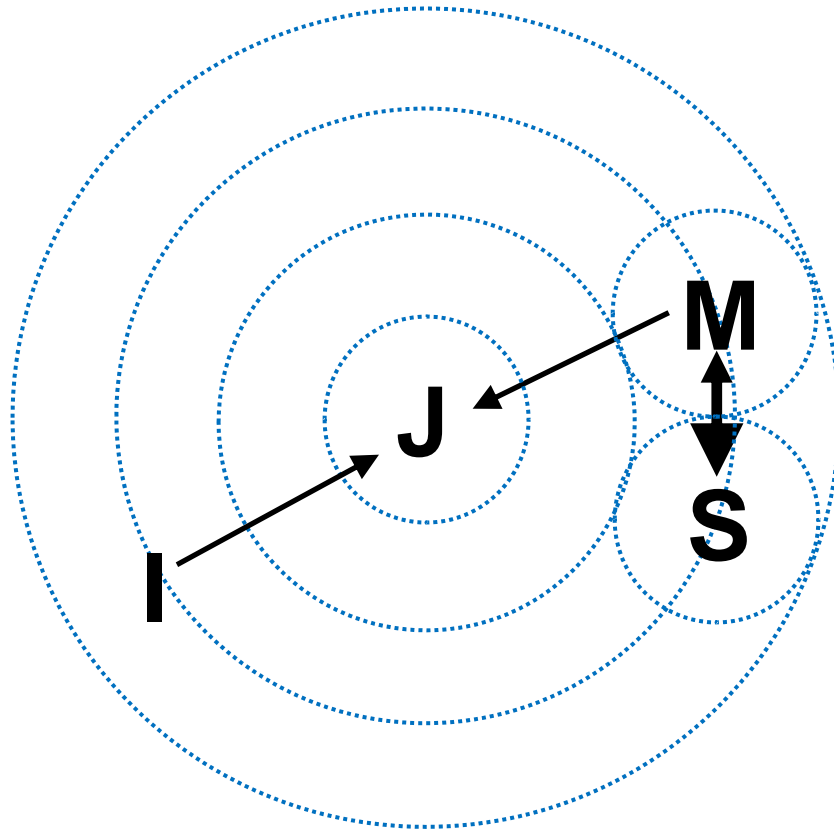


An Evolutionary Perspective on Production Networks in the Asia-US region

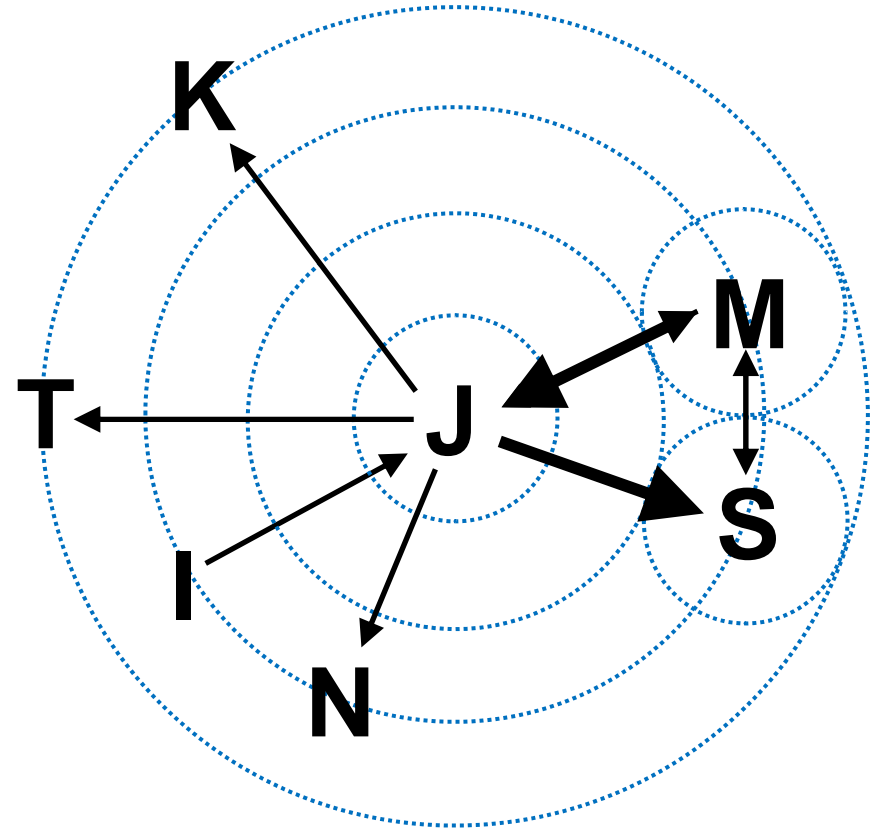
Satoshi Inomata

Institute of Developing Economies
JETRO

1985

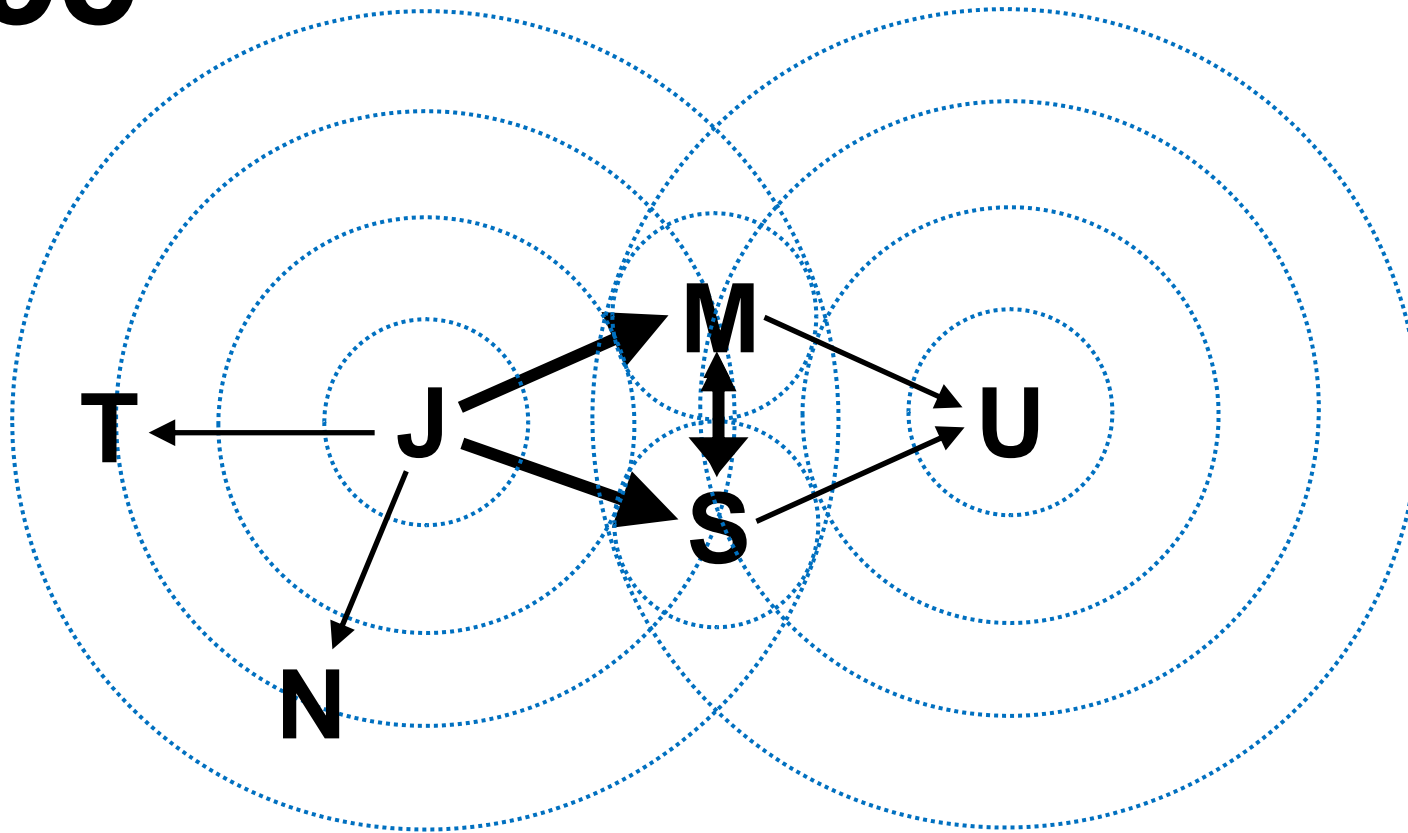


1990

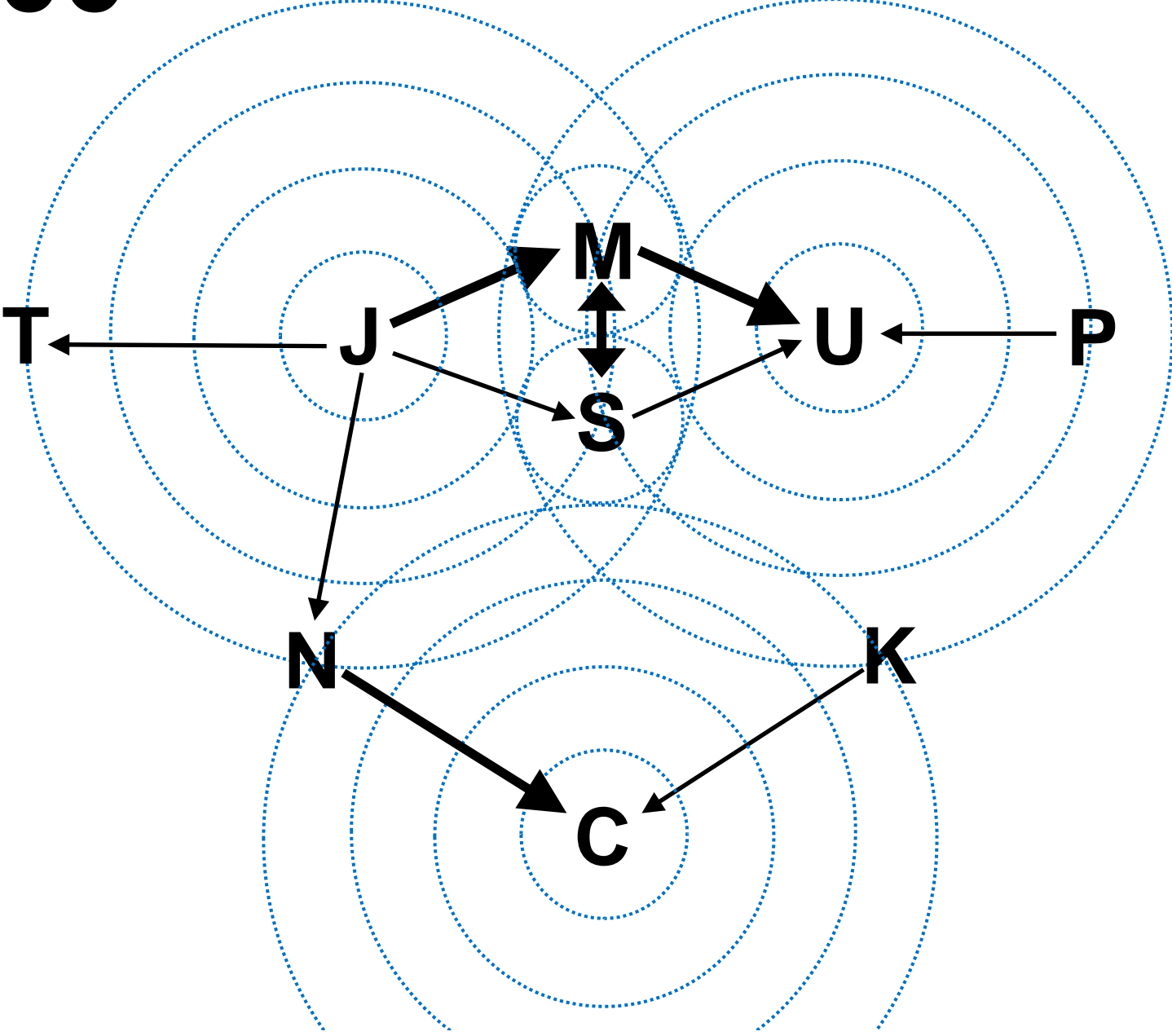


C: China, I: Indonesia, J: Japan, K: Korea, M: Malaysia, N: Taiwan, P: The Philippines, S: Singapore, T: Thailand, U: The USA

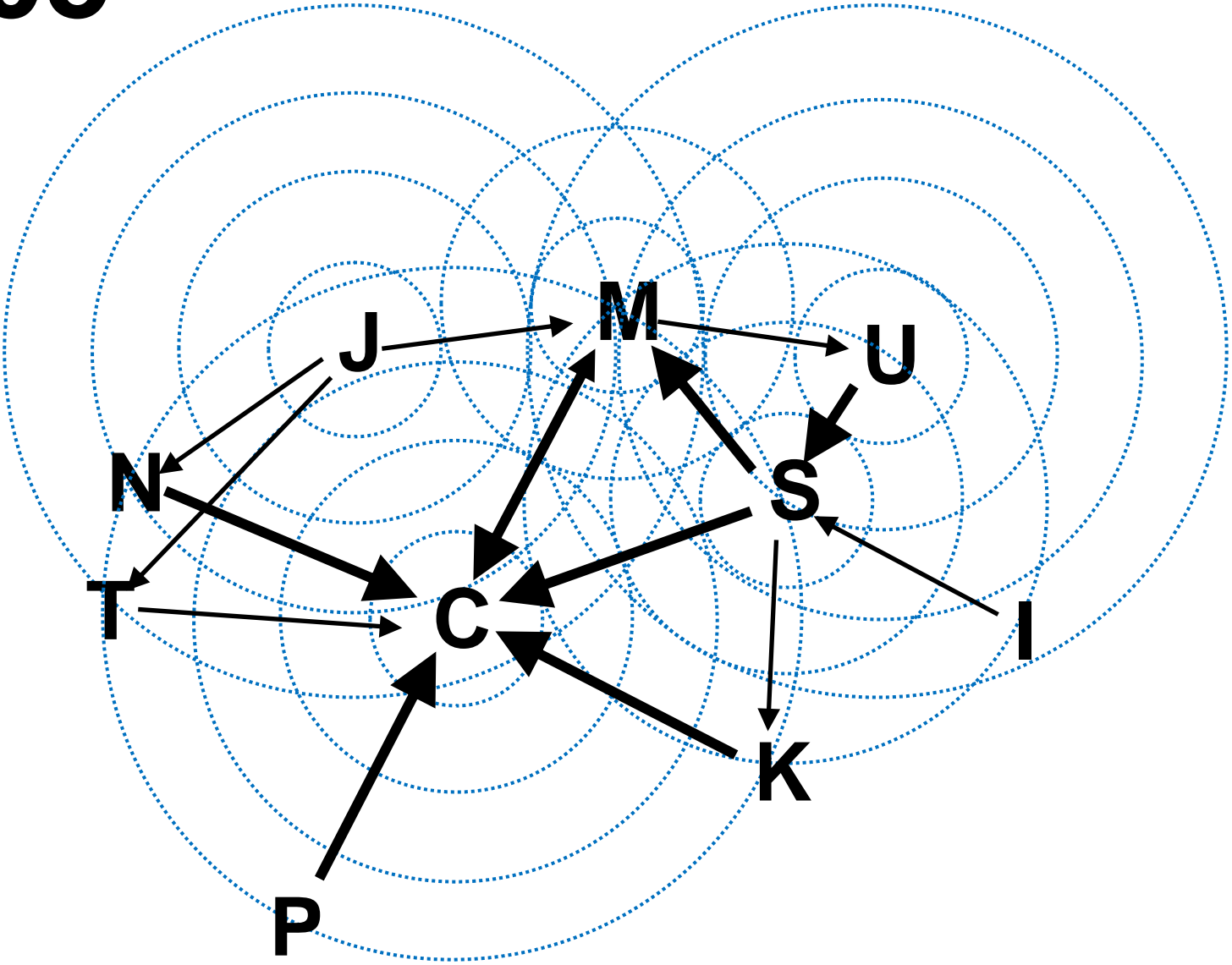
1995



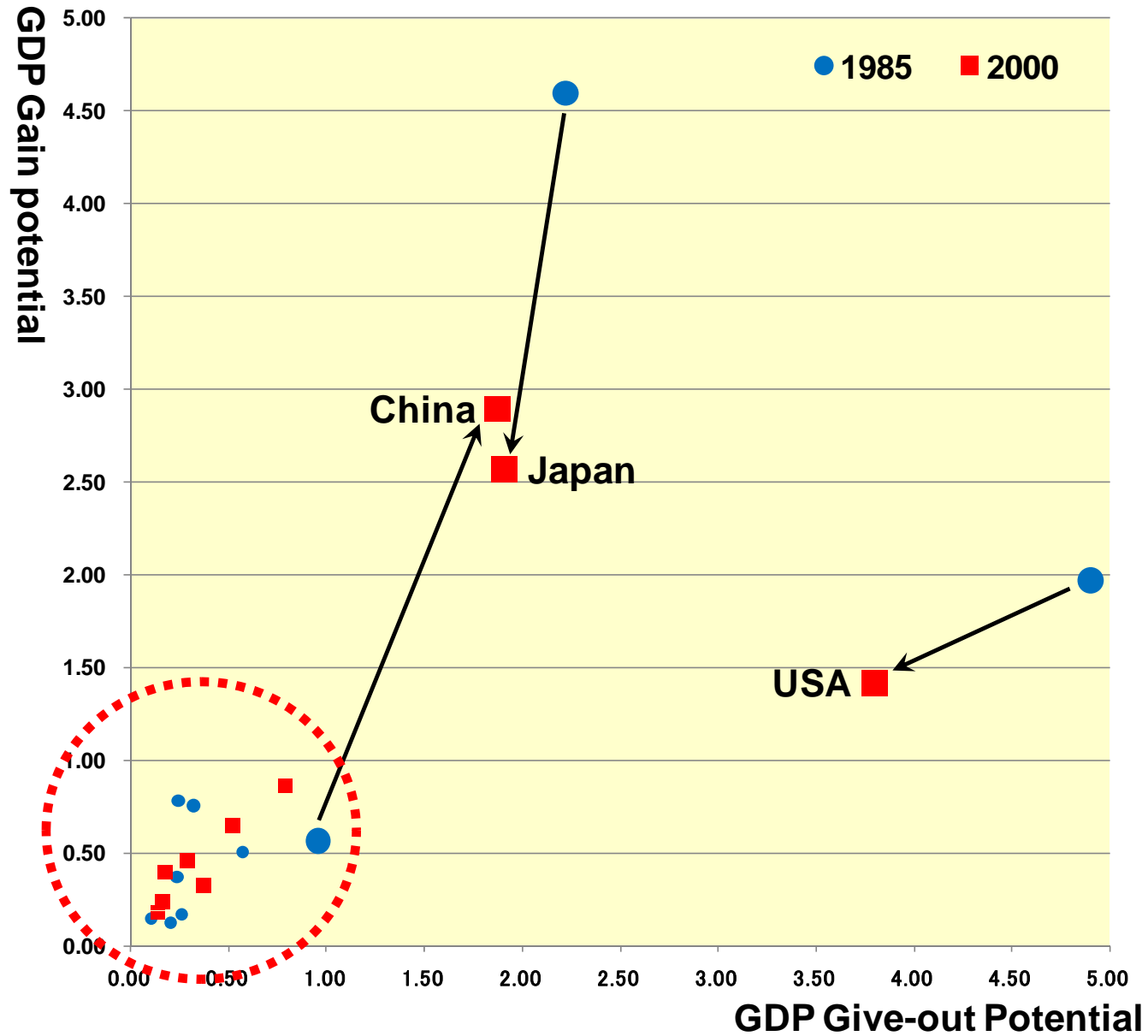
2000



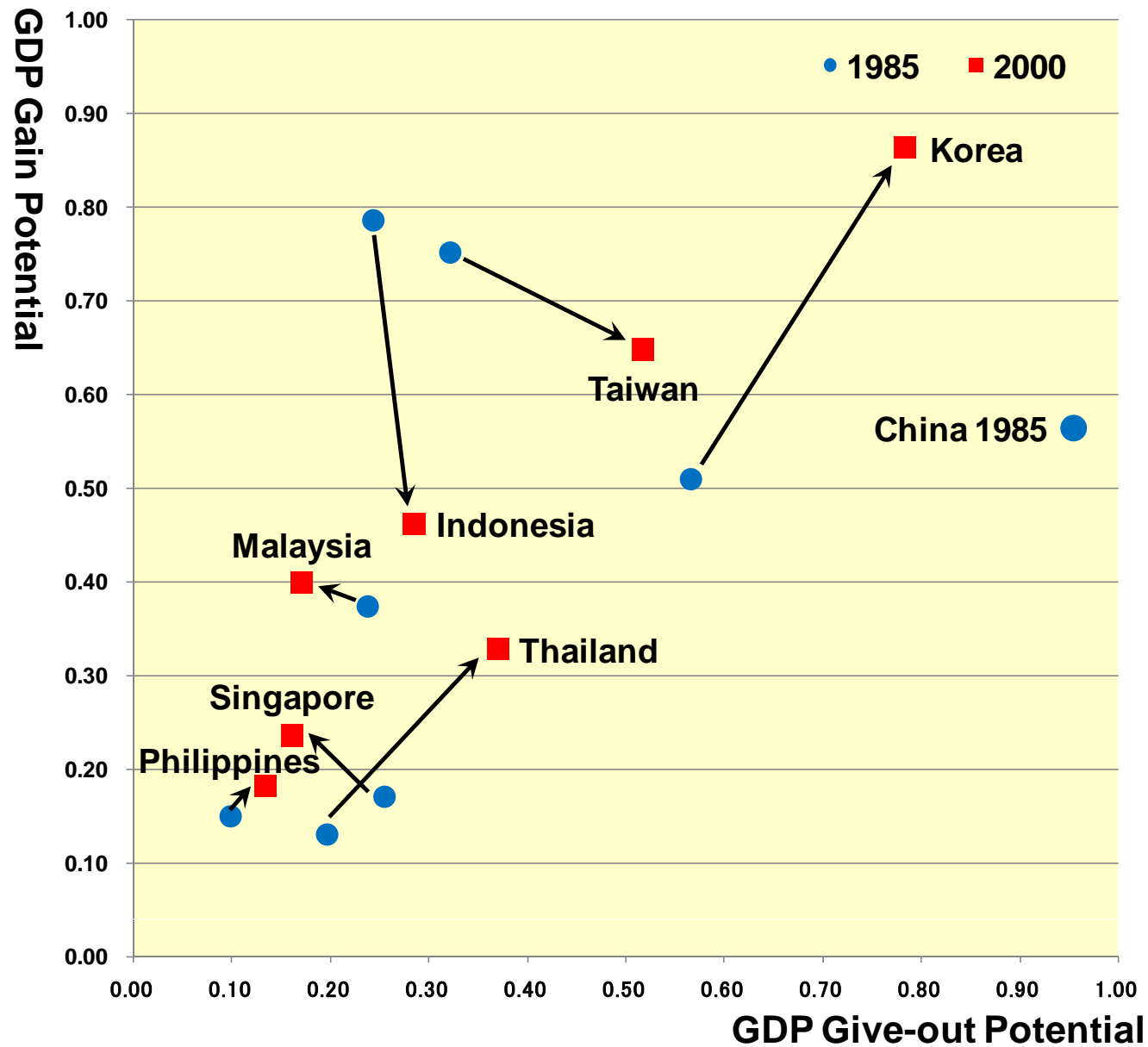
2005



Transfer of value-added in the Asia-US region, 1985 and 2005,



Transfer of value-added in the Asia-US region, 1985 and 2005, emerging economies



Characteristic features of the production networks in the Asia-US region

- * Deepening interdependency, while showing a gradual shift of weight towards China.
- * A high degree of fragmentation and sophistication.
- * The emergence of “tri-polar trade” structure in the international distribution of value-added.



Thank you !!

A schematic image of the 2005 Asian International Input-Output Table

		Intermediate Demand (A)										Final Demand (F)										Export (L)									
		Indonesia (AI)	Malaysia (AM)	Philippines (AP)	Singapore (AS)	Thailand (AT)	China (AC)	Taiwan (AN)	Korea (AK)	Japan (AJ)	U.S.A. (AU)	Indonesia (FI)	Malaysia (FM)	Philippines (FP)	Singapore (FS)	Thailand (FT)	China (FC)	Taiwan (FN)	Korea (FK)	Japan (FJ)	U.S.A. (FU)	Export to India (LG)	Export to Hong Kong (LH)	Export to EU (LO)	Export to R.O.W. (LW)	Statistical Discrepancy (QX)	Total Outputs (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	<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 2em; margin-right: 10px;">}</div> <div> <p>Valued at producer's price</p> <p>← International freight and insurance on the trade between member countries (A**, F**).</p> <p>← Valued at C.I.F.</p> <p>← Import duties and import commodity taxes levied on all trade.</p> </div> </div>									
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																				

* Each cell of A** and F** represents a matrix of 76 x 76 and 76 x 4 dimension, respectively.

In a columnwise direction, each cell in the table shows the input compositions of industries of respective country. **A** for example shows the input compositions of Indonesian industries vis-à-vis domestically produced goods and services, i.e. domestic transactions of Indonesia. **A^{MI}** in contrast shows the input composition of Indonesian industries for the imported goods and services from Malaysia. The cells **A^{PI}**, **A^{SI}**, **A^{TI}**, **A^{CI}**, **A^{NI}**, **A^{KI}**, **A^{JI}**, **A^{UI}**, **A^{GI}**, **A^{HI}**, **A^{OI}**, **A^{WI}** allow the same interpretation for the imports from other countries. **BA** and **DA** give international freight & insurance and taxes on these import transactions.

Turning to the 11th column from the left side of the table, it shows the compositions of goods and services that have gone to final demand sectors of Indonesia. **F^{II}** and **F^{MI}**, for example, maps the 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. **L^{+G}**, **L^{+H}**, **L^{+O}**, **L^{+W}** are exports (vectors) to India, Hong Kong, EU and the Rest of the World. **Vs** and **Xs** are value added and total input/output, as seen in the conventional national I-O table.