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DISCUSSION PAPER No. 30

**Towards the Compilation of a Consistent
Asian International I-O Table**

— The Report of the General Survey on National I-O Tables —

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Abstract

This paper reports on the survey of the characteristic features of national input-output tables compiled by the member countries of the Asian International Input-Output Table project. In making any inter-regional tables, the presentation format of each constituent table has to be carefully studied in order to design a common adjustment rule. The survey was conducted in the period of 2003-04, with invaluable cooperation from each collaborating institution of the project. Some analytical findings are drawn from the survey results, such as the similarity between each national table and the Japanese table, the responsiveness to the 1993 SNA, and the major areas of conflict regarding the presentation format.

Keywords: input-output table, 1993 SNA, presentation format

JEL classification: C67, D57

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1 Introduction

Despite the fact that input-output tables constitute the central apparatus of the System of National Accounts, each national table of individual countries exhibits more or less different features and characteristics, reflecting the countries' economic idiosyncrasies and the availability of data. Such a variety in the form, however, poses a practical difficulty for compiling the Asian international input-output table (AIO table). Even though the AIO table is composed of the segments taken from each national I-O table, the interpretation of the data should be mutually consistent and comparable for any part of the whole.

Accordingly, one of the most complicated, nerve-breaking tasks of compilation is the adjustment of national tables towards the AIO common format. In general, it is the detailed, information-rich table that has to concede to less-detailed ones, as the other way round would require a costly (yet often unrewarding) effort of obtaining supplementary data. So, there always exists a trade-off between the level of uniformity and the level of information, and hence a careful and thorough consideration is called for in making adjustment rules.

This paper reports on the characteristic features of national tables of the AIO project member countries. The survey was conducted in the period of 2003-04, in order to construct the basic information reserves for designing the AIO common format and adjustment rules. To my knowledge, such an extensive and detailed survey on national tables has never been carried out, and I believe that no institution but the IDE, with a history of significant cooperative relationships with I-O experts of various Asian countries, would be able to make such a substantial survey possible and successful.

2 Questionnaire and the survey result

The questionnaire was carefully designed so as to capture every important aspect of an I-O table. The questions are grouped under seven broad categories, namely:

1. Benchmark-year and recording principles
2. Availability of national tables and supporting tables
3. Valuation
4. Form and coverage

5. Special treatment
6. Public / semi-public sectors
7. Response to the 1993 SNA.

A glossary is provided so that any ambiguity of I-O jargons in the questionnaire is ruled out. It is appended with a special explanatory note on the treatment of “Scraps and By-products” sectors, which often prompts a general argument on concepts and definitions.

The result of the survey is shown in the table that follows the questionnaire. The column-cells on the left side refer to the questions from the questionnaire, and each country’s answers to them are given along the rows. The word “unknown” is typed in where the information was not sufficient to give a definite answer. Endnotes are provided, with an asterisk (*) and reference number.

3 Major findings

(1) Similarity to the Japanese I-O table

In Figure 1, the degree of similarity to the Japanese I-O table is illustrated. The horizontal axis is the level (number) of industrial classification, while vertical axis concerns presentation format, giving the percentage rates of the number of questions in the questionnaire to which the country gave the same answers as Japan's. (The rates are calculated against the sum of valid answers only.) The diagram shows that the most similar table of all is the Korean I-O table, as its industrial classification has just one sector difference with that of the Japanese table, and the rate of the same answer is more than 70%.

Then, we can identify the second group, including Indonesia, the Philippines, Thailand and Malaysia. Not to mention the Korean table, there is no wonder for these tables (except Malaysia’s) to show high degree of similarity to the Japanese table, since their national I-O projects are known to have been initiated and conducted under the advice and support of Japanese I-O experts.

The US table is indicated as having some degree of similarity, but in the survey result it is observed that many answers remain to be “unknown”, so that no conclusive evaluation can be made against this table (although it is true that the classification

difference is the second smallest after the Korean table.)

The third group, which is the least similar to the Japanese table, includes Taiwan, Singapore and China. In addition to the dissimilarity of the format and of the level of industrial classification, the benchmark years of these national tables differ from that of Japan, i.e., with “0” or “5” in the last digit of the year. So the official tables had to be updated to the year 2000 with the help of some estimation methods like RAS algorithm, and this will further disturb the accuracy of the tables. The same is true for the national table of the United States.

(2) The responsiveness to the 1993 SNA

The System of National Accounts is a comprehensive guideline for compiling national statistical data. If properly followed, the resulting statistics will be mutually consistent and internationally comparable. The latest version of the SNA, the 1993 SNA, underwent an extensive revision of its predecessor, the 1968 SNA, to bring the statistical notions and methods up to date. I-O tables (or more precisely supply and use tables), which constitute a core apparatus of the System, didn't remain unaffected, and many countries including our project partners are now putting every effort to make their tables accordant to the new scheme.

The survey result (Table 3) shows that the most “responsive” countries are the Philippines and the United States, yet again one must be careful about the result on the US table as it contains a number of “unknowns”. The Thai I-O table comes next, followed by the Korean and Japanese table. Although the Korean table and Japanese table ranked the same, the former can be evaluated higher as it already succeeded in introducing one of the most challenging schemes in the 1993 SNA, i.e., the Financial Intermediary Services Indirectly Measured (FISIM). On the other hand, it is rather surprising to observe that Singapore and Malaysia ranked low, as these national tables are known to have followed the previous 1968 SNA schemes quite extensively.

(3) The areas of conflict

Finally, we shall briefly look at the areas of conflict where each country's treatment is not in line. The most prominent example is the treatment of “Scraps and By-products”. As explained in the appendix of the questionnaire, there are four adjustment methods for this problem. Each of them has both advantages and disadvantages and, as shown in the survey result, the member countries employed the various schemes in quite an

uncoordinated fashion. In the absence of supplementary information on generation and use of scraps / by-products, it is not possible to convert from one scheme to another, making it difficult to reach a common agreement on the adjustment method.

The second area of conflict is about the treatment of imputed interest. The previous 1968 SNA recommended that the output of imputed interests (= the difference between the interests receivable and the interests payable) should all go to intermediate transaction, not to final demand. The countries like Japan, Singapore and Malaysia strictly follow this stipulation, while other countries' tables have output in final demand as well. The introduction of FISIM under the 1993 SNA may provide an integrated guideline for this issue, but so far no member country except Korea is successful in introducing this new scheme.

The last prominent area of conflict is the treatment of inventory. The related question in the questionnaire states that:

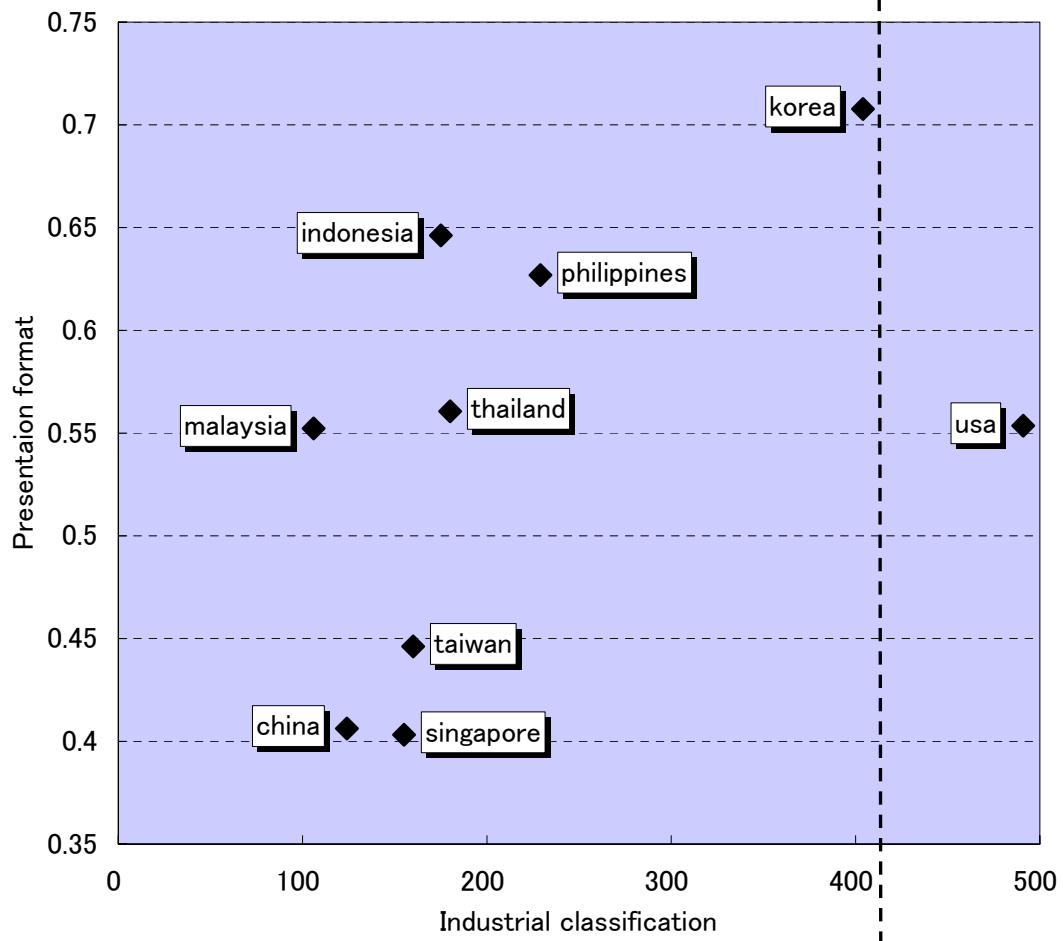
“Suppose that a car industry (demand-side sector) purchased a set of tyres (supply-side sector) but did not use them this time. How does this input enter in the table?”

Most of the countries answered that the input should be recorded at the intersection between “Tyre (supply-side)” industry and “Change in Stocks”, but some countries like China, Taiwan and Singapore answered the opposite, i.e., at the intersection with “Car (demand-side)” industry. Singapore gave an explanatory comment on this. It treated this input as a stock of car since “tyres are regarded as a <work-in-progress> of a car.” It is quite surprising to find out that even the very basic economic concept like an “inventory” is in fact yielding to different interpretations among countries.

4 Concluding remark

One might ask, “So, which table is right, after all?” The feature of a national I-O table is a reflection of the economy that it represents, like languages reflect national traits and ethics. As French or Chinese language is no more “correct” than Dutch or Thai, no table is right, and no table is wrong. This is the common ground that the AIO project must stand on, and without deep respect for and thorough understanding of each table's characteristics, the compilation of Asian international input-output table would not be able to open a rewarding field of analysis.

Figure 1. Similarity to Japanese I-O Table



Japanese I-O Table
Column=405

<Table 1. Similarity in the presentation format>

Rank	Country	Rate *	Classification
1	KOREA	0.7077	404
2	INDONESIA	0.6462	175
3	PHILIPPINES	0.6269	229
4	THAILAND	0.5606	180
5	USA	0.5536	491
6	MALAYSIA	0.5522	106
7	TAIWAN	0.4462	160
8	CHINA	0.4063	124
9	SINGAPORE	0.4032	155

* The percentage rates of the number of questions in the questionnaire to which the country gave the same answers as Japan's.

<Table 2. Similarity in the no. of industrial classification>

Rank	Country	Difference in the number of industrial	Classification
1	KOREA	1	404
2	USA	86	491
3	PHILIPPINES	176	229
4	THAILAND	225	180
5	INDONESIA	230	175
6	TAIWAN	245	160
7	SINGAPORE	250	155
8	CHINA	281	124
9	MALAYSIA	299	106

<Table 3. Responsiveness to the 1993 SNA>

Rank	Country	rate *
1	PHILIPPINES	0.5714
1	USA	0.5714
3	THAILAND	0.5385
4	KOREA	0.5000
4	JAPAN	0.5000
6	SINGAPORE	0.4545
7	INDONESIA	0.4286
7	MALAYSIA	0.4286
9	CHINA	0.3077
10	TAIWAN	0.2143

* The percentage rates of the number of questions in section 7 of the questionnaire to which the country gave the answer that follows the SNA recommendation .

QUESTIONNAIRE ON NATIONAL TABLES FOR ISAP 2000

IDE I-O team

Please place "x" in the appropriate boxes, or fill the space with words/numbers.

1. Benchmark-year and recording principles

1.1 What is the benchmark-year of the national table for the use of ISAP 2000?

--	--	--	--

1.2 Please specify your recording principles of national tables.

1.2.1 The accounting period for which the transactions were recorded in the table

	d	d	m	m
from				
to				

1.2.2 The boundary of economic territory

	Legally-defined national territory
	National embassies in foreign countries
	Foreign embassies in legally-defined territory
	Foreign military bases in legally-defined territory
	Ships/aeroplanes of own nationality in ex-territorial operation
	Others (Please specify: _____)

1.2.3 Accrual basis or a cash basis Accrual Cash

2. Availability of national tables and supporting tables

2.1 Please specify the aggregation levels of national tables.

2.1.1 Basic table (for the use of ISAP)

--	--	--

 x

--	--	--

2.1.2 Other level of classification (1)

--	--	--

 x

--	--	--

2.1.3 Other level of classification (2)

--	--	--

 x

--	--	--

2.1.4 Other level of classification (3)

--	--	--

 x

--	--	--

2.2 Please specify appended tables available upon request for each level of classification in 2.1 of your own I-O tables.

2.2.1 Import matrix

--	--	--	--

2.2.2 Trade margins matrix

--	--	--	--

2.2.3 Domestic freight transport cost matrix

--	--	--	--

- 2.2.4 Scraps & by-products matrix
- 2.2.5 In-house transport cost matrix
- 2.2.6 Commodity tax matrix
- 2.2.7 Fixed capital formation matrix
- 2.2.8 Employment matrix
- 2.2.9 Quantity-based matrix
- 2.2.10 U-table (Use table)
- 2.2.11 V-table (Supply table)

3. Valuation

3.1 Please specify the overall valuation scheme for the tables given in Q2.1.
(Multiple answers possible)

- Basic price
- Producer's price
- Purchaser's price

3.2 Please specify the valuation principle of national tables.

- 3.2.1 Actual price or uniform price basis Actual Uniform
- 3.2.2 Domestic or national basis Domestic National

3.3 Please specify individual valuation schemes of the following items.

3.3.1 Private consumption expenditure Domestic National

3.3.2 Export vectors

- Basic price table Producer's FOB
- Producer's price table Producer's FOB
- Puchaser's price table Producer's FOB

3.3.3 Import vectors/matrix

- Basic price table CIF
- CIF + Duties & Import Com. taxes
- CIF + Duties & Import Com. taxes + TTM from ports to purchasers
- Producer's price table CIF
- CIF + Duties & Import Com. taxes
- CIF + Duties & Import Com. taxes + TTM from ports to purchasers
- Puchaser's price table CIF
- CIF + Duties & Import Com. taxes
- CIF + Duties & Import Com. taxes + TTM from ports to purchasers

4. Form and coverage

4.1 Please specify the items which are explicitly presented in the national table as a stand-alone vector.

4.1.1 Final Demand items

- Expenditure of private non-profit institutions serving household
- Export: direct purchases
- Export: special trade
- Import: direct purchases (subtraction)
- Import: special trade (subtraction)
- Custom duties (subtraction)
- Imported commodity tax (subtraction)
- Domestic freight transportation cost
- Trade margins

4.1.2 Value Added items

- Contribution of employers to pensions/social insurance
- Indirect taxes, except custom duties
- Subsidies (subtraction)

4.2 What does "direct purchases" cover?

- Tourist expenditure for sight-seeing
- Personal expenditure of diplomatic attache
- Personal expenditure of foreign military personnels
- Others (Please specify:)

4.3 What does "special trade" cover?

- Tourist expenditure for business purpose
- Use of patent/royalty
- Ex-territorial construction activities
- Supplies to foreign embassies
- Supplies to foreign military bases
- Supplies to foreign transport (ships, aeroplanes etc.)
- International freight transport services of national companies
- International freight transport services of foreign companies
- Insurance services of national companies for international transp.
- Insurance services of foreign companies for international transp.
- Services within harbours/airports for foreign transport
- Other types of service trade (finance, telecommunication, etc.)
- Others (Please specify:)

4.4 What does "domestic freight transport cost" cover?

- Ordinary freight transport (on-road, railway, shipping, air)
- Railway forwardings
- Services within harbours/airports for domestic freight transport
- Storage facility services
- In-house transport
- Cost-transport
- Others (Please specify:)

4.5 What does "trade margins" cover?

- Wholesale margins
- Retail margins
- Cost-commerce
- Others (Please specify:)

4.6 Are there any TTM entries for the inputs from service industries?

- yes no

4.7 Cost-transport and cost-commerce

4.7.1 How is "cost-transport" dealt with in purchaser's price tables?

- Subtracted together with TTM
- Left at the intersections with transportation vectors

4.7.2 How is "cost-commerce" dealt with in purchaser's price tables?

- Subtracted together with TTM
- Left at the intersections with wholesale/retail trade vectors

4.8 Suppose that a car industry (demand-side sector) purchased a set of tyres (supply-side sector) but did not use them this time.

How does this input enter in the table?

- Entered into the intersection between Car industry (row) and Change in Stocks
- Entered into the intersection between Tyre industry (row) and Change in Stocks

4.9 Does the table have negative entries in intermediate transactions?

- yes -> (Please specify:)
- no

5. Special treatment

5.1 Please specify the activity which stands alone as a dummy sector.

- In-house transport
- In-house education
- In-house research
- Office supplies
- Scraps
- Business consumption
- Others (Please specify:)

5.2 Please specify the type of scraps treated under each method shown below, if any.

- 5.2.1 Gross-counting method
- 5.2.2 Transfer method
- 5.2.3 Stone method
- 5.2.4 Separation method

5.3 Please specify the type of by-products treated under each method shown below, if any.

- 5.3.1 Gross-counting method
- 5.3.2 Transfer method
- 5.3.3 Stone method
- 5.3.4 Separation method

5.4 Does the table have "machine repairing" activities as a stand-alone sector?

- yes no

5.5 Does the table have "rental/operating leasing" activities as a stand-alone sector?

- yes no

5.6 Does the activity of "imputed interest" have output to final demands?

- yes no

5.7 Do you do imputing calculation for

5.7.1 self-owned houses (the output of owner/occupier) ?

yes no

5.7.2 self-consumption of agricultural products by farmers?

yes no

5.8 Are expenses on second-hand goods, apart from transaction margins, recorded as an output?

yes no

5.9 What is included as an output of agents for the dealings of real estate?

(Multiple answers possible)

- Actual sold-value of the land
- Agent's commission
- The cost of land development/improvement

5.10 How is the output of processing on brought-in materials recorded?

- Total value of the final product is recorded as output of the firm which placed the order
- Total value of the final product is recorded as output of the firm which took the order
- Net value (i.e. consignment fee) is recorded as output of the firm which took the order

5.11 What defines "fixed capital goods"?

Endurable life of a machine:

More than years

Unit price (in domestic currency):

More than

5.12 How is capital equipment in "roundabout production" dealt with?

- recorded as capital formation
- recorded as intermediate input into the construction sector

5.13 How is re-export of imported goods dealt with in the table?

- recorded as import and export among others
- recorded as import among others but not as export
- recorded as export among others but not as import
- Independently presented as re-export
- Not recorded at all

6. Public / semi-public sectors

(* Please note that for answering Q6.1 - 6.3 each "activity" does not have to be a stand-alone I-O sector. Perhaps, production account of National Account can be referred to.)

6.1 Please specify how to calculate the output of the followings. (Total cost? total revenue? etc.)

- 6.1.1 Public enterprises
- 6.1.2 Public administration
- 6.1.3 Public education
- 6.1.4 Public medical services
- 6.1.5 Private non-profit instit. serving households

6.2 Please specify the activity which may have non-zero operating surplus (in Value Added).

- 6.2.1 Public enterprises
- 6.2.2 Public administration
- 6.2.3 Public education
- 6.2.4 Public medical services
- 6.2.5 Private non-profit instit. serving households

6.3 Please specify the output destination for the following activities.

(Place "x" in the matrix. Multiple answers possible)

		Intermediate demand				
			Household consumption expenditure			
				Consp. of Private non-profit instit. serving households		
				Government consumption expenditure		
				Other final demands		
		↓	↓	↓	↓	↓
6.3.1	Public enterprises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3.2	Public administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3.3	Public education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3.4	Public medical services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3.5	Private non-profit instit. for households	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.4 Does "public administration" sector have intermediate inputs?

- yes no

6.5 How are the activities of public enterprises dealt with?

- Treated as an industry
- Included in "public administration"

6.6 How are "public education" activities dealt with?

- Explicitly presented as a stand-alone vector
- Included in "public administration"
- Merged together with private educational activities

6.7 How are "public medical services" activities dealt with?

- Explicitly presented as a stand-alone vector
- Included in "public administration"
- Merged together with private medical activities

7. Response to the 1993 SNA

7.1 Do you estimate and record the output of services provided by paid domestic staff, i.e. domestic servants, cooks, gardeners, chauffeurs, etc.?

- yes no

If so, how is its output recorded?

- Entered into the fourth quadrant of the table at the intersection between Household consumption in Final Demand and Compensation for employees in Value-Added
- Entered at the intersection between Household consump (FD) and an industrial sector (row) engaging in an activity of "Personal Services" or of similar kinds
- Entered at the intersection between Household consump (FD) and a dummy sector (row) representing unincorporated enterprises of household for providing domestic services
- Others (Please specify: _____)

7.2 Do you estimate and record the amount of royalties paid for the following assets?

7.2.1 Produced intangible assets such as artistic originals
yes no

7.2.2 Non-produced intangible assets such as scientific patents and franchise.
yes no

7.3 Financial leasing is regarded as

- One form of operating leasing,
and hence the payment for it is recorded as output.
 A financial service
and hence the payment for it is recorded as output.
 A financial instrument, and hence
the payment for it is not recorded as output.

7.4 Income and consumption

7.4.1 Do you present explicitly in your table "Collective consumption"
and "Individual consumption" of government in separate vectors?
yes no

7.4.2 Do you present explicitly in your table "Mixed income"
distinguished from ordinary operating surplus?
yes no

7.5 Do you record the following activities as capital formation or intermediate consumption?

7.5.1 Research and development
 Capital formation
 Intermediate consumption

7.5.2 Mineral exploration
 Capital formation
 Intermediate consumption

7.5.3 Acquisition of literary and artistic originals
 Capital formation
 Intermediate consumption

7.6 Are computer software products for business use treated as intermediate input or fixed capital?

- Intermediate input
 Fixed capital

**7.7 Do you do imputing calculation for depreciation of social capitals
i.e. physical infrastructure such as roads and dams?**

yes no

7.8 Do you record the followings as work-in-progress?

7.8.1 Natural growth of orchards or timber tracts before their harvest
yes no

7.8.2 Service activities that take a long time to complete,
such as architectural design, software development, writing of books etc.
yes no

7.9 Entries into government inventory of goods are recorded as

- government final consumption
 change in stock

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
1.1	Benchmark-year	--	1997	2000	2000	2000	2000	2000	1995	1999	2000	1997 *1
1.2	Recording principle											
1.2.1	Accounting period	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12	01/01 - 31/12
1.2.2	Boundary of economic territory	(14.9 14.25 14.26)										
	Legal territory	included	included	included	included	included	included	included	included	included	included	included
	National embassies in foreign countries	included	included	included	included	included	included	included	not included	included	included	included
	Foreign embassies in national territory	not included	not included	not included	not included	not included	included	not included	included	not included	not included	not included
	Foreign military bases in national territory (National military bases in foreign countries for the USA)	not included	not included	not included	not included	not included	included	not included	do not exist	not included	do not exist	included
	National (operator's) ships/aeroplanes abroad	included	included	included	included	included	included	included	not included	not included	included	included
1.2.3	Recording method	Accrual (6.54 14.53)	Cash	Accrual	Accrual	Accrual	Accrual	Accrual	Accrual	Cash	Cash	Accrual
2.1	Level of classification											*2
2.1.1	Basic classification	What follows is recommended	124 x 124	175 x 175	517 x 405	404 x 404	undecided	229 x 229	155 x 156	160 x 160	180 x 180	495 x 491
2.1.2	Other level (1)	Row: Central Product Classification (CPC) ...over 1,800 items at 5-digit level	040 x 040	066 x 066	188 x 188	168 x 168	--	059 x 059	--	045 x 045	058 x 058	069 x 066
2.1.3	Other level (2)	Column: ISIC Rev3 ...2-digit level	006 x 006	019 x 019	104 x 104	077 x 077	--	011x 011	--	--	026 x 026	013 x 012
2.1.4	Other level (3)		--	--	032 x 032	028 x 028	--	--	--	--	016 x 016	--
2.2	Availability of appended tables for different level of classification	Upper: available in publication/internet Lower: available upon request	B: Available in Basic classification in 2.1 (1), (2), (3): Available in level of classification (1), (2) or (3) in 2.1									
2.2.1	Import matrix	Tab 15.7	n/a n/a	B, (1), (2) B, (1), (2)	B, (1), (2) B, (1), (2)	(2), (3) B, (1), (2), (3)	B B	B B, (1), (2)	B B	B, (1) B, (1)	B, (1), (2), (3) B, (1), (2), (3)	B B
2.2.2	Trade margins matrix	Tab 15.2 Shown together with taxes	n/a n/a	B, (1), (2) B, (1), (2)	B, (1), (2) B, (1), (2)	(2) *1 (2), (3)	B B	n/a col vectors only	n/a col vectors	n/a n/a	B, (1), (2), (3) B, (1), (2), (3) *1	B B
2.2.3	Domestic freight transport cost matrix	Tab 15.2 Shown together with taxes	n/a n/a	n/a n/a	B, (1), (2) B, (1), (2)	(2) *2 (2), (3)	n/a n/a	n/a col vectors only	n/a col vectors	n/a n/a	B, (1), (2), (3) B, (1), (2), (3)	B B
2.2.4	Scraps & by-products matrix	n/a	n/a n/a	n/a n/a	B B	B B, (1), (2), (3)	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
2.2.5	In-house transport cost matrix	n/a	n/a n/a	n/a n/a	B, (1) B, (1)	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
2.2.6	Commodity tax matrix	Tab 15.2 Shown together with TTM	n/a n/a	n/a n/a	n/a n/a	n/a n/a	B B	n/a col vectors only	n/a a col vector	B, (1) B, (1)	n/a n/a	n/a n/a
2.2.7	Fixed capital formation matrix	Tab 15.1 Only a column and a row vector available	n/a n/a	n/a n/a	(2), (3) (2), (3)	n/a 404 x 71	n/a n/a	n/a n/a	n/a n/a	B, (1) B, (1)	n/a n/a	n/a n/a
2.2.8	Employment matrix	n/a	n/a n/a	n/a n/a	(2) (2)	(2), (3) (1), (2), (3)	n/a n/a	n/a n/a	n/a 1X155 *1	B, (1) B, (1)	n/a n/a	n/a n/a
2.2.9	Quantity-based matrix	n/a	n/a n/a	n/a n/a	B B	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
2.2.10	Use table	Tab 15.1 U	(1) (1)	n/a n/a	n/a n/a	n/a n/a	B B	B B, (1), (2)	n/a n/a	n/a n/a	n/a n/a	B B *3
2.2.11	Supply table	Tab 15.1 S	(1) (1)	n/a n/a	(2) (2)	n/a n/a	B B	B B, (1), (2)	n/a n/a	n/a n/a	n/a n/a	B B *3

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
3.1	Valuation scheme (overall) Ba = Basic price Pr = Producer's price Pu = Purchaser's price	Ba: Vtable, I-Otable Pu: Utable	Pr	Pr, Pu	Pr, Pu	Pr	Ba, Pr, Pu	Pr, Pu	Ba	Pr	Pr, Pu	Pr, Pu
3.2	Valuation principle											
	3.2.1 Actual price or Uniform price basis	Actual (1.62)	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
	3.2.2 Domestic or National basis	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic
3.3	Valuation scheme (individual)	<Abbreviation> FOB = free on board, CIF = cost, insurance, freight, DC = duties and import commodity taxes, TTM = trade and transport cost margins										
	3.3.1 Private consumption expenditure	Domestic: With an adjusting row (ANNEX I 100 15.80)	National	National	National	National	Neither *1	National	Neither *2	National	National	Domestic *4
	3.3.2 Export vectors	FOB (15.35)										
	Basic price table		-	-	-	-	FOB	-	FOB	-	-	-
	Producer's price table		Producer's price	Producer's price	Producer's price	Producer's price	FOB	Producer's price	-	Producer's price	Producer's price	Producer's price
	Puchaser's price table		-	FOB	FOB	-	FOB	FOB	-	-	FOB	FOB
	3.3.3 Import vectors/matrix		(vector only)									
	Basic price table		-	-	-	-	CIF	-	CIF	-	-	-
	Producer's price table	CIF (15.35), CIF+DC (15.36)	CIF+DC+TTM	CIF	CIF+DC	CIF+DC	CIF	CIF+DC	-	CIF	CIF+DC	CIF+DC *5
	Puchaser's price table	CIF+DC+TTM	-	CIF+DC+TTM	CIF+DC	-	CIF	CIF+DC	-	-	CIF+DC	CIF+DC *5
4.1	Stand-alone vectors in the table											
	4.1.1 Final Demand items											
	Expenditure of non-profit institution for household	yes (ANNEX V A)	none	none *1	9131-20 9131-40	none	081 *2	none	none *3	none	none	none *6
	Direct purchases (expt)	yes (H 7.42)	none	306	9121-00	none	none	none	none	166	306	none
	Special trade (expt)	no	none		9211-20	none	none	none	none			none
	Direct purchases (impt)	Only a total value (H6.5)	none	404	9412-00	none	none	none	none	169	404	none
	Special trade (impt)	no	none		9411-20	none	none	none	none			none
	Custom duties	yes (15.51 In Vtable at producer's price)	none	403	9413-00	417	none	none	156	none	402	none
	Import commodity tax	yes (15.51 In Vtable at producer's price)	none	402	9414-00	418	none	none	none	none		none
	TTM (transport)	yes (Tab 15.1 shown altogether)	none	503	9610, 9620 9630-10 9630-20 9640, 9650 9660	none	none	none	none	none	503	none
	TTM (trade margins)	yes (Tab 15.1 shown altogether)	none	501, 502	9510-00 9520-00	none	none	none	none	none	501, 502	none
	4.1.2 Value Added items											
	Social insurance contributed by employer	yes (ANNEX V B)	none	none	9312-00	none	none	none	none	none	none	none
	Indirect taxes	no: given only as a scaler (ANNEX V B)	net value only	204	9404-00	409	net value only	net value only IT-S	158, 159	net value only	net value only	V00200
	Subsidies	no: given only as a scaler (ANNEX V B)	VA004	205	9405-00	410			none	164	204	Included in V00300

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
4.2	Coverage of "direct purchases"	H 6.5 - 6.8										
	Sight-seers	included (14.110)	included	included	included	not identified	included	included	included	included	included	not identified
	Diplomats	included	included	included	included	not identified	included	included	included	included	included	not identified
	Military personnel	included	not exist	included	included	not identified	included	included	included	no	included	not identified
4.3	Coverage of "special trade"	H 6.5 - 6.8										
	Business trip	included (14.110 H6.5)	included	merged in Direct Purchase	included	not identified	merged in Direct Purchase	total value only	recorded on the corresponding activities in domestic intermediate transaction	included	included	not identified
	Use of patent/royalty	included (14.114, ANNEX I 68)	not identified		not included	not identified				no	not included	not identified
	Construction activities	included (14.100, 14.101)	included		not included	not identified				no	included	not identified
	Supplies to foreign embassies	included	not identified		included as export	not identified				included	included	not identified
	Supplies to foreign military bases	included	not identified		included as export	not identified				no	included	not identified
	Supplies to foreign transport	included	not identified		included as export	not identified				included	included	not identified
	Int. freight transport of national companies	included as import/export (H 6.6 & p154 footnote)	not identified		included as export	not identified				included	included	not identified
	Int. freight transport of foreign companies	Included as import (14.38 H 6.7)	not identified		included as import	not identified				included	included	not identified
	Int. Insurance services of national companies	included as import/export (H 6.6 & p154 footnote)	not identified		included as export	not identified				included	included	not identified
	Int. Insurance services of foreign companies	Included as import (14.38 H 6.7)	not identified		included as import	not identified				included	included	not identified
	Services within ports for foreign transport	included (H 6.6)	not identified		included as export	not identified				included	included	not identified
	Other services (finance, telecom, etc.)	included (14.115 H 6.7)	not identified		included	not identified				included	included	not identified
4.4	Coverage of "domestic freight transport cost"											
	Ordinary freight transp	included	included	included	included	included	included	included	included	included	included *2	included
	Railway forwardings	included	included	included	included	not included	included	included	included	included	not included	included
	Services within ports for domestic freight transport	included	included	included	included	included	included	included	included	included	not included	included
	Storage facility services	included	included	included	included	included	included	included	included	included	not included	included
	Inhouse transport	no (15.42 H5.71)	not included	included	not included	not included	not included	included	not included	not included	not included	not included
	Cost-transport	no (15.42 H5.71)	partially included	included	not included	included	not included	included	not included	not included	included *3	not included
4.5	Coverage of "trade margins"											
	Wholesale margins	included (6.110)	included	included	included	included	included	included	included	included	included	included
	Retail margins	included (6.110)	included	included	included	included	included	included	included	included	included	included
	Cost-commerce	no	not included	included	not included	included	not included	not included	included	included	not included *4	not included
4.6	TTM on input from service sectors	No (15.31 cf. the case of travel agencies)	no	no	no	yes *3	no	no	no	no	yes *5	yes *7
4.7	Treatment in purchaser's price table											
	4.7.1 Cost-transport	no description given for SNA treatment	no purchaser's price table	subtracted all together	left behind in the cell	no purchaser's price table	left behind in the cell	subtracted all together	no purchaser's price table	no purchaser's price table	subtracted all together	left behind in the cell
	4.7.2 Cost-commerce	no description given for SNA treatment	no purchaser's price table	subtracted all together	left behind in the cell	no purchaser's price table	left behind in the cell	left behind in the cell	no purchaser's price table	no purchaser's price table	left behind in the cell	left behind in the cell

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
4.8	Treatment of purchased but unused input	no description given for SNA treatment	Demand-side sector x Stocks	Supply-side sector x Stocks	Supply-side sector x Stocks	Supply-side sector x Stocks	Supply-side sector x Stocks	Supply-side sector x Stocks	Demand-side sector x Stocks *4	Demand-side sector x Stocks	Supply-side sector x Stocks	unknown
4.9	Negative entries in intermeditate transactions	none	none	none	Scraps & By-products	Scraps & By-products, Negative trade margins *4	none	none	none	none	none	Scraps, Used & secondhand goods
5.1	Dummy sectors	I-H research (6.142/H tab5.5) Imputed interest (ANNEX III)	Scrap & waste = 2343085	none	I-H transport = 7131-01P, Office supp = 8900-00P, Scraps = 1811-012P, 2612-011P Busin cons. =9110-00 *1	Office supp = 402, Busin cons. = 403	Imputed interest = 094(column vector only)	none	Imputed interest =156(column vector only)	none *1	none	Scraps = S00401, Royalties = 533000, Management of companies & enterprises = 550000
5.2	Treatment of scraps	No best solution provided (H 4.25)	Original method									
	5.2.1 Gross-counting method	-	-	Metal scraps, Tin scraps	Excrement of livestock etc.	none	all scraps	all scraps	all scraps	most scraps	Rubber scraps Iron scraps, etc	none
	5.2.2 Transfer method	-	-	none	none	none	none	none	none	Valuable scraps, e.g. wine bottles	none	none
	5.2.3 Stone method	-	-	Broken glass, Used paper	Broken glass, Used paper, Iron scraps, Non-ferrous etc.	Broken glass, Useless textile, Used paper, Iron scraps etc.	none	none	none	none	none	all scraps *8
	5.2.4 Separation method	-	-	none	none	none	none	none	none	none	none	none
5.3	Treatment of by-products	No best solution provided (H 4.25)	none								do not exist	
	5.3.1 Gross-counting method	-	none	all by-products	none	Rice bran etc.	all by-products	all by-products	all by-products	Straw, Wheat bran, Rice bran, Bagasse etc	-	none
	5.3.2 Transfer method	-	none	none	Advertisement	Advertisement	none	none	none	Advertisement LPG	-	none
	5.3.3 Stone method	-	none	none	Coke, LPG	none	none	none	none	none	-	all by-products *8
	5.3.4 Separation method	-	all by-products	none	none	almost all by-products *5	none	none	none	none	-	none
5.4	Stand-alone "machine repairing"	-	2138082	none	8516-00	none	none	Machinery	none	none	none	811200 811300
5.5	Stand-alone "operating leasing"	-	none	none *2	8513-00 8514-00	366	none	203	140	144 *2	none *6	532100 532230 532A00
5.6	Allocation of imputed interest to final demand	yes (ANNEX I 37. FISIM)	yes	yes	no	yes	no *3	yes	no *5	yes	yes	yes
5.7	Imputation for:											
	5.7.1 self-owned dwellings	yes (6.89)	recorded	recorded	recorded	recorded	not recorded	recorded	recorded	not recorded	recorded	recorded
	5.7.2 consumption by farmers of own agro-products	yes (6.84)	recorded	recorded	not recorded	recorded	not recorded	recorded	not recorded	not recorded	recorded	unknown

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
5.8	Output of dealing second-hand goods	Goods value also recorded (9.31/H 5.41) *1	only dealing commission	only dealing commission	only dealing commis. *2	only dealing commission	only dealing commission	only dealing commission	only dealing commission	only dealing commission	only dealing commission	Goods values also recorded *9
5.9	Output of dealing real estate	Only dealing commission (15.85)	only dealing commission	only dealing commission	only dealing commission	only dealing commission	only dealing commission	commission + land imp. cost	commission + land imp. cost	only dealing commission	only dealing commission	only dealing commission
5.10	Output of processing of brought-in-materials	Total value for manufacturer (14.61)	total value for manufacturer	net value only	total value for manufacturer	total value for manufacturer	total value for manufacturer	total value for manufacturer	total value for manufacturer	total value for manufacturer	net value only	unknown
5.11	Attributes of fixed capital goods	Over 1 year (10.7)	over 1 year & 2,000 CY	over 1 year	over 1 year & 100,000 yen	over 1 year & 500,000 won	over 1 year	over 5 years	over 1 year	over 1 year	over 1 year & 5,000 Bh	unknown
5.12	Treatment of "roundabout production"	no description given for SNA treatment	capital formation	capital formation	intermediate input	intermediate input	capital formation	capital formation	capital formation	intermediate input	capital formation	unknown
5.13	Treatment of re-export	Not recorded (H6.4)	not recorded	not recorded	not recorded	not recorded	separately presented *4	not recorded	not recorded	not recorded	not recorded	not recorded
6.1	Calculation of output of public/semi-public institutions											
	6.1.1 Public enterprises	Total sale	total sales	total sales	total sales	total cost	total sales	total cost	total sales	total cost	total sales	total sales
	6.1.2 Public administration	Total cost (6.91 H5.95)	total budget	total cost	total cost	total cost	total cost	total cost	total revenue	total cost	total value added	total value added *10
	6.1.3 Public education	Total cost (6.91 H5.95)	total cost	total cost	total cost	total cost	total cost	total cost	total cost	total cost	total cost	total sales *11
	6.1.4 Public medical services	Total cost (6.91 H5.95)	total cost	total cost	total revenue	total cost	total cost	total cost	total cost	total cost	total cost	total sales *11
	6.1.5 Non-profit institution serving household	Total cost (6.91 H5.95)	total income	total cost	total cost	total cost	total cost	total cost	total cost	total cost	donations, member fee	total cost
6.2	Operating surplus of public/semi-public institutions											
	6.2.1 Public enterprises	Positive (ANNEX V A)	non-zero	non-zero	non-zero	zero	non-zero	non-zero	non-zero	zero	non-zero	non-zero
	6.2.2 Public administration	zero (6.91 H5.95)	non-zero	zero	zero	zero	zero	zero	non-zero *6	zero	zero	not applicable *12
	6.2.3 Public education	zero (6.91 H5.95)	non-zero	zero	zero	zero	zero	zero	zero	zero	non-zero *7	
	6.2.4 Public medical services	zero (6.91 H5.95)	non-zero	zero	non-zero	zero	zero	zero	zero	zero	non-zero *7	
	6.2.5 Non-profit institutions serving households	zero (6.91 H5.95)	non-zero	zero	zero	zero	zero	zero	zero	zero	zero	
6.3	Output destination of public/semi-public activities		<Abbreviations> I = Intermediate demand, H = Household, N = Non-profit instit. for household, G = Government, O = Other final demand									
	6.3.1 Public enterprises		I, H, G, O	I, H, N, G, O	I, H, G	I, H, N, G, O	I, H, N, G, O	I, H, G, O	I, H, N, O	I, H, O	I, H, N, G, O	I, H, N, G, O
	6.3.2 Public administration		G, O	G	I, H, G	G	I, H, N, G, O	H, G	I, H, G, N, O	G	G	G
	6.3.3 Public education	no description given for SNA treatment	I, H, G, O	I, H, N, G, O	H, G	H, G, O	I, H, N, G, O	H, G	I, H, N, O	I, H, G, O	H, G, O	unknown
	6.3.4 Public medical services		I, H, G, O	I, H, N, G, O	H, G, O *3	I, H, N, G, O	I, H, N, G, O	H, G	I, H, N, O	I, H, G, O	H, G, O	unknown
	6.3.5 Private non-profit instit. for households		I, H, G, O	H	I, H, N, G	I, H, O	H	I, H, O	I, H, N, O	I, H, N, G, O	I, H, N, G, O	unknown
6.4	Intermediate input of public administration	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no
6.5	Treatment of public enterprises	Industry (ANNEX V A)	industry	industry	industry	industry	industry	industry	industry	industry	industry	industry
6.6	Public education vis-à-vis private education	Stand-alone (15.65)	merged 3789118	merged 169	stand-alone 8211-011 8212-011	stand-alone 374, 375, 376	merged 079	stand-alone 209, 227	merged 145	merged 148	merged 167	merged *10 610000
6.7	Public vis-à-vis private medical services	Stand-alone (15.65)	merged 3685115	merged 170	stand-alone 8311-01 -02, -03 8312-01, -02	stand-alone 381, 382, 383	merged 080	stand-alone 210, 211, 228	merged 146	merged 150	merged 169	merged *10 622000 623000

INFORMATION MATRIX FOR NATIONAL TABLES (ISAP 2000)		SNA recommendation	CHINA	INDONESIA	JAPAN	KOREA	MALAYSIA	PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	USA
7.1	Households own-consumption of paid domestic staff is recorded on...	To be estimated, but the entry is not specified	"Personal Service" x Household Consump.	"Personal Service" x Household Consump.	not recorded	"Personal Service" x Household Consump. *6	not recorded	"Personal Service" x Household Consump.	"Personal Service" x Household Consump.	"Personal Service" x Household Consump.	"Personal Service" x Household Consump.	"Personal Service" x Household Consump.
7.2	Royalties											
	7.2.1 paid for the use of produced intangible	recorded as output	recorded	not recorded	included in operat. surplus	not recorded	not recorded	not recorded	unknown	recorded	not recorded	recorded *13
	7.2.2 paid for the use of non-produced intangible	not recorded as output	recorded	not recorded	included in operat. surplus	recorded	not recorded	not recorded	unknown	recorded	not recorded	recorded *14
7.3	Financial leasing is regarded as...	Financial instrument	financial service	financial service	operating leasing	financial service	financial service	financial service	financial service	financial service	financial instrument	operating leasing
7.4	Income and consumption											
	7.4.1 Collective vis-à-vis Individual consumption	separate	not separate	separate	separate	not separate	not separate	not separate	not separate	not separate	not separate	not separate
	7.4.2 Mixed income vis-à-vis Operating Surplus	distinguished	not distinguished	not distinguished	not distinguished	not distinguished	not distinguished	not distinguished	not distinguished	not distinguished	not distinguished	unknown
7.5	Capital formation or Intermediate consumption											
	7.5.1 Research & development	Intermediate Consumption	intermediate consumption	intermediate consumption	intermediate consumption	intermediate consumption	intermediate consumption	intermediate consumption	capital formation	intermediate consumption	capital formation	unknown
	7.5.2 Mineral exploration	Capital Formation	capital formation	intermediate consumption	capital formation	capital formation	capital formation	capital formation	capital formation	intermediate consumption	capital formation	unknown
	7.5.3 Acquisition of literary and artistic originals	Capital Formation	not recorded	intermediate consumption	not recorded	not recorded	capital formation	capital formation	capital formation	intermediate consumption	capital formation	unknown
7.6	Computer software products	Fixed capital (ANNEX I 67)	n/a *1	fixed capital	fixed capital *4	fixed capital *7	fixed capital	fixed capital	fixed capital	intermediate input	fixed capital	fixed capital
7.7	Imputation for depreciation of social fixed capitals	yes (6.186 ANNEX I 81)	not recorded	not recorded	recorded	recorded	not recorded	recorded	not recorded	not recorded	recorded	recorded
7.8	Record of work-in-progress											
	7.8.1 Natural growth of orchards or timber tracts	yes	not recorded	not recorded	recorded	recorded	not recorded	recorded	not recorded	not recorded	not recorded	unknown
	7.8.2 Long-term services	yes	not recorded	not recorded	not recorded	not recorded	not recorded	not recorded	recorded	not recorded	not recorded	unknown
7.9	Government inventory of goods is recorded as	Changes in Stock	Government Consumption	Changes in Stock	Changes in Stock	Changes in Stock	Changes in Stock	Government Consumption	unknown	Government Consumption	not exist	unknown

NOTES

CHINA

C *1 In China all the computer software is distributed as a package to computer hardware, and no large-scale system development is carried out.

INDONESIA

I *1 Included in 301.

I *2 The activity is identified as an industry and included in 161.

JAPAN

J *1 Business consumption stands as final demand and value added items.

J *2 Except dealings of used steel ships, whose transaction values are recorded as output.

J *3 O=direct purchase (export).

J *4 Only for the types of software programme designed for a specific needs of a company. Application software (like MS-Office) is treated as intermediate consumption.

KOREA

K *1 Total margins (Wholesale + Retails) only.

K *2 Total freight cost only.

K *3 For the delivery of computer software products.

K *4 For convenience, suppose that "A" is a farm household engaging in producing rice. Company "B" produces fertilizer. And Company "C(trade sector)" sells fertilizer to the farm household.

Suppose that the normal market price of fertilizer is "100". But with the support of the government, "A" can buy it at the price of "60". In that case, the subsidy which amounts to "40" is given to "C", neither to "A" nor to "B".

The subsidies have no relation with "B". So in the input structure of "A", trade margins should be negative to constitute "100" input of "B" and no subsidies. (In 2000 KIO, Rice & fertilizer is the same case with "B".)

Negative margin can happen when rice is sold to "polished grains" and when fertilizer is sold to almost all agricultural products.

K *5 If by-product has an independent sector where CT of that can be included, separation method is applied.

K *6 Also entered into "Personal Services" x "Business Consump (dummy)".

K *7 Package software under 500\$ is treated as intermediate input. Software as a raw material is treated as intermediate input.

MALAYSIA

M *1 PCE vector includes Malaysian's purchases abroad (in the import matrix) but not foreigners' purchases in Malaysia. There is an adjustment scaler in a negative value that represents the gross value of the latter, at the intersection between PCE and 094 "Import commodities". The total value of PCE is thus given on national basis.

M *2 Presented as an industry in 1991 table.

M *3 All the outputs of imputed interests are recorded at "financial sectors x a column dummy".

M *4 There are positive entries on the export vector in the import matrix (the fourth quadrant) which represent the value of re-export.

THE PHILIPPINES

P *1 NPISHs in the Philippines table do not include private education and medical services, which have positive operating surplus.

SINGAPORE

S *1 A row vector showing the number of employees for each sector.

S *2 PCE vector includes Singaporean's purchases abroad (in the retained import matrix) but not foreigners' purchases in Singapore. There is an adjustment scaler in a negative value that represents the gross value of the latter, at the intersection between PCE and 156 "Other goods & services" in import matrix. The total value of PCE is thus given on national basis.

S *3 Its expenditure is included in 154 "Other sector".

S *4 This is because tyres are regarded as "a work-in-progress" of a car.

S *5 All the outputs of imputed interests are recorded at "financial sectors x a column dummy".

S *6 Positive OS comes from budget surplus.

TAIWAN

N *1 Scraps are included in 160 "Undistributed", together with second-hand goods.

N *2 Operating leasing sector includes car renting, too.

THAILAND

T *1 Total margins (Wholesale + Retails) only.

T *2 TIO149, 151, 154, 156 correspond to it.

T *3 Cost-transport is all recorded as output of TIO151 Road Freight.

T *4 It records only the dealing commission of used cars (in Retail Trade x PCE) and used machinery (in Retail trade x GFCF), while the commission payment to trading company for foreign trade is treated as the input from TIO164 "Business Service".

T *5 For the delivery of canned propane gas from Gas Supply sector.

T *6 The activity is identified as an industry and included in TIO164.

T *7 When a public school or a public hospital made a loss, government covers that loss, and that coverage is recorded as positive operating surplus.

USA

U *1 This is the information of the table by the Department of Commerce, from which the 2000 INFORUM table is compiled for the use of ISAP.

U *2 495 x 491 = "Detail table", 69 x 66 = "Summary table", 13 x 12 = "Sector table" (Classification changes depending on whether the table is for benchmark years ie. xxxx2 & xxxx7 or other years.)

U *3 There is no C-table.

U *4 PCE vector has two entries that make its total value into national basis

(1) at the intersection with "Noncomparable import vector (row)" : Resident's purchases abroad,

(2) at the intersection with "ROW adjustment to final uses (row)" : Non-resident's purchases in the USA (negative value).

U *5 There is an adjustment scalar at the intersection between Wholesale trade (row) and Import (column) with a total amount of duties as positive entry. The import vector is therefore given in CIF without DC in total value.

The same amount is recorded at the intersection between Indirect Taxes (in VA) and Wholesale trade (column) to achieve the row-column balance.

U *6 They stand alone in intermeditate sectors.

813100 Religious organizations

813A00 Grantmaking and giving and social advocacy organizations

813B00 Civic, social, professional and similar organizations

U *7 For the delivery of publishing materials, computer software products, motion pictures etc.

U *8 There is only one vector S00401 (row only) showing all the generation and uses of scraps/by-products.

U *9 Whole values of secondhand goods are recorded at along S00402 "Used and secondhand goods (row only)", as a positive entry for the use of that good, and as a negative entry for the generation of that good.

U *10 S00500 "General government industry" is not a producer of government services like Japan's "Public Administration". It stands like a dummy and its inputs are only value added items, the total of which all goes to Government Consumption Expenditure.

U *11 The sales of goods and services provided by the government are recorded (at non-market prices) at along the corresponding goods and services row vectors, together with those provided by the private industries.

Yet there is a negative entry equal to the total of these sales at the intersection with GCE, to cancel out the CT of government activities.

U *12 Governmental bodies are not regarded as service producers, and hence no input exists for them.

U *13 e.g. 512230 (NIPA) Music Publisher => 512200 Sound recording industry.

U *14 e.g. 5330 Rights to nonfinancial intangible assets.

GLOSSARY

Accrual basis or Cash basis

These concepts refer to the point of transaction. If a transaction is recorded when the agreement (written or unwritten) between parties is exchanged, it is “Accrual basis”. If a transaction is recorded when the payment is done, it is “Cash basis”. In some cases they may coincide (say, buying goods from a shop or eating at a restaurant) but usually there is a lag between these two points of time.

Actual price or Uniform price

Identical commodities may have different prices for various reasons. It may be cheaper in a local factory than in urban regions, or may offer a discount for a big purchaser. To calculate transaction values, we can either apply a “Uniform price (using, say, the average market price)”, or “Actual prices” that accommodate these variations.

Business consumption

It includes:

- Lodging expenses and daily allowance for business trips,
- Expenses on social exchanges to promote business partnership,
- Expenses on welfare and recreation facilities for staffs.

Construction services (foreign trade)

Foreign trade of construction services includes:

- (1) services to foreign territorial enclaves in home country, such as military bases,
- (2) a dispatch of a team to foreign country for a specific construction project (a dam, a bridge), lasting less than a year. (If the project continues for more than a year it should be regarded as quasi-corporation of that country.)

Cost-transport and cost-commerce

In some cases, transportation activities are carried out for the purpose other than of mere distribution of freight. They are categorised and dubbed as “cost-transportation”.

It includes:

- The transportation of goods from production sites to markets or to the place where the product's price is determined (example: fishery products, logs),
 - The transportation of materials/parts within a huge production site (example: dockyard),
 - The transportation of construction equipment (example: scaffoldings),
 - The transportation of goods that cannot be regarded as commodities (example: mail, second-hand goods, waste/disposables, travel luggage, loads and belongings when moving)
- In the same manner, the following trading activities are grouped as “cost-commerce”:
- Payment of commissions to trading firms for the dealings of foreign trade,
 - Transaction margins for dealing in second-hand goods.

Dummy sectors

In some cases, it makes the table much more tractable by positing a stand-alone sector for an activity that cannot be regarded as an independent industry. Let us think about office supplies. No matter which industry takes them as inputs, we know that the composition of office supplies is more or less the same across the industries. So, instead of letting respective industry record each of bits and bobs (erasers from Rubber Products sector, notebooks from Paper Products sector ... etc.), the Office Supplies sector takes all of these office inputs on their behalf, and each industry purchases the goods (by the lump) from this hypothetical sector. Apart from office supplies, such a treatment can be applied to in-house activities and scraps.

Imputation

Imputation is a special form of recording transaction values where no actual flow of money occurs. For example, if you own a house, that fact is decomposed as follows. You acquire a double-identity, one as a provider of housing service (= industry) and the other as a tenant of the building (= household). So, transaction is recorded as if you, as a tenant, are paying yourself, as a landlord, a certain amount of rents evaluated at a market rate for renting a house of the same size and quality. This hypothetical rent is recorded as an output of Housing rent sector. The same idea applies to calculating self-consumption of agricultural products by farmers.

In the same manner, bank's net interests (i.e. interests paid-in by debtors minus interest paid-out to depositors) are calculated, even if we know that there is no direct dealing of services among depositors, debtors and banks. Another prominent example is insurance services (both life assurance and casualty insurance), whose output is calculated as (premium income + assets income) – (insured benefits + net increase in reserves).

In-house activities

Firms often use their own production resources to carry out some supporting activities by themselves for promoting the productivity. These include in-house training of staffs, research and development, self-transport and self-advertisement.

Private non-profit institution serving households

It is an institution that provides its services for households, normally free of charge or at the price which does not cover its cost. It includes political parties, labour unions, religious groups, NGOs, private schools, private hospitals, etc.

Roundabout production

If capital equipment (such as an elevator or a boiler) are built into a structure after being used for construction of that building, we call it "roundabout production".

Scraps and By-products

If more than two different types of goods are produced out of a single production process, the minor products are categorised either into “scraps” or “by-products”. If there is an industry which specialises in producing that minor product, the product is regarded as a by-product. If no other industry competes in that product, it is a scrap. Both scraps and by-products have positive market values and hence should be differentiated from waste and disposables.

<Example>

Scraps: Metal scraps produced out of steel industry

By-products: Coke produced out of gas supply industry

There are four known methods to deal with these special entries in an I-O table.

1. Gross-counting method
2. Transfer method
3. Negative input (or Stone) method
4. Separation method.

(See "Treatment of scraps and by-products for illustrative examples.)

Treatment of scraps and by-products: Illustrative examples

Suppose that the Gas Supply sector produces 100 units of city gas as a principal product (to be consumed by a household) and 10 units of coke as a by-product (to be consumed by Pig Iron sector). This is represented in different ways as follows.

Gross-counting method

("Aggregation method" in the SNA terminology)

Gross-counting method does not differentiate the production of a by-product from that of principal activity. Accordingly, 10 units of coke produced as a by-product is recorded together with output of city gas along the row of Gas Supply sector.

	Gas sup.	Coke	Pig iron	PCE	Total output
Gas supply	100	10		100	100+10
Coke					
Pig iron					
Value added					
Total output	110				

Transfer method

(No SNA equivalent)

Transfer method presumes that a by-product will reach the final user via the sector which produces that good as a principal product. In our example, 10 units of coke (as a by-product) will first go to the Coke manufacturing sector, and then take a further step to reach the Pig Iron sector (final user). As a result, 10 units of coke are double-counted in total output.

	Gas sup.	Coke	Pig iron	PCE	Total output
Gas supply	100	10		100	100+10
Coke			10		+10
Pig iron					
Value added					
Total output	110	+10			

Negative input or Stone method

(Negative transfer method in the SNA terminology)

Stone method treats an output of by-products as a negative input of the producing sector, and hence corresponding negative value is recorded against the row of the sector producing the same good as a principal product. So, -10 units of coke is recorded at the intersection between Coke sector (row) and Gas Supply sector (column). Since input of coke by Pig Iron sector is recorded as it is, these values cancel out each other and total output of by-product coke comes to be zero.

	Gas sup.	Coke	Pig iron	PCE	Total output
Gas supply				100	100
Coke	-10		10		+0
Pig iron					
Value added	10				
Total output	100	+0			

Separation method

(Redefinition method in the SNA terminology)

Separation method doesn't differentiate between a good as a by-product and the same good as a principal product. Accordingly, 10 units of coke is recorded together with other output of coke produced by Coke sector, as shown by the entry at the intersection between Coke sector (row) and Pig Iron sector (column).

Also, imputed inputs for producing by-product are separated from its principal activity (Gas Supply sector) and added to the input structure of activity that the by-product belongs to as a good (Coke sector).

	Gas sup.	Coke	Pig iron	PCE	Total output
Gas supply	-2	+2		100	100
Coke			10		+10
Pig iron	-3	+3			
Value added	-5	+5			
Total output		+10	10		

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