A Afghanistan

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A.1 Introduction

This chapter describes the transformation of the Afghan Social Accounting Matrix (SAM) of 2018 (Joya 2019) to the GTAP 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.

A.2 Source Data

The SAM had 38 sectors measured in millions of local currency. The table is in purchaser prices. Vectors for net taxes on products and net taxes on production are available. While there is a vector of import values and import duties, land values are not available.

A.3 Data processing

The original data does not fully satisfy the requirements of the GTAP data base described in Huff et al. 2000. Main adjustments to the data 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.[8]

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.

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

A.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 8.3).

Table 8.3: Concordance between Original sectors and GTAP sectors

No.	Original I-O sectors	GTAP 65
1	Cereals	GTAP1_3
2	Fruits	v_f
3	Vegetables	v_f
4	Livestock	GTAP9_12
5	Forestry	frs
6	Opium & opiates	ocr
7	Coal	coa
8	Oil & Gas	oilgas
9	Metallic Minerals	oxt
10	Non-metallic Minerals	oxt
11	Surface Minerals	oxt
12	Food & beverages	GTAP19_26
13	Cigarettes & tobacco	GTAP19_26
14	Carpets, textile, leather, and wearing apparel	texwaplea
15	Wood & paper	lumppp
16	Fuel, lubricants, and coke	p_c
17	Chemical, rubber, plastic products	crp
18	Pharmaceuticals, and medicinal products	bph
19	Non-metallic mineral products	nmm
20	Metal products	i_snfmfmp
21	Electronic equipment	ele_eeq_ome
22	Vehicles & transport equipment	mvhotn
23	Furniture	omf
24	Other manufacturing	omf
25	Electricity, gas, and water	elygdtwtr
26	Construction	cns
27	Maintenance and Repair	omf
28	Trade	otpwtpatpwhs
29	Accommodation & food services	afs
30	Transportation and postal services	otpwtpatpwhs
31	Information and Communication	cmn
32	Financial and insurance services	ofi_ins
33	Real estate	rsa_Dwe
34	Professional, technical and support services	obs
35	Public Administration & Defense	osg
36	Education	edu
37	Health & Social Work	hht
38	Other services	ros

A.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

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.

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