elasticity value on the detailed commodity base. We execute the elasticity estimation using both time series and cross section data.

This paper just have reported the first step of our analysis and consists more 2 sections. In section 2, we shows our methodology and main results about price differentials. In section 3, we shows the research plan to execute the our second objectives.

2. Methodology and Main Results

2.1 *Objectives of Price Differential Analysis*

There are several ways in analyzing price differentials. One way is that general price levels in different cities are compared, such as the price of a watch in Tokyo is higher than in London. Since this comparison is made at the stage of final demand, calculation implies possibility that mixed factors could contribute the difference. Distribution margins, monopolistic and/or oligopolistic pricing behaviors, or industry specific policies are commonly considered. Another is to look at the prices closest to the producers; shipment or boarder prices. This method is assumed one price law is hold and any difference is explained as tariffs and/or non-tariff barriers.

To investigate policy distortion, including non-tariff barriers (NTBs), data close to producers are very useful if there is no distortion, because the differential based on it could be assumed zero, otherwise different products.

2.2 *Calculation of Price Differentials*

(1) Method of Calculation

In calculating unit value differentials, we followed the completely same method as used in Sazanami, Urata, and Kawai (1995). They are derived from domestic price (Pd) devided by imported price (Pm) and times 100.

$$[Pd(90)/Pm(90)] *100 \qquad (2.1),$$

where Pd(90) means unit price for domestic goods in 1990, and Pm(90) is those for imported in 1990[1]. To construct data set, we started to calculate from the most detailed level, and aggregated them step by step. The most detailed goods are called "items," and first aggregation of them are "commodities," then the last category are called "Products."

a.) making a unit price data set for domestic goods

We obtained necessary data from 1990 Input-Output Table for Japan provided by Management and Coordination Agency (1995) and collected value, quantity, and unit on about 5000 goods domestically produced. Unit price is calculated by value devided by quantity on the basis of 10-digit items.

b.) making a unit price data set for imported goods

As for imported goods, we obtained c.i.f.[2] import data from the trade statistics, Japan Exports and Imports, Commodity and Country 1990, provided by Japan Tariff Association. These data are available in about 9000 items by 10-digit level on the HS[3] classification system. The price constructed here implies shipment price from foreign suppliers plus transportation margins to a port and insurance fee.

c.) calculation of price differentials

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1. In Sazanami, Urata, and Kawai (1995), the differential can be seen as tariff equivalent. However, our calculation does not show it. If 100 is subtracted from equation (2.1), then, all figures in this study could be considered as tariff equivalent.

2. "c.i.f." stands for "Cost, Insurance and Freight," and means the transaction price including transportation and insurance fee.

3. HS is an abbreviation of Harmonized Commodity Description and Coding System.

Next, we aggregated unit prices on the basis of 10-digit commodity into 7-digit unit prices using quantity weights. In this time, referring to the converter which connects the I-O Table and the Trade Statistics with code numbers, we decided the same commodity between domestic and imported goods and devided the forger price by the latter. The result can be considered as the most detail price differential. We calculated the price differentials about 201 commodities among total 396 on the basis of the I-O basic classification. The results are summarized in the APPENDIX 1.

(2) Merits and Demerits of the Producer Price Differential Approach

Distortions by non-tariff barriers (NTBs) such as price support policy or production subsidy, invisible trade customs or *keiretsu* are all thought as the direct and indirect reasons for generating price differentials in Japan. Price differential analysis sums up these effects into tariff equivalents. In that sense, this approach has great merit in investigating the portion of the NTBs.

As the number of items available from the I-O Table is less than that from the Trade Statistics, we sometimes defined slightly different goods as the same commodities. Then, there remains limitation on matching the correctly same goods between domestic and imported, and this brings about the quality problem. In addition, since we operated imported goods from various countries as one thing as long as they have the same name, it is highly possible that clothing, for example, from Asia are different from those from Europe in quality, or by the same token, different from domestic products. Moreover, it is obvious that the aggregated figures embrace much more possibility in having this problem. Therefore, the quality problem is a major demerit in the approach.

2.3 *Overviews of Price Differentials in 1990*

(1) Overview of Unit Price

Table 2.1 summarizes price differentials of the aggregated product categories in

1990[4]. More than half of calculated commodities show higher prices in domestically produced goods comparing with imported commodities. Chemical products includes 35 commodities, Food products is 29, and Agriculture, forestry and fisheries has 17 commodities whose PPP is greater than 1. In terms of the ratio to the total number, Food products shows 76%, and Chemical is 66%. Those industries are known as having much regulation for stability of supply and/or security for consumer.

(2) Remarks on the Difference between Producer Price Basis and Retail Price Basis

Our calculation (Pd/Pm) was based on the producer price data, whereas PPP estimated by OECD is on the retail price basis. Tables 2.2 and 2.3 are indicating that industries with high PPP(Pd/Pm) is slightly different from those with high PPP(OECD). However, looking at the product groups, there appear similar categories in both tables.

Difference in price differentials [(data by OECD) minus (Pd/Pm)] means quality of Japanese goods is higher than imported in the case the figure takes negative number. According to the panels <D>, <E>, and <F> in Table 2.4, some commodities show high quality of domestic goods.

(3) Comparison with 1985 Price Differential

To compare with the prior study, Table 2.5 provides information. Roughly speaking, two thirds of listed commodities expanded the price differentials between 1985 and 1990. However, outstanding feature can be observed in Whiskey and brandy, where non-tariff barriers have dramatically reduced after the abolition of the ad valorem tariff.

3. Concluding Remarks

In this paper, we estimate the several kind of price differentials as a measure of the

4. Regarding the detail statistics, see the APPENDIX 1, in which some reference data is described together.

distortion in the market. We compare several price differential data and settle some range of it.

Next step of our analysis is to relate these price differentials to several kinds of market distortions. The source of distortion in the market seems to be (1) the formal and informal policy restriction, (2) the restricted competition of the producers, (3) the restricted competition of the retailers. We would add some empirical study for relating the price differentials to the these factors.

Third step of our analysis is to use the computable general equilibrium model. Our model consists of 5 equations as follows:

$$P_{Mi} = (1 + t_{Mi})\, P_{Wi},\ i = 1,..,N$$

$$PO_i = F\,(PD_i, PM_i),\ i = 1,..,N$$

$$Pd_i = (1 + t_j)\, F\,(PO_1,..,PO_N, w, r, y_j : K_j) / TFP_j,\ j = 1,..,N$$

$$PC_i = F\,(PO_i, w, r, y_i : CR),\ i = 1,..N$$

$$E_k = E\,(PC_1,..,PC_N, u_k : A_k),\ k = 1,..,K$$

where:

PM: the price of imported commodity, PW: the world price, tM: tariff equivalent rate, PO: the price of composite commodity, PD: the price of domestic commodity, t: indirect tax rate, w: wage rate, r: capital price, y: output level, K: capital stock, TFP: the level of total factor productivity, PC: the retail price of composite commodity, CR: concentration rate, E: cost of living, u: utility level, A: attributes of household k

The first equation is the supply function of import goods. This equation means the supply of import goods is perfectly elastic for the import price. Second equations is the unit cost function of composite commodity. This equation means the imperfectly substitutable between the imported and domestic commodity. The third equation is the supply function of domestic goods. This is derived from the marginal cost function of producers. The forth equation is the supply function of retail sector. This is derived from the marginal cost function of retailers. The Last equation is the expenditure function of household k which have some

attribute Ak. This equation imply the variety policy effect of household. It is depends on the relative price and household attributes.

Now, we estimate the each equation and construct full model based on the detailed commodity level. We would use the simulation analysis to estimate the cost of protection in Japan.

Reference

[1] PECC[1995a], *Survey of Impediments to Trade and Investment in the Apec Region*, PECC.

[2] PECC[1995b], *Milestone in APEC Liberalization: Map of Market Opening Commitments by APEC Economies*, PECC.

[3] Sazanami, Y., S. Urata and H. Kawai[1995], *Measuring the cost of protection in Japan*, Institute for International Economics, Washington D.C.

Table 2.1 Summary of Price Differential

1990 Input-Output Table for Japan

Counting Number	Product Category *1	No. of Commodities Available in PPP*2 (A)	No. of Commodities PPP > 1 (B)	Ratio 1 (%) (B/A*100)	No. of Commodities [OECD-PPP] > |0.5| (C)	*3	Ratio 2 (%) (C/A*100)
01	Agriculture, Forestry and Fishery (1 - 47)	29	17	58.6	11	(6)	37.9
02	Mining (48 - 60)	8	3	37.5	1	(1)	12.5
03	Food products (61 - 110)	38	29	76.3	25	(15)	65.8
04	Textile products (111 - 130)	6	4	66.7	2	(2)	33.3
05	Pulp, paper and wood products (131 - 147)	3	1	33.3	3	(3)	100.0
06	Chemical products (151 - 212)	53	35	66.0	6	(4)	11.3
07	Petroleum and coal products (213 - 224)	10	5	50.0	4	(3)	40.0
08	Ceramics, stones and clay products (240 - 256)	11	4	36.4	3	(3)	27.3
09	Iron and steel (257 - 278)	16	9	56.3	0	(0)	0.0
10	Non-ferrous metal (279 - 292)	8	6	75.0	2	(2)	25.0
11	Metal products (293 - 303)	4	2	50.0	2	(1)	50.0
12	General	2	0	0.0	2	(2	100.0

	machinery (304 - 336)					)	
13	Electric machinery (337 - 364)	3	3	100.0	1	(0)	33.3
14	Transportation equipment (365 - 381)	5	2	40.0	2	(2)	40.0
15	Precision instruments (382 - 387)	0	0	0.0	0	(0)	0.0
16	Other industrial products (148 - 150, 225- 239, 388 - 396)	5	0	0.0	5	(5)	100.0
	Total	201	120	59.7	69	(4 9)	34.3

No *1. Figures in parentheses show commodity counting numbers included in each product te category. (see APPENDIX 1.)
s.

*2. PPP equals to the unit value differential (Pd/Pm).

*3. Figures in parentheses are the numbers of commodity whose differential estimated by OECD exceeds PPP (Pd/Pm) by the positive value 0.5.

Table 2.2 and 2.3 Commodities: Large Price Differentials — Producer Price Indices vs. Retail Price Indices

Table 2.2 Commodities: PPP (Pd/Pm, producer price indices) is greater than 2

Barley	01	6.494	Processed meat products	03	2.412
Soybeans	01	5.954	Confectionery	03	2.250
Wheat	01	5.650	Beer	03	2.231
Oil seeds	01	5.351	Vegetable oil	03	2.146
Miscellaneous grains	01	5.168	Feeds	03	2.142
Mushrooms and minor products (inc. hunting)	01	3.120	Other processed seafoods	03	2.070
Beef cattle	01	2.856	Canned or bottled vegetables and fruits	03	2.045
Other pulses	01	2.390	Cosmetics, toilet preparations and dentifrices	06	7.982
Leaf tobacco	01	2.250	Ethylene glycol	06	2.697
Coking coal	02	2.312	Methane derivatives	06	2.620
Milled rice	03	6.094	Synthetic phenol	06	2.568

Tea, and roasted coffee	03	3.407	Ethylene dichloride	06	2.171
Dairy products	03	3.348	High functionality resins	06	2.074
Other foods	03	2.723	Oil and fat industrial chemicals	06	2.038
Condiments and seasonings	03	2.685	Gasoline	07	2.478
Refined sake	03	2.682	Cast materials (iron)	09	2.018
Pressed agricultural foodstuffs (other than canned and bottled)	03	2.667	Metal containers, fabricated plate and sheet metal	11	3.597
Other grain milled products	03	2.558	Other household electric appliances	13	3.386
Soft drinks	03	2.524			

Table 2.3 Commodities: Price Differential (OECD, retail price indices) is greater than 2

Raw milk	01	2.173	Foreign paper and Japanese paper	05	2.601	Metal products for architecture	11	2.159
Mushrooms and minor products (inc. hunting)	01	2.159	Coated paper and building (construction) paper	05	2.601	Gas and oil appliances and heating and cooking apparatus	11	2.159
Coal for general use, lignite, anthracite	02	7.337	Paper textile for medical use	05	2.276	Bolts, nuts, rivets and springs	11	2.159
Manufactured ice	03	4.309	Pulp	05	2.159	Metal containers, fabricated plate and sheet metal	11	2.159
Beef meat (Bone meat)	03	4.233	Paperboard	05	2.159	Plumber's supplies	11	2.159
Vegetable oil	03	3.131	Corrugated cardboard	05	2.159	Stamped and pressed products	11	2.159
Cooking oil	03	3.131	Corrugated card board boxes	05	2.159	Other metal products, n.e.c..	11	2.159
animal oils and fats	03	2.657	Other paper containers	05	2.159	Copy machine	12	6.857
Processed meat products	03	2.552	Other pulp, paper and processed paper products	05	2.159	Electronic calculator	12	6.857
Canned or bottled meat products	03	2.552	Paints varnishes and lacquers	06	2.601	Word processing machine	12	6.857
Canned or bottled vegetables and fruits	03	2.510	Gelatin and adhesives	06	2.601	Other office machines, n.e.c..	12	6.857
Pressed agricultural foodstuffs (other than canned and bottled)	03	2.510	Cosmetics, toilet preparations and dentifrices	06	2.276	Pumps and compressors	12	2.292

Prepared frozen foods	03	2.510	Other final chemical products, n.e.c..	06	2.276	Machinist's precision tools	12	2.292
Retort foods	03	2.510	Synthetic dyes	06	2.159	Other general machines and parts	12	2.292
Dishes, sushi, lunch boxes	03	2.510	Other coal products	07	7.337	Electric computing equipment (main parts)	13	6.857
Other foods	03	2.510	LPG (liquefied petroleum gas)	07	3.428	Electric computing equipment (accessory devices)	13	6.857
By-products of slaughtering and meat processing	03	2.494	Gasoline	07	2.720	Plastic film and sheets	16	2.601
Milled rice	03	2.412	Light oils	07	2.720	Plastic plates, pipes and bars	16	2.601
Other grain milling	03	2.412	Other petroleum refinery products	07	2.720	Foamed plastic products	16	2.601
Other liquors	03	2.398	Abrasive	08	2.292	Reinforced plastic products	16	2.601
Other meat (Bone meat)	03	2.397	Ceramic, stone and clay products	08	2.292	Plastic containers	16	2.601
Noodles	03	2.268	Pottery, china and earthenware for home use	08	2.076	Plastic table ware, kitchen ware and other household articles	16	2.601
Beer	03	2.173	Other structural clay products	08	2.076	Other plastic products	16	2.601
Drinking milk	03	2.173	Cast materials (iron)	09	2.159	Writing instruments and stationery	16	2.601
Poultry meat	03	2.044	Other non-ferrous metals	10	2.159	"Tatami" (Japanese straw mat) and straw products	16	2.276
Wheat flour	03	2.003	Non-ferrous metal scrap	10	2.159			
Other grain milled products	03	2.003	Rolled aluminium products	10	2.159			
Fabricated textiles for medical use	04	2.276	Non-ferrous metal castings and forgings	10	2.159			
Ropes and nets	04	2.159	Cutlery and tools	11	2.897			

Table 2.4 Difference in Price Differentials [OECD - (Pd/Pm)]

<A> Difference in Price Differentials is greater than 2 (6 commodities)		<D> Difference in Price Differentials is smaller than -2 (5 commodities)	
Coal for general use, lignite, anthracite	02	Soybeans	01
Beef meat (Bone meat)	03	Oil seeds	01
Cooking oil	03	Milled rice	03
Paints varnishes and lacquers	06	Cosmetics, toilet preparations and	06

				dentifrices	
Gelatin and adhesives	06			Other household electric appliances	13
LPG (liquefied petroleum gas)	07				

<B> Difference in Price Differentials falls between 1 and 2 (24 commodities)				<E> Difference in Price Differentials falls between -1 and -2 (5 commodities)	
Other livestock-raising	01	Paperboard	05	Tea, and roasted coffee	03
Hen eggs	01	Other petroleum refinery products	07	Dairy products	03
Other grain milling	03	Ceramic, stone and clay products	08	Soft drinks	03
animal oils and fats	03	Abrasive	08	Feeds	03
Fish oil and meal	03	Other structural clay products	08	Metal containers, fabricated plate and sheet metal	11
Canned or bottled meat products	03	Bolts, nuts, rivets and springs	11		
Pork (Bone meat)	03	Other general machines and parts	12		
Poultry meat	03	Plastic plates, pipes and bars	16		
Dextrose, syrup and isomerized sugar	03	Foamed plastic products	16		
Woolen yarn	04	Plastic film and sheets	16		
Foreign paper and Japanese paper	05	Reinforced plastic products	16		
Pulp	05	Writing instruments and stationery	16		

<C> Difference in Price Differentials falls between 0.5 and 1 (19 commodities)				<F> Difference in Price Differentials falls between -0.5 and -1 (10 commodities)	
Marine culture	01	Synthetic dyes	06	Other pulses	01
Citrus fruits	01	Other final chemical products, n.e.c..	06	Mushrooms and minor products (inc. hunting)	01
Other fruits	01	Light oils	07	Seeds and seedlings	01
Vegetables	01	Other non-ferrous metals	10	Condiments and seasonings	03
Vegetable oil	03	Rolled aluminium products	10	Confectionery	03
Other meat (Bone meat)	03	Refrigerators and air conditioning apparatus	12	Refined sake	03
Salted, dried or smoked seafoods	03	Trucks, buses and other cars	14	Other grain milled products	03
Frozen fish and shellfish	03	Passenger motor cars	14	Organic fertilizers, n.e.c..	03
Canned or bottled seafoods	03			Combined fertilizer	06
Starch	03			Sheet glass	08
Other fiber yarn	04				

Table 2.5 Comparison of Unit Price Differentials: 1985 and 1990

			1985 Input-Output Table for Japan		1990 Input-Output Table for Japan			
		1985	85(Pd/Pm)	89(Pd/Pm)	90(Pd/Pm)			1990
		I-O Code	Unit Value Differential	MITI &	Unit Value Differential			I-O Code
	Commodities	Number	(Vd,Vm-Weight)	(Equal Weight)	(Vd,Vm-Weight)		Commodities	Number
101	Wheat (Domestic+imported)	111021	4.551	5.778	5.650	↑	Wheat	111023 1
102	Soybeans (domestic+imported)	112021	4.383	5.236	5.954	↑	Soybeans	112021
103	Citrus fruits	114011	1.853	2.285	1.015	↓	Citrus fruits	114011
104	Oil seed	115011	3.140	7.034	5.351	↑	Oil seed	115091
105	Leaf tobacco	116021	2.230	2.196	2.250	↑	Leaf tobacco	116021
106	Dressed carcasses and poultry meat	1111011	1.089	1.379	1.970	↑	Dressed carcasses and poultry meat	111101 11
107	Processed meat products	1112021	1.645	2.198	2.412	↑	Processed meat products	111201 11
108	Dairy products	1112042	3.675	3.697	3.348	↓	Dairy products	111201 4 2
109	Milled rice	1114011	6.875	8.373	6.094	↓	Milled rice	111401 11
110	Bread	1115021	4.189	4.465	5.880	# #	Bread	111502 21
111	Confectionery	1115022	1.888	2.667	2.250	↑	Confectionery	111503 31
112	Canned or bottled vegetables	1115031	1.566	2.209	2.045	↑	Canned or bottled vegetables	111601 11
113	((Other sugar and by-products))	1115049	1.164	0.964	1.894	↑	Other sugar and by-products	111701 19

114	Beer	1121021	1.926	2.430	2.231	↑	Beer	1121021	10	1
115	Whiskey and brandy	1121041	3.084	1.941	1.780	↓	Whiskey and brandy	1121041	10	3
116	Tea and roasted coffee	1129011	4.551	7.163	3.407	↓	Tea and roasted coffee	1129011	10	5
117	Sparkling and still-	1129021	1.827	2.970	2.524	↑	Sparkling and still-	1129021	10	6
118	Tobacco	1141011	2.644	3.412	Pd		Tobacco	1141011	11	0
201	Cotton yarn	1511021	1.263	1.396	1.523	↑	Cotton yarn	1511021	11	2
202	((Knit fabrics))	1513011	1.025	1.391	UNIT		Knit fabrics	1513011	12	1
203	Wearing apparel	1521011	4.073	3.940	UNIT		Wearing apparel	1521011	12	7
204	Plywood	1611021	1.206	1.307	Pd		Plywood	1611021	13	2
205	((Paperboard))	1813011	0.912	0.893	0.980		Paperboard	1813011	14	1
206	Foreign paper and	1812011	1.147	1.394	1.204	↑	Foreign paper and	1812011	14	0
207	Leather footwears	2411011	0.756	0.896	UNIT		Leather footwears	2411011	23	7
301	Copper ore	6120111	2.815	2.592	3.247	##	Copper ore	612011	49	
302	Sheet glass	2511011	0.815	1.631	0.981		Sheet glass	2511011	24	0
303	Clay refactories	2599011	2.141	3.684	1.769	↓	Clay refactories	2599011	25	1
304	Ferro-alloy	2611021	1.274	1.216	1.669	↑	Ferro-alloy	2611021	25	8
305	Lead (inc. regenerat-)	2711021	1.879	1.234	1.869	↓	Lead (inc. regenerat-)	2711021	28	0
306	Regenerated Aluminium	2711042	1.271	1.259	0.978	↓	Regenerated Aluminium	2711041	28	2
307	Other non-ferrous metals	2711099	1.034	1.465	1.160	↑	Other non-ferrous metals	2711099	28	3
401	((Crude petroleum))	7210111	1.094	0.942	0.843	↓	Crude petroleum	721011	59	
402	Natural gas	7310111	1.055	2.134	UNIT		Natural gas	7310111	60	

403	Nitric fertilizers	2011021	1.620	1.964	1.334		Nitric fertilizers	2011021	152
404	Soda ash	2021011	1.773	2.485	0.572	↓	Soda ash	2021011	155
405	Caustic soda	2021012	3.039	3.237	0.892	↓	Caustic soda	2021012	156
406	Titanium oxide	2029021	1.342	1.398	1.586	↑	Titanium oxide	2029021	160
407	Methane derivatives	2039021	2.047	2.930	2.620	↑	Methane derivatives	2039021	186
408	Oil and fat industrial	2039031	1.125	1.447	2.038	↑	Oil and fat industrial	2039031	187
409	Polyethylene (2041021-2041024)	2041012	1.325	1.332	1.611		Polyethylene (low density)	2041021	192
					0.767		Polyethylene (high density)	2041022	193
410	Medicaments	2061011	1.000	1.085	Pd, Pm		Medicaments	2061011	201
411	Cosmetics, toilet preparatory	2071021	7.466	7.279	7.982	↑	Cosmetics, toilet preparatory	2071021	204
412	Gasoline	2111011	1.510	3.290	2.478	↑	Gasoline	2111011	213
413	((Heavy oil A))	2111015	1.148	0.961	0.990	↓	Heavy oil A	2111015	217
501	Chemical machinery	3022011	1.000	1.611	Pd		Chemical machinery	3022011	314
502	((Agricultural machinery))	3029011	0.698	1.013	UNIT		Agricultural machinery	3029011	318
503	Radio and televisions	3211021	3.475	7.070	UNIT		Radio and televisions	3211021	338
504	Electric computing equipment	3311010	1.329	1.758	UNIT		Electric computing equipment	3311011	343
505	Communication equipment	3321010	4.125	2.811	UNIT		Communication equipment	3321011	345
506	Semi-conductor devices	3341010	1.885	2.066	1.606	↓	Semi-conductor devices	3341011	350
507	Medical	3719031	1.000	1.327	Pd		Medical	3719011	381

7	instrument s	1			instrument s	31	7

No See the notes of APPENDIX 1 about meanings of symbols in this te table.
s.

Arrows (↑, ↓) are showing 1990 price differential went up, or down, respectively.
Also, see Sazanami, Urata, and Kawai (1995).

Appendix Summary Table

1990 Input-Output Table for Japan		Producer price indices	Difference in			Retail price indices									
		Unit Value Differentials		Price Differentials		International Price	Other	Price Change Rate			Import Penetration Ratio (%)			Ave Ta Rate	
I-O Code Number	Commodities Category	(Pd/Pm)		[OECD - (Pd/Pm)]	MITI Research Center	OECD	Ministries	Pd(%)	Pm(%)	Pd/Pm	1980	1985	1990	1980	1985
01	Agriculture, Forestry and Fishery														
1 111011	Rice	PM		NA		NA									
2 111012	Rice straw	0.809		NA		NA		11.8	-4.6	-2.56	1.2	2.8	6.7	0.0	0.0
3 111021	Wheat	5.650	C	NA		NA		-21.8	-37.0	0.59	72.2	58.1	50.5	0.0	0.0
5 111023	Barley	6.494	LM	NA		NA		-21.5	-32.6	0.66	44.5	44.0	36.8	0.0	0.0
7 111031	Miscellaneous grains	5.168		NA		NA		17.2	-35.3	-0.49	99.0	99.2	98.4	1.0	0.9
8 112011	Sweet potatoes	1.565		0.256		1.821	2.273	13.2					0.1		
9 112012	Potatoes	PM		NA		1.821	2.273	11.0					0.0		
10 112021	Soybeans	5.954	C	-4.545		1.409		-10.2	-33.9	0.30	86.9	83.1	78.6	0.0	0.0
12 112029	Other pulses	2.390		-0.981		1.409		-17.3	-39.1	0.44	38.5	33.7	33.1	8.5	8.1
13 113001	Vegetables	0.845		0.564		1.409	2.200	24.6	-27.8	-0.88	0.8	1.0	1.6	5.2	4.8
14 114011	Citrus fruits	1.015	C	0.738		1.753	2.460	37.8	-16.8	-2.24	15.6	16.9	16.1	20.2	15.9
15 114012	Apples	PM		NA		1.753	1.852	-13.5	-10.2	1.33	0.1	0.1	0.1	0.0	0.0
16 114019	Other fruits	1.178		0.575		1.753	1.270	33.7	-21.2	-1.59	23.9	25.7	22.3	25.3	17.7
17 115011	Sugar crops	0.193		NA		NA		-10.8	41.7	-0.26	0.0	0.0	0.0	0.0	0.0
18 115021	Coffee and cocoa beans	PD		NA		NA			-62.7		100.0	100.0	100.0	0.0	0.0
19 115029	Other crops for beverages	1.830		NA		NA		15.4	5.4	2.83	6.2	4.2	5.5	5.0	5.0

20	115091	Oil seeds	5.351	C	-4.038		1.313		-15.4	-39.3	0.39	99.0	99.5	99.6	0.0	0.0
21	115092	Crops for edible agricultural products	1.088		NA		NA		8.7	-43.0	-0.20	35.1	44.5	27.9	1.2	2.7
22	116011	Crops for feed and forage	0.255		NA		NA		16.7	-17.8	-0.94	7.5	9.6	12.4	0.0	0.0
23	116021	Leaf tobacco	2.250	C	NA		NA		4.4	3.4	1.29	4.3	0.5	31.3	0.0	0.0
24	116031	Seeds and seedlings	1.709		-0.612		1.097		12.1	-26.8	-0.45	7.8	13.8	14.5	0.8	0.0
25	116041	Flowers and plants	0.644		0.453		1.097		15.2	-1.4	-10.80	1.5	1.4	3.4	0.9	0.3
26	116091	Raw rubber	PD		NA		NA			-33.0		100.0	100.0	100.0	0.0	0.0
27	116092	Raw cotton	PD		NA		NA			-24.4		100.0	100.0	100.0	0.0	0.0
28	116093	Crops for inedible agricultural products	1.892		NA		NA		5.5	-52.0	-0.11	48.4	53.3	45.4	1.3	1.1
29	121011	Raw milk	PM		NA		2.173		-8.7							
30	121019	Other daily farming products	PM		NA		NA		2.6							
31	121021	Hen eggs	0.612		1.035		1.647		-17.7	-48.6	0.36	0.1	0.1	0.1	10.3	13.3
32	121031	Fowls and poultry, n.e.c..	0.398		NA		NA		-15.0	-14.6	1.03	0.4	0.5	0.3	0.0	0.0
33	121041	Hogs	0.087		NA		NA		-16.5	54.3	-0.30	0.1	0.1	0.1	4.6	6.9
34	121051	Beef cattle	2.856		NA		NA		32.8	1.5	22.42	1.3	1.0	0.8	6.4	22.6
35	121091	Sheep and lamb wool	0.400		NA		NA		-4.8	35.0	-0.14	100.0	99.9	100.0	0.0	0.0
36	121099	Other livestock-raising	0.274		1.426		1.700		-1.6	-47.0	0.04	22.5	35.5	32.7	5.2	3.5
37	122011	Sericulture	0.907		NA		NA		4.5	35.8	0.12	1.8	1.1	9.0	3.2	0.0
38	131011	Veterinary service	PD, PM		NA		1.831		6.4							
39	131021	Agricultural services (except veterinary service)	PD, PM		NA		NA		3.4							
40	211011	Silviculture	PD, PM		NA		NA		8.9							
41	212011	Logs (domestic + imported)	1.089		NA		NA		12.0	-5.3	-2.28	57.5	47.2	47.1	0.0	0.0
43	213011	Mushrooms and minor products (inc. hunting)	3.120		-0.961		2.159		11.0	-17.2	-0.64	13.4	16.2	17.5	3.0	3.2
44	311001	Marine fisheries (domestic + imported)	PM		NA		1.543	1.190	-14.0	9.4	-1.49	19.6	23.0	9.6	5.4	4.4
46	311041	Marine culture	0.554		0.989		1.543	1.190	-7.8	557.2	-0.01	3.2	2.7	9.3	0.3	1.0
47	312001	Inland water fisheries and culture	1.685	###	-0.142		1.543	1.190	-10.3	-10.5	0.99	13.7	16.4	15.6	4.5	4.0
	02	Mining														

48	611011	Iron ore mining	1.574		NA		NA		6.6	-33.1	-0.20	99.7	99.7	100.0	0.0	0.0
49	612011	Copper ores	3.247	##, C	NA		NA		1.4	4.0	0.35	95.6	94.8	98.5	0.0	0.0
50	612012	Lead and zinc ores	2.004	##	NA		NA		4.8	13.6	0.35	60.9	59.5	83.0	0.0	0.0
51	612019	Other non-ferrous metal ores	19.420	##	NA		NA		-28.4	15.0	-1.90	83.5	87.9	94.4	0.0	0.0
52	621011	Limestone	0.013		NA		NA		-0.8	33.3	-0.02	0.0	0.0	0.0	0.0	0.0
53	621099	Other materials for ceramics	0.459		NA		NA		-6.9	-28.6	0.24	30.6	43.0	54.0	0.0	0.0
54	622011	Gravel and quarry	0.709		NA		NA	2.300	6.5	-11.3	-0.58	1.8	2.9	6.7	0.0	0.0
55	622021	Crushed stones	PM		NA		NA	1.440	6.5	-11.3	-0.58				0.0	0.0
56	629099	Other non-metal ores	0.430		NA		NA		21.3	-24.8	-0.86	89.7	96.1	96.2	0.0	0.0
57	711011	Coking coal	2.312	L M	NA		NA		-5.7	-37.4	0.15	88.2	92.2	99.7	0.0	0.0
58	711012	Coal for general use, lignite, anthracite	1.972		5.365		7.337		-1.2	-32.8	0.04	39.4	57.5	68.1	0.0	0.0
59	721011	Crude petroleum	0.843	C	NA		NA		-63.9	-56.3	1.13	99.8	99.7	99.8	1.2	1.4
60	731011	Natural gas	UNIT	C	NA		NA		-25.2	-56.5	0.45	92.8	94.0	92.9	0.0	0.0
	03	Food products														
61	1111011	Beef meat (Bone meat)	1.970	C	2.264		4.233	1.639	-4.9	-12.6	0.39	14.8	16.7	31.0	13.5	11.6
62	1111012	Pork (Bone meat)	0.609		1.198		1.806	1.031	-4.9	-12.6	0.39	14.8	16.7	28.2	13.5	11.6
63	1111013	Poultry meat	0.865		1.180		2.044	0.769	-4.9	-12.6	0.39	14.8	16.7	17.9	13.5	11.6
64	1111014	Other meat (Bone meat)	1.617		0.779		2.397	1.190	-4.9	-12.6	0.39	14.8	16.7	94.4	13.5	11.6
65	1111015	By-products of slaughtering and meat processing	UNIT		NA		2.494	1.190	-18.1	108.3	-0.17	76.5	77.7	83.1	5.0	4.2
66	1112011	Processed meat products	2.412	C	0.139		2.552	1.190	-5.5	-23.3	0.24	2.7	2.1	3.6	21.6	20.3
67	1112021	Canned or bottled meat products	1.300		1.252		2.552	1.190	42.5	-0.6	-70.32	7.1	6.7	5.9	24.3	23.5
68	1112031	animal oils and fats	0.949		1.708		2.657	1.087	-41.9	-46.5	0.90	37.6	22.4	23.6	0.3	0.6
69	1112041	Drinking milk	PM		NA		2.173	2.380	-3.1	-3.1	1.02	0.0	0.0	0.0	0.0	0.0
70	1112042	Dairy products	3.348	C	-1.351		1.996	1.780	9.7	18.9	0.51	9.5	6.3	8.8	16.1	15.1
71	1113011	Frozen fish and shellfish	0.902		0.641		1.543	1.190	23.0	21.7	1.06	18.1	15.6	35.0	5.7	5.2
72	1113021	Salted, dried or smoked seafoods	0.936		0.655		1.591	1.190	19.4	-20.8	-0.93	9.1	9.6	8.7	10.1	10.0
73	1113031	Canned or bottled seafoods	1.032		0.608		1.641	1.190	27.9	14.0	2.00	3.9	5.0	7.0	11.2	9.7

74	1113041	Fish paste	PD, PM		NA		1.641	1.190	34.7	24.5	1.42	0.1	0.0		0.0	0.0			
75	1113051	Fish oil and meal	0.084		1.556		1.641	1.190	-20.3	-17.9	1.13	22.2	11.2	21.1	0.4	1.4			
76	1113099	Other processed seafoods	2.070		-0.430		1.641	1.190	17.1	-14.7	-1.17	7.3	9.4	10.5	9.1	9.8			
77	1114011	Milled rice	6.094	L M, C	-3.682		2.412	1.470	4.0	-32.9	-0.12	0.1	0.1	0.0	0.0	0.0			
78	1114019	Other grain milling	0.671		1.741		2.412	1.470	-44.1	-1.9	23.75	0.6	1.0	1.8	24.6	4.7			
79	1114021	Wheat flour	1.853		0.150		2.003		-9.8	-14.3	0.683	0.0	0.0	0.0	8.0	3.7			
80	1114029	Other grain milled products	2.558		-0.556		2.003		5.6	-13.1	-0.43	9.5	6.9	7.9	8.5	5.7			
81	1115011	Noodles	2.346	##	-0.079		2.268	1.130	-38.3	-15.0	2.555	0.4	0.7	1.0	17.9	21.3			
82	1115021	Bread	5.880	##, C	-4.179		1.701	1.060	9.9	-2.1	-4.79	0.1	0.1	0.1	3.9	5.2			
83	1115031	Confectionery	2.250	C	-0.789		1.462	1.429	7.2	-19.3	-0.37	2.3	2.1	3.0	28.7	23.3			
84	1116011	Canned or bottled vegetables and fruits	2.045	C	0.465		2.510		1.6	-23.1	-0.07	15.3	24.7	27.0	21.2	21.5			
85	1116021	Pressed agricultural foodstuffs (other than canned and bottled)	2.667		-0.157		2.510		16.3	-7.1	-2.29	15.5	19.5	28.8	14.7	13.6			
86	1117011	Refined sugar	1.851		-0.197		1.654	1.470	-14.8	1.3	-11.74	0.0	0.1	0.1	29.9	25.8			
87	1117019	Other sugar and by-products of sugar manufacturing	1.894	C	-0.240		1.654	1.470	-31.2	28.2	-1.11	97.9	93.8	96.2	27.1	82.0			
88	1117021	Starch	1.267		0.529		1.797		-16.8	-18.8	0.89	3.5	4.7	6.5	8.4	5.0			
89	1117031	Dextrose, syrup and isomerized sugar	0.505		1.149		1.654		-16.0	-12.5	1.28	0.0	0.0	2.1	42.9	33.3			
90	1117041	Vegetable oil	2.146		0.985		3.131	1.087	-20.8	-60.0	0.35	13.2	11.0	9.9	7.7	6.3			
91	1117042	Cooking oil	0.960		2.171		3.131	1.087	-20.8	-60.0	0.35	13.2	11.0	0.3	7.7	6.3			
92	1117043	Vegetable meal	1.254		NA		NA	1.087	-24.2	-15.8	1.53	7.2	3.7	13.5	0.0	0.0			
93	1117051	Crude salt	PD		NA		NA			-30.0		100.0	100.0	100.0	0.0	0.0			
94	1117052	Salt	PD, PM		NA		1.691		0.6	0.0		0.0	0.0	0.0	0.0	0.0			
95	1117061	Condiments and seasonings	2.685		-0.994		1.691	1.087	2.5	-8.0	-0.31	1.1	1.3	1.6	13.3	9.4			
96	1119011	Prepared frozen foods	PD, PM		NA		2.510		0.4	0.0		0.1	0.0	0.0	0.0	0.0			

97	1119021	Retort foods	PD, PM		NA			2.510		10.3	10.2	1.01	0.0	0.1	0.1	0.0	0.0
98	1119031	Dishes, sushi, lunch boxes	PD, PM		NA			2.510		12.7	-16.0	-0.80	3.3	2.6	0.1	9.4	12.1
99	1119099	Other foods	2.723		-0.213			2.510		12.7	-16.0	-0.80	3.3	2.6	4.0	9.4	12.1
100	1121011	Refined sake	2.682		-0.788			1.893		-15.5	353.3	-0.04	0.0	0.0	0.0	7.1	0.0
101	1121021	Beer	2.231	C	-0.058			2.173	2.530	-9.8	-22.6	0.44	0.2	0.3	1.6	2.7	2.9
102	1121031	Ethyl alcohol for liquor manufacturing	1.261		NA			NA		5.7	181.8	0.03	0.8	0.5	3.5	0.0	0.0
103	1121041	Whiskey and brandy	1.780	C	0.114			1.893	1.075	-11.2	81.0	-0.14	22.2	19.8	46.8	18.2	22.7
104	1121099	Other liquors	1.917		0.482			2.398	1.449	13.5	47.8	0.28	15.2	8.0	16.3	30.3	24.0
105	1129011	Tea, and roasted coffee	3.407	C	-1.874			1.532	1.570	-15.3	-45.5	0.34	8.5	5.3	4.8	15.4	14.9
106	1129021	Soft drinks	2.524	C	-1.158			1.365	1.370	6.4	-32.8	-0.19	0.3	0.2	0.8	22.1	18.3
107	1129031	Manufactured ice	PD, PM		NA			4.309		51.3							
108	1131011	Feeds	2.142		-1.045			1.097		-27.2	-39.3	0.69	0.9	0.9	3.7	2.8	3.9
109	1131021	Organic fertilizers, n.e.c..	1.613		-0.516			1.097		11.9	-42.6	-0.28		0.1	0.9		0.0
110	1141011	Tobacco	PD	C	NA			0.909		11.5	-30.6	-0.38	3.6	5.0	11.4	7.6	4.3
	04	Textile products															
111	1511011	Raw silk	PD, PM		NA			NA		6.5	31.8	0.20	13.2	11.3	21.0	6.0	2.1
112	1511021	Cotton yarn	1.523	C	NA	0.970		NA		-19.7	-34.3	0.57	10.1	21.2	20.2	3.2	3.6
113	1511031	Synthetic fiber yarn	1.138		NA			NA		-14.8	-26.9	0.55	3.2	2.4	4.0	8.1	8.2
114	1511041	Woolen yarn	0.396		1.183			1.579		-13.0	62.5	-0.21	1.3	6.0	7.8	1.3	2.6
115	1511099	Other fiber yarn	0.875		0.704			1.579		-4.7	-15.1	0.31	30.5	17.5	14.0	7.7	9.1
116	1512011	Cotton and staple fiber fabrics (inc. fabrics of synthetic spun fibers)	0.813	#	0.767	0.455		1.579		3.9	-12.7	-0.31	8.4	12.9	16.4	5.3	5.5
117	1512021	Silk and artificial silk fabrics (inc. fabrics of synthetic filament fibers)	1.092	#	0.487			1.579		-7.3	25.7	-0.28	7.5	5.3	8.5	9.3	8.7
118	1512031	Woolen fabrics	UNIT		NA			1.579		6.8	13.0	0.52	9.6	9.7	16.6	10.8	11.4
119	1512091	Narrow fabrics (under 13cm	PD, PM		NA			1.579		3.7	-31.0	-0.12	4.2	2.3	3.2	7.6	7.3

		width)																	
120	1512099	Other fabrics, n.e.c..	UNIT		NA			1.579		20.5	-47.4	-0.43	13.0	15.0	13.8	14.4	13.3		
121	1513011	Knitted fabrics	UNIT	C	NA			1.579		3.0	-20.5	-0.15	11.4	14.7	25.8	12.5	13.6		
122	1514011	Yarn and fabric dyeing and finishing (processing on commission only)	PD, PM		NA			NA		13.0									
123	1519011	Ropes and nets	1.675	LM	0.484			2.159		6.6	10.2	0.64	7.5	2.6	4.6	1.5	3.3		
124	1519021	Carpets and floor mats	UNIT		NA			1.536		-5.4	-27.4	0.20	5.5	3.8	18.3	9.1	7.1		
125	1519031	Fabricated textiles for medical use	PD		NA			2.276		1.4	-40.6	-0.03	2.6	2.5	2.9	3.5	3.1		
126	1519099	Other fabricated textile products	1.189		0.390			1.579		3.9	3.9	1.00	22.4	25.3	21.3	2.2	1.9		
127	1521011	Wearing apparel	UNIT	C	NA			1.452	1.360	5.1	-11.5	-0.45	5.1	4.8	10.7	11.9	11.7		
128	1522011	Other wearing apparel and clothing accessories	UNIT		NA			1.603	2.010	4.2	-6.5	-0.65	39.3	40.5	66.0	11.9	13.0		
129	1529011	Cotton and bedding	0.660	#	-0.095			0.566		-5.4	-27.4	0.20	5.5	3.8	8.2	9.1	7.1		
130	1529099	Other ready-made textile products	PD		NA			1.603		-5.4	-27.4	0.20	5.5	3.8	6.9	9.1	7.1		
	05	Pulp, paper and wood products																	
131	1611011	Timber	PD		NA	1.436		NA		24.4	18.4	1.33	11.4	13.2	18.4	1.1	1.8		
132	1611021	Plywood	PD	C	NA	0.900		NA		8.6	-0.4	-20.95	0.7	2.0	13.2	16.1	16.4		
133	1611031	Wooden chips	PD		NA			NA		8.1	-15.1	-0.54	48.2	43.2	51.9	0.0	0.0		
134	1619091	Wooden products for construction	PD		NA	1.120		NA		24.1	-30.1	-0.80	0.3	0.5	2.3	4.4	4.3		
135	1619099	Other wooden products, n.e.c..	PD		NA			1.983		11.1	1.4	7.90	4.8	5.0	6.8	4.4	4.0		
136	1711011	Wooden furniture and fittings	PD		NA			1.677		14.8	15.0	0.99	2.2	2.8	6.3	3.2	1.9		
137	1711021	Wooden fixtures	PD		NA			1.677		14.8	15.0	0.99	2.2	2.8	1.3	3.2	1.9		
138	1711031	Metallic furniture and fittings	PD		NA			1.677		2.0	2.0	1.00	1.3	2.1	2.9	5.4	2.7		
139	1811011	Pulp	0.919		1.241	0.940		2.159		-8.7	2.6	-3.39	22.0	21.6	24.5	0.0	0.0		
140	1812011	Foreign paper and Japanese paper	1.204	C	1.397	1.240	1.267	2.601		-17.2	-19.2	0.89	1.7	2.8	3.4	5.8	4.7		
141	1813011	Paperboard	0.980	C	1.179	1.127		2.159		-14.4	-6.7	2.14	2.9	2.6	2.7	10.0	7.3		
142	1813021	Corrugated cardboard	UNIT		NA	1.270		2.159		-17.7	0.0		0.0	0.0	0.0	0.0	0.0		
14	181303	Coated paper and	PD, PM		NA	1.14		2.601		0.9	-9.7	-0.0	6.7	8.7	6.8	6.6	4.7		

3	1	building (construction) paper				5						9						
144	1821011	Corrugated card board boxes	PD		NA	1.270		2.159		0.6	-30.5	-0.02	0.1	0.1	0.0	8.3	4.2
145	1821099	Other paper containers	UNIT		NA	1.270		2.159		0.6	-30.5	-0.02	0.1	0.1	0.4	8.3	4.2
146	1829011	Paper textile for medical use	PD		NA			2.276	0.520	8.4	7.7	1.09	3.6	0.9	0.2	5.2	3.1
147	1829099	Other pulp, paper and processed paper products	UNIT		NA			2.159		8.4	7.7	1.09	3.6	0.9	1.8	5.2	3.1
	16(1/3)	Other industrial products																
148	1911011	Newspaper	PD		NA			1.658		23.0	23.0	1.00	0.0	0.1	0.0	0.0	0.0
149	1911021	Printing, engraving and book binding	PD		NA			1.658	1.330	-0.8	-18.6	0.04	0.2	0.2	0.4	0.0	0.0
150	1911031	Publishing	PD		NA			1.477		15.5	-18.6	-0.83	2.5	2.2	2.7	0.1	0.1
	06	Chemical products																
151	2011011	Ammonia	0.059		NA			NA		-37.5			0.0	0.0	0.0	4.7	0.0
152	2011021	Nitric fertilizers	1.334	C	NA		2.033	NA		-29.9	-32.8	0.91	0.7	3.0	16.5	0.0	0.0
153	2011029	Other elemental fertilizers	1.080		NA			NA		-15.2	-35.0	0.43	3.7	4.4	6.1	0.0	0.0
154	2011031	Combined fertilizer	1.673		-0.576			1.097		-15.2	-35.0	0.43	3.7	4.4	8.3	0.0	0.0
155	2021011	Soda ash	0.572	C	NA			NA		-14.5	-88.5	0.16	0.0	11.6	12.8	0.0	5.2
156	2021012	Caustic soda	0.892	C	NA	0.973		NA		-10.7	-25.6	0.42	1.1	0.3	0.5	7.3	2.5
157	2021013	Liquid chlorine	PM		NA			NA		-6.4							
158	2021019	Other industrial soda chemicals	0.009	#	NA			NA		-0.9	6.7	-0.13	0.0	0.0	0.3	4.2	2.0
159	2029011	Sulfuric acid	PM		NA			NA		7.6			0.0			0.0	0.0
160	2029021	Titanium oxide	1.586	C	NA			NA		1.1	-3.5	-0.30	11.5	16.1	17.2	5.8	5.5
161	2029022	Carbon black	0.621		NA			NA		-28.7	-46.9	0.61	2.3	3.3	4.8	7.0	5.7
162	2029029	Other inorganic pigments	1.446		NA			NA		-4.8	-3.7	1.29	10.3	7.1	14.3	4.0	2.8
163	2029031	Compressed gas and liquefied gas	UNIT		NA			NA		-19.6	-41.1	0.48	0.3	0.7	1.3	0.7	0.3
164	2029099	Other industrial inorganic chemicals	1.293		NA			NA		-18.0	-3.7	4.86	16.1	20.1	17.5	2.0	1.8
165	2031011	Ethylene	1.117		NA	1.473		NA		-13.9	-21.1	0.66	0.1	0.0	2.1	0.0	0.0
166	2031012	Propylene	PD, PM		NA			NA		-17.6	-20.0	0.88	0.0	0.7	0.8	0.0	0.0

167	2031019	Other petrochemical basic products	PD, PM		NA			NA		-31.9	-42.0	0.76	1.7	1.3	0.6	1.9	0.0
168	2031021	Pure benzol	0.929		NA			NA		-37.9	-23.1	1.64	0.4	1.2	2.0	0.7	0.0
169	2031022	Pure toluene	0.836		NA			NA		-35.8	-6.6	5.45	2.7	0.9	8.6	1.2	0.0
170	2031023	Xylole	0.430		NA			NA		-44.8	-6.3	7.16	0.1	0.0	0.0	0.0	0.0
171	2031029	Other petrochemical aromatic products	0.924		NA			NA		-47.0	-32.8	1.43	9.9	8.0	2.3	1.1	0.1
172	2032011	Synthetic alcohol	1.706		NA			NA		-9.3	-3.4	2.72	11.0	17.5	18.5	5.5	4.2
173	2032012	Acetic acid	1.830		NA			NA		-8.7	-24.1	0.36	0.0	8.4	2.4	0.0	2.6
174	2032013	Ethylene dichloride	2.171		NA			NA		-9.3	-3.4	2.72	11.0	17.5	9.8	5.5	4.2
175	2032014	Acrylonitrile	1.964		NA			NA		-9.3	-3.4	2.72	11.0	17.5	8.2	5.5	4.2
176	2032015	Ethylene glycol	2.697		NA			NA		-9.3	-3.4	2.72	11.0	17.5	11.7	5.5	4.2
177	2032016	Acetic acid vinyl monomer	PM		NA			NA		-17.0							
178	2032019	Other aliphatic intermediates	1.494		NA			NA		-9.3	-3.4	2.72	11.0	17.5	8.6	5.5	4.2
179	2032021	Styrene monomer	1.392		NA	1.300		NA		-17.1	-13.2	1.29	7.2	8.8	5.9	6.1	2.4
180	2032022	Synthetic phenol	2.568		NA			NA		-9.3	-3.4	2.72	11.0	17.5	2.7	5.5	4.2
181	2032023	Terephtalic acid (high purity)	1.610		NA	1.727		NA		-9.3	-3.4	2.72	11.0	17.5	0.0	5.5	4.2
182	2032024	Capro lactam	0.289		NA			NA		-9.3	-3.4	2.72	11.0	17.5	2.3	5.5	4.2
183	2032029	Other cyclic intermediates	1.353		NA			NA		-9.3	-3.4	2.72	11.0	17.5	66.1	5.5	4.2
184	2033011	Synthetic rubber	1.907		NA	0.982		NA		-8.2	-29.7	0.28	5.1	6.4	4.2	0.0	0.0
185	2039011	Coal-tar products	1.224		NA			NA		-41.3	-41.0	1.01	12.3	19.0	60.4	0.4	0.2
186	2039021	Methane derivatives	2.620	C	NA			NA		-10.6	-47.2	0.22	10.3	22.8	21.3	2.1	3.3
187	2039031	Oil and fat industrial chemicals	2.038	C	NA			NA		-37.0	-52.2	0.71	4.2	11.4	12.5	3.1	0.7
188	2039041	Plasticizers	1.345		NA			NA		-17.1	-16.1	1.07	0.9	2.2	3.7	2.6	0.0
189	2039051	Synthetic dyes	1.221		0.938			2.159		-17.4	-3.3	5.35	34.8	37.4	45.3	8.7	6.1
190	2039099	Other industrial organic chemicals	1.620		NA			NA		-14.5	-6.5	2.23	9.0	9.8	14.4	5.7	5.2
191	2041011	Thermo-setting resins	1.150		NA			NA		-16.5	-35.1	0.47	3.1	3.6	4.7	7.0	5.2
19	204102	Polyethylene (low	1.611	C	NA	0.92		NA		-16.	-7.8	2.04	1.7	1.8	3.0	5.6	3.6

2	1	density)				0				0									
193	2041022	Polyethylene (high density)	0.767	C	NA	0.770	1.784	NA		-16.0	-7.8	2.04	1.7	1.8	0.4	5.6	3.6
194	2041023	Polystyrene	1.531		NA	1.109		NA		-16.0	-7.8	2.04	1.7	1.8	3.2	5.6	3.6
195	2041024	Polypropylene	1.519		NA	1.364		NA		-16.0	-7.8	2.04	1.7	1.8	2.4	5.6	3.6
196	2041025	Vinyl chloride resins	1.290		NA	1.382	1.715	NA		-4.5	-6.6	0.67	2.7	5.8	3.5	2.6	3.5
197	2041031	High functionality resins	2.074		NA			NA		-9.1	-39.5	0.23	19.1	11.4	9.9	7.5	5.9
198	2041099	Other resins	0.862		NA			NA		-9.1	-39.5	0.23	19.1	11.4	15.4	7.5	5.9
199	2051011	Rayon, acetate	1.140		NA			NA		7.1	112.5	0.06	1.0	1.1	4.0	4.7	6.3
200	2051021	Synthetic fibers	1.181		NA	1.091		NA		-12.6	-32.0	0.39	4.5	4.1	6.4	8.6	8.3
201	2061011	Medicaments	PD, PM	C	NA		1.609	0.507	1.695	-19.9	-19.9	1.00	6.7	7.5	7.1	5.0	3.9
202	2071011	Soap and synthetic detergents	1.140		0.274			1.413		28.8	-41.0	-0.70	4.7	2.6	1.8	3.0	6.1
203	2071012	Surface active agents	0.781		NA			NA		28.8	-41.0	-0.70	4.7	2.6	3.2	3.0	6.1
204	2071021	Cosmetics, toilet preparations and dentifrices	7.982	MAX, C	-5.706			2.276	1.555	-2.1	11.0	-0.19	5.2	3.1	6.9	3.1	3.4
205	2072011	Paints varnishes and lacquers	0.429		2.172	0.927		2.601		-13.4	-6.0	2.23	2.3	1.1	1.2	2.7	4.8
206	2072021	Printing ink	0.564		NA			NA		0.8	-20.5	-0.04	0.6	0.5	0.4	7.5	5.7
207	2073011	Photographic sensitive materials	0.403		0.372		0.917	0.775		-19.1	-30.7	0.62	18.2	18.9	12.9	9.5	5.3
208	2074011	Agricultural chemicals	PD, PM		NA			1.097		20.5	-17.7	-1.16	7.7	7.0	8.6	7.4	5.9
209	2079011	Gunpowder	0.011		NA			NA		0.2	22.8	0.01	1.1	2.0	2.4	4.5	3.3
210	2079021	Gelatin and adhesives	0.563		2.038			2.601		-1.6	-19.2	0.08	25.2	14.5	2.9	4.4	3.4
211	2079091	Catalyzer	0.878		NA			NA		-1.6	-19.2	0.08	25.2	14.5	31.0	4.4	3.4
212	2079099	Other final chemical products, n.e.c..	1.476		0.800			2.276		-1.6	-19.2	0.08	25.2	14.5	16.4	4.4	3.4
	07	Petroleum and coal products															
213	2111011	Gasoline	2.478	LM, C	0.242	2.555		2.720	3.240	-25.1	-12.3	2.04	0.2	0.1	0.4	3.9	0.0
214	2111012	Jet fuel oils	0.832		NA			NA		-42.4	-38.5	1.10	28.4	57.7	77.8	0.0	0.0
215	2111013	Kerosene	0.955		-0.343			0.612	2.381	-51.6	-24.5	2.10	0.9	0.5	23.6	1.1	0.3
21	211101	Light oils	1.843		0.877	2.33		2.720		-35.			0.1	0.0	11.0	0.0	

6	4					0			5										
217	2111015	Heavy oil A	0.990	C	NA	1.563	NA		-52.5	-11.5	4.56	10.4	8.5	9.9	0.5	0.3
218	2111016	Heavy oil B and C	1.172		NA	1.336	NA		-53.1	-25.5	2.08	12.8	20.0	23.1	0.7	1.3
219	2111017	Naphtha	0.980		NA	0.927	NA		-51.9	-9.3	5.58	29.3	61.9	72.9	0.4	0.3
220	2111018	LPG (liquefied petroleum gas)	1.210		2.218	1.973	3.428	2.128	-59.2	-58.2	1.02	71.4	67.7	74.1	0.7	0.5
221	2111019	Other petroleum refinery products	1.128		1.593		2.720		-50.1	-29.3	1.71	13.5	4.6	6.9	2.7	1.3
222	2121011	Coke	0.971		NA	0.864	NA		-14.0	-43.1	0.33	0.1	0.1	0.6	4.0	4.0
223	2121019	Other coal products	0.719	##	6.617		7.337		-17.6	-2.6	6.80	1.1	0.5	1.8	0.3	0.1
224	2121021	Paving materials	PD, PM		NA		NA	2.240	2.5	0.0		0.1	0.2	0.3	4.8	2.5
	16(2/3)	Other industrial products														
225	2211011	Plastic film and sheets	0.772		1.829	1.020	2.601		-5.1	3.5	-1.46	1.0	1.0	2.1	7.1	5.0
226	2211012	Plastic plates, pipes and bars	0.712		1.889	0.855	2.601		-5.1	3.5	-1.46	1.0	1.0	2.2	7.1	5.0
227	2211013	Foamed plastic products	0.764		1.837		2.601		-5.1	3.5	-1.46	1.0	1.0	0.5	7.1	5.0
228	2211014	Industrial plastic products	PD		NA		NA		-5.1	3.5	-1.46	1.0	1.0	0.2	7.1	5.0
229	2211015	Reinforced plastic products	0.925		1.676		2.601		-5.1	3.5	-1.46	1.0	1.0	0.6	7.1	5.0
230	2211016	Plastic containers	PD, PM		NA		2.601		-5.1	3.5	-1.46	1.0	1.0	1.1	7.1	5.0
231	2211017	Plastic table ware, kitchen ware and other household articles	PD, PM		NA		2.601		-5.1	3.5	-1.46	1.0	1.0	1.1	7.1	5.0
232	2211019	Other plastic products	PD, PM		NA		2.601		-5.1	3.5	-1.46	1.0	1.0	4.8	7.1	5.0
233	2311011	Tyres and inner tubes	UNIT		NA	1.227	1.500		-2.1	-19.7	0.10	3.3	4.5	10.8	4.1	1.7
234	2319011	Rubber footwear	UNIT		NA		1.603		-23.5	-9.2	2.55	1.8	1.3	40.7	4.4	3.4
235	2319021	Plastic footwear	UNIT		NA		1.603		-10.7	18.4	-0.58	8.8	7.0	18.2	9.5	8.5
236	2319099	Other rubber products	1.132	##	0.471	0.745	1.603		-0.3	-18.4	0.02	16.7	25.0	1.8	12.7	12.2
237	2411011	Leather footwear	UNIT	C	NA		1.603		5.8	-43.6	-0.13	4.7	3.8	15.2	26.1	25.8
238	2412011	Leather and fur products (except wearing apparel)	UNIT		NA		NA		6.4	-0.4	-16.00	15.3	17.6	19.6	7.5	7.0
239	24120210	Miscellaneous leather products	UNIT		NA		1.497	1.450	17.6	15.6	1.13	22.2	19.7	42.9	5.9	6.1
	08	Ceramics, stones and clay products														
240	2511011	Sheet glass	0.981	C	-0.639	1.082	0.342		6.5	-5.6	-1.17	1.6	2.5	6.4	4.4	1.7

241	2511012	Safety glass and multilayered glass	UNIT		NA	1.745		0.342		6.5	-5.6	-1.17	1.6	2.5	4.0	4.4	1.7
242	2512011	Glass fibre and glass products, n.e.c..	0.809		NA	1.450		NA		-2.5	-16.0	0.16	4.0	4.1	5.6	6.0	4.5
243	2519091	Glass processing materials	0.757		NA	1.450		NA		-2.5	-16.0	0.16	4.0	4.1	5.2	6.0	4.5
244	2519099	Other glass and glass products, n.e.c..	PD, PM		NA			0.342		-2.5	-16.0	0.16	4.0	4.1	8.7	6.0	4.5
245	2521011	Cement	1.371		NA	1.482		NA	1.330	-12.5	41.8	-0.30	0.0	0.7	2.3	3.6	0.3
246	2522011	Ready mixed concrete	PM		NA	1.573		NA	1.450	-1.4							
247	2523011	Cement products	0.139		NA	1.460		NA		9.2	-18.4	-0.50	0.2	0.2	0.5	3.6	3.7
248	2531011	Pottery, china and earthenware for construction	PD		NA	1.350		NA		-2.8	-2.8	1.00	1.7	1.4	2.2	3.7	3.5
249	2531012	Pottery, china and earthenware for industry	PD, PM		NA	1.350		NA		-18.8	-79.8	0.24	1.9	2.5	2.5	2.9	3.0
250	2531013	Pottery, china and earthenware for home use	PD, PM		NA	1.350		2.076		14.0	14.5	0.97	3.2	3.2	10.2	4.7	3.4
251	2599011	Clay refactories	1.769	L M, C	NA	2.680		NA		11.2	-19.3	-0.58	2.3	3.3	3.5	2.6	1.8
252	2599021	Other structural clay products	0.671		1.406	1.350		2.076		-4.7	-4.8	0.98	0.1	0.5	1.5	5.3	5.4
253	2599031	Carbon and graphite products	1.234		NA			NA		-24.2	-33.5	0.72	1.8	3.9	8.5	4.3	3.9
254	2599041	Abrasive	0.621		1.671			2.292		14.1	-21.9	-0.64	1.4	1.9	2.5	7.8	4.6
255	2599091	Asbestos products	1.161		NA			NA		31.5	-37.7	-0.84	2.8	2.8	4.8	4.5	3.2
256	2599099 09	Ceramic, stone and clay products Iron and steel	0.478		1.814			2.292		-17.4	12.2	-1.43	9.1	9.3	9.4	1.1	0.6
257	2611011	Pig iron	1.075		NA			NA		-25.0	-25.7	0.97	0.8	0.8	3.7	0.5	0.6
258	2611021	Ferro-alloys	1.669	C	NA			NA		-9.7	-27.0	0.36	15.7	31.9	38.9	3.6	3.6
259	2611031	Crude steel (converters)	PM		NA			NA		-22.8	-34.1	0.67				2.1	4.4
260	2611041	Crude steel (electric furnaces)	0.280		NA			NA		-22.8	-34.1	0.67	0.0	0.0	0.0	2.1	4.4
261	2612011	Scrap iron	PD		NA						50.2		100.0	100.0	100.0		
262	2621011	Section steel (ordinary steel)	0.997		NA	0.882		NA		-11.2	-5.9	1.89	1.3	3.1	3.0	0.5	0.8
263	2621012	Steel plata (ordinary steel)	1.172		NA	0.955	0.993	NA		-11.2	-5.9	1.89	1.3	3.1	11.7	0.5	0.8
26	262101	Steel strip	1.055		NA			NA		-11.	-5.9	1.89	1.3	3.1	5.9	0.5	0.8

4	3	(ordinary steel)								2									
265	2621014	Steel bar (ordinary steel)	0.569		NA	1.264		NA		-11.2	-5.9	1.89	1.3	3.1	0.0	0.5	0.8
266	2621015	Other hot rolled steel (ordinary steel)	1.429		NA			NA		-11.2	-5.9	1.89	1.3	3.1	13.8	0.5	0.8
267	2621016	Hot rolled steel (special steel)	0.561		NA	0.945		NA		-39.0	0.4	-96.86	0.4	0.7	0.9	5.4	4.0
268	2622011	Steel pipes and tubes (ordinary steel)	1.196		NA			NA		-5.8	-16.0	0.36	0.7	0.6	3.6	1.5	0.3
269	2622012	Steel pipes and tubes (special steel)	0.219		NA			NA		-56.9	-54.7	1.04	0.3	0.9	1.0	6.3	4.1
270	2623011	Cold-finished steel	1.243		NA	0.755		NA		-7.9	-15.2	0.52	0.1	0.6	1.3	4.3	0.6
271	2623021	Coated steel	1.094		NA	1.182		NA		-12.9	0.6	-21.84	0.1	0.2	2.1	1.4	0.9
272	2631011	Forged steel	PM		NA			NA		-4.5							
273	2631012	Cast steel	PM		NA			NA		12.3	-6.5	-1.91	0.0	0.1		2.8	0.0
274	2631021	Cast iron pipes and tubes	0.837		NA			NA		19.3	-86.4	-0.22	0.0	0.0	0.1	0.0	4.8
275	2631031	Cast materials (iron)	2.018	LM	0.141			2.159		-4.6	37.4	-0.12	0.0	0.0	0.5	0.0	0.0
276	2631032	Forged materials (iron)	0.662		NA			NA		-6.8	-91.0	0.08	0.0	0.0	0.2	1.3	1.3
277	2649011	Iron or steel shearing and slitting	PD, PM		NA			NA		-3.8	-3.8	1.00	0.2	0.2		2.0	1.6
278	2649099	Other iron or steel products	1.053	#	NA			NA		-3.8	-3.8	1.00	0.2	0.2	1.8	2.0	1.6
	10	Non-ferrous metal															
279	2711011	Copper	1.015		NA	1.109		NA		5.4	15.7	0.34	27.4	30.0	41.2	0.3	1.7
280	2711021	Lead (inc. regenerated lead)	1.869	LM, C	NA			NA		-14.3	6.1	-2.34	11.9	9.6	13.9	0.0	0.9
281	2711031	Zinc (inc. regenerated zinc)	1.046		NA			NA		7.4	11.9	0.62	4.8	6.1	14.3	2.7	2.1
282	2711041	Aluminium (inc. regenerated aluminium)	0.978	C	NA	1.140		NA		-53.3	-9.0	5.92	29.3	42.0	50.8	5.5	4.2
283	2711099	Other non-ferrous metals	1.160	C	0.999	1.018		2.159		-34.5	-23.8	1.45	54.7	70.1	71.5	0.5	0.3
284	2712011	Non-ferrous metal scrap	PD		NA	1.030		2.159			-2.5		100.0	100.0	100.0		
285	2721011	Copper electric wires	1.058	#,##	NA	1.086		NA		23.5	4.5	5.23	1.2	1.7	5.6	5.4	4.2
286	2721012	Aluminium electric wires	PD, PM		NA	1.230		NA		3.0	-6.2	-0.49	5.8	5.3	2.8	0.3	0.9
287	2721013	Cables	PD		NA	0.873		NA		23.5	4.5	5.23	1.2	1.7	0.9	5.4	4.2

288	2722011	Rolled and drawn copper and copper alloys	0.735		NA	1.150		NA		5.9	-5.8	-1.02	0.7	1.0	2.0	5.5	3.3
289	2722021	Rolled aluminium products	1.214		0.945	1.140	1.081	2.159		-10.2	-20.7	0.49	2.3	1.4	2.4	4.9	5.7
290	2722031	Non-ferrous metal castings and forgings	MATCHING		NA			2.159		1.1	8.5	0.12	0.1	0.1	0.1	0.9	0.8
291	2722041	Nuclear fuels	PD		NA			NA		-2.1	-13.0	0.16	1.8	1.2	1.1	0.2	0.4
292	27220911	Other non-ferrous metal products Metal products	1.236		NA			NA		41.0	-23.8	-1.72	25.2	25.7	22.9	1.7	1.2
293	2811011	Metal products for construction	1.048		NA			NA		15.0	1.3	11.23	0.1	0.1	0.6	3.0	1.6
294	2812011	Metal products for architecture	PD		NA			2.159		8.1	8.1	1.00	0.1	0.1	0.6	9.9	3.4
295	2891011	Gas and oil appliances and heating and cooking apparatus	3.972	#	-1.813			2.159		5.2	5.2	1.00	1.7	1.7	0.5	4.2	3.4
296	2899011	Bolts, nuts, rivets and springs	0.472		1.687	1.118		2.159		5.2	5.2	1.00	1.7	1.7	1.4	4.2	3.4
297	2899021	Metal containers, fabricated plate and sheet metal	3.597	LM	-1.438			2.159		5.2	5.2	1.00	1.7	1.7	0.6	4.2	3.4
298	2899031	Plumber's supplies	PD		NA	1.264		2.159		5.2	5.2	1.00	1.7	1.7	5.0	4.2	3.4
299	2899032	Powder metallurgy products and tools	PD, PM		NA			NA		5.2	5.2	1.00				4.2	3.4
300	2899033	Cutlery and tools	PD		NA			2.897		5.2	5.2	1.00	1.7	1.7	12.2	4.2	3.4
301	2899091	Stamped and pressed products	PD		NA			2.159		5.2	5.2	1.00	1.7	1.7	1.3	4.2	3.4
302	2899092	Fabricated wire products	0.751		0.135			0.886		5.2	5.2	1.00	1.7	1.7	2.3	4.2	3.4
303	28990912	Other metal products, n.e.c.. General machinery	PD		NA			2.159		5.2	5.2	1.00	1.7	1.7	5.8	4.2	3.4
304	3011011	Boilers	UNIT		NA			1.532		6.9	6.6	1.05	4.6	3.5	0.1	1.9	0.3
305	3011021	Turbines	UNIT		NA			1.532		6.9	6.6	1.05	4.6	3.5	12.3	1.9	0.3
306	3011031	Engines	UNIT		NA			1.532		6.9	6.6	1.05	4.6	3.5	2.3	1.9	0.3
307	3012011	Conveyors	UNIT		NA			1.086		12.2	12.2	1.00	2.6	2.4	2.5	2.8	2.3
308	3013011	Refrigerators and air conditioning apparatus	0.159		0.968			1.127		-3.9	-11.8	0.33	2.0	2.1	2.1	3.3	1.7
309	3019011	Pumps and compressors	UNIT		NA		1.168	2.292		8.6	10.0	0.86	5.6	4.9	5.3	3.2	2.0
31	301902	Sewing machines	UNIT		NA			0.566		1.5	1.5	0.99	3.1	4.1	10.6	4.0	2.4

0	1	and wool knitting machinery																
311	3019031	Machinist's precision tools	PD, PM		NA			2.292	8.7	8.1	1.08	4.2	4.1	6.1	4.2	2.3
312	3019099	Other general industrial machinery and equipments	UNIT		NA			1.420	3.1	3.0	1.04	2.9	1.8	3.5	4.8	3.5
313	3021011	Mining, civil engineering and construction machinery	UNIT		NA	0.764	1.301	0.961	5.7	6.2	0.93	2.9	1.9	3.3	3.8	2.0
314	3022011	Chemical machinery	PD	C	NA			1.127	9.0	9.0	1.00	5.4	5.6	4.4	4.7	4.2
315	3023011	Industrial robots	PD, PM		NA	0.736		1.420	3.1	3.0	1.04				4.8	3.5
316	3024011	Metal machine tools	UNIT		NA			1.420	3.1	3.1	1.00	5.2	3.0	3.3	4.8	0.6
317	3024021	Metal processing machinery	UNIT		NA	0.782		1.420	5.7	5.7	1.00	3.0	2.8	4.4	5.0	1.0
318	3029011	Agricultural machinery	UNIT	C	NA		1.301	1.238	3.8	3.8	1.00	3.1	2.0	4.0	4.3	3.2
319	3029021	Textile machinery	UNIT		NA			0.875	5.2	5.2	1.00	8.8	8.0	13.8	5.0	4.6
320	3029031	Food processing machinery	PD		NA			1.127	50.5	-24.6	-2.05	3.3	2.8	13.7	5.8	5.4
321	3029091	Sawmill, wood-working, veneer and plywood machinery	UNIT		NA			1.420	24.2	23.4	1.03	4.1	5.9	8.0	5.8	5.6
322	3029092	Pulp equipment and paper machinery	UNIT		NA			1.420	-6.8	91.1	-0.07	2.6	8.4	7.9	4.5	4.1
323	3029093	Printing, bookbinding and paperprocessing machinery	PD		NA		1.389	1.420	8.2	16.8	0.49	15.6	8.8	11.0	5.8	4.8
324	3029094	Casting equipment	UNIT		NA			1.780	31.7	-29.7	-1.07	2.0	2.2	4.6	5.4	3.8
325	3029095	Plastic processing machinery	UNIT		NA			1.127	-11.0	-11.0	1.00	3.7	1.9	5.4	5.3	4.2
326	3029099	Other special industrial machinery, (n.e.c..)	PD		NA			1.420	0.4	7.9	0.05	19.5	10.4	15.2	5.1	4.1
327	3031011	Metal molds	PD		NA			1.780	8.7	8.1	1.08	4.2	4.1	0.8	4.2	2.3
328	3031021	Bearings	PD		NA	0.409		NA	8.7	8.1	1.08	4.2	4.1	5.8	4.2	2.3
329	3031099	Other general machines and parts	0.385		1.908	1.091		2.292	8.7	8.1	1.08	4.2	4.1	6.1	4.2	2.3
330	3111011	Copy machine	UNIT		NA			6.857	-27.5	-22.4	1.23	3.6	1.3	1.6	5.1	2.9

331	3111091	Electronic calculator	PD		NA			6.857		-27.5	-22.4	1.23	3.6	1.3	9.6	5.1	2.9
332	3111092	Word processing machine	PM		NA			6.857		-27.5	-22.4	1.23	3.6	1.3	0.0	5.1	2.9
333	3111099	Other office machines, n.e.c..	UNIT		NA		1.163	6.857		-27.5	-22.4	1.23	3.6	1.3	2.6	5.1	2.9
334	3112011	Vending machines	UNIT		NA			1.304		-8.6	-8.5	1.01	0.2	0.1	0.1	7.6	0.0
335	3112012	Amusement machinery	PD		NA			1.304		-8.6	144.9	-0.06	11.4	1.8	4.3	6.9	4.4
336	3112019	Other machinery for service industry	PD		NA			1.304		-23.0	-0.1	174.34	1.2	0.4	0.8	5.7	5.1
	13	Electric machinery															
337	3211011	Electric audio equipment	UNIT		NA			1.237		-24.6	-24.0	1.03	3.5	2.9	4.6	2.5	1.1
338	3211021	Radio and television sets	UNIT	C	NA		1.381	0.813	1.550	-28.7	-28.3	1.01	0.7	0.6	9.9	0.3	0.0
339	3211031	Video recording and playback equipment	UNIT		NA			1.237	1.540	-50.1	1.9	-26.56	0.7	0.2	0.7	4.5	1.0
340	3211099	Other household electric appliances	3.386	L M	-2.572			0.814		-23.8	-21.7	1.10	0.9	0.8	1.9	3.2	1.3
341	3212011	Magnetic tape and flexible magnetic disc cartridges	PD		NA			0.775	1.540	-24.6	-24.0	1.03	3.5	2.9	5.0	2.5	1.1
342	3212099	Parts and accessories of other electric audio equipment	PD, PM		NA			1.090		-24.6	-24.0	1.03	3.5	2.9	11.6	2.5	1.1
343	3311011	Electric computing equipment (main parts)	UNIT	C	NA	1.245		6.857		-36.7	-36.2	1.01	16.1	9.8	7.8	10.7	4.4
344	3311021	Electric computing equipment (accessory devices)	PD, PM		NA			6.857		-36.7	-36.2	1.01	16.1	9.8	14.4	10.7	4.4
345	3321011	Wired communication equipment	UNIT	C	NA			0.795		-24.7	-15.8	1.56	2.8	2.0	5.7	2.4	1.9
346	3321021	Radio communication equipment	PD, PM		NA			0.795		-24.7	-15.8	1.56	2.8	2.0	3.8	2.4	1.9
347	3321099	Other communication equipment	PD, PM		NA			0.795		-24.7	-15.8	1.56	2.8	2.0	3.1	2.4	1.9
348	3331011	Applied electronic equipment	UNIT		NA			1.304		-50.1	1.9	-26.56	0.7	0.2	2.2	4.5	1.0
349	3332011	Electric measuring instruments	PD, PM		NA			1.304		0.8	-35.9	-0.02	20.5	19.1	20.6	4.3	3.7
350	3341011	Semi-conductor devices	1.606	C	NA			NA		-36.7	-52.8	0.70	18.3	9.8	12.1	6.2	0.5
351	3341012	Integrated circuits	1.682		NA	0.982	1.057	NA		-36.7	-52.8	0.70	18.3	9.8	16.3	6.2	0.5

352	3359011	Electron tubes	UNIT		NA			NA		-22.3	-22.2	1.00	12.3	8.8	10.2	2.4	1.1
353	3359099	Parts of other electric, communication equipment	PD		NA			0.795		-24.7	-15.8	1.56	2.8	2.0	1.9	2.4	1.9
354	3411011	Generators	UNIT		NA			1.420		4.4	4.4	1.00	9.5	6.0	12.7	1.0	0.0
355	3411012	Electric motors	UNIT		NA	1.500		1.420		3.3	5.9	0.56	3.3	3.9	4.5	1.8	0.0
356	3411021	Relay switch and switchboard	PD		NA			1.420		4.0	4.0	1.00	3.0	3.8	2.5	3.6	1.5
357	3411031	Other electricity transmission and distribution apparatuses	UNIT		NA			1.420		4.0	4.0	1.00	3.0	3.8	11.1	3.6	1.5
358	3411099	Other industrial heavy electrical equipment	UNIT		NA			1.420		4.0	4.0	1.00	3.0	3.8	8.8	3.6	1.5
359	3421011	Electric lighting fixtures and apparatus	UNIT		NA			0.886		0.2	0.2	1.02	0.7	0.7	3.4	3.7	2.1
360	3421021	Batteries	UNIT		NA			0.886		1.2	1.3	0.91	3.2	5.2	2.9	4.6	2.9
361	3421031	Electric bulbs	3.554	#	-2.668			0.886		1.2	1.2	1.00	5.6	5.1	5.2	5.0	4.0
362	3421041	Wiring devices and supplies	UNIT		NA			1.337		1.2	1.3	0.91	3.2	5.2	6.7	4.6	2.9
363	3421051	Electrical equipment for internal combustion engines	UNIT		NA		1.257	NA		1.2	1.3	0.91	3.2	5.2	0.4	4.6	2.9
364	3421099	Other light electrical appliances	PD		NA			NA		1.2	1.3	0.91	3.2	5.2	9.4	4.6	2.9
	14	Transportation equipment															
365	3511011	Passenger motor cars	0.386		0.618		1.196	1.004		-13.0	20.0	-0.65	4.7	4.9	11.8	0.0	0.0
366	3521011	Trucks, buses and other cars	0.113		0.891	0.727		1.004		-6.7	1.8	-3.63	0.4	0.4	1.0	2.9	0.1
367	3531011	Two-wheel motor vehicles	0.607		0.432			1.039		1.1	1.1	1.00	1.8	1.6	5.9	4.5	0.0
368	3541011	Motor vehicle bodies	49.304	#	NA			NA		-6.7	1.8	-3.63	0.4	0.4	0.4	2.9	0.1
369	3541021	Internal combustion engines for motor vehicles and parts	11.168	#	-10.082			1.086		2.5	6.6	0.38	0.6	0.5	0.6	1.3	0.0
370	3541031	Motor vehicle parts and accessories	PD		NA			1.106		-6.7	1.8	-3.63	0.4	0.4	0.8	2.9	0.1
371	3611011	Steel ships	PD		NA			0.721		-8.7	-28.0	0.31				0.0	0.0

372	3611021	Other ships	PD, PM		NA			0.721		-1.1	57.6	-0.02	2.9	6.8	41.5	2.0	1.8
373	3611031	Internal combustion engines for vessels	UNIT		NA			0.721		7.7	7.7	1.00	1.2	0.6	1.7	4.7	4.3
374	3611101	Repair of ships	PD, PM		NA			NA		8.1							
375	3621011	Railroad equipment	PD		NA			0.716		-1.0	-68.8	0.02	4.0	1.1	1.4	5.6	1.3
376	3621101	Repair of railroad equipment	PD, PM		NA			NA		12.3							
377	3622011	Aircraft	UNIT		NA			0.721		5.6	-31.2	-0.18	60.8	44.3	54.0	0.1	0.0
378	3622101	Repair of aircraft	PD, PM		NA			NA		5.6						0.0	
379	3629011	Bicycles	1.476		-0.437			1.039		6.1	4.3	1.43	1.4	1.1	4.9	1.5	1.2
380	3629091	Transport equipment for industrial use	1.571	LM	NA			NA		3.0	4.7	0.63	0.5	0.2	0.4	6.6	3.3
381	36290995	Other transport equipment, n.e.c..	PD		NA	1.062		1.039		4.9	5.9	0.83	0.0	0.0	3.4	2.4	0.0
	15	Precision instruments															
382	3711011	Camera	6.714	#	-5.691		1.084	1.023		-24.6	-16.8	1.46	8.4	9.6	11.3	3.9	3.2
383	3711099	Other photographic and optical instruments	UNIT		NA			1.023		-3.2	-16.8	0.19	13.4	8.0	8.2	8.1	2.3
384	3712011	Watches and clocks	0.224	#	1.412			1.636		-7.3	-3.5	2.09	11.9	17.1	28.6	2.1	0.1
385	3719011	Professional and scientific instruments	PD		NA			1.304		2.9	-9.1	-0.32	14.1	28.8	23.7	6.0	3.2
386	3719021	Analytical instruments, testing machine, measuring instruments	PD		NA	0.773		1.304		5.2	5.2	1.00	9.7	8.0	7.8	3.4	3.0
387	3719031	Medical instruments	PD	C	NA		1.202	1.304		2.9	0.0		24.2	23.5	22.6	5.5	4.6
	16(3/3)	Other industrial products															
388	3911011	Toys	PD		NA			1.326		-2.2	-2.2	1.00	11.1	9.8	9.3	5.2	3.1
389	3911021	Sporting and athletic goods	PD		NA			1.685		-2.2	-2.2	1.00	11.1	9.8	27.0	5.2	3.1
390	3919011	Musical instrument	UNIT		NA			0.814		-3.2	-3.1	1.03	6.7	7.4	10.3	5.3	3.8
391	3919021	Record	PD		NA			1.437		-3.2	-3.1	1.03	6.7	7.4	26.4	5.3	3.8
392	3919031	Writing instruments and stationery	0.836		1.765		1.700	2.601		5.8	5.8	1.00	10.8	7.7	18.3	4.3	2.5

393	3919041	Small personal Adornments	PD		NA		1.090		-2.6	1.6	-1.63	41.4	37.3	57.7	2.7	1.3
394	3919051	"Tatami" (Japanese straw mat) and straw products	PD		NA		2.276		-2.2	-26.5	0.08	0.8	4.8	4.1	4.2	5.1
395	3919061	Ordnance	UNIT		NA		NA		21.4	-34.6	-0.62	7.5	11.3	3.2	5.0	2.5
396	3919099	Miscellaneous manufacturing products	0.073	##	1.353		1.426		0.4	1.6	0.25	3.4	2.5	4.1	4.3	2.8

Notes. Some symbols appearing in the table show following meanings.
1.Pd, Pm. Pd: unit price of domestic goods; Pm: unit price of imported goods.
2.PD, PM, UNIT, MATCHING. These are symbols showing reasons why price comparison could not be made l
PD and/or PM mean deficiencies of domestic goods data and/or imported data in terms of value and/or quantity.
domestic goods is different from that of imported, though unit price is available in each side.
MATCHING means avoiding comparison because of the difference in commodity names, even if unit price is ava
3.#. There still remains necessity reconsidering the compared items as suitable. (It is possible that quality is dif
##. Unit is slightly different between domestic and imported goods. In some cases, specific unit to industry is
###. IO code number seems inconsistent. (There is necessity to check it further.)
4.LM (Local Maximum), MAX, C (Comparable). LM means commodity which has maximum figure in unit value
categories.
MAX shows the commodity whose price differential is the largest in the whole table. The commodities with C a
Urata, and Kawai (1995).

Sources: Management and Coordination Agency, "1990 Input-Output Tables for Japan." Japan Tariff Association, "Japa
Country - 1990."
Japan Fair Trade Commission, "Cumulative Concentration Ratios and Herfindahl Indices in Major Industries."

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