

AB.1 Source Data

The GTAP input-output table (IOT) for Iran was constructed using the IOT for Iran published by the Iranian Statistical Center. The original source data provides a commodity-by-commodity IOT, with values reported in Million IRR. Along with the IOT, supporting data that includes supply-use tables from the Iranian Statistical Center were also utilized. These tables contain 155 products and 110 activities.

The data are for Persian year 1390 which is equivalent to the Gregorian calendar year from March 20, 2011 to March 20, 2012.

AB.2 Final Demand and Tax Accounts

The original IOT was a symmetric matrix of 99 products, and 6 final demand accounts: households, general administration, non-profit organizations in the services of households, gross capital formation, changes in stocks and exports. On the input side the table provides: compensation of personnel, constant capital consumption, and operating surplus.

These were mapped to GTAP demand and value-added accounts as follows:

Original Final Demand Account	Assigned GTAP Account
Households	Households
Private non-profit organizations in the service of households	Households
Gross capital formation	Investment
Changes in Stocks	Stocks
Exports	Exports
Compensation of personnel services	Labor
Constant capital formation	Capital
Mixed income and operating surplus (net)	Capital
Imports	Imports

The original IOT provides three tax accounts. Import taxes and production taxes were not reported separately, as a result the reported taxes were mapped to GTAP tax accounts as follows:

Original Tax Account	Assigned GTAP Account
Tax on import and export	DomTax
Subsidy on production and import	DomTax
Net other tax on production	ProdTax

AB.3 Sectors

Split of Agricultural Services and forestry products

As stated above, the original symmetric IOT contains 99 products³², and was accompanied by supply and use tables that contained 155 commodities and 110 activities. The 99 sectors included a single aggregate sector for “Agricultural Services and forestry products”. This was split into two sectors, “agricultural services”, and “forestry products” by utilizing shares from the use table (which included “forestry and logging products” and “agricultural services” separately).

Thus, as a first step the original aggregate sector was split using consumption shares from the use table. When splitting the aggregate column, this however led one case where the use tables does not report any payments from “Ag services” or “Forestry” activities to the product “wholesale and retail services”; while in the IOT table there does exist a payment from the combined sector for wholesale and retail services. In the absence of any mapping issue that could be identified, the entire payment was allocated to forestry in this case (and not any to agricultural services under the assumption that these are technical or extension-type services which would not use wholesale and retail services).

Similar cases arose when splitting the row. That is, there is no receipt to the two sectors in the consumption table from four sectors³³, yet the aggregate IOT reports a value. In the absence of any obvious way to assign shares, the IOT row values in question was split equally between agricultural services and forestry. In the next step, we proceeded to balance the new split sectors as follows: we treated the new row for forestry as fixed, while all the column values are adjusted by distributing the row-column difference in proportion to the original column shares. Having balanced the new forestry sector in this way, the agricultural services sector is then re-calculated as the residual from original aggregate sector. This results in a new balanced IOT with 100 sectors.

³²The 99 product descriptions of the original IO tables are contained in Table 8.49

³³These four cases were “Miscellaneous Goods not classified elsewhere”, “Computer services and related activities”, “Architectural and engineering services, analysis and testing”, and “Heavy equipment, industrial machine and home equipment rentals”.

Mapping to GTAP Sectors

While the source data provided mappings from the 155 commodities to CPC codes, and from 110 activities to ISIC codes, a mapping for the 99 products was not provided.

Thus, the mapping from the 100 (after the split of agricultural services and forestry described above) to products to GTAP sectors is based on the product titles and likely mappings using the above mappings as a guideline. The mapping of the 100 products to GTAP sectors (MPIO) is provided in Table 8.50. This mapping leads to 48 unique GTAP associated sectors (set “SEC”). Table 8.51 reports the final 48 sectors and their mapping to GTAP sectors (SMAP).

Appendix

Table 8.49: Original sectors in the Iranian IOT (2011-12)

No.	Original sectors
1	Crops
2	Gardening Products
3	Agricultural Services and forestry products
4	Livestock products, beekeeping, silkworm breeding and hunting
5	Chicken, chicken and other living
6	Fish and other fishery products
7	Coal and peat
8	Crude oil and natural gas
9	Iron ore and its concentrate
10	Copper ore and its concentrate
11	Stone, sand and clay
12	Other minerals
13	Mining services
14	Food Products
15	Herbal and animal fats and oils
16	Types of Beverages
17	Tobacco Products and tobacco
18	Textiles
19	Carpet, khums and other types of floor covering-woven
20	Types of clothing
21	Types of shoes and leather products
22	Products made of wood, cork, wood material
23	Pulp, paper and paper products, print papers and related goods
24	Oil Refining & Products
25	Chemical Products
26	Absorptive Products
27	Rubber & Plastic Products
28	Glass and glass Products
29	Other non-metallic mineral products
30	Iron, steel and its products
31	Copper
32	Aluminum

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No.	Original sectors
33	Other metals
34	Metal Products
35	Optical instruments, medical equipment and devices related to radio and television
36	Electric and electrical machines and devices
37	General and specific application machinery
38	Motor vehicles and other equipment for transportation and parts
39	Furniture
40	Miscellaneous Goods not classified elsewhere
41	Electrical and related services
42	Distribution of natural gas, LPG and gas condensate
43	Water and related services
44	Services related to sewage and waste disposal, environmental sanitation and other environmental protection services
45	Residential Buildings (Construction)
46	Other buildings (Construction)
47	Services of repair and maintenance of transport machinery and equipment
48	Wholesale & Retail Services
49	Railway transport Services
50	Passenger road transport services
51	Cargo transport Services
52	Services of transport through pipelines
53	Water transport Services
54	Air Transport Services
55	Logistics Support Services
56	Post Services
57	Hotels, hostels and vacation rentals
58	Services of food and beverage premises
59	Telecom and Internet Services
60	Broadcasting, production, application and distribution services (TV programs, radio, TV program distribution...)
61	Computer services and related activities
62	News Agency Services
63	Banking services
64	Other financial intermediaries and their incidental activities
65	Insurance Services
66	Rental services for private residential units
67	Services of residential units
68	Services of non-residential units
69	Real Estate Services
70	Legal and accounting services
71	Architectural and engineering services, analysis and testing
72	Research & Development Services
73	Advertising and market research services
74	Other scientific, technical and professional services
75	Veterinary Services
76	Heavy equipment, industrial machine and home equipment rentals
77	Other support Services
78	Travel Agency Services
79	Government official services
80	Military and civilian defense services
81	Police and firefighting services

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No.	Original sectors
82	Compulsory Social security services
83	Private primary education Services
84	Governmental Training Services
85	Public, technical and vocational secondary education services
86	Private and technical secondary education services
87	Public higher Education Services
88	Private Higher education services
89	Education and educational Services
90	Hospital services
91	Medical and Dentistry Services
92	Other human health services
93	Social services
94	Religious and religious services
95	Art services, libraries and museums
96	Sport & Recreational Services
97	Services of member organizations
98	Services of repair and maintenance of other goods, machinery and equipment other than transport and computer
99	Other services

Table 8.50: Mapping from 100 IOT sectors to GTAP sectors

No.	Original Sector (OSEC)	Mapping to GTAP Sectors	Mapping to SEC (MPIO)	New No.
1	Crops	Pdr, Wht, Gro, C_B, Pfb, Ocr, Osd, V_F	AG	1
2	Horticultural Products			
4	Forestry products	Frs	Frs	2
5	Livestock products, beekeeping, silk-worm breeding and hunting	Ctl, Oap, Rmk, Wol	CORW	3
6	Chicken, chicken and other living			
7	Fish and other fishery products	Fsh	Fsh	4
8	Coal and peat	Coa	Coa	5
9	Crude oil and natural gas	Oil, Gas	OilGas	6
10	Iron ore and its concentrate	Oxt	Oxt	7
11	Copper ore and its concentrate			
12	Stone, sand and clay			
13	Other minerals			
14	Mining services			
15	Food Products	Cmt, Omt, Mil, Pcr, Sgr, Ofd	FOOD	8
16	Herbal and animal fats and oils	Vol	Vol	9
17	Types of Beverages	B_T	B_T	10
18	Tobacco Products and tobacco			
19	Textiles	Tex	Tex	11
20	Carpet, khums and other types of floor covering-woven			
21	Types of clothing	Wap	Wap	12
22	Types of shoes and leather products	Lea	Lea	13

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No.	Original Sector (OSEC)	Mapping to GTAP Sectors	Mapping to SEC (MPIO)	New No.
23	Products made of wood, cork, wood material	Lum	Lum	14
24	Pulp, paper and paper products, print papers and related goods	Ppp	Ppp	15
25	Oil Refining & Products	P_C	P_C	16
26	Chemical Products	Chm	Chm	17
27	Medicines	Bph	Bph	18
28	Rubber & Plastic Products	Rpp	Rpp	19
29	Glass and glass Products	Nmm	Nmm	20
30	Other non-metallic mineral products			
31	Iron, steel and its products	LS	LS	21
32	Copper	Nfm	Nfm	22
33	Aluminum			
34	Other metals			
35	Metal Products	Fmp	Fmp	23
36	Optical instruments, medical equipment and devices related to radio and television	Ele	Ele	24
37	Electric and electrical machines and devices	Eeq	Eeq	25
38	General and specific application machinery	Ome	Ome	26
39	Motor vehicles and other equipment for transportation and parts	Mvh, Otn	MvhOtn	27
40	Furniture	Omf	Omf	28
41	Miscellaneous Goods not classified elsewhere			
42	Electrical and related services	Ely	Ely	29
43	Distribution of natural gas, LPG and gas condensate	Gdt	Gdt	30
44	Water and related services	Wtr	Wtr	31
45	Services related to sewage and waste disposal, environmental sanitation and other environmental protection services			
46	Residential Buildings (Construction)	Cns	Cns	32
47	Other buildings (Construction)			
48	Services of repair and maintenance of transport machinery and equipment	Trd	Trd	33
49	Wholesale & Retail Services			
50	Railway transport Services	Otp	Otp	34
51	Passenger road transport services			
52	Cargo transport Services			
53	Services of transport through pipelines			
54	Water transport Services	Wtp	Wtp	35
55	Air Transport Services	Atp	Atp	36
56	Logistics Support Services	Whs	Whs	37
58	Hotels, hostels and vacation rentals	Afs	Afs	38
59	Services of food and beverage premises			
60	Telecom and Internet Services	Cmn	Cmn	39
61	Broadcasting, production, application and distribution services (TV programs, radio, TV program distribution...)			
62	Computer services and related activities			
63	News Agency Services			
57	Post Services			

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No.	Original Sector (OSEC)	Mapping to GTAP Sectors	Mapping to SEC (MPIO)	New No.
64	Banking services	Ofi	Ofi	40
65	Other financial intermediaries and their incidental activities			
66	Insurance Services	Ins	Ins	41
67	Rental services for private residential units	Dwe	Dwe	42
68	Services of residential units	Rsa	Rsa	43
69	Services of non-residential units			
70	Real Estate Services			
3	Agricultural Services	Obs	Obs	44
71	Legal and accounting services			
72	Architectural and engineering services, analysis and testing			
73	Research & Development Services			
74	Advertising and market research services			
75	Other scientific, technical and professional services			
76	Veterinary Services			
77	Heavy equipment, industrial machine and home equipment rentals			
78	Other support Services			
79	Travel Agency Services			
99	Services of repair and maintenance of other goods, machinery and equipment other than transport and computer			
80	Government official services	Osg	Osg	45
81	Military and civilian defense services			
82	Police and firefighting services			
83	Compulsory Social security services			
84	Private primary education Services	Edu	Edu	46
85	Governmental Training Services			
86	Public, technical and vocational secondary education services			
87	Private and technical secondary education services			
88	Public higher Education Services			
89	Private Higher education services			
90	Education and educational Services			
91	Hospital services	Hht	Hht	47
92	Medical and Dentistry Services			
93	Other human health services			
94	Social services			
95	Religious and religious services	Ros	Ros	48
96	Art services, libraries and museums			
97	Sport & Recreational Services			
98	Services of member organizations			
100	Other services			

Table 8.51: Mapping of GTAP Sectors to Iran IOT sectors (SMAP)

No.	GTAP Sectors	Mapping to IOT Sectors (SMAP)	No.	GTAP Sectors	Mapping to IOT Sectors (SMAP)
1	pdr	AG	34	bph	Bph
2	wht	AG	35	rpp	Rpp
3	gro	AG	36	nmm	Nmm
4	v.f	AG	37	i.s	I_S
5	osd	AG	38	nfm	Nfm
6	c.b	AG	39	fmp	Fmp
7	pfb	AG	40	ele	Ele
8	ocr	AG	41	eeq	Eeq
9	ctl	CORW	42	ome	Ome
10	oap	CORW	43	mvh	MvhOtn
11	rmk	CORW	44	otn	MvhOtn
12	wol	CORW	45	omf	Omf
13	frs	Frs	46	ely	Ely
14	cmt	FOOD	47	gdt	Gdt
15	omt	FOOD	48	wtr	Wtr
16	vol	Vol	49	cns	Cns
17	mil	FOOD	50	trd	Trd
18	pcr	FOOD	51	afs	Afs
19	sgr	FOOD	52	otp	Otp
20	ofd	FOOD	53	wtp	Wtp
21	b.t	B_T	54	atp	Atp
22	fsh	Fsh	55	whs	Whs
23	coa	Coa	56	cmn	Cmn
24	oil	OilGas	57	ofi	Ofi
25	gas	OilGas	58	ins	Ins
26	oxt	Oxt	59	rsa	Rsa
27	tex	Tex	60	obs	Obs
28	wap	Wap	61	ros	Ros
29	lea	Lea	62	osg	Osg
30	lum	Lum	63	edu	Edu
31	ppp	Ppp	64	hht	Hht
32	p.c	P_C	65	dwe	Dwe
33	chm	Chm			