PART I

Technical Notes on the 2005 Asian International Input-Output Table

I. GENERAL OUTLINE

The *2005 Asian International Input-Output Table* 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 serve as an effective 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 years of 1985, 1990, 1995 and 2000, and partly available even for the year of 1975 (China and Taiwan excluded), the 2005 table is expected to contribute to the studies on technological changes that took place among these countries for decades.

II. SCHEMATIC IMAGE OF THE ASIAN INTERNATIONAL INPUT-OUTPUT TABLE

The whole picture of the *2005 Asian International Input-Output Table* is given in Figure 1. As seen column-wise, each cell in the table shows the input composition of the industries of respective country. $\mathbf{A^{II}}$, for example, shows the input compositions of Indonesian industries vis-à-vis domestically produced goods and services. $\mathbf{A^{MI}}$, on the other hand, shows input composition of Indonesian industries for the imported goods and services from Malaysia.[1] The cells $\mathbf{A^{PI}}$, $\mathbf{A^{SI}}$, $\mathbf{A^{TI}}$, $\mathbf{A^{CI}}$, $\mathbf{A^{NI}}$, $\mathbf{A^{KI}}$, $\mathbf{A^{JI}}$ and $\mathbf{A^{UI}}$ allow the same interpretation for 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 vectors $\mathbf{BA^{I}}$. $\mathbf{A^{GI}}$, $\mathbf{A^{HI}}$, $\mathbf{A^{OI}}$ and $\mathbf{A^{WI}}$ are input compositions of Indonesian industries vis-à-vis imported goods and services from India, from Hong Kong, from EU and from the Rest of the world, presented in CIF value.[2] Import duties and import commodity taxes levied on all Indonesian imports are recorded in the row vector $\mathbf{DA^{I}}$.

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. $\mathbf{F^{II}}$ and $\mathbf{F^{MI}}$, 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 by domestic industries, to Malaysian industries, to the Philippines industries, and so on. $\mathbf{F^{II}}$ is the distribution of Indonesian goods and services to final demand sectors of Indonesia, and $\mathbf{F^{IM}}$ is to the final demand sectors of Malaysia, and so on.

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[1] For imports of services, only imports of "Wholesale and retail trade" and "Transportation" are recorded in each country's import matrix. All other imports of services are treated as imports from the Rest of the world.

[2] EU (**O**) in the 2005 Asian table consists of 25 member countries in 2005: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

$\mathbf{L^{IG}}$, $\mathbf{L^{IH}}$, $\mathbf{L^{IO}}$ and $\mathbf{L^{IW}}$ are Indonesia's export to India, to Hong Kong, to EU, and to the Rest of the world. $\mathbf{Q^{I}}$ is the statistical discrepancies and $\mathbf{X^{I}}$ shows the gross outputs of Indonesian industries.

The column and rows of the other countries can be read in the same manner.

Figure 1. Layout of the *2005 Asian International Input-Output Table*

			Intermediate Demand (A)										Final Demand (F)										Export (L)					
		code	Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.	Indonesia	Malaysia	Philippines	Singapore	Thailand	China	Taiwan	Korea	Japan	U.S.A.	Export to India	Export to Hong Kong	Export to EU	Export to R.O.W.	Statistical Discrepancy	Total Outputs
			(AI)	(AM)	(AP)	(AS)	(AT)	(AC)	(AN)	(AK)	(AJ)	(AU)	(FI)	(FM)	(FP)	(FS)	(FT)	(FC)	(FN)	(FK)	(FJ)	(FU)	(LG)	(LH)	(LO)	(LW)	(QX)	(XX)
	Indonesia	(AI)	A^{II}	A^{IM}	A^{IP}	A^{IS}	A^{IT}	A^{IC}	A^{IN}	A^{IK}	A^{IJ}	A^{IU}	F^{II}	F^{IM}	F^{IP}	F^{IS}	F^{IT}	F^{IC}	F^{IN}	F^{IK}	F^{IJ}	F^{IU}	L^{IG}	L^{IH}	L^{IO}	L^{IW}	Q^{I}	X^{I}
	Malaysia	(AM)	A^{MI}	A^{MM}	A^{MP}	A^{MS}	A^{MT}	A^{MC}	A^{MN}	A^{MK}	A^{MJ}	A^{MU}	F^{MI}	F^{MM}	F^{MP}	F^{MS}	F^{MT}	F^{MC}	F^{MN}	F^{MK}	F^{MJ}	F^{MU}	L^{MG}	L^{MH}	L^{MO}	L^{MW}	Q^{M}	X^{M}
	Philippines	(AP)	A^{PI}	A^{PM}	A^{PP}	A^{PS}	A^{PT}	A^{PC}	A^{PN}	A^{PK}	A^{PJ}	A^{PU}	F^{PI}	F^{PM}	F^{PP}	F^{PS}	F^{PT}	F^{PC}	F^{PN}	F^{PK}	F^{PJ}	F^{PU}	L^{PG}	L^{PH}	L^{PO}	L^{PW}	Q^{P}	X^{P}
	Singapore	(AS)	A^{SI}	A^{SM}	A^{SP}	A^{SS}	A^{ST}	A^{SC}	A^{SN}	A^{SK}	A^{SJ}	A^{SU}	F^{SI}	F^{SM}	F^{SP}	F^{SS}	F^{ST}	F^{SC}	F^{SN}	F^{SK}	F^{SJ}	F^{SU}	L^{SG}	L^{SH}	L^{SO}	L^{SW}	Q^{S}	X^{S}
	Thailand	(AT)	A^{TI}	A^{TM}	A^{TP}	A^{TS}	A^{TT}	A^{TC}	A^{TN}	A^{TK}	A^{TJ}	A^{TU}	F^{TI}	F^{TM}	F^{TP}	F^{TS}	F^{TT}	F^{TC}	F^{TN}	F^{TK}	F^{TJ}	F^{TU}	L^{TG}	L^{TH}	L^{TO}	L^{TW}	Q^{T}	X^{T}
	China	(AC)	A^{CI}	A^{CM}	A^{CP}	A^{CS}	A^{CT}	A^{CC}	A^{CN}	A^{CK}	A^{CJ}	A^{CU}	F^{CI}	F^{CM}	F^{CP}	F^{CS}	F^{CT}	F^{CC}	F^{CN}	F^{CK}	F^{CJ}	F^{CU}	L^{CG}	L^{CH}	L^{CO}	L^{CW}	Q^{C}	X^{C}
	Taiwan	(AN)	A^{NI}	A^{NM}	A^{NP}	A^{NS}	A^{NT}	A^{NC}	A^{NN}	A^{NK}	A^{NJ}	A^{NU}	F^{NI}	F^{NM}	F^{NP}	F^{NS}	F^{NT}	F^{NC}	F^{NN}	F^{NK}	F^{NJ}	F^{NU}	L^{NG}	L^{NH}	L^{NO}	L^{NW}	Q^{N}	X^{N}
	Korea	(AK)	A^{KI}	A^{KM}	A^{KP}	A^{KS}	A^{KT}	A^{KC}	A^{KN}	A^{KK}	A^{KJ}	A^{KU}	F^{KI}	F^{KM}	F^{KP}	F^{KS}	F^{KT}	F^{KC}	F^{KN}	F^{KK}	F^{KJ}	F^{KU}	L^{KG}	L^{KH}	L^{KO}	L^{KW}	Q^{K}	X^{K}
	Japan	(AJ)	A^{JI}	A^{JM}	A^{JP}	A^{JS}	A^{JT}	A^{JC}	A^{JN}	A^{JK}	A^{JJ}	A^{JU}	F^{JI}	F^{JM}	F^{JP}	F^{JS}	F^{JT}	F^{JC}	F^{JN}	F^{JK}	F^{JJ}	F^{JU}	L^{JG}	L^{JH}	L^{JO}	L^{JW}	Q^{J}	X^{J}
	U.S.A.	(AU)	A^{UI}	A^{UM}	A^{UP}	A^{US}	A^{UT}	A^{UC}	A^{UN}	A^{UK}	A^{UJ}	A^{UU}	F^{UI}	F^{UM}	F^{UP}	F^{US}	F^{UT}	F^{UC}	F^{UN}	F^{UK}	F^{UJ}	F^{UU}	L^{UG}	L^{UH}	L^{UO}	L^{UW}	Q^{U}	X^{U}
Freight and Insurance		(BF)	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 India		(CG)	A^{GI}	A^{GM}	A^{GP}	A^{GS}	A^{GT}	A^{GC}	A^{GN}	A^{GK}	A^{GJ}	A^{GU}	F^{GI}	F^{GM}	F^{GP}	F^{GS}	F^{GT}	F^{GC}	F^{GN}	F^{GK}	F^{GJ}	F^{GU}						
Import from Hong Kong		(CH)	A^{HI}	A^{HM}	A^{HP}	A^{HS}	A^{HT}	A^{HC}	A^{HN}	A^{HK}	A^{HJ}	A^{HU}	F^{HI}	F^{HM}	F^{HP}	F^{HS}	F^{HT}	F^{HC}	F^{HN}	F^{HK}	F^{HJ}	F^{HU}						
Import from EU		(CO)	A^{OI}	A^{OM}	A^{OP}	A^{OS}	A^{OT}	A^{OC}	A^{ON}	A^{OK}	A^{OJ}	A^{OU}	F^{OI}	F^{OM}	F^{OP}	F^{OS}	F^{OT}	F^{OC}	F^{ON}	F^{OK}	F^{OJ}	F^{OU}						
Import from the R.O.W.		(CW)	A^{WI}	A^{WM}	A^{WP}	A^{WS}	A^{WT}	A^{WC}	A^{WN}	A^{WK}	A^{WJ}	A^{WU}	F^{WI}	F^{WM}	F^{WP}	F^{WS}	F^{WT}	F^{WC}	F^{WN}	F^{WK}	F^{WJ}	F^{WU}						
Duties and Import Commodity Taxes		(DT)	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		(VV)	V^{I}	V^{M}	V^{P}	V^{S}	V^{T}	V^{C}	V^{N}	V^{K}	V^{J}	V^{U}																
Total Inputs		(XX)	X^{I}	X^{M}	X^{P}	X^{S}	X^{T}	X^{C}	X^{N}	X^{K}	X^{J}	X^{U}																

III. CODING SYSTEM AND SECTOR CLASSIFICATION

1. Coding System

Row	Column	Description
AI001	AI001	
|	|	Intermediate sectors, Indonesia
AI076	AI076	
AI900	AI900	Sub-total (AI001 to AI076)
AM001	AM001	
|	|	Intermediate sectors, Malaysia
AM076	AM076	
AM900	AM900	Sub-total (AM001 to AM076)
AP001	AP001	
|	|	Intermediate sectors, Philippines
AP076	AP076	
AP900	AP900	Sub-total (AP001 to AP076)
AS001	AS001	
|	|	Intermediate sectors, Singapore
AS076	AS076	
AS900	AS900	Sub-total (AS001 to AS076)
AT001	AT001	
|	|	Intermediate sectors, Thailand
AT076	AT076	
AT900	AT900	Sub-total (AT001 to AT076)
AC001	AC001	
|	|	Intermediate sectors, China
AC076	AC076	
AC900	AC900	Sub-total (AC001 to AC076)
AN001	AN001	
|	|	Intermediate sectors, Taiwan
AN076	AN076	
AN900	AN900	Sub-total (AN001 to AN076)
AK001	AK001	
|	|	Intermediate sectors, Korea
AK076	AK076	
AK900	AK900	Sub-total (AK001 to AK076)

1. Coding System (Continued)

Row	Column	Description
AJ001	AJ001	
|	|	Intermediate sectors, Japan
AJ076	AJ076	
AJ900	AJ900	Sub-total (AJ001 to AJ076)
AU001	AU001	
|	|	Intermediate sectors, U.S.A.
AU076	AU076	
AU900	AU900	Sub-total (AU001 to AU076)
BF001		International freight and insurance
CG001		
|		Intermediate input from India (C.I.F. prices)
CG076		
CG900		Sub-total (CG001 to CG076)
CH001		
|		Intermediate input from Hong Kong (C.I.F. prices)
CH076		
CG900		Sub-total (CH001 to CH076)
CO001		
|		Intermediate input from European Union (C.I.F. prices)
CO076		
CO900		Sub-total (CO001 to CO076)
CW001		
|		Intermediate input from the Rest of the World (C.I.F. prices)
CW076		
CW900		Sub-total (CW001 to CW076)
DT001		Import duties and import commodity taxes
ET900	ET900	Total intermediate input or total intermediate output

1. Coding System (Continued)

Row	Column	Description
VV001		Wages and salary[*1]
VV002		Operating surplus
VV003		Depreciation of fixed capital[*2]
VV004		Indirect taxes less subsidies
VV900		Sub-total (VV001 to VV004)
	FI001	
	|	Final demands[*3], Indonesia
	FI004	
	FI900	Sub-total (FI001 to FI004)
	FM001	
	|	Final demands, Malaysia[*4]
	FM005	
	FM900	Sub-total (FM001 to FM005)
	FP001	
	|	Final demands, Philippines[*5]
	FP005	
	FP900	Sub-total (FP001 to FP005)
	FS001	
	|	Final demands, Singapore[*4]
	FS005	
	FS900	Sub-total (FS001 to FS005)
	FT001	
	|	Final demands, Thailand
	FT004	
	FT900	Sub-total (FT001 to FT004)
	FC001	
	|	Final demands, China[*6]
	FC005	
	FC900	Sub-total (FC001 to FC005)

1. Coding System (Continued)

Row	Column	Description
	FN001	
	|	Final demands, Taiwan
	FN004	
	FN900	Sub-total (FN001 to FN004)
	FK001	
	|	Final demands, Korea
	FK004	
	FK900	Sub-total (FK001 to FK004)
	FJ001	
	|	Final demands, Japan
	FJ004	
	FJ900	Sub-total (FJ001 to FJ004)
	FU001	
	|	Final demands, U.S.A.
	FU004	
	FU900	Sub-total (FU001 to FU004)
	LG001	Export to India
	LH001	Export to Hong Kong
	LO001	Export to European Union
	LW001	Export to the Rest of the World
	LX900	Sub-total (LH001 to LW001)
	QX001	Statistical Discrepancies
XX600	XX600	Total input or total output

Notes: *1 In Malaysia part, VV001 includes "Wages and Salary" and VV002 include "Operating surplus", "Depreciation" and "Indirect taxes less subsidies".

*2 In U.S.A. part, "VV003 Depreciation" is included in "VV002 Operating surplus" as the "Gross operating surplus" and not recorded independently.

*3 Common final demand items are as follows:

001 Private consumption expenditure
002 Government consumption expenditure
003 Gross fixed capital formation
004 Changes in stocks
005 Adjustment item (This item exist for China, Malaysia, the Philippines and Singapore)

*4 FM005 for Malaysia and FS005 for Singapore are the balancing items in converting the valuation of transactions from basic price to producer's price. Specifically, they are balanced for (1) domestic commodity taxes and GST, which came out of the adjustment process of domestic transactions

from basic price to producer's price; and (2) domestic trade margins and domestic transport cost (TTM) on exported goods, which came out of the adjustment process of export vector from F.O.B. to producer's price.

*5 FP005 for the Philippines is established to record the discrepancy between production and expenditure in the national account statistics.

*6 FC005 for China represents the statistical error which is included in China's original national input-output table.

2. Sector Classification of the 2005 Asian International Input-Output Table

7 Sectors		26 Sectors		76 Sectors (2000, 2005)		78 Sectors (1985*, 1990, 1995)	
Code	**Description**	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**
INTERMEDIATE SECTORS							
001	Agriculture, livestock, forestry and fishery	001	Paddy	001	Paddy	001	Paddy
		002	Other agricultural products	002	Other grain	007A	Other grain
				003	Food crops	002	Cassava
						004	Sugar cane and beet
						005	Oil palm and coconuts
						007B	Other food crops
				004	Non-food crops	003	Natural rubber
						006	Fiber crops
						008	Other commercial crops
		003	Livestock and poultry	005	Livestock and poultry	009	Livestock and poultry
		004	Forestry	006	Forestry	010	Forestry
		005	Fishery	007	Fishery	011	Fishery
002	Mining and quarrying	006	Crude petroleum and natural gas	008	Crude petroleum and natural gas	012	Crude petroleum and natural gas
		007	Other mining	009	Iron ore	015A	Iron ore
				010	Other metallic ore	013	Copper ore
						014	Tin ore
						015B	Other metallic ore
				011	Non-metallic ore and quarrying	016	Non-metallic ore and quarrying
003	Manufacturing	008	Food, beverage and tobacco	012	Milled grain and flour	018	Milled rice
						019	Other milled grain and flour
				013	Fish products	021A	Fish products
				014	Slaughtering, meat and dairy products	021B	Slaughtering, meat and dairy products
				015	Other food products	017	Oil and fats
						020	Sugar
						021C	Other food products
				016	Beverage	022A	Beverage
				017	Tobacco	022B	Tobacco
		009	Textile, leather, and the products thereof	018	Spinning	023	Spinning
				019	Weaving and dyeing	024	Weaving and dyeing
				020	Knitting	025	Knitting
				021	Wearing apparel	026	Wearing apparel
				022	Other made-up textile products	027	Other made-up textile products
				023	Leather and leather products	028	Leather and leather products

2. Sector Classification of the 2005 Asian International Input-Output Table (Continued)

7 Sectors		26 Sectors		76 Sectors (2000, 2005)		78 Sectors (1985*, 1990, 1995)	
Code	Description	Code	Description	Code	Description	Code	Description
INTERMEDIATE SECTORS							
003	Manufacturing	010	Wooden furniture and other wooden products	024	Timber	029	Timber
				025	Wooden furniture	030A	Furniture
				026	Other wooden products	030B	Other wooden products
		011	Pulp, paper and printing	027	Pulp and paper	031	Pulp and paper
				028	Printing and publishing	032	Printing and publishing
		012	Chemical products	029	Synthetic resins and fiber	033A	Synthetic resins and fiber
				030	Other basic industrial chemicals	033B	Other basic industrial chemicals
				031	Chemical fertilizers and pesticides	034	Chemical fertilizers and pesticides
				032	Drugs and medicine	035A	Drugs and medicine
				033	Other chemical products	035B	Other chemical products
		013	Petroleum and petrol products	034	Petroleum and petrol products	036	Refined petroleum and its products
		014	Rubber products	036	Tires and tubes	037	Tires and tubes
				037	Other rubber products	038	Other rubber products
		015	Non-metallic mineral products	038	Cement and cement products	039	Cement and cement products
				039	Glass and glass products	040	Glass and glass products
				040	Other non-metallic mineral products	041	Other non-metallic mineral products
		016	Metals and metal products	041	Iron and steel	042	Iron and steel
				042	Non-ferrous metal	043	Non-ferrous metal
				043	Metal products	044	Metal products
		017	Industrial machinery	044	Boilers, engines and turbines	045E	Engines and turbines
				045	General machinery	045C-2	Ordinary industrial machinery
				046	Metal working machinery	045B-1	Specialized industrial machinery
						045C-2	Ordinary industrial machinery
				047	Specialized machinery	045A	Agricultural machinery
						045B-2	Specialized industrial machinery

2. Sector Classification of the 2005 Asian International Input-Output Table (Continued)

7 Sectors		26 Sectors		76 Sectors (2000, 2005)		78 Sectors (1985*, 1990, 1995)	
Code	**Description**	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**
INTERMEDIATE SECTORS							
003	Manufacturing	018	Computers and electronic equipment	050	Electronic computing equipment	046A	Electronics and electronic products
				051	Semiconductors and integrated circuits		
				052	Other electronics and electronic products		
		019	Other electrical equipment	048	Heavy electrical equipment	045D	Heavy electric machinery
				049	Television sets, radios, audios and communication equipment	046A	Electronics and electronic products
				053	Household electrical equipment	046B	Other electric machinery and appliance
				054	Lighting fixtures, batteries, wiring and others		
		020	Transport equipment	055	Motor vehicles	047A	Motor vehicles
				056	Motor cycles	047B-1	Motor cycles and bicycles (Motor cycles)
				057	Shipbuilding	048B	Shipbuilding
				058	Other transport equipment	047B-2	Motor cycles and bicycles (Bicycles)
						048A	Aircrafts
						048C	Other transport equipment
		021	Other manufacturing products	035	Plastic products	050A	Plastic products
				059	Precision machines	049	Precision machines
				060	Other manufacturing products	050B	Other manufacturing products
004	Electricity, gas and water supply	022	Electricity, gas and water supply	061	Electricity and gas	051	Electricity, gas and water supply
				062	Water supply		
005	Construction	023	Construction	063	Building construction	052A	Building construction
				064	Other construction	052B	Other construction
006	Trade and transport	024	Trade and transport	065	Wholesale and retail trade	053A	Wholesale and retail trade
				066	Transportation	053B	Transportation

2. Sector Classification of the 2005 Asian International Input-Output Table (Continued)

7 Sectors		26 Sectors		76 Sectors (2000, 2005)		78 Sectors (1985*, 1990, 1995)	
Code	**Description**	**Code**	**Description**	**Code**	**Description**	**Code**	**Description**
INTERMEDIATE SECTORS							
007	Services	025	Other services	067	Telephone and telecommunication	054A	Telephone and telecommunication
				068	Finance and insurance	054B	Finance and insurance
				069	Real estate	054D-1	Other services
				070	Education and research	054C	Education and research
				071	Medical and health service	054D-2	Medical and health service
				072	Restaurants	054D-3	Restaurants
				073	Hotel	054D-4	Hotel
				074	Other service	054D-5	Other service
				076	Unclassified	056	Unclassified
		026	Public administration	075	Public administration	055	Public administration
FINAL DEMAND SECTORS							
001	Private consumption expenditure	001	Private consumption expenditure	001	Private consumption expenditure	001	Private consumption expenditure
002	Government consumption expenditure	002	Government consumption expenditure	002	Government consumption expenditure	002	Government consumption expenditure
003	Gross fixed capital formation	003	Gross fixed capital formation	003	Gross fixed capital formation	003	Gross fixed capital formation
004	Changes in stocks	004	Changes in stocks	004	Changes in stocks	004	Changes in stocks
005	Adjustment item	005	Adjustment item	005	Adjustment item	-	-
VALUE ADDED SECTORS							
001	Wages and salaries	001	Wages and salaries	001	Wages and salaries	001	Wages and salaries
002	Operating surplus	002	Operating surplus	002	Operating surplus	002	Operating surplus
003	Depreciation	003	Depreciation	003	Depreciation	003	Depreciation
004	Indirect taxes less subsidies	004	Indirect taxes less subsidies	004	Indirect taxes less subsidies	004	Indirect taxes less subsidies

*1985 Asian table was compiled at 78 sectors. However, it is published at 24 sectors.

3. Sector Concordance between National I-O Classification and Asian I-O Classification

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia[*1] (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
001	Paddy	001 034A	001	001		001
002	Other grain	002 011 034B	008A 022A 026A	002		003B
003	Food crops	003 004 005 006 007 008 009 010 013 014 015 020 021 022 023 055 034C	002 003 004 006 008B	0003 004 005 006 007 008 009 010 011 015 016		004 005 006 007 008 009 010 011
004	Non-food crops	012 016 017 018 019 024 106 034D	005 007 008C	012 013 014 017 018 019	002 003	002 003A 012 013 014 015 016 017
005	Livestock and poultry	025 026 027 028 034E	009 010	021 022 023 024 025 026 027	001	018 019 020 021 022 023
006	Forestry	029 030 034F	011	033		025 026 027
007	Fishery	031 032 033 034G	012	028 029 030 031 032	004 005	028 029
008	Crude petroleum and natural gas	036 037 105	013	041		031
009	Iron ore	044	014A	034		032

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia*1 (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
010	Other metallic ore	038 039 040 041 042 043 045	014B	035 036 037 038		033 034 035
011	Non-metallic ore and quarrying	035 046 047 048	015 016	039 040 041	050	030 036 037 038 039 040 041
012	Milled grain and flour	057 058 059	022B	042 043	011	049 050 051 052
013	Fish products	053 054	018	044 045	007	046
014	Slaughtering, meat and dairy products	049 050 051	017 020	046 047 048 049 050 051	006 010	042 043 044 048A
015	Other food products	052 056 060 061 062 063 064 067 068 069	019 021 023 024 025 026B	052 053 054 055 056 057 058 059 060 061 062 063 064 065 066	008 009 012 013 014 015 016 017	045 047 048B 053 054 055 056 057 058 060 061
016	Beverage	065 066 070 071	027 028	067 068 069 070	018 019	059 062 063 064
017	Tobacco	072 073	029	071 072 073	020	065 066

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia*1 (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
018	Spinning	074 075	030A	074	021A	067A
019	Weaving and dyeing	076	030B	075A	021B	068 069
020	Knitting	078	031 033A	075B	021C	071
021	Wearing apparel	079	033B	076 077 078 079	022 024	072
022	Other made-up textile products	077 080	032 033C 035A	080 081 082 083 084 085 086	023 025	070 073 074
023	Leather and leather products	081 082 083	034 035B	087 088 089	026 027	075 076 077
024	Timber	084	036	090	028A	078A
025	Wooden furniture	087	041A	091 092 093	029 096	080
026	Other wooden products	085 086 088 089	037 038 039 040	094 095 096 097 098 099 100	028B	078B 078C 078D 079
027	Pulp and paper	090 091 092	041B	101 102 103	030	081 082
028	Printing and publishing	093	042 043	104 105 106	031 032 129	083
029	Synthetic resins and fiber	097	050A	107	036	067B
030	Other basic industrial chemicals	094	045 050B	108	034 035 041	084 086A 086B 086C
031	Chemical fertilizers and pesticides	095 096	046 050C	109 110	042A	085
032	Drugs and medicine	099 100	048	111	037	088
033	Other chemical products	098 101	047 049	112 113	038 039	087 089

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia*1 (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
033	Other chemical products	102 103	050D	114 115	040 042B	090 091 092
034	Petroleum and petrol products	104	044	116 117	033	093 094
035	Plastic products	109	055	118	045 046	098
036	Tires and tubes	107	051 054A	119	044B	095 096
037	Other rubber products	108	052 053 054B	120 121	043 044A	097
038	Cement and cement products	113	057 058 059A	122	049	102 103
039	Glass and glass products	111	056	123 124 125	047 048	100
040	Other non-metallic mineral products	110 112 114	059B	126 127 128 129	051 052	099 101 104
041	Iron and steel	115 116	060 064A	130 131	053	105 106
042	Non-ferrous metal	117 118	061 064B	132 133	054 084	107
043	Metal products	119 120 121 122	062 063 064C	134 135 136 137 138 139 140 141 142	055 056 057 058 059 060 061 063 090	108 109 110 111
044	Boilers, engines and turbines	123	065A	143	077B	112
045	General machinery	124A	065B 066	144	074 076	115A
046	Metal working machinery	124B	065C 067A	145A	077C	114
047	Specialized machinery	124C	067B	145B 146	062 073 077A	113 115B
048	Heavy electrical equipment	125 126	069A 070A 071A 074A	147	078 079 080	117

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia*1 (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
049	Television sets, radios, audios and communication equipment	127A	075	148 149	066	118A
050	Electronic computing equipment	127B	069B	150	064 065	116B
051	Semiconductors and integrated circuits	127C	074B	151 152	067 068 069 070	118B
052	Other electronics and electronic products	127D	070B 071B	153	071 072 081	116A
053	Household electrical equipment	128 173A	068	154	082	119
054	Lighting fixtures, batteries, wiring and others	129 130	072 073	155 156 157 158	083 085	120 121 122
055	Motor vehicles	133 173B	080	159 160 161	086A	125 127
056	Motor cycles	134 173C	081	162	086B	126A
057	Shipbuilding	131	082A	163	075 087 088 089	123
058	Other transport equipment	132 135 136 173D	082B 083	164	086C 091	124 126B 128
059	Precision machines	137 173E	076 077 078 079	165 166 167	092 093 094	129 130 131
060	Other manufacturing products	138 139 140 141 173F	084 085A	168 169 170 171 172 173 174 175	095 097 098	132 133 134
061	Electricity and gas	142	086 087A	176 177A	099 100	135 136
062	Water supply	143	087B	177B	101	137
063	Building construction	144	088 089	178	102	138 139

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia[*1] (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
064	Other construction	145 146 147 148	090 091A	179	103	140 141 142 143 144
065	Wholesale and retail trade	149	091B 092	180	104	145 146
066	Transportation	152 153 154 155 156 157	095 096 097 098 099 100	181 182 183 184 185 186 187 188 189 190 191 192 193	107 108 109 110 111 112 113 114 115 116 118 119	149 150 151 152 153 154 155 156 157 158
067	Telephone and telecommunication	158	101	194 195 196 197	120	159
068	Finance and insurance	159 160 161	102 103 104 105	198 199 200 201 202	121 122 123 124	160 161 162
069	Real estate	162	106 107	203 204	125 152	163
070	Education and research	165 168	110 114	205 206	141	167 168
071	Medical and health service	166 169	115	207 208 209	142	169
072	Restaurants	150	094	210	105	147
073	Hotel	151	093	211 212	106	148
074	Other service	163 167 170 171 172 174	108 109 111 112 118 119 120A	213 214 215 216 217 218 219 220 221 222	117 126 127 128 130 131 132 133 134 135	024 164 166 170 171 172 173 174 175 176

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	Indonesia (2005)	Malaysia*1 (2005)	Philippines (2000)	Singapore (2000)	Thailand (2005)
<Intermediate Transaction>						
074	Other service			223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239	136 137 138 140 143 144 145 146 147 148 149 150 151	177 178
075	Public administration	164	113 116 117	240	139	165
076	Unclassified	175	085B 120B			180
<Final Demand>						
001	Private consumption expenditure	301	Private consumption	Private consumption expenditure	4177	301
002	Government consumption expenditure	302	Government consumption	General Government consumption expenditure	4178	302
003	Gross fixed capital formation	303	Gross fixed capital formation	Gross fixed capital formation	4179	303
004	Changes in stocks	304	Changes in inventories	Changes in stocks	4180	304
005	Adjustment item				4183A	
<Value Added*2>						
001	Wages and salaries	201	Compensation of employees	Compensation of employees	3178	201
002	Operating surplus	202	Operating surplus	Operating surplus	3179	202
003	Depreciation	203		Depreciation	3180	203
004	Indirect taxes less subsidies	204 205		Indirect taxes less subsidies	3181	204

*1 Malaysian-part for the 2005 Asian table is compiled from more detailed classifications (unpublished). Therefore, the concordance table reported here between published 120-sector Malaysian national I-O classification and the Asian I-O classification is not accurate in a rigorous manner and just provides a very rough correspondence between two classifications.

*2 In the Malaysian national input-output table, values of only two value added items (“Wages and salaries” and “Operating surplus”) are reported and the other two items (“Depreciation” and “Indirect taxes less subsidies”) are included in “Operating surplus” and not reported independently.

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Intermediate Transaction>						
001	Paddy	01001A	001 010A	001	011101	
002	Other grain	01001B	002A 010B	002 003 004	011102 011509	1111B0
003	Food crops	01001C	002B 003A 004A 005 006 007A 010C	005 006 007 008 009 010 011	011201 011202 011301 011302 011401 011501 011502 011509	111200 111335 1111A0 1113A0 1119A0
004	Non-food crops	01001D	002C 003B 004B 007B 010D	012 013 014 015 016 017	011601 011602 011603 011609	111400 111910 111920 1119B0
005	Livestock and poultry	03004	008 009A 010E	018 019 020 021 022	012101 012102 012103 012104 012105 012109	112120 112300 1121A0 112A00
006	Forestry	02002	007C 011	023 024 025 026	021101 021201 021301	113300 114200 113A00
007	Fishery	04005	012	027 028	031101 031102 031103 031104 031201 031202	114100
008	Crude petroleum and natural gas	07008	013A	032 033	071101A	211000 213111 213112
009	Iron ore	08009	014A	034	061101	212210
010	Other metallic ore	09010	014B	035 036 037	061101	212230 2122A0 21311A
011	Non-metallic ore and mining	06007 10011 10012	013B 016	030 031 038 039 040 041 042	062101 062201 062202 062909 071101B	212100 212310 212320 212390

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
011	Non-metallic ore and quarrying			043 044		
012	Milled grain and flour	13013	020	056 057 058	111401 111402	311210
013	Fish products	13018	024A	051 052 053 054 055	111301 111302 111303 111304 111309	311700
014	Slaughtering, meat and dairy products	13017	017 023A 024B 027 029A	045 046 047 048 049 050	111101 111201 111202 111203	311513 311514 311520 311615 31151A 31161A
015	Other food products	13014 13015 13016 13019	009B 015 018 019 021 022 023B 024C 025 026 028 029B	059 060 061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 083	111501 111502 111503 111601 111602 111701 111702 111703 111704 111705 111706 111901 111902 111903 111904 111905 111909 113101 202903	311111 311119 311221 311225 311230 311313 311320 311330 311340 311410 311420 311810 311820 311830 311910 311930 311940 311990 31122A 31131A
016	Beverage	15020 15021	029C 030 031	077 078 079 080 081 082	112101 112102 112103 112109 112901 112902 112903	311920 312110 312120 312130 312140
017	Tobacco	16022	032	084	114101	3122A0
018	Spinning	17023A 17024A 17025A 17026A	033A 034A 035A	085 086 087 088 089	151101	313100

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Intermediate Transaction>						
018	Spinning			090		
019	Weaving and dyeing	17023B 17024B 17025B 17026B	033B 034B 035B 037A 038	091 092 093 094 095 096 098	151201 151202 151203 151401	313210 313310
020	Knitting	17027	036	097	151301 152102	313240 315100
021	Wearing apparel	18028A	039 040	099 101	152101	315210 315220 315230 315290
022	Other made-up textile products	18028B	037B 041	100 102 105 106 107	151901 151902 151903 151909 152209 152901 152909	313220 313230 313320 314110 314120 314910 314990 315900
023	Leather and leather products	19029	042 043 044	103 104 108 109 110 111 113	231901 231902 241101 241201 241202	316100 316200 316900
024	Timber	02003	045	114	161101	321100
025	Wooden furniture	21031	048	288 290	171101	337110 337121 337122 337127
026	Other wooden products	20030	046 047	115 116 117 118 119	161102 161103 161909 171102	321219 321910 321920 321991 321992 321999 337212 32121A 32121B
027	Pulp and paper	22032	049 050	120 121 122 123 124 125	181101 181201 181202 181301 181302 182101	322110 322120 322130 322210 322230 322291

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
027	Pulp and paper			126 127 128	182109 182901 182909	322299 32222A 32222B
028	Printing and publishing	23033	051 052	129 130 384 385	191101 735102 735103	323110 323120 511110 511120 511130
029	Synthetic resins and fiber	28046	056 057	148 150 151	204101 204102 204103 204109 205101 205102	325211 325220
030	Other basic industrial chemicals	26038 26041	053 054 058	142 143 145 146 147 149	202101 202902 202909 203101 203102 203201 203202 203301 203901 203902 203903 203909	325110 325120 325181 325182 325188 325190 325212
031	Chemical fertilizers and pesticides	26039 26040	055 062	152 153 154	113102 201101 207401	325310 325320
032	Drugs and medicine	27045	061	155	206101	325411 325412 325413 325414
033	Other chemical products	26044 26042 26043	059A 060 063 064	156 157 158 159 160 161 162 164 165	202901 203904 207101 207102 207201 207202 207301 207901 207909	325130 325510 325520 325610 325620 325910 3259A0
034	Petroleum and petrol products	25036	065 066	131 132 133 134 135 136 137	211101 212101 212102	324110 324121 324122 324191 324199

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Intermediate Transaction>						
034	Petroleum and petrol products			138 139 140 141 144 186		
035	Plastic products	25037	068A 069	166 167 168	221101	326110 326121 326122 326130 326140 326150 326160 32619A
036	Tires and tubes	30048	067A	169	231101	326210
037	Other rubber products	29047B	059B 067B 068B	112 170 171	231909	326220 326290
038	Cement and cement products	31049	072 073	179 180 181	252101 252201 252301	327310 327320 327330 327390
039	Glass and glass products	31050	071	172 173 174	251101 251201 251909	327211 327212 327213 327215
040	Other non-metallic mineral products	31051 31052 31053	070 074	175 176 177 178 182 183 184 185 187	253101 259901 259902 259903 259904 259909	327910 327991 327992 327993 327999 335991 32711A 32712A 32712B 3274A0
041	Iron and steel	32054 32055 32056 32057	075 076	188 189 190 191 192 193 194 195 196 197 198 199 200	261101 261102 261103 261104 262101 262201 262301 262302 263101 263102 263103 264901 264909	331110 331200 331510

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
042	Non-ferrous metal	33058 33059	094 077A 078A	201 202 203 204 205 206 207 208 244	271101 271102 271103 271109 272201 272202 272203 272204 272209	331314 331411 331419 331420 331490 331520 332114 335920 33131A 33131B
043	Metal products	34060	077B 078B 079 080 082 083 084 085 090A	209 210 211 212 213 214 215 216 217 218 219 226 280 289	171103 281101 281201 289101 289901 289902 289903 289909	332310 332320 332420 332430 332500 332600 332710 332720 332800 332996 333414 337215 337910 337920 339111 339991 33211A 33211B 33221A 33221B 33299C 33712A 33721A
044	Boilers, engines and turbines	35061	086A	220 225	301101 301102 301103	332410 333611 333618
045	General machinery	35063	086B 090B 095A	221 222 223 224 227 229	301201 301301 301901 301902 301909 303102 303109 851510	332913 333415 333514 333515 333612 333613 333911 333912 333920 333991 333993 333994 811300

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Intermediate Transaction>						
045	General machinery					33291A 33341A 33399A 33399B
046	Metal working machinery	35062	081 087	230 231	302401 302402 303101	332991 333511 33351A 33351B
047	Specialized machinery	36064 36065	088 089A	228 232 233 234 235 236 237 238 239	302101 302201 302301 302901 302902 302903 302904 302905 302909 311201	333111 333112 333120 333130 333220 333295 333319 33329A
048	Heavy electrical equipment	39072	093	240 241 242 243 247	321101 321102 321103 321109	335311 335312 335313 335314
049	Television sets, radios, audios and communication equipment	40079 40075 40080	100 101	256 257 258 259 260 261	331101 331102 331103 332101 332102 332103 332109	334210 334220 334290 334300
050	Electronic computing equipment	40076 40077	096A 097 099	262 263	333101 333102 333103	334111 334112 33411A
051	Semiconductors and integrated circuits	40078	102 103	250 251	341101 341102	334413
052	Other electronics and electronic products	41082	089B 096B 098 104	163 248 249 252 253 254 255	272101 272102 311101 311109 322101 323101 342101 342102 342103 342109	333315 334411 334412 334417 334418 334419 334510 334511 334512 334515 334517 334613 33331A 33441A

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
053	Household electrical equipment	39073	089C 091	264 265 266 267	325101 325102	335210 335221 335222 335224 335228
054	Lighting fixtures, batteries, wiring and others	39074	092 095B	245 246	321104 321105 324101 324102 324103 324109	335110 335120 335911 335912 335930 335999 811200
055	Motor vehicles	37067 37068	106 156	274 275 276 277 278 279 395	351101 352101 354101 354102 354103 851410	336111 336112 336120 336211 336212 336213 336214 336300 811192 8111A0
056	Motor cycles	37071A	107	286	353101	336991
057	Shipbuilding	37069	105	281 282 283	361101 361102 361103 361110	336611 336612
058	Other transport equipment	37066 37071B	108 109 110	284 285 287	362101 362110 362201 362210 362901 362909	336411 336412 336413 336500 336999
059	Precision machines	41081	111	268 269 270 271 272 273	371101 371109 371201 371901 371902 371903	333314 334513 334514 334516 339112 339113 339114 339115 339116 33451A
060	Other manufacturing products	24034 24035 42083 42084	112	291 292 293 294 295 296	391101 391102 391901 391902 391903 391904	336414 336992 339910 339920 339930 339940

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Intermediate Transaction>						
060	Other manufacturing products			297	391905 391906 391909	339950 339992 339994 512200 33299A 33299B 33461A 33641A 33999A
061	Electricity and gas	44086 45087	113 114	298 299 300 301 302 303	511101 511102 511103 511104 512101 512201	221100 221200 S00101 S00202
062	Water supply	46088	115	304	521101 521102 521103	221300
063	Building construction	47089A	116 117	305 306 307	411101 411102 411201 411202 412101	230101 230102 230201 230202 230301 230302
064	Other construction	47089B	118 119	308 309 310 311 312 313 314 315 316 317 318 319 320	413101 413102 413103 413201 413202 413203 413209	230103
065	Wholesale and retail trade	63102	120 121 122 123	321 322	611101 611201	420000 4A0000
066	Transportation	51090 51091 52092 53093 54094 55095 55096 58098	126 127 128 129 130	327 328 329 330 331 332 333 334	711101 711201 712101 712102 712201 714101 714201 714301	481000 482000 483000 484000 485000 486000 492000 493000

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
066	Transportation			335 336 337 338 339 340	715101 716101 717101 718101 718901 718902 718903 718904 718905 718906 718909	561500 48A000 S00201
067	Telephone and telecommunication	59099 60100	133 134	341 342 343 344	731101 731201 731202 731203 731909	491000 517000
068	Finance and insurance	68105 70106	135 136 137	348 349 350 351 352 353	621101 621201 621202	523000 524100 524200 525000 522A00 52A000
069	Real estate	72107	139	354 355 356	641101 641102 642101 642201	531000 S00800
070	Education and research	84117 75111	144 147	357 358 359 360 374 375 376	821101 821102 821301 821302 821303 821304 822101 822102 822103 822104 822105 822106	541700 611100 611A00 611B00
071	Medical and health service	85118	148	377 378 379	831101 831102 831103 831201 831202	621600 622000 623000 624200 624400 621A00 621B00 624A00
072	Restaurants	67104	125	323 324 325	861201 861202 861203	722000

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
073	Hotel	66103	124	326	861301	7211A0 721A00
074	Other service	80115 82116 74110 92122 73108 74109 61101 91121 86119 88120 76112 05006 78113 79114	131 132 138 140 141 142 143 145 146 149 150 151 152 153 154 155 157 158 159	029 345 346 347 361 362 363 364 365 366 367 368 369 370 371 380 381 382 383 386 387 388 389 390 391 392 393 394 396 397 398 399 400	013101 013102 521201 521202 732101 732102 732103 733101 734101 735101 735104 831301 831302 831303 831304 831305 831401 831402 841101 841102 851101 851201 851301 851901 851902 851903 851904 851909 861101 861102 861103 861104 861105 861109 861401 861402 861403 861404 861409 861901 861902 861903 861904 861909	115000 511200 512100 515100 515200 516110 518100 518200 519100 532100 532230 532400 541100 541200 541300 541400 541511 541512 541610 541800 541920 541940 561100 561200 561300 561400 561600 561700 561900 562000 711100 711200 711500 712000 713940 713950 811400 812100 812200 812300 812900 813100 814000 5111A0 532A00 54151A 5416A0

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.[*3] (2002)
<Intermediate Transaction>						
074	Other service					5419A0 711A00 713A00 713B00 813A00 813B00
075	Public administration	93123	160	372 373	811101 811201	S00500 S00600 S00700
076	Unclassified	56097	161	403	900000	S00102 S00203 S00300 S00401 S00402
-	Sectors undistributed or for special treatment	43085		401 402	392101 713101P 713201P 822201 890000P 909900 911000 920000 921000 922000 930000 935000 942000 950000	533000 550000 S00900
<Final Demand>						
001	Private consumption expenditure	FU101 FU102	162	405	912100 912200	F01000
002	Government consumption expenditure	FU103	163	406	913110 913120 913130 913140 913210 913220 913230 913240	F06C00 F07C00 F08C00 F09C00
003	Gross fixed capital formation	FU201	164	407 408	914100 914200	F02000 F06I00 F07I00 F08I00 F09I00
004	Changes in stocks	FU202	165	409	915010 915020 915030 915040	F03000
005	Adjustment item					

3. Sector Concordance between National I-O Classification and Asian I-O Classification (Continued)

Asian I-O classification		National I-O classifications				
Code	Description	China (2002)	Taiwan (2004)	Korea (2005)	Japan (2005)	U.S.A.*3 (2002)
<Value Added>						
001	Wages and salaries	VA002	162	405	9311000 9312000 9313000	V00100
002	Operating surplus	VA004	163	406	9401000	V00300
003	Depreciation	VA001	164	407	9402000 9403000	V00300*4
004	Indirect taxes less subsidies	VA003	165	408 409	9404000 9405000	V00200

*3 The classification of the U.S.A. is that of the Department of Commerce (D.O.C.).

*4 In the U.S.A. table, “Depreciation” is included in the “V00300 Gross operating surplus” and it is not recorded independently.

IV. TECHNICAL NOTES

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

1. Definitions of Indices

(1) Input Coefficient Matrix and Inverse Matrix

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

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

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 dimension of $10 \times n$.

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

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

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

Then the "Input Coefficient Matrix" is defined as

$$\mathbf{A} = \left(a_{ij}^{\alpha\beta}\right) = \begin{pmatrix} a_{11}^{\mathrm{II}} & \cdots & a_{1n}^{\mathrm{II}} & & a_{11}^{\mathrm{IU}} & \cdots & a_{1n}^{\mathrm{IU}} \\ \vdots & \ddots & \vdots & \cdots & \vdots & \ddots & \vdots \\ a_{n1}^{\mathrm{II}} & \cdots & a_{nn}^{\mathrm{II}} & & a_{n1}^{\mathrm{IU}} & \cdots & a_{nn}^{\mathrm{IU}} \\ & \vdots & & \ddots & & \vdots & \\ a_{11}^{\mathrm{UI}} & \cdots & a_{1n}^{\mathrm{UI}} & & a_{11}^{\mathrm{UU}} & \cdots & a_{1n}^{\mathrm{UU}} \\ \vdots & \ddots & \vdots & \cdots & \vdots & \ddots & \vdots \\ a_{n1}^{\mathrm{UI}} & \cdots & a_{nn}^{\mathrm{UI}} & & a_{n1}^{\mathrm{UU}} & \cdots & a_{nn}^{\mathrm{UU}} \end{pmatrix}$$

where $a_{ij}^{\alpha\beta} = \dfrac{x_{ij}^{\alpha\beta}}{x_j^{\beta}}$

By using the input coefficient matrix (**A**), the "Inverse Matrix" **B**, known as the "Leontief Inverse" is defined as

$$\mathbf{B} = \left(b_{ij}^{\alpha\beta}\right) = (\mathbf{I} - \mathbf{A})^{-1} =$$

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

(2) Forward and Backward Linkage Effects

(2-a) Forward Linkage Effects ($\mathbf{FE_i^{\alpha}}$)

Firstly, the row-totals vector b_i^{α}, is calculated from the inverse matrix $\mathbf{B} = \left(b_{ij}^{\alpha\beta}\right)$ as

$$b_i^{\alpha} = \sum_{\beta} \sum_{j=1}^{n} b_{ij}^{\alpha\beta}$$

Then, the "Forward Linkage Effects" of the i-th industry of country α ($\mathbf{FE_i^{\alpha}}$) is defined as

$$\mathbf{FE_i^{\alpha}} = \frac{b_i^{\alpha}}{\frac{1}{10\times n}\sum_{\alpha}\sum_{i=1}^{n} b_i^{\alpha}}$$

(2-b) Backward Linkage Effects ($\mathbf{BE_j^{\beta}}$)

Similarly, the column-totals vector b_j^{β}, is calculated by

$$b_j^{\beta} = \sum_{\alpha} \sum_{i=1}^{n} b_{ij}^{\alpha\beta}$$

Then, the "Backward Linkage Effects" of the j-th industry of country β ($\mathbf{BE}_{\boldsymbol{j}}^{\boldsymbol{\beta}}$) is defined as

$$\mathbf{BE}_{\boldsymbol{j}}^{\boldsymbol{\beta}} = \frac{b_j^{\beta}}{\frac{1}{10 \times n} \sum_{\beta} \sum_{j=1}^{n} b_j^{\beta}}$$

(3) Impact of Final Demand on Gross Output ($\mathbf{IFx}^{\boldsymbol{\alpha}}$)

Let $\mathbf{F}^{\boldsymbol{\alpha}}$ be a column vector of final demand sub-totals of, or an export to, a country α, or the vector of statistical discrepancies, with the column length of $10 \times n$. Then, the "Impact of Final Demand on Gross Output" of country α ($\mathbf{IFx}^{\boldsymbol{\alpha}}$) is defined by post-multiplying $\mathbf{F}^{\boldsymbol{\alpha}}$ to $\mathbf{B}$, the "Inverse Matrix" defined in section (1).

$$\mathbf{IFx}^{\boldsymbol{\alpha}} = \mathbf{BF}^{\boldsymbol{\alpha}}$$

(4) Impact of Final Demand on Gross Value Added ($\mathbf{IFv}^{\boldsymbol{\alpha}}$)

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

$$\mathbf{v} = \left(\mathrm{v}_1^{\mathrm{I}} \cdots \mathrm{v}_n^{\mathrm{I}}, \mathrm{v}_1^{\mathrm{M}} \cdots \mathrm{v}_n^{\mathrm{M}}, \cdots\cdots, \mathrm{v}_1^{\beta} \cdots \mathrm{v}_n^{\beta}, \cdots\cdots, \mathrm{v}_1^{\mathrm{J}} \cdots \mathrm{v}_n^{\mathrm{J}}, \mathrm{v}_1^{\mathrm{U}} \cdots \mathrm{v}_n^{\mathrm{U}} \right)$$

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

Then, the vector of value added ratios of the i-th industry of country β is defined as the ratio of v_i^{β} to the gross output of the i-th industry of country (x_i^{β}), an element in $\mathbf{x}'$ defined in section (1).

$$v_i^{\beta} = \frac{\mathrm{v}_i^{\beta}}{x_i^{\beta}}$$

The vector of value added ratios $\boldsymbol{v}$, of which elements consisting of v_i^{β}, is thus expressed as follows.

$$\boldsymbol{v} = \left(v_1^{\mathrm{I}} \cdots v_n^{\mathrm{I}}, v_1^{\mathrm{M}} \cdots v_n^{\mathrm{M}}, \cdots\cdots, v_1^{\beta} \cdots v_n^{\beta}, \cdots\cdots, v_1^{\mathrm{J}} \cdots v_n^{\mathrm{J}}, v_1^{\mathrm{U}} \cdots v_n^{\mathrm{U}} \right)$$

Now let $\hat{\boldsymbol{v}}$ be the diagonal matrix of $\boldsymbol{v}$.

$$\hat{\boldsymbol{v}} = \mathbf{diag}(\boldsymbol{v}) = \begin{pmatrix} v_1^{\mathrm{I}} & & & & & \\ & \ddots & & & \mathbf{0} & \\ & & v_n^{\mathrm{I}} & & & \\ & & & \ddots & & \\ & & & & v_1^{\mathrm{U}} & \\ & \mathbf{0} & & & & \ddots \\ & & & & & v_n^{\mathrm{U}} \end{pmatrix}$$

Then, the "Impact of Final Demand on Gross Value Added" of country α ($\mathbf{IFv}^{\alpha}$) is calculated by pre-multiplying $\hat{\boldsymbol{v}}$ to the "Impact of Final Demand on Gross Output" of country α ($\mathbf{IFx}^{\alpha}$) derived in section (3).

$$\mathbf{IFv}^{\alpha} = \hat{\boldsymbol{v}}\mathbf{IFx}^{\alpha} = \hat{\boldsymbol{v}}\mathbf{BF}^{\alpha}$$

(5) Contribution Ratios of Final Demand on Gross Value Added ($\mathbf{CR}_i^{\alpha}$)

Let $\mathbf{IFv}_i^{\alpha}$ be the i-th element of the "Impact of Final Demand on Gross Value Added" of country α ($\mathbf{IFv}^{\alpha}$) derived in section (4) above, i.e. the value of the impact of final demand on gross value added of the i-th industry of country α.

Then, the "Contribution Ratio of Final Demand on Gross Value Added" of the i-th industry of country α ($\mathbf{CR}_i^{\alpha}$) is defined as the share to the total value of the impact of final demand on gross value added ($\sum_{\alpha} \mathbf{IFv}_i^{\alpha}$).

$$\mathbf{CR}_i^{\alpha} = \frac{\mathbf{IFv}_i^{\alpha}}{\sum_{\alpha} \mathbf{IFv}_i^{\alpha}} \times \mathbf{100\%}$$

2. Notes on Import Duty and Import Commodity Taxes Table

Duties and import commodity taxes reported in Table 3.1 are defined as taxes imposed when the commodity is imported to the country from other countries. The ratio is calculated from the following formula:

Duties and import commodity taxes ratio
= Duties and import commodity taxes / (CIF imports + Duties and import commodity taxes)

The rates reported in Table 3.1 are calculated based on the actual data obtained from national I-O tables, foreign trade statistics and other sources. Thus they are not necessarily consistent with the official rates determined by each country.

3. Notes on Employment Matrices

As a supplementary data to the 2005 Asian table, employment matrices by sector and by employment status were compiled (Table 3.2). Due to data limitations and the differences of statistical systems, some concepts and the coverage differ across countries. The main features of each country's data are reported in Table 1 below and the following is some major issues accompanying the compilation of employment matrices.

(1) Treatment of sideline occupations

For the purpose of analyzing the creation of job opportunities, it may be desirable if the number of sideline occupation is included in addition to individual's main job (double count of the occupation). However, the labor statistics in many countries only report principal jobs and does not count sideline occupations.

(2) Treatment of military personnel

The number of military personnel accounts for a large portion of employment in the public sector and thus it should be included in the employment of public administration (those of extra-territorial US military base are excluded).

(3) Timing of the Survey

In most of the countries, the national labor force survey (LFS) is used as the main source for compiling employment matrices. LFS is conducted several times a year and the number of employment at industry level fluctuates depending on the timing of surveys. For instance, the number of employment in agricultural sector becomes large when harvesting and that of the service sectors may increase at the time of national events such as New Year Holidays, Christmas and Fasting. Also, the total number of employment changes at the time of graduation of schools as the new labor force is supplied to the labor market. Therefore, it is not an easy task to capture the employment structure of the country appropriately.

(4) Data inconsistencies and other problems

In many countries, only the number of labour force by broad industrial category is available from labour statistics and it is difficult to obtain the detailed information on employment by industry and by employment status. Then, the number of employed persons at Asian I-O classification has to be estimated from the limited information. It is sometimes estimated by applying simple mechanical calculation (e.g. splitting the numbers of workers using the shares of industrial outputs). As a result, decimal numbers may be created in some sectors and the inconsistency (rounding errors) exists in some matrices between the sum of the number of employment of each sector and the total number of employment. Also, very small numbers in some cells are observed as a result of mechanical calculation.

Table 1. Features of Employment Matrices

INDONESIA	
1. Main data sources	Labor Force Survey (LFS)
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Not counted
5. Classification of employment status	(1) Employee, (2) Own account worker, (3) Unpaid family worker
MALAYSIA	
1. Main data sources	Labor Force Survey (LFS), Economic Census
2. Definition of working age	15 to 64 years
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account worker, (3) Unpaid family worker
PHILIPPINES	
1. Main data sources	Labor Force Survey (LFS)
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account worker, (3) Unpaid family worker
SINGAPORE	
1. Main data sources	Economic Survey Series, Annual Census of Manufacturing Activities, Report on Labour Force, Singapore Yearbook of Manpower Statistics, etc.
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account worker, (3) Unpaid family worker
THAILAND	
1. Main data sources	Labor Force Survey (LFS)
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account worker, (3) Unpaid family worker
CHINA	
1. Main data sources	China Labor Statistical Yearbook, China 1% Population Sample Survey Data
2. Definition of working age	16 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Not counted
5. Classification of employment status	(1) City, (2) Town, (3) Rural

Table 1. Features of Employment Matrices (Continued)

TAIWAN	
1. Main data sources	Manpower Resource Survey
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Counted (The number of sideline occupations is reported explicitly as part of "Employees" in the table.)
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees (Sideline), (2) Own account worker, (3) Unpaid family worker
KOREA	
1. Main data sources	2005 Korea I-O table
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Not counted
5. Classification of employment status	(1) Employees, (2) Own account and family workers *Available for only two categories.
JAPAN	
1. Main data sources	2005 Japan I-O table
2. Definition of working age	15 years and over
3. Treatment of sideline occupation	Not counted
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account worker, (3) Unpaid family worker
U.S.A.	
1. Main data sources	Bureau of Labor Statistics (Household Survey and Establishment Survey)
2. Definition of working age	None (Employment data of BLS is compiled from the results of household survey and establishment survey. Household survey is limited to workers 16 years of age and older, while establishment survey is not limited by age.)*
3. Treatment of sideline occupation	The household survey has no duplication of individuals, because individuals are counted only once, even if they hold more than one job. In the establishment survey, employees working at more than one job and thus appearing on more than one payroll are counted separately for each appearance.*
4. Treatment of military personnel	Counted
5. Classification of employment status	(1) Employees, (2) Own account and unpaid family workers *Available for only two categories.

*Explanations are based on BLS website: http://www.bls.gov/news.release/empsit.tn.htm.