

O Oman

Angel Aguiar and Mohamed Chemingui

O.1 Introduction

This chapter describes the transformation of the 2018 Social Accounting Matrix (SAM) for Oman into the GTAP Input-Output Table format. The next section presents the source data. Section 3 describes the reformatting steps. Section 4 describes the concordance between the original classification of sectors and the GTAP sectors.

O.2 Source Data

The Oman SAM was developed by the National Statistical Office. The initial SAM had 28 sectors measured in millions of Omani Rial. Vectors taxes are available for net per product and net taxes on production are available.

O.3 Data processing

The Input-Output Table (IOT) derived from this SAM does not fully satisfy the requirements of the GTAP data base described in Huff et al. 2000. Main adjustments to the derived IOT are as follows:

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

The derivation of the IOT from a SAM and further adjustments to meet the GTAP IOT format are implemented using the GAMS programs documented in Aguiar and Pereira n.d.³⁶

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.

³⁶Programs and further documentation are available upon request.

O.4 Concordance between original sectors and GSEC3

The original data sectors were first aggregated and then mapped to the GTAP classification of 65 sectors (Table 8.28).

Table 8.28: Concordance between Original sectors and GTAP sectors

No.	Original I-O sectors	GTAP 65
Agr	Crop and livestock production hunting and related services activities	GTAP1-13
Fish	Fishing and aquaculture	fsh
Oil_Gas	Extraction of crude oil and natural gas	gtap16-17
Mining	Mining activities and support services	gtap15-18
Bev_Tob	Manufacture of food beverage and tobacco products	gtap19-26
Tex	Manufacture of textiles apparel and leather products	gtap27-29
Wood	Wood and paper making and printing	gtap30-31
cook_Rafpe	Manufacture of coke and refined petroleum products	p_c
Chem	Manufacture of chemicals and pharmaceutical products	gtap33-35
N_Met	Manufacture of other non-metallic mineral products	nmn
Met_prod	Manufacture of base metals and forged metal products	gtap37-39
ele	Manufacture of computers electrical equipment machinery and vehicles	gtap40-42
oth_Met	Other manufacturing activities	gtap43-45
el_wat	Electricity water and sewage supply and waste collection	gtap46-48
cons	construction	cns
trade	Wholesale and retail trade Repair of motor vehicles and motorcycles	trd
trans	transport	gtap52-54
support	Warehousing and support activities for transportation and postal activities	whs
acc	Accommodation and food service activities	afs
com	Information and Communication	cmn
fin	Financial and insurance activities	gtap57-58
real	real estate activities	gtap59-65
public	public administration and defense and compulsory social security	osg
educ	education	edu
health	Activities in the field of human health and social work	hht
oth_ser	Other economic activities	ros

O.5 Diagnostics

Before and after conversion, the data 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

Aguiar, Angel H and Maria Seara e Pereira (n.d.). “Transforming a Social Accounting Matrix (SAM) into GTAP format”.

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.