

1. *Introduction*

This documentation outlines the steps involved in contributing an input-output (I-O) table of Uganda to the GTAP database. The procedure followed the guidelines established in Huff et al. (2000) and Horridge et al. (2008).

2. *Data Source*

The contributed I-O table was derived from a Social Accounting Matrix (SAM) of Uganda for the year 2007 (Uganda SAM 2007), provided as an excel file by Thurlow (2008a) and documented in Thurlow (2008b).

2.1 *Alternative Sources*

Another option for the source table would have been the Uganda SAM (reference year: 2007) prepared by John Mary Matovu, Evarist Twimukye, Albert Musisi and Sebastian Levine, online available from the Development Policy and Analysis Division of the United Nations Department of Economic and Social Affairs (DPAD/UN-DESA) at: http://www.un.org/en/development/desa/policy/capacity/output_sam.shtml (last access on 7 October 2015).

It was not used for the construction of the I-O table since it contains less sectoral detail than the Uganda SAM 2007 provided by Thurlow (2008a).

3. *Description of the source table*

The Uganda SAM 2007 refers to the year 2007 and is measured in billions of 2007 Ugandan shillings (Ush). The data is commodity by commodity (37 sectors – 15 agriculture, 11 industry, 11 services), valued at market prices.

3.1 *Structure*

This subsection describes how the structure of the Uganda SAM 2007 was made consistent with the GTAP requirements. It includes details on the treatment of margins, imports and indirect taxes as well as the classification of final demands and primary factors.

Margins:

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The values in the commodity accounts of the Uganda SAM 2007 are measured at market prices (Thurlow 2008b). As required by Horridge et al. (2008), the margins were split and represented as direct sales. The procedure followed the GAMS program developed by Dario Debowicz and used in the contribution of the Pakistan SAM to the GTAP 8 database.² That is, the *Transaction costs* account (row) of the Uganda SAM 2007 was allocated to the two row accounts *Trade services (ctrad)* and *Transport services (ctran)*,³ i.e. to the commodities used to bring the goods from the farms and factories to the market or to and from the border. Thereby, each of the two commodities *ctrad* and *ctran* received a share of the *Transaction costs* (row) equal to the respective share of *ctrad* and *ctran* in the total *Transaction costs* (column). Finally, the account *Transaction costs* was deleted.

Imports:

In the row account *Rest of world*, the Uganda SAM 2007 reported total imports (Mcif) by commodity. To create separate use matrices of domestic products and imports, an import matrix was constructed and subtracted from the available total use matrix associated with domestic users.⁴ For the derivation of the import matrix, total imports at producers' prices were allocated across domestic users by calculating the share of these imports in the total domestic use of imports and domestic products (import share) and multiplying it with the total use matrix associated with domestic users (Horridge et al. 2008). The import share was assumed to be constant across all domestic users.

Indirect taxes:

Concerning indirect taxes, the Uganda SAM 2007 contained the accounts *Sales taxes* and *Import tariffs*. The tax concordance between these accounts and the corresponding GTAP categories is given in Table 1. It involved the following adjustments:

- In the Uganda SAM 2007, information on commodity taxes on domestic goods (DomTax) and commodity taxes on imports (MTax) was only available in the combined account *Sales taxes*. This combined account was split into DomTax and MTax based on the procedure outlined in Section 5.
- Since the Uganda SAM 2007 did not contain any information on indirect taxes of production (ProdTax), this category was included as a vector of zeros.

Sales taxes were provided in the Uganda SAM 2007 as total sales taxes by commodity. Correspondingly, the derived taxes on domestic commodities and imports, DomTax and MTax, were only available as total domestic and import taxes by commodity. Therefore, the commodity uses had to be separated into their (margin-inclusive) basic value flows and tax flows, both for domestic commodities and imports. The procedure followed Horridge et al. (2008). First, the domestic and import tax matrices were created by multiplying each the domestic and the import use matrix with the associated tax rates. Thereby, the domestic and import tax rates referred to the share of taxes in the total values of domestic and import uses, respectively. It was assumed that all users faced the same tax rates, while zero taxes were levied on changes in stocks (DSTOCK). Second, the domestic and import matrices containing the (margin-inclusive) basic value flows were calculated by subtracting the respective tax matrices from the domestic and import use matrices.

² The GAMS program is available at: <https://www.gtap.agecon.purdue.edu/databases/contribute/programs.asp> (last access on 8 October 2015).

³ For an overview of the sectors in Uganda SAM 2007, see Table 4. Following the convention in Thurlow (2008a), the sector abbreviations are preceded by "c" if they refer to commodities and by "a" if they refer to activities.

⁴ The Uganda SAM 2007 contained no re-exports, neither explicitly nor implicitly.

Final demands:

The final demand categories of the Uganda SAM 2007 were (1) *Households*, divided into five subcategories, (2) *Enterprises*, (3) *Government*, (4) *Savings-investment*, (5) *Changes in inventories* and (6) *Rest of world* (column). To arrive at the final demand concordance between the Uganda SAM 2007 and GTAP categories as outlined in Table 2, the five different household categories were aggregated to one private household and, not creating any final demand, the account *Enterprises* was deleted.

Primary factors:

The primary factor accounts of the Uganda SAM 2007 included (1) *Labor*, separated into self-employed labor, unskilled labor and skilled labor, (2) *Crop land* and (3) *Capital*. As summarized in the primary factor concordance in Table 3, all the different *Labor* categories were combined in one labor account to obtain the GTAP factor classification.

3.2 Sectoral classification of the source data and mapping to the GTAP sectors

The Uganda SAM 2007 covered 37 sectors. In the contribution process, they were disaggregated to 44 (Table 4). That is, seven additional sectors were introduced, namely *Gas distribution (gdt)*, *Coal (coa)*, *Oil (oil)*, *Gas (gas)*, *Water (wtr)*, *Water transport (wtp)* and *Air transport (atp)*.

Following the previous I-O table contribution for Uganda (Teichmann 2012) – which was based on the SAM of Uganda for the year 2002 (Uganda SAM 2002) obtained from the Uganda Bureau of Statistics (UBoS) –, the sectors *Gas distribution*, *Coal*, *Oil* and *Gas* were added as separate sectors containing all zeros in domestic production.⁵ For *Gas distribution*, also all imports and uses were filled with zeros. The imports and uses of the commodities *Coal*, *Oil* and *Gas*, however, were disaggregated from the *Mining* sector (*mine*) of the Uganda SAM 2007 (for the details, see Section 5). As also described in Section 5, the added sector *Water* was split out from the combined sector *Electricity and water (elec)* of the Uganda SAM 2007, and the sectors *Water transport* and *Air transport* from the aggregated sector *Transport services (tran)*.

After mapping the 37 plus 7 sectors in the Uganda SAM 2007 (OSEC) to the 57 GTAP sectors (GSEC), 30 sectors were obtained in the contributed I-O table (SEC). The detailed mapping can be found in Table 4. It was mainly based on the sector labels of the Uganda SAM 2007 and insights gained from the previous I-O table contribution using the Uganda SAM 2002 (Teichmann 2012).⁶ With respect to the mapping, it is important to note the following:

- Analogously to Teichmann (2012), the GTAP sector *Cane & Beet (c_b)* was mapped to the OSEC sector *Other cereals*.
- Other than in Teichmann (2012), the GTAP sectors *Cattle meat (cmt)* and *Other meat (omt)* were not included in the SEC sector *Livestock*, but in *ProcFood*. The reason was that the ratio of the *Livestock* sector to *Food processing* in the Uganda SAM 2007 was smaller than the corresponding ratio in the Uganda SAM 2002.

⁵ According to World Bank (2015), the commercial production of oil and gas in Uganda is expected to start in 2017, after the discovery of commercial oil reserves in 2006 and the issuing of the first oil production license in 2013. In 2007, the oil and gas sector was still in the exploration stage (see Ministry of Energy and Mineral Development 2008). Moreover, UBoS (2012: Table 4.4.A) does not list any oil revenue before 2010/2011.

⁶ The Uganda SAM 2002 seems to be a good fit to the Uganda SAM 2007 since the Uganda SAM 2007 heavily draws on information from the 2002/2003 supply-use table (see Thurlow 2008b).

- Due to the lack of better knowledge, the GTAP sector *Leather (lea)* was mapped to the OSEC sector *Textiles and clothing*.
- Following Teichmann (2012), the OSEC sector *Real estate* was mapped to both the GTAP sectors *Other business services (obs)* and *Dwellings (dwe)*.

4. Description of any applied constraints

Apart from the sectoral balance conditions imposed on the disaggregated sectors (see Section 5), no constraints were applied.

5. Description of how inconsistencies between the source table and GTAP were dealt with

Inconsistencies between the Uganda SAM 2007 and the GTAP requirements arose in the areas of *Sales taxes* as well as the sectors (1) *Other mining, Coal, Oil and Gas*, (2) *Electricity and Water* and (3) *Other transport, Water transport and Air transport*. These inconsistencies were handled before splitting imports and taxes, but after dealing with the margins. Moreover, the treatments were applied in the following order:

Sales taxes:

The *Sales taxes* of the Uganda SAM 2007 had to be disaggregated into taxes on domestic commodities (DomTax) and taxes on imports (MTax). Thereby, MTax received the share of *Sales taxes* equal to the share of imports (Mcif plus MTar) in the sum of total sales of domestic goods and imports. Likewise, DomTax received the share of *Sales taxes* equal to the share of total sales of domestic goods in the sum of total sales of domestic goods and imports. An exception to this rule, however, was made for the commodities *ccomm*, *cfsrv* and *ctran*, where the *Sales taxes* were shifted entirely to DomTax. The reason was that the Uganda SAM 2002 had revealed that no taxes on imports were levied on the imports of those commodities.

Other mining, Coal, Oil and Gas sectors:

Since the Uganda SAM 2007 contained no separate information on the commodities *Coal, Oil and Gas*, they had to be split out from the *Mining* sector of the Uganda SAM 2007, leaving this sector to capture only *Other mining (omn)*. While there was no domestic production of *Coal, Oil and Gas* in 2007 (see above), imports and domestic uses of these three commodities had to be disaggregated. The external sources used in this process were UN-Comtrade (2015) and McDougall (1996).

The target values for the disaggregation were the 2007 import shares of *Coal* (8.45%), *Oil* (0.02%) and *Gas* (23.36%) in the total imports of *Mining* derived from UN-Comtrade (2015) and displayed in Table 5. Thereby, the total Ugandan imports of *Mining* were calculated as the sum of Uganda's imports of the GTAP commodities *Coal, Oil, Gas* and *Other mining (omn)*. Since the Standard International Trade Classification, Revision 1 (SITC Rev. 1) was chosen for the UN-Comtrade (2015) data, the mapping between the four GTAP sectors and the four-digit codes of SITC Rev. 1 was based on McDougall (1996).

First, the obtained import shares were used to split out *Coal, Oil and Gas* from imports (Mcif), import taxes (MTax) and import duties (MTar) of the *Mining* sector of the Uganda SAM 2007 (Table 6).

Second, the resulting imports were allocated to domestic users.⁷ Analogously to the treatment of *Oil* in the previous I-O table contribution (Teichmann 2012), *Oil* imports were completely shifted to the sector *Petroleum products (apetr)*. Due to the lack of better knowledge, the *Coal* and *Gas* imports were allocated uniformly across all domestic users where *Mining* was non-zero. The allocation was based on the share of *Coal* and *Gas* imports (3.47% and 9.59%, respectively) in the total domestic use of *Mining* (191.44 billion Ush). Third, the obtained values for *Coal*, *Oil* and *Gas* were subtracted from *Mining*, creating the new sector *Other mining (omn)*.

Electricity and Water sectors:

The Uganda SAM 2007 contained the combined sector *Electricity and water (elec)*. It was disaggregated into the sectors Electricity (ely) and Water (wtr) based on the Uganda SAM 2002, which was arranged industry by commodity (74 industries, 61 commodities) and valued at producers' prices. Taking into account information on both output shares and cost structures, the split was performed in the following way:

First, the row account of Electricity and water (celec) was split for each activity (i.e. commodity) of the Uganda SAM 2007 which made use of celec, as well as for all the final-demand and indirect-tax categories with non-zero entries in celec.⁸ The split of celec in the activity accounts was based on the shares of electricity and water used by the industries of the Uganda SAM 2002 most relevant for the production of the respective commodity of the Uganda SAM 2007 for which celec had to be disaggregated, if the selected industries made use of electricity and/or water (Table 7).⁹ The relevant industries were chosen based on the MAKE matrix of the Uganda SAM 2002. If more than one industry was involved in producing the respective commodity, the final shares of electricity and water used for the disaggregation of celec were calculated as simple averages over the respective shares in the single industries. The split of celec in the final-demand and DomTax accounts was performed analogously, using the final-demand and tax concordances given in Teichmann (2012).

Second, the procedure was repeated for the column account of Electricity and water (aelec) (Table 8). That is, aelec was split for each commodity and primary factor of the Uganda SAM 2007 which entered into the production of Electricity and water.¹⁰ The split was based on the 2002 shares of the industries electricity and water in the demand for the respective commodities and primary factors for which aelec had to be disaggregated.¹¹ Whenever several commodities of the Uganda SAM 2002 were mapped to a respective commodity of the Uganda SAM 2007, the final shares used in the disaggregation were calculated as simple averages over the respective shares of electricity and water of all underlying commodities.

Third, the imbalances in the resulting row and column totals of the newly created ely and wtr sectors were removed by imposing the column totals on the rows. That is, the disaggregated columns were treated as given, but the rows were changed. The reason for doing so was that the ratio of the column total of ely to the column total of wtr (39.9% to 60.1%) resulting from the split of aelec (Table 8) was nearly the same as the 2002 ratio of ely to wtr, 39.5% to 60.5%, in terms of commodities (Table 7), while the ratio of the

⁷ The allocation was restricted to domestic users since there was no domestic production of *Coal*, *Oil* and *Gas*, and since re-exports are not allowed in the GTAP database. This means that the vectors Exports and DomTax had to be filled with zeros.

⁸ Note that there were no imports of *celec* in the Uganda SAM 2007. Thus, MTax and MTar were also zero.

⁹ In the Uganda SAM 2002, the commodities electricity and water were termed *Electricity supply* and *Collection, purification and distribution of water*.

¹⁰ Remember that ProdTax is a zero account.

¹¹ In the Uganda SAM 2002, the industries electricity and water were termed *Production, collection and distribution of electricity* and *Collection, purification and distribution of water*. Both industries were nearly entirely occupied with the provision of the commodities *Electricity supply* and *Collection, purification and distribution of water*, respectively.

row total of *ely* to the row total of *wtr* was 29.5% to 70.5% (Table 7). In balancing the *ely* and *wtr* accounts, first, the *wtr* row was adjusted proportionally to meet the new row total. Second, the new *ely* row was obtained by subtracting the new *wtr* row from the original *Electricity and water* row. In this way, the final *ely* and *wtr* rows still summed exactly to the original *Electricity and water* row and the sectoral balance was maintained. The reason for starting with the *wtr* row was that the proportional change to be made in this row was less than the one for the *ely* row.

Other transport, Water transport and Air transport sectors:

The aggregated account Transport services (*tran*) of the Uganda SAM 2007 was split into the three sectors Other transport (*otp*), Water transport (*wtp*) and Air transport (*atp*). The split was based on corresponding output shares and cost structures given in the Uganda SAM 2002, where the commodities Railway transport, Passenger road transport, Goods road transport and Other transport services were mapped to *otp*, Water transport was mapped to *wtp* and Air transport to *atp* (see Teichmann 2012: Table 5).

First, the row account of Transport services (*ctran*) was split for each activity (i.e. commodity) of the Uganda SAM 2007 which made use of *ctran*, as well as for all the final demands, imports and indirect taxes with non-zero entries in *ctran*.¹² As revealed by the Uganda SAM 2002, the only demand for *wtp* was by the rest of the world and there were no imports of *wtp*. Since there was no export demand for *atp*, in turn, the export demand for *wtp* and *otp* was derived according to Table 9. The further disaggregation of *ctran* into *otp* and *atp* for all the remaining accounts can be found in Table 10. Thereby, the split of *ctran* in the activity accounts was based on the shares of *otp* and *atp* used by the industries of the Uganda SAM 2002 most relevant for the production of the respective commodity of the Uganda SAM 2007 for which *ctran* had to be disaggregated. The relevant industries were chosen based on the MAKE matrix of the Uganda SAM 2002. If more than one industry was involved in producing the respective commodity, the final shares of *otp* and *atp* used for the disaggregation of *ctran* were calculated as simple averages over the respective shares in the single industries. The split of *ctran* in the final-demand, import and DomTax accounts was performed analogously, using the final-demand and tax concordances given in Teichmann (2012).

Second, the column account of Transport services (*atran*) was disaggregated for each commodity and primary factor of the Uganda SAM 2007 which entered into the production of *atran* (Table 12). The split was based on the Uganda SAM 2002, where the relevant industries for the production of *otp* were Railway transport, Land passenger transport, Freight transport by road, Air transport, Warehousing and supporting transport activities, Post and courier services and Repair of personal households and other services, the sole producer of *wtp* was Land passenger transport and that of *atp* was Air transport. To determine the 2002 shares of the relevant industries in the demand for the commodities and primary factors for which *atran* had to be disaggregated, all the industries related to *otp*, *wtp* and *atp* were weighted based on the MAKE matrix of the Uganda SAM 2002. Whenever several commodities of the Uganda SAM 2002 were mapped to a respective commodity of the Uganda SAM 2007, the final shares used in the disaggregation were calculated as simple averages over the respective shares of *otp*, *wtp* and *atp* of all underlying commodities.

Third, to balance the newly created sectors, the column totals of *otp*, *wtp* and *atp* were imposed on the respective rows. The reason was that the shares of the column totals of *otp*, *wtp* and *atp* (90.0%, 2.6% and 7.4%, respectively) in the total transport services obtained in 2007 (Table 12) were nearly similar to the corresponding shares for 2002 in terms of commodities (90.0%, 2.4% and 7.6%, respectively) (Table

¹² Note that there were no import duties (MTar) or taxes on imports (MTax) for *ctran* in the Uganda SAM 2007.

11).¹³ The proportional adjustment necessary to meet the column totals was made in the *wtp* and *atp* rows. Afterwards, the *otp* row was re-calculated by subtracting the adjusted *wtp* and *atp* rows from the original Transport services row.

6. *Deviations between the supplied table and those required for GTAP*

The contributed I-O table does not substantially deviate from the GTAP requirements. In particular, there are no deviations with respect to sign constraints and sectoral balance conditions. However, it is important to note the following:

a) Structure

The Uganda SAM 2007 did not have any information on indirect taxes of production. Therefore, *ProdTax* was included as a vector of zeros.

b) Sectoral classification

The GTAP sector *Textiles (tex)* could not be separately identified. Together with the GTAP sectors *Wearing apparel (wap)* and *Leather (lea)*, it was mapped to the *Textiles* sector in the contributed I-O table (see Table 4).

7. *Comment on quality of the I-O data*

The Uganda SAM 2007 contained detailed information on three different types of labor (self-employed labor, unskilled labor, skilled labor) and five household categories (rural farm, rural non-farm, Kampala metro, urban farm, urban non-farm). This information got lost due to the aggregation into one labor category and one household category.

Moreover, the Uganda SAM 2007 was detailed on agricultural sectors important for the Ugandan economy. This sectoral detail also disappeared after the mapping to the GTAP sectors.

¹³ For comparison, the rows led to the following shares for *otp*, *wtp* and *atp*: 83.7%, 6.2% and 10.2% (Table 11).

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Appendix

Table 1: Tax concordance

Uganda SAM 2007 category	GTAP category
Sales taxes	Commodity taxes on domestic goods (DomTax)
	Commodity taxes on imports (MTax)
Import tariffs	Import tariffs (MTar)
-	Indirect taxes of production (ProdTax)

Source: Own contribution based on Uganda SAM 2007.

- Not available.

Table 2: Final demand concordance

Uganda SAM 2007 category	GTAP category
Rural farm	Private household consumption (Household)
Rural non-farm	
Kampala metro	
Urban farm	
Urban non-farm	
Government	Government consumption (Government)
Savings-investment	Investment
Changes in inventories	Changes in stocks (DSTOCK)
Rest of world (column account)*	Exports

Source: Own contribution based on Uganda SAM 2007.

* Note that the Uganda SAM 2007 category *Rest of world* (row account) was mapped to the GTAP category Imports (Mcif).

Table 3: Primary factor concordance

Uganda SAM 2007 category	GTAP category
Self-employed labor	Labor
Unskilled labor	
Skilled labor	
Capital	Capital
Crop land	Land

Source: Own contribution based on Uganda SAM 2007.

Table 4: Mapping of sectors in Uganda SAM 2007 to GTAP sectors

#	37 (+ 7**) sectors in Uganda SAM 2007 ¹	Mapping to 57 GTAP sectors (GSEC) ²		30 sectors in contributed I-O table (SEC) ²	#
	Long name	OSEC			
1	Maize	maiz	gro	WhtGroCB	1
2	Other cereals	ocer	wht, gro, c b		
3	Rice	rice	pdr	Pdr	2
4	Cassava	cass	v f	OthCrops	3
5	Roots	root	v f, ocr		
6	Pulses and oilseeds	puls	osd, v f, ocr		
7	Horticulture	hort	v f, ocr		
8	Matoke	mato	v f		
9	Tobacco	toba	ocr		
10	Cotton	cott	pfb		
11	Coffee	coff	ocr		
12	Other crops	ocrp	ocr, pfb, v f		
13	Livestock	live	ctl, oap, rmk, wol	Lvstock	4
14	Forestry	fore	frs	Frs	5
15	Fishing	fish	fsh	Fsh	6
16	Other mining*	omn	omn	Omn	7
17	Food processing	food	cmt, omt, vol, mil, pcr, sgr, ofd	ProcFood	8
18	Beverages and tobacco	beve	b t	BT	9
19	Textiles and clothing	text	tex, wap, lea	Textiles	10
20	Petroleum products	petr	p c	PC	11
21	Chemical products	chem	crp	Crp	12
22	Machinery	mach	mvh, otn, ele, ome	Machine	13
23	Wood and furniture	wood	lum, omf	WoodManu	14
24	Other manufacturing	oman	ppp, nmm, i_s, nfm, fmp, omf		
25	Construction	cons	cns	Cns	15
26	Electricity*	ely	ely	Ely	16
27	Trade services	trad	trd	Trd	17
28	Hotels and catering	hotl	trd		
29	Other transport*	otp	otp	Otp	18
30	Communications	comm	cmn	Cmn	19
31	Financial services	fsrv	ofi, isr	OfiIsr	20
32	Business services	bsrv	obs	ObsDwe	21
33	Real estate	real	obs, dwe		
34	Government administration	gsrv	osg	Osg	22
35	Education	educ	osg		
36	Health	heal	osg		
37	Other services	osrv	ros	Ros	23
38	Gas distribution**	gdt	gdt	Gdt	24
39	Coal**	coa	coa	Coa	25
40	Oil**	oil	oil	Oil	26
41	Gas**	gas	gas	Gas	27
42	Water**	wtr	wtr	Wtr	28
43	Water transport**	wtp	wtp	Wtp	29
44	Air transport**	atp	atp	Atp	30

Sources: ¹ Uganda SAM 2007. ² Own contribution based on Uganda SAM 2007.

* The sector is not identical to the original sector in the Uganda SAM 2007 – Mining (*mine*) for *Other mining*, Electricity and water (*elec*) for *Electricity* and Transport services (*tran*) for *Other transport* –, but refers to the sector that remained after splitting out other sectors from the original sector.

** The sector was not available in the original Uganda SAM 2007, but was disaggregated by the contributor.

Table 5: Ugandan imports of Coal, Oil, Gas and Other Mining, 2007, UN-Comtrade (2015)

GTAP sectors	UN-Comtrade (2015), SITC Rev. 1 [4-digit codes]	Imports ¹ (US-\$)	Subtotal ² (US-\$)	Subtotal as % of total ²
Coal	Coal /anthracite, bituminous/ [3214]	2,198,287	2,229,898	8.45
	Peat briquettes & peat [3217]	31,611		
Oil	Petroleum, crude & partly refined [3310]	6,500	6,500	0.02
Gas	Gas, natural [3411]	6,162,353	6,163,239	23.36
	Gas, manufactured [3412]	886		
Other Mining	Natural fertilizers of anim./veget. origin [2711]	45,990	17,980,599	68.16
	Natural phosphates, whether or not ground [2713]	42,789		
	Building & monumental stone, rough [2731]	140,927		
	Gypsum, plasters, limestone flux & calcareous st. [2732]	2,229,510		
	Sand excluding metal bearing sand [2733]	80,373		
	Gravel & crushed stone [2734]	256,150		
	Sulphur, not sublimed, precipitd or colloidal [2741]	133,702		
	Iron pyrites, unroasted [2742]	12,503		
	Natural abrasives [2752]	374,878		
	Natural asphalt & natural bitumen [2761]	4,457,320		
	Clay & other refractory minerals, nes [2762]	107,672		
	Salt [2763]	9,712,916		
	Asbestos, crude, washed or ground [2764]	4,007		
	Quartz, mica, felspar, fluorspar, cryolite etc. [2765]	158,504		
	Minerals crude, nes [2769]	205,619		
	Ores and concentrates of lead [2834]	3,253		
	Ores and concentrates of zinc [2835]	723		
	Ores and concentrates of manganese [2837]	3,698		
	Ores & concentrates of non ferrous base met. nes [2839]	8,900		
	Silver & platinum ores [2850]	18		
	Pearls, not set or strung [6671]	944		
Other precious & semi-precious stones not set [6673]	203			
TOTAL		26,380,236	26,380,236	100

Sources:

¹ UN-Comtrade (2015).

² Own calculations based on UN-Comtrade (2015) and McDougall (1996).

Table 6: Ugandan imports of Coal, Oil, Gas and Other Mining, 2007, Uganda SAM 2007

			Mcif	MTax	MTar	Mcif + MTax + MTar
Billion Ush						
Mining¹			67.92	1.57	9.09	78.58
Coal²	8.45%	=	5.74	0.13	0.77	6.64
Oil²	0.02%	=	0.02	4E-04	0.002	0.02
Gas²	23.36%	=	15.87	0.37	2.12	18.36
Other Mining²	68.16%	=	46.29	1.07	6.19	53.56

Sources:

¹ Uganda SAM 2007, after disaggregating *Sales taxes* into DomTax and MTax.

² Own calculations based on Uganda SAM 2007, UN-Comtrade (2015) and McDougall (1996).

Note that the table displays rounded values, whereas any calculations were based on exact values.

Table 7: Disaggregation of the row account of *Electricity and water (celec)*

Industries, final demands and indirect taxes	Uganda SAM 2002				Uganda SAM 2007				Contributed I-O table		
	ely ¹	wtr ¹	Total ² (ely+wtr)	ely ²	wtr ²	ely ²	wtr ²	Uses*	celec ³	ely ⁴	wtr ⁴
	Million Ush			% of total		% (Simple average)		Billion Ush			
Growing Flowers & Horticultural crops	646	202	848	76	24	76	24	aocrp	1.656552	1.258979	0.397572
Tea Growing	3	1	4	75	25						
Passion Fruits & other tree crops	67	21	87	76	24						
Farming Of Cattle; Dairy Farming	929	3	932	100	0	99	1	alive	1.270293	1.25759	0.012703
Farming of Goats and Other Livestock	2,107	75	2,181	97	3						
Poultry Farming	829	0	829	100	0						
Mining and Quarrying	554	225	778	71	29	71	29	omn**	1.301198	0.92385	0.377347
Farming of Goats and Other Livestock	2,107	75	2,181	97	3	86	14	afood	14.879121	12.796044	2.083077
Fishing, Operation Of Fish Hatcheries And Fish Farms	632	1	633	100	0						
Processing And Preserving Of Fish And Fish Products	1,683	587	2,270	74	26						
Vegetable and animal oils & fats	5,349	626	5,975	90	10						
Manufacture Of Sugar and Jaggery	1,944	609	2,554	76	24						
Coffee and Tea Processing	4,025	984	5,009	80	20						
Manufacture of petroleum and chemical products	1,458	457	1,916	76	24	76	24	achem	6.776997	5.150517	1.626479
Manufacture of rubber and plastic products	1,711	536	2,247	76	24						
Manufacture of metal products	3,330	475	3,805	88	12	93	7	amach	9.856886	9.166904	0.689982
Manufacture of electronics, etc.	2,212	38	2,250	98	2						
Manufacture of paper and paper products	206	7	213	97	3	84	16	aoman	7.468798	6.27379	1.195008
Manufacture of metal products	3,330	475	3,805	88	12						
Manufacture of clay and ceramics	819	240	1,060	77	23						
Manufacture of cements and related products	2,998	939	3,936	76	24						
<i>Production, Collection And Distribution Of Electricity</i>	<i>1,279</i>	<i>506</i>				93	7	aelec	19.280843	17.931184	1.349659
<i>Collection, Purification And Distribution Of Water</i>	<i>6,059</i>	<i>55</i>									
Electricity and water [§]	7,338	561	7,899	93	7						
Motor repair and spare parts	5,151	1,367	6,518	79	21	78	22	atrad	72.978093	56.922913	16.05518
Retails services	15,568	4,843	20,411	76	24						
Wholesale services	2,331	683	3,013	77	23						
Land passenger transport	6,266	26	6,292	100	0	94	6	atran	13.100136	12.314128	0.786008
Freight Transport By Road	105	5	109	96	4						
Air transport	163	22	185	88	12						

Industries, final demands and indirect taxes	Uganda SAM 2002				Uganda SAM 2007				Contributed I-O table		
	ely ¹	wtr ¹	Total ² (ely+wtr)	ely ²	wtr ²	ely ²	wtr ²	Uses*	celec ³	ely ⁴	wtr ⁴
	Million Ush			% of total		% (Simple average)		Billion Ush			
Public Service Activities	10,944	3,953	14,897	73	27	73	27	agsrv	19.590703	14.301214	5.28949
Education services	12,770	4,000	16,770	76	24	76	24	aeduc	31.189337	23.703896	7.485441
Health services	6,050	1,894	7,943	76	24	76	24	aheal	14.311053	10.8764	3.434653
Social services	5,611	1,767	7,378	76	24	77	23	aosrv	22.32284	17.188587	5.134253
Recreation & Entertainment	1,615	313	1,928	84	16						
Other Activities	12,716	3,979	16,695	76	24						
Other Business services	1,296	428	1,724	75	25						
Public Service Activities	10,944	3,953	14,897	73	27						
Repair of personal households and other services	1,739	546	2,286	76	24						
Household [§]	30,402	280,885	311,287	10	90	10	90	Household ^{§§}	854.09445	85.409445	768.685003
Exports [§]	27,144	0	27,144	100	0	100	0	Ex-ports ^{§§}	55.045491	55.045491	0
Value added taxes - domestic (VAT) [‡]	-1,757	-19,754	-21,511	8	92	8	92	Dom-Tax ^{‡‡}	-	-2.571113	-29.567803
Total[#]	191,708	294,152	485,860	39.5	61	-	-	Total	1,112.98	327.94982	785.034052
								% of total	-	29.5	70.5

Sources:

- ¹ Uganda SAM 2002. Note that *ely* refers to the commodity sector *Electricity supply* in the Uganda SAM 2002 and *wtr* to *Collection, purification and distribution of water* (see Teichmann 2012: Table 5). The commodity *wtr* was entirely produced from the industry *Collection, purification and distribution of water*; *ely* nearly entirely from the industry *Production, collection and distribution of electricity*.
- ² Own calculation based on Uganda SAM 2002.
- ³ Uganda SAM 2007. Note that *celec* refers to the commodity *Electricity and water* in the Uganda SAM 2007.
- ⁴ Own calculation based on Uganda SAM 2007 (*celec*) and the average percentage shares of *ely* and *wtr* derived from Uganda SAM 2002.

Notes:

- * Activities, final demands, imports and indirect taxes with non-zero elements in *celec*.
- ** The sector was introduced by the contributor after disaggregating the *Mining* sector of the Uganda SAM 2007 into *omn*, *coa*, *oil* and *gas* (see Table 4).
- § Own calculation, sum of electricity (*Production, collection and distribution of electricity*) and water (*Collection, purification and distribution of water*) industries.

- ¶ For the final demand concordance of Uganda SAM 2002, see Teichmann (2012: Table 3). Note that *Household* refers to the total over all household categories only (i.e. excluding non-profit institutions serving households) since the demand for *ely* and *wtr* by *Government and Non-Profit* was zero.
- ¶¶ For the final demand concordance of Uganda SAM 2007, see Table 2.
- ‡ For the tax concordance of Uganda SAM 2002, see Teichmann (2012: Table 2). Entered as negative values (see Horridge et al. 2008).
- ‡‡ For the tax concordance of Uganda SAM 2007, see Table 1. Entered as negative values (see Horridge et al. 2008).
- # Own calculation, deducting *Value added taxes - domestic (VAT)* from the respective totals given in Uganda SAM 2002. Note that there were no imports of *ely* and *wtr* in Uganda SAM 2002.
- Not applicable.

Table 8: Disaggregation of the column account of *Electricity and water (aelec)*

Uganda SAM 2002 Commodities and primary factors	ely ¹	wtr ¹	Total ² (ely+wtr)	ely ²	wtr ²	ely ²	wtr ²	Uganda SAM 2007 Inputs*	aelec ³	Contributed I-O table ely ⁴	wtr ⁴
	Million Ush			% of total		% (Simple average)			Billion Ush		
Petroleum Refining, Manufacture Of Products Of Coal	2,789	839	3,628	77	23	77	23	cpetr	9.273486	7.140584	2.132902
Chemical And Pharmaceutical Products	44	4,125	4,169	1	99	49	51	cchem	11.900321	5.831157	6.069164
Manufacture Of Rubber And Plastic Products	286	12	298	96	4						
Manufacture Of Metal Products And Equipment	11,004	3,336	14,340	77	23	88	12	cmach	40.033221	35.229235	4.803987
Manufacture And Repair Of Motor Vehicles And Ships	407	3	410	99	1						
Manufacture Paper, Printing And Publishing	165	0	165	100	0	68	32	coman	6.25597	4.254059	2.00191
Manufacture Of Non Metallic Products	2,094	81	2,175	96	4						
Manufacture Of Metal Products And Equipment	11,004	3,336	14,340	77	23						
Other Manufacturing N.E.C.	0	37	37	0	100						
Electricity Supply	1,279	6,059	7,338	17	83	17	83	ely**	17.931184	3.048301	14.882882
Trade Services	3,459	1,565	5,025	69	31	69	31	ctrad	5.581135	3.850983	1.730152
Telecommuni-cations	3,561	916	4,477	80	20	80	20	ccomm	12.376879	9.901503	2.475376
Business Services	2,981	1,954	4,935	60	40	60	40	cbsrv	12.219238	7.331543	4.887695
Collection, Purification And Distribution Of Water	506	55	561	90	10	90	10	wtr**	1.349659	1.214693	0.134966
Labor[†]	42,210	25,915	68,125	62	38	62	38	Labor [‡]	159.107399	98.646587	60.460811

Uganda SAM 2002 Commodities and primary factors	ely ¹	wtr ¹	Total ² (ely+wtr)	ely ²	wtr ²	ely ²	wtr ²	Uganda SAM 2007 Inputs*	aelec ³	ely ⁴	Contributed I-O table wtr ⁴
	Million Ush			% of total		% (Simple average)				Billion Ush	
Capital[¶]	119,001	251,434	370,435	32	68	32	68	Capital [‡]	836.95538	267.825722	569.129659
Total [#]	193,622	297,327	490,949	39.4	61	-	-	Total	1,112.98	444.274368	668.709503
								% of total	-	39.9	60.1

Sources:

- ¹ Uganda SAM 2002. Note that *ely* in this table refers to the industry sector *Production, collection and distribution of electricity* of the Uganda SAM 2002 and *wtr* to *Collection, purification and distribution of water*. Both industry sectors were nearly entirely occupied with the provision of the commodities *Electricity supply* and *Collection, purification and distribution of water*, respectively.
- ² Own calculation based on Uganda SAM 2002.
- ³ Uganda SAM 2007. Note that *aelec* refers to the activity (i.e. commodity) *Electricity and water* in the Uganda SAM 2007.
- ⁴ Own calculation based on Uganda SAM 2007 (*aelec*) and the average percentage shares of *ely* and *wtr* derived from Uganda SAM 2002.

Notes:

* Commodities and primary factors with non-zero elements in *aelec*.

** Disaggregated sector.

¶ For the primary factor concordance of Uganda SAM 2002, see Teichmann (2012: Table 4). Note that *Labor* refers to the total over all labor accounts, excluding mixed income since mixed income was zero for *ely* and *wtr*. Likewise, *Capital* refers to the sum of *Operating surplus* and *Capital account* (row), excluding mixed income.

‡ For the primary factor concordance of Uganda SAM 2007, see Table 3.

Respective totals from Uganda SAM 2002.

- Not applicable.

Table 9: Disaggregation of the row account of *Transport services (ctran)* – Part I

Uses	Uganda SAM 2002					Uganda SAM 2007		Contributed I-O table	
	otp ¹	wtp ¹	Total ² (otp+wtp)	otp ²	wtp ²	Uses	ctran ³	otp ⁴	wtp ⁴
	Million Ush			% of total		Billion Ush			
Exports[¶]	72,578	15,850	88,428	82	18	Exports ^{¶¶}	428.8482	351.6555	77.19268
Total	72,578	15,850	88,428	-	-	Total	428.8482	351.6555	77.19268

Sources:

¹ Uganda SAM 2002. Note that *otp* refers to the commodity sectors *Railway transport, Passenger road transport, Goods road transport* and *Other transport services* in the Uganda SAM 2002 and *wtp* to *Water transport* (see Teichmann 2012: Table 5).

² Own calculation based on Uganda SAM 2002.

³ Uganda SAM 2007. Note that *ctran* refers to the commodity *Transport services* in the Uganda SAM 2007.

⁴ Own calculation based on Uganda SAM 2007 (*ctran*) and the percentage shares of *otp* and *wtp* derived from Uganda SAM 2002.

Notes:

¶ For the final demand concordance of Uganda SAM 2002, see Teichmann (2012: Table 3). Note that the export demand for *atp* is zero in the Uganda SAM 2002.

¶¶ For the final demand concordance of Uganda SAM 2007, see Table 2.

- Not applicable.

Table 10: Disaggregation of the row account of *Transport services (ctran)* – Part II

Industries, final demands, imports and indirect taxes	Uganda SAM 2002					Uganda SAM 2007		Contributed I-O table			
	otp ¹	atp ¹	Total ² (otp+atp)	otp ²	atp ²	otp ²	atp ²	Uses*	ctran ³	otp ⁴	atp ⁴
	Million Ush			% of total		% (Simple average)			Billion Ush		
All agricultural sectors, excluding livestock						100	0	amaiz	9.296194	9.296194	0
								arice	1.474511	1.474511	0
								aocer	9.60943	9.60943	0
								acass	21.479397	21.479397	0
								aroot	20.754456	20.754456	0
								apuls	27.585259	27.585259	0
								ahort	3.757937	3.757937	0
								amato	19.257195	19.257195	0
								atoba	0.686571	0.686571	0
								acott	2.648791	2.648791	0
								acoff	2.655864	2.655864	0
							aocrp	13.751315	13.751315	0	
Farming Of Cattle; Dairy Farming	1,609	197	1,806	89	11	86	14	alive	8.640382	7.430729	1.209654
Farming of Goats and Other Livestock	5,731	741	6,472	89	11						
Poultry Farming	755	185	940	80	20						
Forestry, Logging And Related Service Activities	985	266	1,251	79	21	79	21	afore	175.748348	138.841195	36.907153
Fishing, Operation Of Fish Hatcheries And Fish Farms	1,118	273	1,391	80	20	80	20	afish	14.880331	11.904265	2.976066
Mining and Quarrying	110	0	110	100	0	100	0	omn**	6.04051	6.04051	0
Farming of Goats and Other Livestock	5,731	741	6,472	89	11	94	6	afood	132.139813	124.211424	7.928389
Fishing, Operation Of Fish Hatcheries And Fish Farms	1,118	273	1,391	80	20						
Processing And Preserving Of Fish And Fish Products	5,030	219	5,249	96	4						

Industries, final demands, imports and indirect taxes	Uganda SAM 2002					Uganda SAM 2007				Contributed I-O table	
	otp ¹	atp ¹	Total ² (otp+atp)	otp ²	atp ²	otp ²	atp ²	Uses*	ctran ³	otp ⁴	atp ⁴
	Million Ush			% of total		% (Simple average)				Billion Ush	
Vegetable and animal oils & fats	14,015	794	14,809	95	5						
Manufacture Of Dairy Products	1,284	0	1,284	100	0						
Manufacture Of Sugar and Jaggery	2,459	8	2,467	100	0						
Coffee and Tea Processing	13,720	0	13,720	100	0						
Distilling and manufacture of malt	12,067	1,100	13,167	92	8	97	3	abeve	59.56844	57.781387	1.787053
Manufacture Of Soft Drinks; Production Of Mineral Waters	2,839	31	2,870	99	1						
Manufacture Of Tobacco Products	1,196	0	1,196	100	0						
Cotton and associated activities	1,572	7	1,579	100	0	93	7	atext	44.434113	41.323726	3.110388
Manufacture of textiles	948	118	1,066	89	11						
Manufacture Of Wearing Apparel, Except Fur Apparel	1,705	236	1,941	88	12						
Manufacture of apparel, leather and footwear	611	25	636	96	4						
Wood & wood products	9,515	1,145	10,660	89	11	89	11	awood	4.804924	4.276382	0.528542
Manufacture of petroleum and chemical products	7,325	722	8,047	91	9	91	9	apetr	6.117081	5.566543	0.550537
Manufacture of petroleum and chemical products	7,325	722	8,047	91	9	96	4	achem	51.752189	49.682101	2.070088
Manufacture of rubber and plastic products	957	0	957	100	0						
Manufacture of metal products	2,607	169	2,776	94	6	97	3	amach	31.612586	30.664208	0.948378

Industries, final demands, imports and indirect taxes	Uganda SAM 2002					Uganda SAM 2007			Contributed I-O table		
	otp ¹	atp ¹	Total ² (otp+atp)	otp ²	atp ²	otp ²	atp ²	Uses*	ctran ³	otp ⁴	atp ⁴
	Million Ush			% of total		% (Simple average)			Billion Ush		
Manufacture of electronics, etc.	216	1	217	100	0						
Manufacture of paper and paper products	328	0	328	100	0	94	6	aoman	31.743681	29.83906	1.904621
Printing activities	955	63	1,018	94	6						
Manufacture of metal products	2,607	169	2,776	94	6						
Manufacture of clay and ceramics	2,459	543	3,002	82	18						
Manufacture of cements and related products	2,446	0	2,446	100	0						
Building	46,108	9	46,117	100	0	100	0	acons	119.316822	119.316822	0
Civil Engineering	17,734	0	17,734	100	0						
Motor repair and spare parts	6,484	1,140	7,624	85	15	85	15	atrad	311.256045	264.567638	46.688407
Retails services	89,611	20,319	109,930	82	18						
Wholesale services	35,644	4,030	39,673	90	10						
Hotels, Bars and Restaurants	8,216	1,150	9,366	88	12	88	12	ahotl	12.750016	11.220014	1.530002
Railway Transport	1,020	0				100	0	atran	26.19819	26.19819	0
Land passenger transport	1,738	10									
Freight Transport By Road	582	0									
Air transport	1,835	0									
Warehousing and supporting transport activities	669	0									
Post and courier services	775	0									
Transport services [§]	6,618	10	6,628	100	0						
Telecommuni-cations	850	1	851	100	0	100	0	acomm	13.92161	13.92161	0
Financial services	12,228	0	12,228	100	0	100	0	afsrv	12.598509	12.598509	0
Other Business services	4,891	175	5,066	97	3	97	3	absrv	5.656058	5.486376	0.169682
Public Service Activities	62,277	11,942	74,220	84	16	84	16	agsrv	96.635965	81.174211	15.461754
Education services	11,308	357	11,665	97	3	97	3	aeduc	38.800884	37.636857	1.164027

Industries, final demands, imports and indirect taxes	Uganda SAM 2002					Uganda SAM 2007			Contributed I-O table		
	otp ¹	atp ¹	Total ² (otp+atp)	otp ²	atp ²	otp ²	atp ²	Uses*	ctran ³	otp ⁴	atp ⁴
	Million Ush			% of total		% (Simple average)				Billion Ush	
Health services	8,720	1,451	10,171	86	14	86	14	aheal	14.677823	12.622927	2.054895
Social services	5,903	7	5,910	100	0	95	5	aosrv	12.519963	11.893965	0.625998
Recreation & Entertainment	904	5	909	99	1						
Other Activities	3,430	435	3,865	89	11						
Other Business services	4,891	175	5,066	97	3						
Public Service Activities	62,277	11,942	74,220	84	16						
Repair of personal households and other services	12,203	73	12,276	99	1						
Household [¶]	444,840	1,590	446,430	100	0	100	0	House-hold ^{¶¶}	995.289678	995.289678	0
Capital account (column) [¶]	9,352	0	9,352	100	0	100	0	D-STOCK ^{¶¶}	0.126642	0.126642	0
Exports [¶]	72,578	0	72,578	100	0	100	0	Ex-ports ^{¶¶}	351.655517 [†]	351.655517	0
Value added taxes - domestic (VAT) [‡]	-19,664	0	-19,664	100	0	100	0	Dom-Tax ^{‡‡}	-63.909274	-63.909274	0
Imports [§]	-388694	0	-388694	100	0	100	0	Mcif [§]	-1,472.15	-1,472.15	0
Total[#]	589,847	49,727	639,574	-	-	-	-	Total	1,175.79	1,048.17	127.61563

Sources:

- ¹ Uganda SAM 2002. Note that *otp* refers to the commodity sectors *Railway transport, Passenger road transport, Goods road transport* and *Other transport services* in the Uganda SAM 2002 and *atp* to *Air transport* (see Teichmann 2012: Table 5). Further note that the intermediate and final domestic demand for *wtp* is zero; the same holds for imports of *wtp* (Uganda SAM 2002).
- ² Own calculation based on Uganda SAM 2002.
- ³ Uganda SAM 2007. Note that *ctran* refers to the commodity *Transport services* in the Uganda SAM 2007.
- ⁴ Own calculation based on Uganda SAM 2007 (*ctran*) and the average percentage shares of *otp* and *atp* derived from Uganda SAM 2002.

Notes:

- * Activities, final demands, imports and indirect taxes with non-zero elements in *ctran*.
- ** The sector was introduced by the contributor after disaggregating the *Mining* sector of the Uganda SAM 2007 into *omn, coal, oil* and *gas* (see Table 4).
- § Own calculation, sum of industries *Railway transport, Land passenger transport, Freight transport by road, Air transport, Warehousing and supporting transport activities* and *Post and courier services*.

- ¶ For the final demand concordance of Uganda SAM 2002, see Teichmann (2012: Table 3). Note that *Household* refers to the total over all household categories plus *Government and Non-Profit*, assuming that the demand for *otp* and *atp* by *Government* was zero in 2002 as in Uganda SAM 2007.
- ¶¶ For the final demand concordance of Uganda SAM 2007, see Table 2.
- † The value refers to *otp* in the contributed I-O table given in Table 9.
- ‡ For the tax concordance of Uganda SAM 2002, see Teichmann (2012: Table 2). Entered as negative values (see Horridge et al. 2008).
- ‡‡ For the tax concordance of Uganda SAM 2007, see Table 1. Entered as negative values (see Horridge et al. 2008).
- \$ Entered as negative values (see Horridge et al. 2008).
- # Own calculation, deducting *Value added taxes - domestic (VAT)* and *Imports* from the respective totals given in Uganda SAM 2002. Note that there were no import duties and import taxes of *otp* and *atp* in Uganda SAM 2002.
- Not applicable.

Table 11: Summary of totals from Tables 9 and 10

Uganda SAM 2002	Uganda SAM 2007				Contributed I-O table				
	otp ¹	wtp ¹	atp ¹	Total ² (otp+wtp +atp)	Uses	ctran ³	otp ⁴	wtp ⁴	atp ⁴
Industries, final demands, imports and indirect taxes	Million Ush				Billion Ush				
Total	589,847	15,850	49,727	655,424	Total	1,252.98	1,048.17	77.1926	127.615
% of total	90	2.4	7.6	-	% of total	-	83.7	6.2	10.2

Sources:

- ¹ Column total of *wtp* from Table 9 and respective column totals of *otp* and *atp* from Table 10.
- ² Own calculation.
- ³ Own calculation, deducting *Sales taxes* and *Imports* from the respective total given in Uganda SAM 2007. Note that *ctran* refers to the commodity *Transport services* in the Uganda SAM 2007.
- ⁴ Column total of *wtp* from Table 9 and respective column totals of *otp* and *atp* from Table 10.

Notes:

- Not applicable.

Table 12: Disaggregation of the column account of *Transport services (atran)*

Commodities and primary factors	Uganda SAM 2002									Uganda SAM 2007		Contributed I-O table			
	otp ¹	wtp ¹	atp ¹	Total ² (otp+wt p+atp)	otp ²	wtp ²	atp ²	otp ²	wtp ²	atp ²	Inputs*	atran ³	otp ⁴	wtp ⁴	atp ⁴
	Million Ush				% of total			% (Simple average)			Billion Ush				
Petroleum Refining, Manu-facture of Products of Coal	59,562	1,876	9,773	71,211	83.6	2.6	14	83.6	2.6	14	cpetr	143.359	119.90	3.777	19.675
Chemical And Pharmaceutical Products	1,874	3	211	2,087	89.8	0.1	10	88.5	0.1	11	cchem	13.577	12.012	0.019	1.547
Manufacture Of Rubber And Plastic Products	2,749	5	400	3,153	87.2	0.1	13								
Manufacture Of Metal Products And Equipment	11,169	189	1,962	13,320	83.9	1.4	15	85.5	1	13	cmach	53.929	46.134	0.565	7.2298
Manufacture and Repair Of Motor Vehicles And Ships	10,870	84	1,506	12,460	87.2	0.7	12								
Electricity Supply	6,915	328	117	7,361	94	4.5	1.6	94	4.5	1.6	ely**	12.43	11.679	0.554	0.1979
Trade Services	30,828	845	1,985	33,659	91.6	2.5	5.9	91.6	2.5	5.9	ctrad	44.918	41.141	1.128	2.649
otp[§]	9,219	91	1,317	10,627	86.8	0.9	12	86.8	0.9	12	otp**	26.198	22.728	0.224	3.246
Telecommunications	4,727	13	1,635	6,375	74.1	0.2	26	74.1	0.2	26	ccomm	14.680	10.885	0.0296	3.765
Banking And Insurance	7,951	29	6,605	14,585	54.5	0.2	45	54.5	0.2	45	cfsrv	24.342	13.27	0.048	11.024
Business Services	7,850	30	1,034	8,913	88.1	0.3	12	88.1	0.3	12	cbsrv	21.464	18.903	0.07	2.489
Housing And Real Estate Services	14,271	365	1,034	15,669	91.1	2.3	6.6	91.1	2.3	6.6	creal	33.241	30.274	0.774	2.19
Collection, Purification And Distribution Of Water	306	1	15	323	94.8	0.4	4.8	94.8	0.4	4.8	wtr**	0.6695	0.635	0.003	0.032
Labor[¶]	98,750	1,086	6,127	105,963	93.2	1	5.8	93.2	1	5.8	Labor [‡]	133.58	124.494	1.369	7.724
Capital[¶]	302,425	10,848	13,744	327,016	92.5	3.3	4.2	92.5	3.3	4.2	Capital [‡]	730.58	675.641	24.235	30.71
Total[#]	581,975	15,850	49,727	647,552	89.9	2.4	7.7	-	-	-	Total	1,252.98	1,127.70	32.797	92.478
											% of total	-	90	2.6	7.4

Sources:

- ¹ Own calculation based on Uganda SAM 2002, where *otp* refers to a combination of the industry sectors *Railway transport, Land passenger transport, Freight transport by road, Air transport, Warehousing and supporting transport activities, Post and courier services* and *Repair of personal households and other services* of the Uganda SAM 2002, *wtp* to the industry *Land passenger transport* and *atp* to *Air transport*. Each industry was weighted by the MAKE matrix of the Uganda SAM 2002, i.e. by the share of the respective commodity *otp, wtp* or *atp* in the total output of the industry. Thereby, the commodity *otp* in the Uganda SAM 2002 refers to *Railway transport, Passenger road transport, Goods road transport* and *Other transport services*, *wtp* to *Water transport* and *atp* to *Air transport* (see Teichmann 2012: Table 5).
- ² Own calculation based on Uganda SAM 2002.
- ³ Uganda SAM 2007. Note that *atran* refers to the activity (i.e. commodity) *Transport services* in the Uganda SAM 2007.
- ⁴ Own calculation based on Uganda SAM 2007 (*atran*) and the average percentage shares of *otp, wtp* and *atp* derived from Uganda SAM 2002.

Notes:

- * Commodities and primary factors with non-zero elements in *atran*.
- ** Disaggregated sector.
- § Note that *otp* refers to the commodity sectors *Railway transport, Passenger road transport, Goods road transport* and *Other transport services* from Uganda SAM 2002.
- ¶ For the primary factor concordance of Uganda SAM 2002, see Teichmann (2012: Table 4). Note that *Labor* refers to the total over all labor accounts plus the labor-share of mixed income. Likewise, *Capital* refers to the sum of *Operating surplus* and *Capital account* (row) plus the capital-share of mixed income. Parallel to Teichmann (2012), mixed income was allocated to labor and capital based on the shares of labor and capital in total value added excluding mixed income.
- ‡ For the primary factor concordance of Uganda SAM 2007, see Table 3.
- # Respective totals derived from Uganda SAM 2002.
- Not applicable.