

APPENDIX

Table 1. Converters between UIO and Domestic I/O

(1) Intermediate Sectors

UIO (127 sectors)		SIO (175 sectors)		JIO (408 sectors)	
Code	Description	Code	Description	Code	Description
001	Livestock	001	Livestock	012101	Dairy farming
				012102	Egg hen
				012103	Fowls, n.e.c.
				012104	Pig raising
				012105	Beef cattle raising
				012109	Other livestock-raising
				012201	Sericulture
002	Flowers	002	Orchids & other flowers	011604	Flowers
003	Other agriculture	003	Other agriculture	011101	Rice
		019	Roasted coffee	011102	Barley & wheat
				011103	Miscellaneous cereals
				011201	Potatoes
				011202	Pulses
				011301	Vegetables
				011401	Fruits
				011501	Field crops for edible oil
				011502	Field crops for sugar
				011503	Crops for beverages
				011509	Other edible field crops
				011601	Field crops for feed
				011602	Leaf tobacco
				011603	Seeds
				011609	Other inedible field crops (excl imported rubber)
				013102	Agricultural services (excl veterinary)
				021101	Forest planting & conservation
				021301	Cultivated & uncultivated forest products (incl hunting)
				112901	Finished tea & coffee
004	Aquiculture	004	Aquarium fish	031104	Sea-shore water culture
				031202	Inland water culture
005	Fishing	005	Other fishing	031101	Coastal water fishing
				031102	Off-shore water fishing
				031103	Ocean water fishing
				031201	Inland water fishing
006	Mining & quarrying	006	Quarrying & mining	061101	Iron & ore mining
				061201	Non-ferrous metal ores
				062101	Limestone
				062109	Other materials for ceramics
				062201	Gravel & quarry
				062202	Crushed stones
				062909	Other non-metal ores
				071101	Coal mining
				073101	Natural gas
007	Meat products	007	Meat preparations	111101	Slaughtering & meat processing

				111201 Canned or bottled meat products 111202 Processed meat products
008 Dairy products		008 Milk 009 Other dairy products		111204 Drinking milk & dairy products
009 Fruit & vegetable products		010 Fruit & vegetable preparations		111503 Bottled or canned agricultural products 111509 Other vegetables & fruits products
010 Seafood products		011 Seafood preparations		111301 Frozen fishes & shellfishes 111302 Salted, dried & smoked seafoods 111303 Canned or bottled seafoods 111304 Kneaded fish meat 111309 Other processed seafoods
011 Oils & fats		012 Oils & fats		111203 Animal oil & fat 111305 Fish oil & scrap 111507 Vegetable oil & waste
012 Grain milling & flour manufacturing		013 Wheat milling		111401 Grain polishing 111402 Flour manufacturing
013 Bread & confectionery		014 Biscuits 015 Bread & confectionery 018 Chocolate & chocolate products		111502 Bread & confectionery
014 Noodles & related products		016 Noodles & related products		111501 Noodles
015 Sugar & products		017 Sugar & sugar products		111504 Sugar 111506 Glucose & isomerized sugar
016 Condiments		020 Spices		111902 Flavoring
017 Other processed foods		021 Soya bean products 022 Other food preparations		111505 Starch 111901 Salt 111903 Retort foods 111904 Frozen cooked foods 111909 Other foodstuffs
018 Animal feed		023 Animal feed & other milled products		113101 Feeds for animal & poultry
019 Softdrinks & ice		024 Softdrinks		112902 Soft drinks 112903 Ice manufacturing
020 Alcoholic drinks		025 Alcoholic drinks		112101 Refined sake 112102 Beer 112103 Ethyl alcohol for liquor manufacturing 112104 Whisky & brandy 112109 Other liquor
021 Tobacco products		026 Tobacco products		114101 Tobacco
022 Yarn		027 Yarn		151101 Silk-reeling

				151102 Cotton-Yarn 151103 Synthetic fiber yarn 151104 Woolen yarn 151109 Other fiber yarns
023	Woven fabrics	028	Woven fabrics	151201 Cotton & staple fibers fabrics (incl fabrics of discontinuous synthetic fibers) 151202 Silk & artificial silk fabrics (incl fabrics of continuous synthetic fibers) 151203 Woolen woven fabrics 151209 Other woven fabrics 151401 Yarn & fabric dyeing & finishing
024	Knitted fabrics	029	Knitted fabrics	151301 Knit fabrics
025	Wearing apparel	030 Shirts 031 Other garments 033 Tailoring & dressmaking		152101 Wearing apparel
026	Apparel accessories	032 Other wearing apparel		152201 Apparel accessories
027	Textile articles	034 Textiles articles		151901 Straw & rush products 151902 Ropes & nets 151903 Carpets & floor mats 151904 Textile for medical use 151909 Other fabricated textile products 152901 Cotton & beddings 152909 Other ready-made textile products
028	Footwear	035 Footwear		231901 Rubber footwears 231902 Plastic footwears 241101 Leather footwears
029	Leather & products	036 Leather & leather products		241201 Leather & fur products (excl wearing apparel) 241202 Luggage, bags & miscellaneous leather products
030	Logging, sawmilling & wood preserving	037 Sawmilling & preserving of wood		021201 Logging 161101 Sawn lumber
031	Plywood & veneer	038 Plywood & veneer		161102 Plywood
032	Rattan, cork & other wood products	039 Rattan 040 Wooden products for building 041 Other wood & cork products		161103 Wooden chips 161909 Other wooden products
033	Wooden furniture & fixtures	042 Wooden furniture & fixtures		171101 Wooden furniture & accessories 171102 Wooden fixtures
034	Paper, paperboard & paper articles	043 Paper, paperboard & paper articles		181101 Pulp 181201 Machine-made paper &

				181301 Japanese paper 181302 Paper board 181303 Corrugated card board 181303 Coated paper & paper converted for construction use 182901 Cellophane 182909 Other pulp, paper & converted paper products
035	Paper containers	044	Paper containers	182101 Corrugated cardboard boxes 182109 Other paper containers
036	Newspapers	045	Newspapers	191101 Newspapers
037	Books & magazines	046	Books & magazines	191103 Publishing
038	Printing & allied industries	047 048	Commercial & job printing Other printing	191102 Printing, engraving & book- binding
039	Industrial gases	049	Industrial gases	202903 Compressed gas & liquefied gas
040	Basic industrial chemicals	050	Basic industrial chemicals	201101 Ammonia 202101 Industrial soda chemicals 202901 Sulfuric acid 202902 Inorganic pigment 202909 Other inorganic basic chemicals 203201 Aliphatic intermediates 203202 Cyclic intermediates 203902 Methane derivatives 203903 Oil & fat industrial chemicals
041	Paints & varnishes	051	Paints	207201 Paints, varnish & lacquer
042	Medicinal & pharmaceutical products	052	Medicinal & pharmaceutical products	206101 Medicaments
043	Cosmetics & toiletries	053	Toiletries	207102 Cosmetics, toilet preparations & dentifrices
044	Soaps, detergents & polishes	054	Soaps, detergents & polishes	207101 Soap, synthetic detergents & surface active agents
045	Inks & carbon black	056	Inks & carbon black	207202 Printing ink
046	Other chemical products	055 057	Incense, joss sticks & matches Other chemical products	113102 Organic fertilizers, n.e.c. 201102 Elemental fertilizers 201103 Combined & compound fertilizers 203905 Synthetic dye 203909 Other organic basic chemicals 207901 Agricultural chemicals 207902 Gunpowder 207909 Other final chemical products
047	Petroleum refining	058	Petroleum refining	072101 Crude petroleum 203101 Petrochemical basic products 203102 Petrochemical aromatic products

				203901	Coal tar products
				211101	Petroleum refinery products
				212101	Coal products
048	Paving materials	059	Bitumen & asphalt premix	212102	Paving materials
049	Processing of rubber & natural gums	060	Rubber processing	011609	Other inedible field crops (imported rubber only)
		061	Processing of natural gums		
050	Tyres & tubes	062	Tyres & tubes	231101	Tyres & inner tubes
051	Other rubber products	063	Other rubber products	231909	Other rubber products
052	Thermoplastic materials	064	Thermoplastic materials	203301	Synthetic rubber
				204102	Thermoplastic resin
053	Thermosetting & other plastic materials	065	Thermosetting & other plastic materials	203904	Plasticizers
				204101	Thermosetting resin
				204103	High functionality resin
				204109	Other resin
				205101	Artificial silk & staple fibers
				205102	Synthetic fiber
054	Plastic products	066	Plastic bags	221101	Plastic products
		067	Plastic industrial supplies		
		068	Other plastic products		
055	Pottery, china & earthenware	069	Pottery & earthenware products	253101	Ceramic wares
056	Glass & products	070	Glass & glass products	251101	Sheet glass & safety glass
				251909	Other glass & glass products
057	Fiberglass & products	071	Fiberglass & fiberglass products	251201	Glass fiber & glass fiber products
058	Cement	072	Cement	252101	Cement
059	Non-metallic mineral products	073	Concrete products	252201	Ready-mixed concrete
		074	Bricks & earth-baked products	252301	Cement products
		075	Non-metallic mineral products	259901	Clay refractories
				259902	Other structural clay products
				259903	Carbon & graphite products
				259904	Abrasives
				259909	Miscellaneous ceramics, stone & clay products
060	Iron & steel rolling mills	076	Iron & steel rolling mills	262101	Hot rolled steel
				262301	Cold-finished steel
				262302	Coated steel
061	Iron foundries & non-ferrous basic metals	077	Iron foundries	261101	Pig iron
		078	Non-ferrous basic metals	261102	Ferro alloy
		120	Metal scrap	261103	Crude steel
				261201	Iron scrap
				263101	Cast & forged steel
				263103	Cast & forged materials (iron)
				263104	Iron & steel shearing &

				slitting 263109 Other steel products 271101 Copper 271102 Lead (incl regenerated lead) 271103 Zinc (incl regenerated zinc) 271104 Aluminum 271109 Other non-ferrous metals 271201 Non-ferrous metal scrap 272201 Rolled & drawn copper & alloys 272202 Rolled aluminum products 272203 Non-ferrous metal castings & forgings 272204 Nuclear fuels 272209 Other non-ferrous metal products
062	Metal furniture	080	Metal furniture	171103 Metallic furniture & accessories
063	Metal pipes & tubes	082	Metal pipes & tubes	262201 Steel pipes & tubes 263102 Cast iron pipes & tubes
064	Other structural metal products	081	Metal doors & windows	281101 Metal products for construction
		083	Other structural metal products	281201 Metal products for architecture
065	Metal containers	085	Tin-plate cans	289902 Metal containers, fabricated plate & sheet metal
		086	Other metal containers	
066	Other metal products	079	Cutlery & tools	289101 Gas & oil appliances, heating & cooking apparatus
		087	Electroplating	289901 Bolts, nuts, rivets & springs
		088	General hardware	289903 Plumber's supplies, powder, metallurgy products & tools
		089	Metal stampings	289909 Other metal products
		090	Other metal products	303101 Metal mold 303102 Bearings 303109 Other general machines & parts
067	Computers & accessory devices	091	Computers	331101 Electronic computing equipment 331102 Electronic computing equipment accessories
068	Office machinery & equipment	092	Other office machinery & equipment	311101 Office machines
069	Lifting & hoisting machines	093	Lifting & hoisting machines	301201 Conveyors
070	Other industrial machinery & equipment	095	Oilfield & gasfield machinery	301101 Boilers & turbines
		096	General engineering works	301102 Engines
		097	Other industrial machinery & equipment	301901 Pumps & compressors 301902 Sewing machines & knitting machinery 301903 Machinists' precision tools 301909 Other general industrial machinery & equipment 302101 Mining civil engineering & construction machinery

				302201 Chemical machinery 302301 Industrial robots 302401 Metal machine tools 302402 Metal processing machinery 302901 Agricultural machinery 302902 Textile machinery 302903 Food processing machinery 302909 Other special industrial machinery 303210 Repairs of general machinery 311201 Machinery for service industry 341109 Other industrial heavy electrical equipment 391904 Ordnance
071	Electric motors & generators	098	Electric motors & generators	341101 Rotating electrical machinery 342106 Electrical equipment for internal combustion engines
072	Switchgear & switchboard apparatus	099	Switchgear & switchboard apparatus	341102 Relay switches & switchboards 342105 Wiring devices & supplies
073	Other electrical industrial apparatus & telecommunication equipment	100 105 106 107	Other electrical industrial apparatus Capacitors & resistor Printed circuit boards Other communication equipment	332101 Wired communication equipment 332102 Radio communication equipment 332109 Other communication equipment 341103 Other electricity transmission & distribution apparatus 342109 Other weak electrical equipment 343109 Parts & accessories of electronic & communication equipment 343210 Repair of electric machinery
074	Audio & video equipment & accessories	101 102 103 108 172	Microphones, loudspeakers & amplifiers Radios & sound recorders Television sets Records & magnetic tapes Repair of household goods	321101 Electric audio equipment 321102 Radio & television sets 321103 Magnetic recording & playback equipment (VTR) 343102 Parts & accessories of electric audio equipment
075	Semiconductors & electronic tubes	104	Semiconductors & electronic tubes	334101 Semi-conductor devices & integrated circuits 343101 Electron tubes
076	Electric wires & cables	084 111	Non-insulated cable products Electrical wires & cables	272101 Electrical wires & cables
077	Household appliances, refrigerators & air-conditioners	094 109	Refrigerators & air-conditioners Household appliances	301301 Refrigerating & air conditioning apparatus 321109 Other household electric appliances
078	Batteries	110	Storage & primary batteries	342103 Batteries

079	Lamp & lighting fixtures	112	Lamp & lighting fixtures	342102	Electric lighting fixtures
				342104	Electric bulbs
080	Motor vehicles	113	Motor vehicles	351101	Passenger cars
				352101	Trucks, buses & other motor vehicles
081	Motor vehicle bodies & parts	114	Motor vehicles bodies & parts	354101	Motor vehicle bodies
				354102	Internal combustion engines for motor vehicles & their parts
				354103	Motor vehicle parts & accessories
082	Motor cycles & non-motorised vehicles	115	Motor cycles & non-motorised vehicles	353101	Two wheel motor vehicles
				362101	Railroad cars
				362110	Repair of railroad cars
				362901	Bicycles
				362909	Other transportation equipment
083	Building of ships, boats & oil rigs	116	Building of ships & boats	361101	Steel ships
		119	Oil rigs	361102	Other ships
084	Repairing of ships & boats	117	Repairing of ships & boats	361110	Repair of ships
085	Ship engines & parts	118	Marine engine & ship parts	361103	Internal combustion engine for vessel
086	Aircraft & repair	121	Aircraft	362201	Aircrafts
				362210	Repair of aircrafts
087	Scientific & precision equipment	122	Scientific & precision equipment	333101	Applied electronic equipment
				342101	Electric measuring instruments
				371901	Physical & chemical instruments
				371902	Analytical instruments, testing machines & measuring instruments
				371903	Medical instruments
				371910	Repair of precision instruments
088	Photographic & optical goods	123	Photographic & optical goods	207301	Photographic sensitive materials
				371101	Cameras
				371109	Other photographic & optical instruments
089	Watches & clocks	124	Watches & clocks	371201	Watches & clocks
090	Toys & recreational goods	125	Toys & recreational goods	391101	Toys
				391102	Sporting & athletic goods
091	Other manufactures & activities not elsewhere classified	126	Jewellery	391901	Musical instruments & record disks
		127	Umbrellas	391902	Writing instruments & stationery
		128	Signs & displays	391903	Small personal adornments
		129	Other manufactures	391909	Miscellaneous manufacturing products

				900000	Activities not elsewhere classified
092	Electricity	130	Electricity	511101 511102 511103 511104	Electric power (atomic) Electric power (thermal) Electric power (water, etc.) Self power generation
093	Gas	131	Gas	512101	Gas supply
094	Water	132	Water	512201 521101 521102	Steam & hot water supply Water supply Industrial water supply
095	Building construction & repair	133	Building construction	411101 411102 411201 411202 412101	New residential construction (wooden) New residential construction (non-wooden) New non-residential construction (wooden) New non-residential construction (non-wooden) Repair of buildings
096	Other construction	134	Other construction	413101 413102 413103 413201 413202 413203 413209	Public utility construction & maintenance of roads Public utility construction & maintenance of rivers, drainers & others Agricultural public utility construction Railway construction Electric utility facilities construction Telecommunications facilities construction Other civil engineering & construction
097	Wholesale & retail trades	135	Wholesale & retail trades	611101 611201	Wholesale trade Retail trade
098	Restaurants	136	Restaurants	861201 861202 861203	General eating & drinking places (excl coffee shops) Coffee shops Amusement eating & drinking places
099	Hotels & other lodging places	137	Hotels	861301	Hotel & other lodging places
100	Passenger transport by land	138	Passenger transport by land	712101 712102 851401	Bus transport Limousine & taxi transport Renting & leasing of motor vehicles
101	Freight transport by land	139	Freight transport by land	712201	Road freight transport

102	Water transport	140	Water transport	714101	Ocean transport
				714201	Coastal & inland water transport
				714301	Transport service in harbor
103	Port services	141	Port services	717902	Services related to water transport (public)
				717903	Services related to water transport (industrial)
104	Air transport	142	Air transport	715101	Air transport
				717904	Services related to air transport (public)
				717905	Services related to air transport (industrial)
105	Forwarding & warehousing services	143	Container services	712202	Railway forwarding
		144	Forwarding & warehousing services	716101	Storage facilities services
		146	Crane & hoisting services	717101	Packing
106	Other transport services	145	Other transport services (incl foreign shipping lines & airlines)	711101	National railway transport (excl passengers of exceptional reduced fare line)
				711201	National railway transport (passengers of exceptional reduced fare line)
				711301	Local railway & tramway transport
				717901	Road transport facilities services
				717909	Other transport services
107	Communications	147	Communications	731101	Postal service
				731201	Domestic telecommunication service
				731202	International telecommunication services
				731909	Other services related to communication
108	Life insurance	148	Life insurance	621201	Life insurance
109	General & other insurance	149	General & other insurance	621202	Casualty insurance
110	Financial services	150	Banking	621101	Financial service
		151	Finance companies		
		152	Other financial services		
111	Real estate	153	Real estate	641101	Real estate agencies & managers
				641102	Real estate rent
112	Legal, accounting & data processing services	154	Legal services	851902	Legal, financial & accounting services
		155	Accounting & data processing	851201	Information services
		161	Market research & management consultant services		

113	Architectural & engineering services	156 157	Architectural & engineering services petroleum & mining consultant services	851903	Civil engineering & construction services
114	Advertising services	159	Advertising services	851101	Advertising
115	Leasing of machinery & equipment	160	Leasing of machinery & equipment	851301 851302	Renting & leasing of electronic computing equipment Renting & leasing of office machines (excl electronic computing equipment)
116	Other business & technical services	158 162 164	Employment & labor contracting services Other business & technical services Security services	851202 851901 851909	News syndicates & detective agencies Building maintenance service Other business services
117	Government	163	Producers of government services (excl PWD & MOE Drainage & Sewage Department)	521103 521201 811101 811201 821101 821103 821104 821301 821303 822101 822102 831101 831104 831201 831203	Sewage disposal (public) Other sanitary services (public) Public administration (central) Public administration (local) School education (public) School research institute (public, natural sciences) School research institute (public, social sciences & humanities) Social education (public) Other education (public) Research institute (public, natural sciences) Research institute (public, social sciences & humanities) Medical service (public) Health & hygiene (public) Social insurance (public) Social welfare service (public)
118	Education	165	Education	821102 821105 821106 821304 822103 822104	School education (private) School research institute (private, natural sciences) School research institute (private, social sciences & humanities) Other education (industrial) Research institute (industrial, natural sciences) Research institute (industrial, social sciences & humanities)
119	Medical & health services	166	Medical & health services	013101 831103 831106	Veterinary service Medical service (industrial) Health & hygiene (industrial)
120	Environmental health services	167	Environmental health services	521202	Other sanitary services

					(industrial)
121	Movie production & cinemas	168	Cinema services	861101 861102	Motion picture production & distribution Movie theaters
122	Broadcasting, theater & entertainment services	169	Broadcasting & entertainment services	732101 732102 732103 861103 861106	Public broadcasting Private broadcasting Cable broadcasting Theater & entertainment facilities Theatrical companies
123	Other recreational services	170	Other recreational services	861104 861105 861107	Amusement halls Other amusement & recreation facilities Other amusement & recreation services
124	Personal & household services	171	Personal & household services	861901 861902 861903 861904 861905 861906 861907 861909	Cleaning, laundries & dyeing services Barber shops Beauty shops Public baths Photo studios Funeral services Miscellaneous repairs, n.e.c. Other personal services
125	Repair of road transport equipment	173	Repair of road transport equipment	355110 362910	Repair of motor vehicles Repair of other transportation equipment
126	Domestic services & non-profit bodies	174	Domestic services & non-profit bodies	821302 831102 831105 831202 831204 841101 841102	Social education (private, non-profit) Medical service (private, non-profit) Health & hygiene (private, non-profit) Social insurance (private, non-profit) Social welfare service (private, non-profit) Private non-profit organizations serving enterprises Private non-profit organizations serving households, n.e.c.
127	Ownership of dwellings	175	Ownership of dwellings	642101	House rent

(2) Value Added

UIO		SIO		JIO	
Code	Description	Code	Description	Code	Description
001	Compensation of employees	180	Compensation of employees	9311000	Wages & salaries
				9312000	Social insurance (employer's contribution)
				9313000	Other payments & allowances
002	Operating surplus	181	Gross operating surplus	9412000	Operating surplus
003	Depreciation of fixed capital	181	Gross operating surplus	9420000	Depreciation of fixed capital
004	Net indirect taxes	179	Other indirect taxes	9430000	Indirect taxes (excl custom duties)
				9440000	Current subsidies

(3) Final Demand

UIO		SIO		JIO	
Code	Description	Code	Description	Code	Description
001	Private consumption	178	Private consumption expenditure	912100	Consumption expenditures of household
				912200	Consumption expenditures of private non-profit institutes
002	Government consumption	179	Government consumption expenditure	913010	Consumption expenditure of central government
				913020	Consumption expenditure of local government
003	Gross domestic fixed capital formation	180	Gross fixed capital formation	914100	Gross domestic fixed capital formation (government)
				914200	Gross domestic fixed capital formation (private)
004	Increase in stock	181	Change in stocks	915010	Net increase in producer's inventories
				915020	Net increase in half-finished products
				915030	Net increase in trader's inventories
				915040	Net increase in raw-materials inventories
				915050	Net increase in unclassified inventories

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ABBREVIATIONS

CCCN	Custom Cooperation Councils Nomenclature
c.i.f.	cost, insurance, and freight
f.o.b.	free on board
IDE	Institute of Developing Economies, Japan
JIO	1985 Japan Input-Output Sector Classification
MITI	Ministry of International Trade and Industry, Japan
NUS	National University of Singapore, Singapore
ROW	Rest of the World
SIO	1985 Singapore Input-Output Sector Classification
SITCR2	Standard International Trade Classification, Revision 2
UIO	Uniform Input-Output Sector Classification