

I. GENERAL OUTLINE

The project on "Industrial Interdependencies in the Asia-Pacific Region" was launched in April 1998 in order for integrating 1995 input-output tables of ten countries in the Asia-Pacific region. The *Asian International Input-Output Table 1995* is designed to depict the industrial network extended over the ten countries, namely, China, Indonesia, Korea, Malaysia, Taiwan, the Philippines, Singapore, Thailand, Japan and the United States of America, and gives a minute picture of input composition and output distribution of each domestic industry vis-à-vis home as well as foreign countries' industries.

On the assumption of stable (or linear) technical correlation between input and output, the table also serves as an effective analytical tool for the study of economic repercussion and forward and backward linkages among the countries of concern. Since the *Asian International Input-Output Table* was already made available for the years of 1985 and 1990, and partly available even for the year of 1975 (China and Taiwan excluded), 1995 table is expected to contribute to the studies on the technological changes that took place among these countries for decades.

II. SCHEMATIC IMAGE OF ASIAN INTERNATIONAL INPUT-OUTPUT TABLE

The whole picture of the *Asian International Input-Output Table 1995* is given in Figure 1. As seen column-wise, each cell in the table shows input compositions of the industries of respective countries. A^{II} , for example, shows the input compositions of Indonesian industries vis-à-vis domestically produced goods and services. A^{MI} , on the other hand, shows input compositions of Indonesian industries for the imported goods and services from Malaysia. The cells A^{PI} , A^{SI} , A^{TI} , A^{CI} , A^{NI} , A^{KI} , A^{JI} and A^{UI} allow the same interpretation for the imports from other countries.

The transaction values thus tabulated are all given at producers' prices of the countries of origin. International freight and insurance paid by Indonesian industries for these imported transactions are all recorded in the row vector BA^I . HA^I and WA^I are input compositions of Indonesian industries vis-à-vis imported goods and services from Hong Kong and those from the Rest of the World, and they are given in CIF value. Import duties and import sales taxes levied on all Indonesian imports are recorded in the row vector DA^I .

The Value Added items of Indonesian industries are shown in V^I . The bottom of the column gives X^I , the Gross Inputs of Indonesian industries.

Turning to the 11th column from the left side of the table, it shows the compositions of goods and services that have gone to final demand sectors of Indonesia. F^{II} and F^{MI} , for example, maps the inflow into Indonesian final demand sectors, of goods and services domestically produced and of those imported from Malaysia, respectively. The rest of the column is read in the same manner as is done for the 1st column of the table.

Seen in row-wise direction, the table shows the output distributions of the commodities produced domestic industries, to Malaysian industries, to the Philippines industries, and so on. F^{II} is the distribution of Indonesian goods and services to final demand sectors of Indonesia, and F^{MI} is to the final demand sectors of Malaysia, and so on.

LH^I , LE^I , LF^I , LG^I and LW^I are Indonesia's export to Hong Kong, the United Kingdom, France, Germany and the Rest of the World. Q^I is the statistical discrepancies and X^I shows the Gross Outputs of Indonesian industries.

The columns and rows for the other countries can be read in the same manner.

Figure 1. Layout of the Asian International Input-Output Table 1995

code	Intermediate Demand (A)													Final Demand (F)										Export (L)					Statistical Discrepancy (XX)	Total Outputs (XX)
	Indonesia (AI)	Malaysia (AM)	Philippines (AP)	Singapore (AS)	Thailand (AT)	China (AC)	Taiwan (AN)	Korea (AK)	Japan (AJ)	U.S.A. (AU)	Indonesia (FI)	Malaysia (FM)	Philippines (FP)	Singapore (FS)	Thailand (FT)	China (FC)	Taiwan (FN)	Korea (FK)	Japan (FJ)	U.S.A. (FU)	Export to Hong Kong (LH)	Export to United Kingdom (LE)	Export to France (LF)	Export to Germany (LG)	Export to R.O.W. (LW)					
Indonesia	A ^{II}	A ^{IM}	A ^{IP}	A ^{IS}	A ^{IT}	A ^{IC}	A ^{IN}	A ^{IK}	A ^{IU}	A ^{IU}	F ^{II}	F ^{IM}	F ^{IP}	F ^{IS}	F ^{IT}	F ^{IC}	F ^{IN}	F ^{IK}	F ^{IU}	F ^{IU}	LH ^I	LE ^I	LF ^I	LG ^I	LW ^I	Q ^I	X ^I			
Malaysia	A ^{MI}	A ^{MM}	A ^{MP}	A ^{MS}	A ^{MT}	A ^{MC}	A ^{MN}	A ^{MK}	A ^{MU}	A ^{MU}	F ^{MI}	F ^{MM}	F ^{MP}	F ^{MS}	F ^{MT}	F ^{MC}	F ^{MN}	F ^{MK}	F ^{MU}	F ^{MU}	LH ^M	LE ^M	LF ^M	LG ^M	LW ^M	Q ^M	X ^M			
Philippines	A ^{PI}	A ^{PM}	A ^{PP}	A ^{PS}	A ^{PT}	A ^{PC}	A ^{PN}	A ^{PK}	A ^{PU}	A ^{PU}	F ^{PI}	F ^{PM}	F ^{PP}	F ^{PS}	F ^{PT}	F ^{PC}	F ^{PN}	F ^{PK}	F ^{PU}	F ^{PU}	LH ^P	LE ^P	LF ^P	LG ^P	LW ^P	Q ^P	X ^P			
Singapore	A ^{SI}	A SM	A ^{SP}	A ^{SS}	A ST	A ^{SC}	A ^{SN}	A ^{SK}	A ^{SU}	A ^{SU}	F ^{SI}	F SM	F ^{SP}	F ^{SS}	F ST	F ^{SC}	F ^{SN}	F ^{SK}	F ^{SU}	F ^{SU}	LH ^S	LE ^S	LF ^S	LG ^S	LW ^S	Q ^S	X ^S			
Thailand	A ^{TI}	A TM	A ^{TP}	A ^{TS}	A ^{TT}	A ^{TC}	A ^{TN}	A ^{TK}	A ^{TU}	A ^{TU}	F ^{TI}	F TM	F ^{TP}	F ^{TS}	F ^{TT}	F ^{TC}	F ^{TN}	F ^{TK}	F ^{TU}	F ^{TU}	LH ^T	LE ^T	LF ^T	LG ^T	LW ^T	Q ^T	X ^T			
China	A ^{CI}	A ^{CM}	A ^{CP}	A ^{CS}	A ^{CT}	A ^{CC}	A ^{CN}	A ^{CK}	A ^{CU}	A ^{CU}	F ^{CI}	F ^{CM}	F ^{CP}	F ^{CS}	F ^{CT}	F ^{CC}	F ^{CN}	F ^{CK}	F ^{CJ}	F ^{CJ}	LH ^C	LE ^C	LF ^C	LG ^C	LW ^C	Q ^C	X ^C			
Taiwan	A ^{NI}	A ^{NM}	A ^{NP}	A ^{NS}	A ^{NT}	A ^{NC}	A ^{NN}	A ^{NK}	A ^{NU}	A ^{NU}	F ^{NI}	F ^{NM}	F ^{NP}	F ^{NS}	F ^{NT}	F ^{NC}	F ^{NN}	F ^{NK}	F ^{NU}	F ^{NU}	LH ^N	LE ^N	LF ^N	LG ^N	LW ^N	Q ^N	X ^N			
Korea	A ^{KI}	A ^{KM}	A ^{KP}	A ^{KS}	A ^{KT}	A ^{KC}	A ^{KN}	A ^{KK}	A ^{KU}	A ^{KU}	F ^{KI}	F ^{KM}	F ^{KP}	F ^{KS}	F ^{KT}	F ^{KC}	F ^{KN}	F ^{KK}	F ^{KJ}	F ^{KJ}	LH ^K	LE ^K	LF ^K	LG ^K	LW ^K	Q ^K	X ^K			
Japan	A ^{JI}	A ^{JM}	A ^{JP}	A ^{JS}	A ^{JT}	A ^{JC}	A ^{JN}	A ^{JK}	A ^{JU}	A ^{JU}	F ^{JI}	F ^{JM}	F ^{JP}	F ^{JS}	F ^{JT}	F ^{JC}	F ^{JN}	F ^{JK}	F ^{JJ}	F ^{JJ}	LH ^J	LE ^J	LF ^J	LG ^J	LW ^J	Q ^J	X ^J			
U.S.A.	A ^{UI}	A ^{UM}	A ^{UP}	A ^{US}	A ^{UT}	A ^{UC}	A ^{UN}	A ^{UK}	A ^{UU}	A ^{UU}	F ^{UI}	F ^{UM}	F ^{UP}	F ^{US}	F ^{UT}	F ^{UC}	F ^{UN}	F ^{UK}	F ^{UU}	F ^{UU}	LH ^U	LE ^U	LF ^U	LG ^U	LW ^U	Q ^U	X ^U			
Freight and Insurance	BA ^I	BA ^M	BA ^P	BA ^S	BA ^T	BA ^C	BA ^N	BA ^K	BA ^J	BA ^U	BF ^I	BF ^M	BF ^P	BF ^S	BF ^T	BF ^C	BF ^N	BF ^K	BF ^J	BF ^U										
Import from Hong Kong	HA ^I	HA ^M	HA ^P	HA ^S	HA ^T	HA ^C	HA ^N	HA ^K	HA ^J	HA ^U	HF ^I	HF ^M	HF ^P	HF ^S	HF ^T	HF ^C	HF ^N	HF ^K	HF ^J	HF ^U										
Import from the R.O.W.	WA ^I	WA ^M	WA ^P	WA ^S	WA ^T	WA ^C	WA ^N	WA ^K	WA ^J	WA ^U	WF ^I	WF ^M	WF ^P	WF ^S	WF ^T	WF ^C	WF ^N	WF ^K	WF ^J	WF ^U										
Import Duty and Sales Tax	DA ^I	DA ^M	DA ^P	DA ^S	DA ^T	DA ^C	DA ^N	DA ^K	DA ^J	DA ^U	DF ^I	DF ^M	DF ^P	DF ^S	DF ^T	DF ^C	DF ^N	DF ^K	DF ^J	DF ^U										
Value Added	V ^I	V ^M	V ^P	V ^S	V ^T	V ^C	V ^N	V ^K	V ^J	V ^U																				
Total Inputs	X ^I	X ^M	X ^P	X ^S	X ^T	X ^C	X ^N	X ^K	X ^J	X ^U																				

III. CODING SYSTEM AND TECHNICAL NOTES

1. Coding System

Row	Column	Description	Row	Column	Description
AI001	AI001	Intermediate sectors, Indonesia	CH001		Intermediate input from Hong Kong (valued at CIF)
AI056	AI056				
AI900	AI900	Sub-total (AI001 to AI056)	CH900		Sub-total (CH001 to CH056)
AM001	AM001	Intermediate sectors, Malaysia	CW001		Intermediate input from Rest of the World (valued at CIF)
AM056	AM056				
AM900	AM900	Sub-total (AM001 to AM056)	CW900		Sub-total (CW001 to CW056)
AP001	AP001	Intermediate sectors, Philippines	DT001		Import duties & import sales tax
AP056	AP056				
AP900	AP900	Sub-total (AP001 to AP056)	ET900	ET900	Total intermediate input or total intermediate output
AS001	AS001	Intermediate sectors, Singapore	VV001*1		Wages and salary
AS056	AS056				
AS900	AS900	Sub-total (AS001 to AS056)	VV002*2		Operating surplus
			VV003		Depreciation of fixed capital
			VV004		Indirect taxes less subsidies
			VV900		Sub-total (VV001 to VV004)
AT001	AT001	Intermediate sectors, Thailand	FI001*3		Final demands, Indonesia
AT056	AT056				
AT900	AT900	Sub-total (AT001 to AT056)	FI004		
			FI900		Sub-total (FI001 to FI004)
AC001	AC001	Intermediate sectors, China	FM001		Final demands, Malaysia
AC056	AC056				
AC900	AC900	Sub-total (AC001 to AC056)	FM004		
			FM900		Sub-total (FM001 to FM004)
AN001	AN001	Intermediate sectors, Taiwan	FP001		Final demands, Philippines
AN056	AN056				
AN900	AN900	Sub-total (AN001 to AN056)	FP004		
			FP900		Sub-total (FP001 to FP004)
AK001	AK001	Intermediate sectors, Korea	FS001		Final demands, Singapore
AK056	AK056				
AK900	AK900	Sub-total (AK001 to AK056)	FS004		
			FS900		Sub-total (FS001 to FS004)
AJ001	AJ001	Intermediate sectors, Japan	FT001		Final demands, Thailand
AJ056	AJ056				
AJ900	AJ900	Sub-total (AJ001 to AJ056)	FT004		
			FT900		Sub-total (FT001 to FT004)
AU001	AU001	Intermediate sectors, the U.S.A.	FC001		Final demands, China
AU056	AU056				
AU900	AU900	Sub-total (AU001 to AU056)	FC004		
			FC900		Sub-total (FC001 to FC004)
BF001		International Freight&Insurance			

Row	Column	Description	Row	Column	Description
	FN001			FU001*4	
		Final demands, Taiwan			Final demands, the U.S.A.
	FN004			FU004	
	FN900	Sub-total (FN001 to FN004)		FU900	Sub-total (FU001 to FU004)
	FK001			LH001	Export to Hong Kong
		Final demands, Korea		LE001	Export to the United Kingdom
	FK004			LF001	Export to France
	FK900	Sub-total (FK001 to FK004)		LG001	Export to Germany
	FJ001			LW001	Export to the Rest of the World
		Final demands, Japan		QX001	Statistical discrepancies
	FJ004			XX600	XX600 Total input, Total output
	FJ900	Sub-total (FJ001 to FJ004)			

*1 In Malaysian part, VV001 includes wages and salary, operating surplus, depreciation of fixed capital, and indirect taxes less subsidies.

*2 In U.S.A. part, VV002 includes operating surplus and depreciation of fixed capital less subsidies and VV004 includes only indirect taxes.

*3 Common final demand items are as follows:

- 001 Private consumption
- 002 Government consumption
- 003 Gross domestic fixed capital formation
- 004 Increase in stocks.

*4 In U.S.A. part, FU002 includes government consumption and government gross domestic fixed capital formation, and FU003 includes only private gross domestic fixed capital formation.

2. Sector Classification (Intermediate Sectors)

7 Sector classification		24 Sector classification		Basic classification			
Code	Description	Code	Description	Code	Description		
001	Agriculture, livestock, forestry and fishery	001	Paddy	001	Paddy		
		002	Other agricultural products*	002	Cassava		
				004	Sugar cane and beet		
				005	Oil palm and coconuts		
				006	Fiber crops		
				007A	Other grain		
				007B	Other food crops		
				008	Other commercial crops		
				009	Livestock and poultry		
		003	Livestock	009	Livestock and poultry		
004	Forestry	010	Forestry				
005	Fishery	011	Fishery				
002	Mining and quarrying	006	Crude petroleum and natural gas	012	Crude petroleum and natural gas production		
		007	Other mining	013	Copper ore		
				014	Tin ore		
				015A	Iron ore		
				015B	Other metallic ore		
				016	Non-metallic ore and quarrying		
				017	Oil and fats		
				018	Milled rice		
003	Manufacturing	008	Food, beverage and tobacco	019	Other milled grain and flour		
				020	Sugar		
				021A	Fish products		
				021B	Slaughtering, meat products and dairy products		
				021C	Other food products		
				022A	Beverage		
				022B	Tobacco		
				009	Textile, leather, and the products thereof	023	Spinning
						024	Weaving and dyeing
						025	Knitting
		026	Wearing apparel				
		027	Other made-up textile products				
		028	Leather and leather products				
		010	Timber and wooden products			029	Timber
						030A	Wooden furniture
				030B	Other wooden products		
		011	Pulp, paper and printing	031	Pulp and paper		
				032	Printing and publishing		
		012	Chemical products	033A	Synthetic resins and fiber		
				033B	Other basic industrial chemicals		
				034	Chemical fertilizers and pesticides		
				035A	Drugs and medicine		
				035B	Other chemical products		
		013	Petroleum and petro products	036	Refined petroleum and its products		
		014	Rubber products	003	Natural rubber		
				037	Tires and tubes		
				038	Other rubber products		
		015	Non-metallic mineral products	039	Cement and cement products		
				040	Glass and glass products		
				041	Other non-metallic mineral products		
		016	Metal products	042	Iron and steel		

2. Sector Classification (Continued)

7 Sector classification		24 Sector classification		Basic classification			
Code	Description	Code	Description	Code	Description		
				043	Non-ferrous metal		
				044	Metal products		
		017	Machinery			045A	Agricultural machinery and equipment
						045B	Specialized industrial machinery
						045C	Ordinary industrial machinery
						045D	Heavy electric machinery
						045E	Engines and turbines
						046A	Electronics and electronic products
						046B	Other electric machinery and appliance
						018	Transport equipment
		047B	Motor vehicles and bicycles				
		048A	Aircraft				
		048B	Shipbuilding				
		048C	Other transport equipment				
		019	Other manufacturing products			049	Precision machines
						050A	Plastic products
						050B	Other manufacturing products
		004	Electricity, gas, and water supply	020	Electricity, gas, and water supply	051	Electricity, gas and water supply
		005	Construction	021	Construction	052A	Building construction
052B	Other construction						
006	Trade and transport	022	Trade and transport	053A	Wholesale and retail trade		
				053B	Transportation		
007	Services	023	Services	054A	Telephone and telecommunication		
				054B	Finance and insurance		
				054C	Education and research		
				054D	Other services		
				056	Unclassified		
		024	Public administration	055	Public administration		

* In Malaysia and the U.S. part, "paddy" is included in this sector.

3. Converter Table between Uniformed I-O Classification and National I-O Classifications

UIO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
<Intermediate Transaction>											
001	Paddy	001	001A 005A	001		001	001A	00110 00195	1101	011101	
002	Cassava	003	001B 005B	003		004	001B				
003	Natural rubber	012 104	002	014		016	002A 004A	01140	1115		
004	Sugar cane and beet	013	001C 005C	010		009	001C	00310 00395		011501	013
005	Oil palm and coconuts	014 015	003 004	009		010 011	001D				
006	Fiber crops	016	001D 005D	012		012 013	001E	00441 00449	1112		005
007A	Other grain	002 011	001E 005E	002 015		002 003	001F	00210 00230 00290	1102 1103 1104	011102 011508	006
007B	Other food crops	004 005 006 007 008 009 010 020 021 022 023 055	001F 005F	003A 004 005 006 007 008 009 010 013		005 006 007 008 015	001G	00220 00240 00410 00431 00490 00495 00510 00520 00530 00540 00590 00595 00610 00620 00630 00695 00710 00730 00790 00795	1105 1106 1107 1108 1109 1110 1111	011201 011202 011301 011302 011401 011502 011509	010 011 012 014 015
008	Other commercial crops	017 018 019 024	001G 005G	011 056 015A	002 003	014 017	001H	00295 00420 00439 00720 00791 03320	1113 1114 1116 1117	011601 011602 011603 011609	007 008 009 017
009	Livestock and poultry	025 026 027 028	001H 005H 006	016 017 018 019 020	001	018 019 020 021 022 023	003	00810 00820 00895 00910 00920 00930 00940 00951 00959 00990	1121 1122 1123 1124 1125	012101 012102 012103 012104 012105 012109 012201	001 002 003 004
010	Forestry	029 030 031	007	024		025 026 027	002B 004B	00710 01110 01120 01130 01150 01160 01190	1131 1132 1133 1134	021101 021201 021301	016 018 162
011	Fishery	032 033 034	008	022 023	004 005	028 029	005	01210 01220 01290	1141 1142 1143 1144	031101 031102 031103 031104 031201 031202	019
012	Crude petroleum and natural gas production	037 038 103	009	031		031	007	01410 01420 01430 01440	2111 2112	072101	026 027
013	Copper ore	042	010A	026			009A	01520	2122	061102	023
014	Tin ore	039	010B	029		033	009B				
015A	Iron ore	045A	010C	029A		032	008	01510	2121	061101	022
015B	Other metallic ore	040 041 043 044 045B	010D	025 027 028 029		034 035	009C	01530 01590	2123 2124	061103	024
016	Non-metallic ore and quarrying	036 046 047	011	030 032 034	006	030 036 037	006 010 011	01300 01710 01720	2101 2102 2131	062101 062201 062202	025 028 029

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications *1									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
		048				038 039 040 041		01730 01740 01790	2132 2133 2134 2135 2136 2137	062909 071101	030 031 032
017	Oil and fats	056	016	040 041	012	047 048	004C 014A	01895 01910 01920 01930 01940 01990 01995	3155 3156	111203 111305 111704	123 124 125 126
018	Milled rice	057	017A	042		049	004D 014B	02110 02120 02195	3121	111401	108
019	Other milled grain and flour	058 059	017B	043	013	050 051 052	004E 014C	02010 02095	3122 3123	111402 111403	103
020	Sugar	062	020A 021A	045	017	055	018	02210 02220 02230 02295	3131 3132	111701	113
021A	Fish products	053 054	015	039	011	046	017	02510 02520 02530 02540 02590 03010	3111 3112 3113 3114 3115	111301 111302 111303 111304 111309	095 100
021B	Slaughtering, meat products and dairy products	049 050 051	012 013	035 036 037	007 008 009	042 043 044	004F 015 016 021A	01810 01820 01830 01840 02430 02810 02820 02830 02890	3101 3102 3103 3104 3105 3106	111101 111201 111202 111204	087 088 089 090 091 092 093 094
021C	Other food products	052 060 061 063 066 067 068 070A	014 018 019 020B 021B 022	033 038 044 046 047 049 050	010 014 015 016 018 020 021 022 023	045 053 054 056 057 058 060 061	019 023	00960 01610 01620 01695 02090 02300 02410 02421 02422 02429 02490 02495 02610 02620 02710 02720 02730 02790 02910 02920 03020 03040 03050 03060 03090 03120	3133 3134 3141 3142 3143 3151 3152 3153 3154 3161 3163 3165 3166 3178 3181	111501 111502 111503 111601 111602 111702 111703 111705 111901 111902 111903 111904 111905 111909 113101 202903	096 097 098 099 101 102 104 105 106 107 109 110 111 112 114 115 116 122 128 129 130 131 132
022A	Beverage	064 065 069 070B	023 024	048 051 052 053	019 024 025	059 062 063 064	020 021B	03031 03032 03110 03190 03210 03290 03295	3162 3164 3171 3172 3173 3174 3175 3176 3177	112101 112102 112103 112104 112109 112901 112902 112903	117 118 119 120 121 127
022B	Tobacco	071 072	025	054 055	026	065 066	022	03310 03390	3191	114101	133 134 135 136
023	Spinning	073	026A	057	027	067	024A 025A 027A	03410 03420 03510	3201 3202 3203	151101 151102	139 140

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
								03610 03810	3204 3205 3206 3207		
024	Weaving and dyeing	074	026B	057A	028	068 069	024B 025B 027B	03430 03440 03490 03530 03620 03630 03640 03650 03820 03900	3211 3212 3213 3214 3215 3216 3217 3219	151201 151202 151203 151401 151908	137 138 143
025	Knitting	076	027	058	029	071	026	03700 04100 04210	3218	151301 152102 152208	147 148 149 150 151 152
026	Wearing apparel	077	029	064 065	030 031 033	072	004G 028A	03520 04010 04020 04030	3221 3222 3223	152101	153
027	Other made-up textile products	075 078	028	059 060 061 062 063 066	032 034	070 073 074	004H 028B	03830 03890 03899 04210 04220 04230 04290 04299 04510	3231 3232 3233 3224	151901 151902 151903 151909 152209 152901 152909	141 142 144 145 146 154 155 156 157 158 159 160 161
028	Leather and leather products	079 080 081A	030 031	067 068	035 036	075 076 077	029	04300 04400 04590	3225 3226 3241 3242 3243 3244 3246	241101 241201 241202	244 245 246 247 248 249 250 251 252
029	Timber	082	032	069	037	078	012 030A	04610 04699 04720	3301	161101	163
030A	Wooden furniture	085	034	076	042	080	004I 031A	04910 04990 04995 04999	4401 4403	171101	167 177 178 179 180 182 183
030B	Other wooden products	083 084 086 087	033	070 071 072 073 074 075	038 039 040 041	079	004J 030B 031B	04710 04730 04810 04820	3302 3303 3304 3305 3306	161102 161103 161909 171102	164 165 166 168 169 170 172 173 174 175 176 186
031	Pulp and paper	088 089 090	035	077 078 079	043 044	081 082	032	05010 05020 05099 05110 05120 05130 05190	3311 3312 3313 3314 3315 3316 3317 3318 3319	181101 181201 181202 181301 181302 182101 182109 182901 182909	190 191 192 193 194 195 197 198 199
032	Printing and publishing	091	036	080 081 082	045 046 047	083	033 102A	05210 05220 05290	3401 3402 3403	191101 191102 191103	200 201 202

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications*1									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
					048			05300	3404		203 204 205 208 209 210 211
033A	Synthetic resins and fiber	095	037A 038A 039A 040A 041A 046A	085	064	086	043A 045	05710 05720 05731 05732 05790 05810 05890 05910 05920 05930 05940 05950 05960 05970 05981 05982 05983 05990 05999	3621 3631 3632	204101 204102 204103 204109 205101 205102	222 224 225
033B	Other basic industrial chemicals	092	037B 038B 039B 040B 041B 046B	083	049 050	084	039 041 043B	05410 05430 05441 05442 05449 05450 05511 05512 05513 05514 05521 05522 05530 05541 05542 05550 05560 05580 05590 05650 06020	3601 3602 3604 3611 3612 3622	202101 202902 202909 203101 203102 203201 203202 203301 203901 203902 203903 203909	212 223
034	Chemical fertilizers and pesticides	093 094	037C 038C 039C 040C 041C 046C	084 086		085	040	05570 05610 05620 05630 05640 05660 05690 06300	3641 3642 3643	113102 201101 201102 207401	213 214 215
035A	Drugs and medicine	097 098	037D 038D 039D 040D 041D 046D	088	052	088	044	06210 06220 06230 06240	3651	206101	226
035B	Other chemical products	096 099 100 101	037E 038E 039E 040E 041E 046E	087 089 090	051 053 054 055 056 057 061	087 089 090 091 092	042	05420 05490 06030 06090 06110 06120 06410 06420 06510 06520 06590	3652 3653 3661 3662 3663 3664 3665 3666 3667 3668	202901 203904 207101 207102 207201 207202 207301 207901 207909	082 085 216 217 218 219 220 221 227 228 229 230 231
036	Refined petroleum and its products	102	042	091 092	058 059	093 094	036 037 038A	06610 06620 06630 06640 06650 06660	3501 3502 3511 3512 3513 3514	211101 212101 212102	232 233 234 235 236 237

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications*1									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
								06670 06680 06691 06692 06700	3515 3516 3517 3518 3519 3603 3735		
037	Tires and tubes	105	043A 044A	093	062	096	046A	06810 06820 06830 06840	3681	231101	238
038	Other rubber products	106	043B 044B	094 095	060 063	095 097	046B 047	06010 06850 06860 06890 06899	3245 3682 3683	231901 231909	239 240 243
039	Cement and cement products	111 112A	048	099	071	102 103	050 051	07300 07410 07490	3721 3722 3723	252101 252201 252301	255 265 266 267
040	Glass and glass products	109	047A 049A	098	069 070	100	053A	07210 07220 07230 07240 07290 07299	3701 3702 3703	251101 251201 251909	253 254
041	Other non-metallic mineral products	108 110 112B	047B 049B	097 100 101 102	068 072 073 074	099 101 104	052 054 055 056	07110 07120 07130 07510 07520 07530 07540 07590 07599	3711 3712 3713 3714 3731 3732 3733 3734 3736	253101 259901 259902 259903 259904 259909	256 257 258 259 260 261 262 263 264 268 269 270 271 272 273 274 275 276 374
042	Iron and steel	113 114	050	103	075 076	105 106	057	07610 07620 07631 07632 07639 07698 07699 07710 07720 07730 07740 07750 07760 07770 07780 07790 07799	3801 3802 3803 3811 3812 3813 3814 3815 3816 3817 3818 3819 3820	261101 261102 261103 261104 262101 262201 262301 262302 263101 263102 263103 264901 264909	277 278 279 280 281 282 283 284 285
043	Non-ferrous metal	115 116	051	104	077 110	107	058	07910 07920 07990 07999 08390 08500 09400 09510 09520 09590 09595	3831 3832 3833 3834 3835 3836 3837 3838 4105	271101 271102 271103 271109 272101 272102 272201 272202 272203 272204 272209	286 287 288 289 290 291 292 293 294 295 296 297
044	Metal products	117 118 119 120	052 053 054	105 106 107 108 109 110	078 079 080 081 082 083	108 109 110 111	059 060	07810 07820 07830 07840 07890 07899	3901 3902 3903 3904 3905 3906	171103 281101 281201 289101 289901 289902	181 184 185 187 188 189

3. Converter Table (Continued)

UJO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
				130	084 085 086 087 088 089 119			08010 08020 08099 08190 08210 08220 08290 08299 08310 08410 08490	3907 3908 3909 3910 3911 4007 4307 4402	289903 289909	298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324
045A	Agricultural machinery and equipment	122A	055A 056A	111		113	064	08910	4023	302901	327 328
045B	Specialized industrial machinery	122B	055B 056B	112	094 095	114	062 063 066	08720 08730 08740 08790 08791 08795 08810 08820 08830 08841 08842 08850 08860 08890 08891 08895 08920 08930 08960 08970 08990 08991 08995	4009 4021 4022 4024 4025 4026 4027 4028 4029	302101 302201 302301 302401 302402 302902 302903 302904 302909 311201	329 330 331 336 337 344 345 346 347 348 349 365 366 369
045C	Ordinary industrial machinery	122C	055C 056C	114 115	092 093 096	115	065C 067	08110 08230 08240 08250 08620 08630 08640 08650 08691 08695 08710 08950 09010 09020 09030 09090 09095 09110 09120 09130 09140 09150 09190 09191 09195	4002 4003 4004 4005 4008 4010	301201 301301 301901 301902 301909 302905 303101 303102 303109 851611	332 333 334 338 339 340 342 343 350 351 352 353 354 355 356 357 358 360 367 368
045D	Heavy electric machinery	123 124	057A 058A 059A	115A	097 098 099	117	072 074A	09310 09320 09395	4101 4102 4103	341101 341102 341103	341 370 371

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
									4104 4108	341109	372 373
045E	Engines and turbines	121 122D	057B 058B 059B	114A 106A		112	061	08610	4001 4006	301101 301102 301103	325 326
046A	Electronics and electronic products	122E 125	057C 058C 059C	113 116 119	090 091 100 101 102 103 104 105 106 107	116 118 119	073 075 076 077	08940 09610 09620 09630 09690 09695 09710 09720 09730 09790 09890 09910 09920 09930 09990 10010 10020 10030 10090 10091 10095 10110 10120 10130 10140 10150 01190 10195 10200 10310 10320 10330 10390 10410 10420 10490 10510 10590 10595 11150	3666 4111 4112 4113 4114 4115 4116 4117 4118 4121 4122 4123 4124 4125 4126 4131 4132	311101 311109 321101 321102 321103 331101 331102 332101 332102 332109 333101 333201 334101 335901 335902 335903 335909	361 362 363 364 385 386 387 388 389 390 391 395 419 420
046B	Other electric machinery and appliance	126 127 128	057D 058D 059D	117 118 120	108 109 111	120 121 122	074B	09210 09220 09291	4106 4107 4141 4142 4143 4144 4145	321201 342101 342102 342103 342104 342105 342109 851612	375 376 377 378 379 380 381 382 383 384 392 393 394 396
047A	Motor vehicles	131 170A	061	122 123 124	171 112 113	125 127	069	10710 10720 10730 10791 10795 15610	4301 4302 4303 4304 4305 4306 6913	351101 352101 354101 354102 354103 851510	335 397 398 399 400 494
047B	Motor vehicles and bicycles	132 133A	062A	125	114	126	065A 071A	10810 10891 10895 10910 10991 10995 15710	4323 4324	353101 362901	407
048A	Aircraft	134	062B	126A	120	128	071B	11010 11090	4322	362201 362210	401 402 403
048B	Shipbuilding	129	060	121	115 116 117 118	123	070	10610 10620 10690 10691	4311 4312 4313	361101 361102 361103 361110	404 405

3. Converter Table (Continued)

UJO Code	Description	National I-O Classifications*1										
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.	
048C	Other transport equipment	130	063	126		124	068	10695	4321	362101	406	
		133B					071C	11020		362110	408	
		170B								362909	409	
										851613	410	
049	Precision machines	135	064	127	121	129	065B	11110	4201	371101	359	
				128	122	130	078	11120	4202	371109	411	
				129	123	131	053B	11130	4203	371201	412	
				134				11140	4204	371901	413	
								11160	4205	371902	414	
								11190	4206	371903	415	
										851614	416	
											417	
											418	
											421	
							422					
							423					
							424					
050A	Plastic products	107	045	096	065	098	048	06900	3671	221101	241	
					066		049	07010		3672	231902	242
					067			07020		3673		
								07030				
								07040				
								07050				
								07060				
								07070				
								07080				
								07091				
								07092				
050B	Other manufacturing products	081B	065	131	124	132	004K	11210	4411	391101	081	
		136		132	125	034	11220	4412	391102	083		
		137		133	126	080	11230	4413	391901	084		
		138		135	127	081	11240	4414	391902	086		
		139		136	128		11250	4415	391903	171		
				137			11310	4416	391904	196		
							11320	4417	391905	206		
							11390		391906	207		
									391909	425		
										426		
										427		
										428		
										429		
										430		
										431		
							432					
							433					
							434					
							435					
							436					
							437					
							438					
							439					
							440					
							441					
							442					
051	Electricity, gas, and water supply	140	066	139	129	135	013	11410	5101	511101	455	
		141		067	140	130	136	035	11420	5102	511102	456
						131	137	038B	11500	5103	511103	457
									11610	5104	511104	458
									11620	5111	512101	459
										5112	512201	523
										5113	521101	526
											521102	
								521103				
052A	Building construction	142	068A	138	132	138	082A	11710	5201	411101	033	
						139			11720	5202	411102	034
									11795	5203	411201	035
									11810	5204	411202	036
									11820	5205	412101	038
									11895			042
												043
												044
												045
												046
												047
												048
					049							
					050							
					051							
					052							

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
											064 067 068 069
052B	Other construction	143 144 145 146	068B	138A	133	140 141 142 143 144	082B	11910 11920 11930 11940 11950 11960 11990 12010 12020 12030 12040 12050 12060 12070 12090	5211 5212 5213 5214 5215 5216 5217 5218 5219 5220 5221 5222	413101 413102 413103 413201 413202 413203 413209	037 039 040 041 053 054 055 056 057 058 059 060 061 062 063 065 066 070 071 072 073 074 075 076 077 078 079 080
053A	Wholesale and retail trade	147	069	141	134	145 146	093	12100 12210 12220 12300	6101 6102	611101 611201	460 461
053B	Transportation	150 151 152 153 154 155	071	142 143 144 145 146 147	137 138 139 140 141 142 143 144	149 150 151 152 153 154 155 156 157 158	083 084 085 086 089 090 091 092	12510 12520 12530 12540 12610 12620 12630 12640 12710 12720 12730 12740 12810 12820 12830 12910 12920 12930 12940 12990 13010 13110 13120 15620 15690	6301 6302 6303 6304 6305 6306 6307 6308 6309 6310 6311 6312 6313	711101 711201 712101 712102 712201 714101 714201 714301 715101 716101 717101 718101 718901 718902 718903 718904 718905 718906 718909	443 444 445 446 447 448 449 450 451 525
054A	Telephone and telecommunication	156	072	148 149 150	145	159	088	13200 13300	6401 6402 6403	731101 731201 731202 731203 731909	452 522
054B	Finance and insurance	157 158	073 074 075	151 152 153 154	146 147 148 149 150	160 161 162	105	13410 13420 13490 13510 13520 13610 13620 13690	6501 6502 6503 6504 6505	621101 621201 621202	462 463 464 465 466
054C	Education and research	162 165	079 092	163 175	163	167 168	101 103	14810 14820 14900	6801 6802 6803 6804 6805 6806	821101 821102 821301 821302 821303 821304	511 512 513 518 519

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications*1									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
										822101 822102 822103 822104 822105 822106	
054D	Other services	035 148 149 159 160 163 164 166 167 168 169 170C 171 093 094 170 171 172 173 174 176	070 076 077 078 080 081 082 083 084 085 086 087 088 094	021 155 156 157 158 159 160 161 162 164 165 166 167 168 169 170 171 172 173 174 176	135 136 151 152 153 154 155 156 157 158 159 160 162 164 165 166 167 168 169 170 171 172 173	024 147 148 163 164 166 169 170 171 172 173 174 175 176 177 178	094 096 097 098 099 100 102B 104	01010 01020 01030 01090 12400 13630 13710 13720 13800 13910 12920 13930 13990 14010 14020 14110 14120 14200 14310 14320 14390 14410 14420 14430 14510 14520 14590 14700 15010 15020 15100 15200 15300 15410 15420 15430 15440 15510 15520 15590 15790 15800 15910 15920 15990	6201 6202 6404 6405 6601 6602 6603 6611 6612 6613 6614 6615 6616 6617 6618 6619 6620 6811 6812 6813 6814 6815 6816 6817 6901 6902 6903 6904 6905 6906 6911 6912 6914 6915 6916 6917 6918	013101 013102 521201 521202 641101 641102 642101 732101 732102 732103 831101 831102 831103 831201 831202 831203 831301 831302 831303 831304 841101 841102 851101 851201 851202 851301 851401 851901 851902 851903 851904 851909 861101 861102 861103 861104 861105 861106 861107 861109 861201 861202 861203 861301 861901 861902 861903 861904 861905 861906 861907 861908 861909	020 021 453 454 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 514 515 516 517 520 521 524 527 533
055	Public administration	161	089 090 091 095 096	177	161	165	106	14600 6701 6702	6701 6702	811101 811201	531
056	Unclassified	172			174	180	087	16010 16020	8121	900000	528 529 530 534 535
<Value Added>											
VV001	Wages and salaries	201	098 100 104	C	3178	201	202 203 205	16100	9101	9311000 9312000 9313000	561
VV002	Operating surplus	202		OS	3179	202	204A	16201 16202 16203 16204	9102	9401000	563

3. Converter Table (Continued)

UIO Code	Description	National I-O Classifications ^{*1}									
		Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.
VV003	Depreciation of fixed capital	203		D	3180	203	201	16205 16300	9103	9402000	563
VV004	Indirect Taxes less subsidies	204 205		IT-S	3177 3181	204	204B	16401 16402 16403 16404	9104 9105	9403000 9404000	562
<Final Demand>											
FX001	Private consumption	301	101	PCE	4177	301	301	16100	9201	912100 912200	561
FX002	Government consumption	302	102 103 104	GCE	4178	302	302B	16200	9202	913010 913020 913030 913040	
FX003	Gross domestic fixed capital formation	303	106	GFCF	4179	303	303	16300	9203 9204	914100 914200	562 574 576 578 579
FX004	Changes in stock	304	105	CS	4180	304	304 402	16400	9205	915010 915020 915030 915040 915050	563
	Sectors for special treatment								*3 6807 8101 8111	*4 920000 921000 930000 935000 941110 941120 941200 941300 941400 942000	

^{*1} Converter table is compiled based on the classifications of the following national input-output tables.

Indonesia: *TABEL INPUT-OUTPUT INDONESIA 1996*, Badan Pusat Statistik, Jakarta - Indonesia, March 1998

Malaysia: *Malaysia Input-Output Table 1990*, Asian International Input-Output Series No.48, Statistical Research Department, Institute of Developing Economies, March 1997

The Philippines: *Philippines Input-Output Table 1990*, Asian International Input-Output Series No.35, Statistical Research Department, Institute of Developing Economies, March 1995

Singapore: *Singapore Input-Output table 1990*, Asian International Input-Output Series No.47, Statistical Research Department, Institute of Developing Economies, March 1997

Thailand: *Input-Output Table of Thailand 1995*, Office of the National Economic And Social Development Board, Office of The Prime Minister, September 2000

China: *China Input-Output table 1990*, Asian International Input-Output Series No. 46, Statistical Research Department, Institute of Developing Economies, November 1996

Taiwan: *1996 INPUT-OUTPUT TABLES, TAIWAN AREA, THE REPUBLIC OF CHINA*, Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Republic of China, January 2000

Korea: *1995 INPUT-OUTPUT 402 BASIC SECTOR TABLES*, The Bank of Korea, March 1998

Japan: *1995 Input-Output Tables for Japan*, Management and Coordination Agency, March 1999

The United States: 1995 Updated table compiled by the Interindustry Economic Research Fund, Inc., University of Maryland (INFORUM).

^{*2} For Malaysia, Philippines, Singapore and China parts are updated from the above 1990 national input-output tables.

^{*3} These items are distributed to the endogenous sectors.

^{*4} Unallocated Japanese sectors.

4. Technical Notes

In this publication, some annex tables are presented for analytical purpose. The definitions and calculation formulae for these tables are given as follows.

(1) Input Coefficient Matrix and Inverse Matrix

Taking up the intermediate transaction segment given in Figure 1, set

$$\mathbf{X} = (x^{\alpha\beta}_{ij}) = \begin{pmatrix} A^{II} & A^{IM} & A^{IP} & A^{IS} & A^{IT} & A^{IC} & A^{IN} & A^{IK} & A^{IJ} & A^{IU} \\ A^{MI} & A^{MM} & A^{MP} & A^{MS} & A^{MT} & A^{MC} & A^{MN} & A^{MK} & A^{MJ} & A^{MU} \\ A^{PI} & A^{PM} & A^{PP} & A^{PS} & A^{PT} & A^{PC} & A^{PN} & A^{PK} & A^{PJ} & A^{PU} \\ A^{SI} & A^{SM} & A^{SP} & A^{SS} & A^{ST} & A^{SC} & A^{SN} & A^{SK} & A^{SJ} & A^{SU} \\ A^{TI} & A^{TM} & A^{TP} & A^{TS} & A^{TT} & A^{TC} & A^{TN} & A^{TK} & A^{TJ} & A^{TU} \\ A^{CI} & A^{CM} & A^{CP} & A^{CS} & A^{CT} & A^{CC} & A^{CN} & A^{CK} & A^{CJ} & A^{CU} \\ A^{NI} & A^{NM} & A^{NP} & A^{NS} & A^{NT} & A^{NC} & A^{NN} & A^{NK} & A^{NJ} & A^{NU} \\ A^{KI} & A^{KM} & A^{KP} & A^{KS} & A^{KT} & A^{KC} & A^{KN} & A^{KK} & A^{KJ} & A^{KU} \\ A^{JI} & A^{JM} & A^{JP} & A^{JS} & A^{JT} & A^{JC} & A^{JN} & A^{JK} & A^{JJ} & A^{JU} \\ A^{UI} & A^{UM} & A^{UP} & A^{US} & A^{UT} & A^{UC} & A^{UN} & A^{UK} & A^{UJ} & A^{UU} \end{pmatrix}$$

where α denotes a code of the country to supply goods and services;
 β denotes a code of the country to demand goods and services;
 i denotes the i -th industry of country α , given $1 \leq i \leq n$;
 j denotes the j -th industry of country β , given $1 \leq j \leq n$;
and n is the number of industries.

Then, \mathbf{X} is a square matrix with the size of $(10 * n) \times (10 * n)$.

Let \mathbf{x}' be the transposed vector of the gross output \mathbf{x} , also shown at the bottom of Figure 1, that is

$$\mathbf{x}' = (x_1^I \cdots x_n^I, x_1^M \cdots x_n^M, \dots, x_1^\beta \cdots x_n^\beta, \dots, x_1^J \cdots x_n^J, x_1^U \cdots x_n^U).$$

The "Input Coefficient Matrix" is defined as

$$\mathbf{A} = (a^{\alpha\beta}_{ij}) \quad \text{where } a^{\alpha\beta}_{ij} = x^{\alpha\beta}_{ij} / x^{\beta}_j.$$

Then, "Inverse Matrix" \mathbf{B} , known as "Leontief Inverse", is defined as

$$\mathbf{B} = (b^{\alpha\beta}_{ij}) = (\mathbf{I} - \mathbf{A})^{-1} = \begin{pmatrix} B^{II} & B^{IM} & B^{IP} & B^{IS} & B^{IT} & B^{IC} & B^{IN} & B^{IK} & B^{IJ} & B^{IU} \\ B^{MI} & B^{MM} & B^{MP} & B^{MS} & B^{MT} & B^{MC} & B^{MN} & B^{MK} & B^{MJ} & B^{MU} \\ B^{PI} & B^{PM} & B^{PP} & B^{PS} & B^{PT} & B^{PC} & B^{PN} & B^{PK} & B^{PJ} & B^{PU} \\ B^{SI} & B^{SM} & B^{SP} & B^{SS} & B^{ST} & B^{SC} & B^{SN} & B^{SK} & B^{SJ} & B^{SU} \\ B^{TI} & B^{TM} & B^{TP} & B^{TS} & B^{TT} & B^{TC} & B^{TN} & B^{TK} & B^{TJ} & B^{TU} \\ B^{CI} & B^{CM} & B^{CP} & B^{CS} & B^{CT} & B^{CC} & B^{CN} & B^{CK} & B^{CJ} & B^{CU} \\ B^{NI} & B^{NM} & B^{NP} & B^{NS} & B^{NT} & B^{NC} & B^{NN} & B^{NK} & B^{NJ} & B^{NU} \\ B^{KI} & B^{KM} & B^{KP} & B^{KS} & B^{KT} & B^{KC} & B^{KN} & B^{KK} & B^{KJ} & B^{KU} \\ B^{JI} & B^{JM} & B^{JP} & B^{JS} & B^{JT} & B^{JC} & B^{JN} & B^{JK} & B^{JJ} & B^{JU} \\ B^{UI} & B^{UM} & B^{UP} & B^{US} & B^{UT} & B^{UC} & B^{UN} & B^{UK} & B^{UJ} & B^{UU} \end{pmatrix}$$

(2) Forward and Backward Linkages Effects

(i) Forward Linkages Effects (\mathbf{FE}^{α}_i)

Firstly, the row-totals vector \mathbf{b}^{α}_i is calculated from the inverse matrix $\mathbf{B} = (b^{\alpha\beta}_{ij})$ as

$$\mathbf{b}^{\alpha}_i = \sum_{\beta=1}^n \sum b^{\alpha\beta}_{ij}$$

Then, "Forward Linkages Effects" of the i-th industry of the country α is defined as

$$\mathbf{FE}^{\alpha}_i = \mathbf{b}^{\alpha}_i \left/ \frac{\sum \sum b^{\alpha}_i}{10 * n} \right.$$

(ii) Backward Linkages Effects (\mathbf{BE}^{β}_j)

Similarly, the column-totals vector \mathbf{b}^{β}_j is calculated by

$$\mathbf{b}^{\beta}_j = \sum_{\alpha=1}^n \sum b^{\alpha\beta}_{ij}$$

Then, "Backward Linkages Effects" of the j-th industry of the country β is defined as

$$\mathbf{BE}^{\beta}_j = \mathbf{b}^{\beta}_j \left/ \frac{\sum \sum b^{\beta}_j}{10 * n} \right.$$

(3) Impact of Final Demand on Gross Output

Let \mathbf{f}^{α} be a column vector of final demand sub-totals of, or an export vector to, a country α , or the vector of statistical discrepancies, with the column length of $10 * n$. Then, "Impact of Final Demand on Gross Output" is defined as

$$\mathbf{IFx}^{\alpha} = \mathbf{B} \cdot \mathbf{f}^{\alpha}$$

where \mathbf{B} is the "Inverse Matrix" as defined in the section (1).

(4) Impact of Final Demand on Gross Value Added

Let \mathbf{v} be a vector of total value added by sector, that is

$$\mathbf{v} = (v^I_1 \dots v^I_n, v^M_1 \dots v^M_n, \dots, v^{\beta}_1 \dots v^{\beta}_n, \dots, v^J_1 \dots v^J_n, v^U_1 \dots v^U_n)$$

where the superscript of each element denotes "country" and the subscript denotes "industry".

Then, the vector of value added ratios \mathbf{v} is defined as

$$\mathbf{v} = (v^I_1 \dots v^I_n, v^M_1 \dots v^M_n, \dots, v^{\beta}_1 \dots v^{\beta}_n, \dots, v^U_1 \dots v^U_n),$$

and $v^{\beta}_i = v^{\beta}_i / x^{\beta}_i$

where x^{β}_i is an element in \mathbf{x}' (= the transpose of gross output vector \mathbf{x}) for the i-th industry of the country β .

