

T.1 Background

The Cyprus Input Output table that we used in GTAP 10 was part of the contribution of the 28 European member countries (Rueda-Cantuche et al. 2019). The data was based on 2010 EUROSTAT information. At that time there were large production subsidies in water transport, recent data in EUROSTAT, however, appears different and motivated this update.

T.2 Source Data

The source of the Cypriot I-O data is EUROSTAT. The table is symmetric product by product and consists of 64 sectors that need to be aggregated into 40 to be mapped to GTAP 65 sectors. The reference year is 2010, the data was measured in millions of Euros (current values). The table is in basic prices. Vectors for net taxes on products and net taxes on production are available. There are vectors of import values and import duties. Land data and agricultural detail are not available.

T.3 Data processing

The original I-O table does not fully satisfy the requirements of the GTAP data base described in Huff et al. 2000. Main adjustments to the I-O tables are as follows:

- Split total use into import and domestic matrices and
- Construct the Product-Tax Matrix

These adjustments are implemented using the GEMPACK programs documented in Horridge et al. 2008.²⁴

The matrix of imports is estimated assuming the import share is uniform across users, except for exports as it would imply re-exports. Domestic flows are then obtained as residual given the initial data and the newly estimated matrix of imports.

The product-tax matrix is constructed for the newly developed domestic and import components. No taxes are levied on changes in stocks and lower taxes are levied on export and intermediate users.

²⁴Programs and documentation available from: https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=2850

T.4 Concordance between I-O sectors and GSEC3

The original sectors in the I-O table are first aggregated and then mapped to the GTAP classification (see Table 8.40).

Table 8.40: Concordance between Cypriot sectors and GTAP sectors

No.	65 Cypriot I-O sectors	GTAP 65 mapping
1	Products of agriculture, hunting and related services	GTAP1_12
2	Products of forestry, logging and related services	frs
3	Fish and other fishing products; aquaculture products; support services to fishing	fsh
4	Mining and quarrying	GTAP15_18
5	Food, beverages and tobacco products	GTAP19_26
6	Textiles, wearing apparel, leather and related products	GTAP27_29
7	Wood and of products of wood and cork, except furniture; articles of straw and plaiting materials	lum
8	Paper and paper products	ppp
9	Printing and recording services	ppp
10	Coke and refined petroleum products	p_c
11	Chemicals and chemical products	chm
12	Basic pharmaceutical products and pharmaceutical preparations	bph
13	Rubber and plastic products	rpp
14	Other non-metallic mineral products	nmn
15	Basic metals	GTAP37_38
16	Fabricated metal products, except machinery and equipment	fmp
17	Computer, electronic and optical products	ele
18	Electrical equipment	eeq
19	Machinery and equipment n.e.c.	ome
20	Motor vehicles, trailers and semi-trailers	mvh
21	Other transport equipment	otn
22	Furniture and other manufactured goods	omf
23	Repair and installation services of machinery and equipment	omf
24	Electricity, gas, steam and air conditioning	GTAP46_47
25	Natural water; water treatment and supply services	wtr
26	Sewerage services; sewage sludge; waste collection, treatment and disposal services; materials recovery services; remediation services and other waste management services	wtr
27	Constructions and construction works	cns
28	Wholesale and retail trade and repair services of motor vehicles and motorcycles	trd
29	Wholesale trade services, except of motor vehicles and motorcycles	trd
30	Retail trade services, except of motor vehicles and motorcycles	trd
31	Land transport services and transport services via pipelines	otp
32	Water transport services	wtp
33	Air transport services	atp
34	Warehousing and support services for transportation	whs
35	Postal and courier services	cmn
36	Accommodation and food services	afs
37	Publishing services	cmn
38	Motion picture, video and television programme production services, sound recording and music publishing; programming and broadcasting services	cmn
39	Telecommunications services	cmn
40	Computer programming, consultancy and related services; Information services	cmn

Continued ...

		... Continued
No.	65 Cypriot I-O sectors	GTAP 65 mapping
41	Financial services, except insurance and pension funding	ofi
42	Insurance, reinsurance and pension funding services, except compulsory social security	ins
43	Services auxiliary to financial services and insurance services	ofi
44	Imputed rents of owner-occupied dwellings	dwe
45	Real estate services excluding imputed rents	rsa
46	Legal and accounting services; services of head offices; management consultancy services	obs
47	Architectural and engineering services; technical testing and analysis services	obs
48	Scientific research and development services	obs
49	Advertising and market research services	obs
50	Other professional, scientific and technical services and veterinary services	obs
51	Rental and leasing services	obs
52	Employment services	obs
53	Travel agency, tour operator and other reservation services and related services	obs
54	Security and investigation services; services to buildings and landscape; office administrative, office support and other business support services	obs
55	Human health services	hht
56	Residential care services; social work services without accommodation	hht
57	Creative, arts, entertainment, library, archive, museum, other cultural services; gambling and betting services	ros
58	Sporting services and amusement and recreation services	ros
59	Services furnished by membership organisations	ros
60	Repair services of computers and personal and household goods	ros
61	Other personal services	ros
62	Services of households as employers; undifferentiated goods and services produced by households for own use	ros
63	Services provided by extraterritorial organisations and bodies	osg
64	Public administration and defence services; compulsory social security services	osg
65	Education services	edu

T.5 Diagnostics

Before and after conversion, the Cypriot table met all balance and sign conditions. There were no tax rates over 100% in the data. The GTAP cost shares comparisons appear correct or at least consistent with the original data.

References

Horridge, Mark et al. (2008). *Exercises in Contributing I-O Tables to the GTAP Data Base*. Department of Agricultural Economics, Purdue University, West Lafayette, IN: Global Trade Analysis Project (GTAP). URL: https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=2850.

- Huff, Karen et al. (2000). *Contributing Input-Output Tables to the GTAP Data Base*. GTAP Technical Paper 01. Department of Agricultural Economics, Purdue University, West Lafayette, IN: Global Trade Analysis Project (GTAP). URL: https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=304.
- Rueda-Cantuche, Jose Manuel et al. (2019). “28 EU members”. In: *Global Trade, Assistance, and Production: The GTAP 10 Data Base*. Ed. by Angel Aguiar. Department of Agricultural Economics, Purdue University, West Lafayette, IN. Chap. 7.A. URL: https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=5953.