

FUGI (Futures of Global Interdependence) global modeling system

Note:

Prof. Onishi will provide GLOSAS/USA with DVD, which will contain files of his FUGI models at free of charge. This will be installed in a laptop computer at Millennium Institute.

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1. A brief description of FUGI model:

In the 21st century it is expected that “global syndromes” will appear in the human society. The global issues seem likely to confront every country around the world co-existing on the planet Earth. As a matter of fact, development policy in the globalized world should be modified in coping with such historical trends toward sustainable global economy. It is worth noting that, in the 21st century, integrated progress of science & technology and humans will be desirable in society consisting of a globally interdependent complex system.

In the globalized world, globally interdependent system structures are getting more and more complex so that nobody might easily perceive cause and effect relationships at a first glance. Unfortunately, human intuitions are not efficient enough to analyze impacts of synergistic effects on complex policy combinations. Therefore, policy makers should largely depend on scientific computer simulations of policy exercises in the globalizing world.

The FUGI (Futures of Global Interdependence) global modeling system has been developed as a scientific policy modeling and future simulation tool, providing global information to society and finding out possibilities of policy coordination among countries in order to achieve sustainable development of the global economy co-existing on the planet Earth in the ever changing universe. The FUGI global model M200 classifies the world into 200 countries/regions where each national/regional model is globally interdependent. Each national/regional model has nine subsystems as population, foods, energy, environment, economic development, peace & security, human right, healthcare and quality of life (IT revolution). This is a super complex dynamic system model using integrated multidisciplinary systems analysis where the number of structural equations is over 170,000. Economic model as a core includes major economic variables such as production of GDP, employment, expenditures of GDP, income distribution, prices, money, interest rates & financial assets, government finance, international balance of payments, international finance, foreign exchange rates and development indicators.

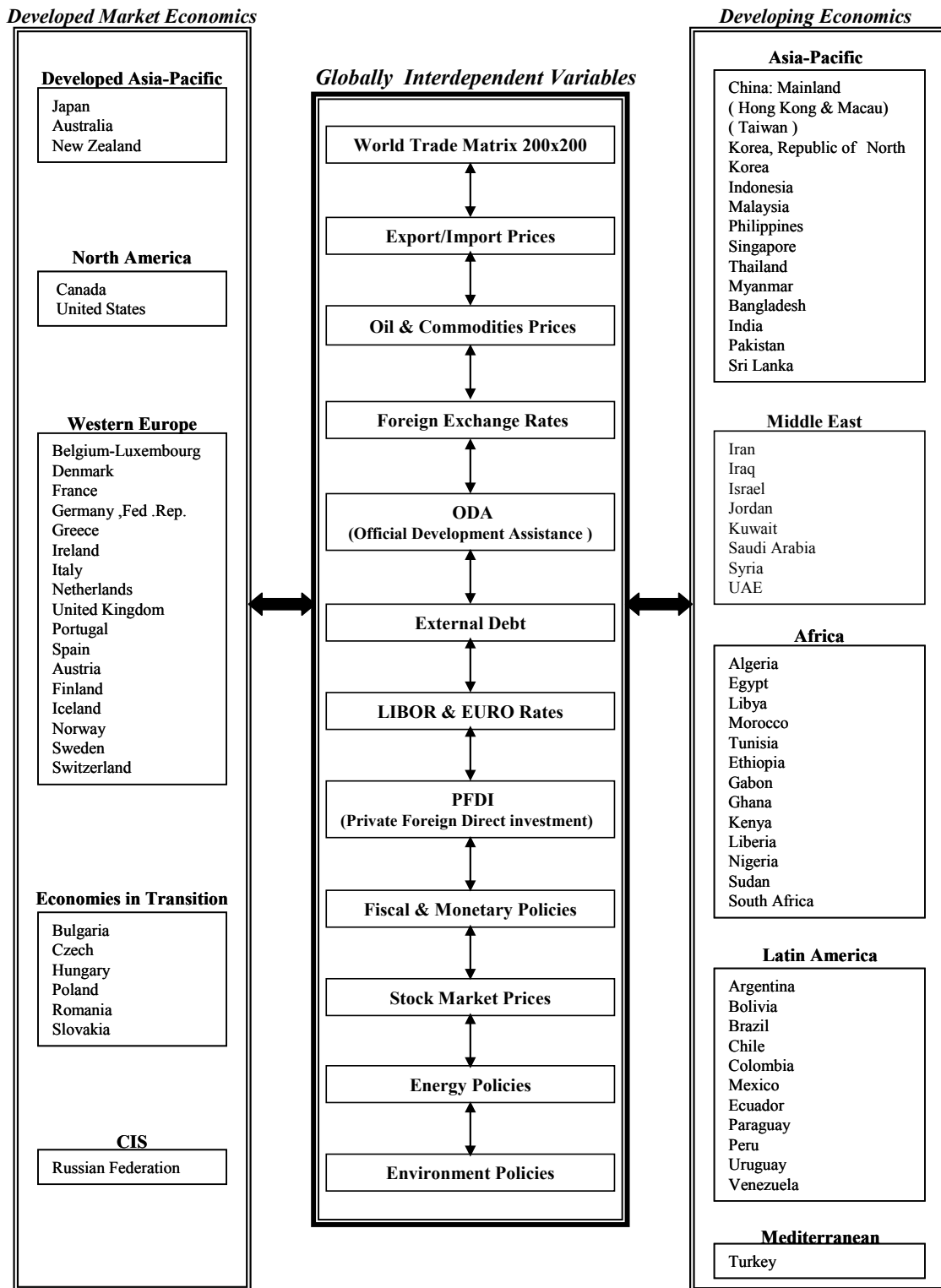
Table 1: Regional classification of FUGI global modeling system (FGMS200):

Regions	No...	Code	Country name	Regions	No	Code	Country name
<i>Developed Market Economies</i>					56	SLB	Solomon Islands
Asia-Pacific	1	JPN	Japan		57	TON	Tonga
	2	AUS	Australia		58	TUV	Tuvalu
	3	NZL	New Zealand		59	WSM	Western Samoa
North America	4	CAN	Canada		60	VUT	Vanuatu
	5	USA	United States	Middle East Asia	61	BHR	Bahrain
Western Europe	6	BEL	Belgium		62	IRN	Iran, I.R. of
	7	DNK	Denmark		63	IRQ	Iraq
	8	FRA	France		64	ISR	Israel
	9	DEU	Germany		65	JOR	Jordan
	10	GRC	Greece		66	KWT	Kuwait
	11	IRL	Ireland		67	LBN	Lebanon
	12	ITA	Italy		68	OMN	Oman
	13	LUX	Luxembourg		69	QAT	Qatar
	14	NLD	Netherlands		70	SAU	Saudi Arabia
	15	PRT	Portugal		71	SYR	Syrian Arab Rep
	16	ESP	Spain		72	ARE	United Arab Emirates
	17	GBR	United Kingdom		73	YEM	Yemen Rep
	18	AUT	Austria	North Africa	74	DZA	Algeria
	19	FIN	Finland		75	EGY	Egypt
	20	ISL	Iceland		76	LYB	Libya
	21	NOR	Norway		77	MAR	Morocco
	22	SWE	Sweden		78	TUN	Tunisia
	23	CHE	Switzerland	Sub-Saharan Africa	79	AGO	Angola
<i>Developing Economies</i>					80	BEN	Benin
Far East Asia	24	CHN	China: mainland		81	BWA	Botswana
	25	HKG	China: Hong Kong		82	HVO	Burkina Faso
	26	MAC	China: Macau		83	BDI	Burundi
	27	TWN	Taiwan(Province of china)		84	CMR	Cameroon
	28	KOR	Korea, Republic of		85	CPV	Cape Verde
	29	PRK	Korea, North		86	CAF	Central African Rep.
Southeast Asia	30	BRN	Brunei		87	TCD	Chad
	31	IDN	Indonesia		88	COM	Comoros
	32	MYS	Malaysia		89	COG	Congo
	33	PHL	Philippines		90	DJI	Djibouti
	34	SGP	Singapore		91	ERI	Eritrea
	35	THA	Thailand		92	GNQ	Equatorial Guinea
	36	KHM	Kampuchea Dem		93	ETH	Ethiopia
	37	LAO	Lao P. D. Rep		94	GAB	Gabon
	38	BUR	Myanmar (Burma)		95	GMB	Gambia, The
	39	VNM	Viet Nam		96	GHA	Ghana
South West Asia	40	AFG	Afghanistan		97	GIN	Guinea
	41	BGD	Bangladesh		98	GNB	Guinea Bissau
	42	BTN	Bhutan		99	CIV	Ivory Coast
	43	IND	India		100	KEN	Kenya
	44	MNG	Mongolia		101	LSO	Lesotho
	45	NPL	Nepal		102	LBR	Liberia
	46	PAK	Pakistan		103	MDG	Madagascar
	47	LKA	Sri Lanka		104	MWI	Malawi
Pacific Islands	48	FJI	Fiji		105	MLI	Mali
	49	PYF	French Polynesia		106	MRT	Mauritania
	50	GUM	Guam		107	MUS	Mauritius
	51	KIR	Kiribati, Rep. of		108	MOZ	Mozambique
	52	MDV	Maldives		109	NAM	Namibia
	53	NRU	Nauru		110	NER	Niger
	54	NCL	New Caledonia		111	NGA	Nigeria
	55	PNG	Papua New Guinea		112	REU	Reunion
Regions	No.	Code	Country name	Regions	No	Code	Country name
	113	RWA	Rwanda		158.	NIC	Nicaragua
	114	SHN	St. Helena		159	PAN	Panama
	115	STP	Sao Tome & Principe		160	PRY	Paraguay
	116	SEN	Senegal		161	PER	Peru
	117	SYC	Seychelles		162	PRI	Puerto Rico
	118	SLE	Sierra Leone		163	KNA	St. Kitts Nevis
	119	SOM	Somalia		164	LCA	St. Lucia
	120	ZAF	South Africa		165	SPM	St. Pierre Miquelon

	121	SDN	Sudan		166	VCT	St. Vincent	
	122	SWZ	Swaziland		167	SUR	Suriname	
	123	TZR	Tanzania		168	TTO	Trinidad and Tobago	
	124	TGO	Togo		169	URY	Uruguay	
	125	UGA	Uganda		170	VEN	Venezuela	
	126	ZAR	Congo, Dem.Republic	Mediterranean	171	CYP	Cyprus	
	127	ZMB	Zambia		172	MLT	Malta	
	128	ZWE	Zimbabwe		173	TUR	Turkey	
Latin America & the Caribbean	129	ARG	Argentina		174	BIH	Bosnia and Herzegovina	
	130	ATG	Antigua and Barbuda		175	CRO	Croatia	
	131	BHS	Bahamas The		176	SVN	Slovenia	
	132	BRB	Barbados		177	MDN	TFYR Macedonia	
	133	BLZ	Belize		178	SIM	Serbia/Montenegro	
	134	BMU	Bermuda					
		135	BOL	Bolivia	<i>Economies in Transition</i>			
		136	BRA	Brazil	Eastern Europe	179	ALB	Albania
		137	CHL	Chile		180	BGR	Bulgaria
		138	COL	Colombia		181	CZE	Czech Republic
		139	CRI	Costa Rica		182	HUN	Hungary
		140	CUB	Cuba		183	POL	Poland
		141	DMA	Dominica		184	ROM	Romania
		142	DOM	Dominican Republic	Former USSR (CIS)	185	SLO	Slovakia
		143	ECU	Ecuador		186	ARM	Armenia
		144	SLV	El Salvador		187	AZE	Azerbaijan
		145	GRL	Greenland		188	BLS	Belarus
	146	GRD	Grenada		189	EST	Estonia	
	147	GLP	Guadeloupe		190	GEO	Georgia	
	148	GTM	Guatemala		191	KAZ	Kazakhstan	
	149	GUF	Guiana, French		192	KYR	Kyrgyzstan	
	150	GUY	Guyana		193	LAT	Latvia	
	151	HTI	Haiti		194	LTU	Lithuania	
	152	HND	Honduras		195	MOL	Republic of Moldova	
	153	JAM	Jamaica		196	RUS	Russian Federation	
	154	MTQ	Martinique		197	TJK	Tajikistan	
	155	MEX	Mexico		198	TKM	Turkmenistan	
	156	MSR	Montserrat		199	UKR	Ukraine	
	157	ANT	Netherlands Antilles		200	UZB	Uzbekistan	

Source; FUGI global modeling system (FGMS 200)

Fig.1: Broad structures of global interdependence in FUGI global modeling system:



Source; FUGI global modeling system (FGMS 200)