

16.3 Austria, Finland and Sweden

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New EU entrants who joined the Common Market in 1995 are all reported in one table. As a separate table for each country was available, the tables were first edited to GTAP readable format before summing up.

16.3.1 Sources

The source table for Austria were the published input-output tables in 1983 by Österreichischen Statistischen Zentralamt. The tables included 177 commodities / activities. Since the diskette version of the tables only contained the so called basic tables, a symmetric commodity by commodity table was built by the input-output technique using the industry technology as the underlying technology assumption. The tables were reported in millions of Austrian schillings and originally at producers prices.

Finland's table is based on an unpublished input-output table for 1992. Published versions of the tables are available only every five years, but the technique used in Finnish Statistical Center makes it possible to derive updated versions from the tables based on the G.P. calculations. The original industry by industry table covered 64 sectors which were valued in millions of Finnish marks at producers prices.

The source table for Sweden were the Input-output tables for Sweden 1985 published by Statistics Sweden. The commodity by commodity table included 88 sectors expressed in millions of Swedish crowns valued at producers prices.

16.3.2 The structure of the original tables and their treatment

For all countries, the imports were reported as a matrix by commodity and sector and valued at *cif*. Only in Austria's case the subtraction of domestic use from total use matrix was demanded. Making indirect taxes and duties consistent with GTAP structure was done by expanding the reported row for indirect taxes to a matrix. This was done by a so called representative table that offered the shares so that the constraint or the sum of indirect taxes remained the same as in the original table.

In GTAP the imports prices are reported duty inclusive. In the original tables the duties are as well reported as a row and adding them to the producer prices was done in the same way as the indirect taxes. In Finland's case the net sum for commodity taxes and subventions both for domestic and imported commodities was reported as one row. So we divided the commodity taxes into duties and indirect taxes to domestic commodities by a rough estimate of 4 % to duties. This must be regarded as a regrettable deficiency because more accurate information was available.

One peculiarity in the Swedish and Finnish tables were the so called activities by non-profit organizations such as government or households. They are reported separately because it is thought that they are sold under producing costs. Ignoring them totally had not caused much bias to the structure of those tables. Some other public items are also left out from input-output tables. This leads to a smaller GDP calculated from IO tables than reported officially. In Sweden's table the items of sales by non-profit organizations that added the value of industries (not final demand) these values were regarded as household production and added to labor costs. This was done to keep the sectors balanced amounting 4.1 billion Swedish crowns of total 20 billion.

Imputed bank service charge was another peculiarity in the original table of Finland. It was reported as a separate intermediate use in Finnish table adding the sales or input of services (OSP). As its gross output is conceptually zero the final value added or operating surplus of this sector was expressed as a negative figure to correct the value added. The amount of this item is about 10 billion Finnish markkas. In input-output analysis it cannot be treated this way. So we transferred the item to the costs of private services (OSP) by increasing all intermediate costs. Also the shares of sales were increased similarly. Shares for allocation were obtained from the shares of each commodity's output of total intermediate use.

For Finland and Sweden, the GTAP class DWE Ownership of dwelling is made up of SIC class 8311 "use of owner-occupied dwellings". For Austria the interpretation of this class was unclear and we set it zero.

Of value added terms or classification of primary factors, the land was not defined in any of the new EU countries. So the operating surplus was divided into capital and land by ratios obtained from the representative table. The value added for capital was made up of items of depreciation, too. Defining the labor input was clear in all cases. Classification of final demands varied a little in every

country but did not cause any problems. The statistical difference in the Finnish table was added to the term Stocks.

16.3.3 Sectoral classification

With the help of ISIC concordances to GTAP the original sectors were mapped to GTAP. The more classified the original table was the easier it was to do. For Austria, the detailed classification caused some problems as the administration of combined industries were classified as a sector of its own. This happened in three cases and it was solved by splitting the sectors into two or three others by their share of combined production. In Austria, fishing was not classified in the original table which seems quite plausible. In the supplied table the imports of this sector was also set zero.

The most problematic sectors were the agricultural production and mining of minerals, namely coal, oil and gas. GTAP has six different classes for agriculture and in all the three countries it was classified in one sector. In Austria's table the forestry was included in agriculture as well. In minerals the classification was not adequate either. The problem was to split sectors for domestic use as well as for imports.

The original objective was to construct these classes to fit the real structure of each country. As imports and exports values are obtainable from the trade statistics and the concordance of HS classification to GTAP is available, the most difficult task was to value the domestic production. For Sweden, these values were quite accurately classified in their agricultural statistics for some items. For Finland and Austria, only volumes for some items were available. Due to remaining shortcomings we had to be content with the shares from the representative table with the exception that the production of paddy rice was set zero. Shares from the same source were applied to imports as well. Imports of paddy rice was also applied. As a result, a similar input-output structure is assumed for every agricultural sector.

Splitting the minerals into coal, oil, gas and other minerals has been done in a more reliable way. For instance in Finland the own production or mining can be thought negligible and therefore, only the imports had to be shared. From trade statistics the shares of 57% to oil, 11.5 % to coal and gas and 20% to the residual were calculated. In Sweden, a 1% share for coal mining from all mineral mining was calculated. The respective shares for imports were calculated from the trade statistics. In Austria, there is mining for all these three minerals. In the original table, coal was already a sector of its own and from the total sum of oil and gas production, shares of 54% to oil and 46% to gas could be found from the production statistics. The same shares were used in splitting the imports.

16.3.4 Evaluation

Although the original tables were in balance for each sector, in the supplied tables there was some bias. This is probably due to computing and losses in rounding.

The strength of the supplied tables is in the intermediate use and the final demand. The input structure of the economies is quite reliable. Also the production shares of different sectors are accurate. Weaknesses of the supplied table are, as already mentioned, in the input-output structure of agriculture. The tax structure is quite artificial as well.

Because of the large public sector, a remarkably high share of total GDP is not covered. For Finland, the share of public salaries in total value added is about 20 per cent.

SWEDISH IO CONCORDANCE

Commodities 88

Reference Year 1985

Source Statistiska Centrabyrån: Input-output tables for Sweden 1985

Currency Millions crowns in producer prices

Appendix: Gtap concordance for EU-3

GTAP Sector		Swedish Sector	
1	AGR	11	agriculture and hunting
2	FOR	12	forestry and logging
3	FSH	13	fishing
4	COL		
5	OIL		
6	GAS		
7	OMN	2301	iron ore mining
		2302	nonferrous ore mining
		21,22,29	other mining and quarrying
8	PCR		
9	MET	3111	slaughtering, prep of meat
10	MIL	3112	dairy products
11	OFP	3113	canning, pres. of fruit & vegetables
		3114	canning of fish
		3115	oils and fats
		3116	grain mill production
		3117	bakery products
		3118	sugar
		3119	cocoa, chocolates & sugar conf.
		3121	other food
		3122	prepared animal feeds
12	B_T	3130	beverage industries
		3140	tobacco manufacturing
13	TEX	3211	spinning and weaving
		3212	textiles, other than clothing
		3213	hosiery and knitted goods
		3214/9	carpets, rugs etc.
14	WAP	3220	clothing
15	LEA	323/4	leather and shoes

Appendix: Gtap concordance for EU-3 (Continued)

GTAP Sector	Swedish Sector
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Appendix: Gtap concordance for EU-3 (Continued)

GTAP Sector		Swedish Sector	
22	NMF	37201/2	non-ferrous metal casting
		37203	semi-finished non-ferrous metal products
		37204	non-ferrous metal casting
23	FMP	381	other metal goods
24	TRN	3841	ship & boat building and repair
		3842	manufacturing & repair of railroad equipment
		3843	motor vehicles & parts
		3844	bicycles & motorcycles
		3845	manufacturing & repair of aircraft
		3849	other vehicles
25	OME	382	mechanical engineering
		3831	electrical machinery etc.
		3832	electronics & telecommunications
		3833	domestic electrical appliances
		3839	other electrical goods
		3850	instruments & photo equipment
26	OMF	3900	other manufacturing
27	EGW	4101&3	electricity & steam water supply
		4102	gas manufacture & distribution
		4292001	water supply, sewage disposal
28	CNS	5000	construction
29	T_T	61/62	distributive trades
		63	restaurants & hotels
		71	transport & storage
		72	communication
30	OSP	81/82	financial institutions & insurance
		831A	one & two family houses & leisure houses
		831B	other real estate
		832/3	business services
		9511/3	repair cars, households goods etc..
31	OSPG	9	personal services

FINNISH IO CONCORDANCE

Commodities	64
Reference Year	1992
Source	Finnish Centre of Statistics, Input-output tables for Finland 1992, unpublished data
Currency	Millions markkas in producer prices

Appendix: Gtap concordance for EU-3

GTAP Sector	Finnish Sector
1 AGR	1100
2 FOR	1200
3 FSH	1300
4 COL	
5 OIL	
6 GAS	
7 OMN	2300
	2900
8 PCR	
9 MET	3111
10 MIL	3112
11 OFP	3113
	3114
	3115
	3116
12 B_T	3131
	3132
	3211
13 TEX	3212
14 WAP	3231
15 LEA	3232

Appendix: Gtap concordance for EU-3 (Continued)

GTAP Sector	Swedish Sector
16 LUM	3311
	3312
	3320
17 PPP	3411
	3412
	3413
	3421
	3422
18 P_C	3530
19 CRP	3511
	3512
	3513
	3514
	3551
	3552
20 NMM	3601
	3602
21 I_S	3701
22 NMF	3702
23 FMP	3811
	3812
24 TRN	3841
	3842
	3843
25 OME	3831
	3832
	3833
26 OMF	3900
27 EGW	4100
	4200
28 CNS	5100
	5200

Appendix: Gtap concordance for EU-3 (Continued)

GTAP Sector	Finnish Sector
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16-3-10

29	T_T	6162
		6300
		7111
		7119
		7120
		7130
		7190
		7200
30	OSP	8182
		8319
		8329
		9503
31	OSPG	9293
		9400
31	DWE	8311

AUSTRIA IO CONCORDANCE

No concordance available