

Converter from *SITC* to *ISIC*

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This report describes the construction of a concordance between *SITC* (Standard International Trade Classification, revision 2) and *ISIC* (International Standard Industrial Classification, revision 2). The concordance completes the existing OECD concordance between *SITC* and *ISIC* manufacturing industries, using *HS* (Harmonized System) crosswalks between *SITC* and *ISIC* for all industries engaged in merchandise trade. The concordance is available as file `sitc2isic.csv` at URL <http://econ.ucsd.edu/muendler/resource>.

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1 Construction of Concordance

The objective is to create a many-to-one mapping from *SITC* (Standard International Trade Classification) revision 2 at the 4-digit industry level to *ISIC* (International Standard Industrial Classification) revision 2 at the 3-digit industry level. The basis of the novel concordance is an existing OECD concordance for manufacturing industries between *SITC* rev. 2 at the 5-digit level and *ISIC* rev. 2.¹

The OECD concordance from *SITC* to *ISIC* partly maps to *ISIC* industries that are not defined in revision 2 and does not provide a mapping for numerous *SITC* sectors. The World Trade Flow data in 2000 (Feenstra, Lipsey, Deng, Ma, and Mo 2005), for instance, include 1,046 *SITC* sectors at the 4-digit level but the existing OECD concordance provides no *ISIC*-mapping for 187 *SITC* sectors at the 4-digit level, or almost one in five sectors.

This report documents how crosswalks between the Harmonized System on the one hand and both *SITC* and *ISIC* on the other hand can be used to correct and complete the OECD's *SITC*-to-*ISIC* mapping.

1.1 Harmonized System and *SITC*

A crosswalk from the Harmonized System product classification at the 10-digit level to *SITC* rev. 2 at the 5-digit level is part of the National Bureau of Economic Research Trade Data CD 1 (Feenstra, Lipsey, Deng, Ma, and Mo 2005).² For the present purposes, I aggregate the Harmonized System information to the 6-digit level, aggregate *SITC* rev. 2 to the 4-digit level, and clear items to create a one-to-one mapping so that ultimately a many-to-one mapping from *SITC* to *ISIC* can be obtained. Table 1 shows how products at the HS 6-digit level with otherwise conflicting one-to-many mappings are assigned a one-to-one restriction for *SITC* rev. 2 at the 4-digit level.

¹Available from URL <http://www.macalester.edu/research/economics/page/haveman/Trade.Resources/Concordances/FromSITC/sitc2.isic2.txt> (download April 11, 2007).

²Available from URL <http://www.macalester.edu/research/economics/page/haveman/Trade.Resources/Concordances/FromHS/NBER/hts.sitc2> (download April 11, 2007). According UN Comtrade sector descriptions for *SITC* rev. 2 are available in text format from URL <http://comtrade.un.org/cf/files/folders/19/download.aspx> (download December 4, 2006).

Table 1: Specific One-to-One Mappings from Harmonized System to *SITC*

Harmonized System		<i>SITC</i>
151920	Industrial Fatty Alcohols	4313
210690	Other Food Preparations	0980
220290	Other Non-alcoholic Beverages	1110
271000	Petroleum Oils, Oils Obtained from Bituminous Minerals	3344
392321	Sacks and Bags of Polymers of Ethylene	8939
981000	Importations of Religious, Educ., Scientific and other Institutions	8745
981700	Imports Free of Duty under Special Classification Provisions	9310

Note: Products at the Harmonized System 6-digit level with otherwise conflicting one-to-many mappings to *SITC* (rev. 2) at the 4-digit level.

1.2 Harmonized System and *ISIC*

The crosswalk from the Harmonized System product classification at the 6-digit level to *ISIC* rev. 2 at the 3-digit level is from “A Dataset on Trade and Production 1976-99” in Hoekman, Mattoo, and English (2002).³ No treatments are necessary.

1.3 Completion of *SITC*-to-*ISIC* mapping

Completion of the many-to-one mapping from *SITC* rev. 2 at the 4-digit industry level to *ISIC* rev. 2 at the 3-digit industry level proceeds in six steps.

Link from *ISIC* to *SITC* through Harmonized System. Joining the HS-to-*ISIC* crosswalk (section 1.2) and the HS-to-*SITC* crosswalk (section 1.1) at the HS 6-digit level results in a raw *SITC*-to-*ISIC* concordance. However, linking at the HS 6-digit level yields numerous non-unique mappings from *SITC* to *ISIC* (135 non-unique mappings out of 845 mappings overall). These non-unique mappings are refined in subsequent steps.

Removal of non-unique mappings based on OECD concordance. In a first treatment step, non-unique mappings are dropped from the raw

³Available from URL http://www.macalester.edu/research/economics/page/haveman/Trade.Resources/Concordances/FromHS/hs_isic.txt (download April 11, 2007), courtesy of Cristina Gamboa (Fedesarrollo Colombia).

SITC-to-*ISIC* concordance if these non-unique mappings contradict the existing OECD concordance for manufacturing industries after aggregating the *SITC* rev. 2 information to the 4-digit level. This first treatment removes 15 mappings (109 non-unique mappings out of now 830 mappings overall remain).

Removal of non-unique mappings to “unclassified” *ISIC* industries. In a second treatment step, non-unique mappings are dropped from the raw *SITC*-to-*ISIC* concordance if these non-unique mappings point to “unclassified” *ISIC* industries (*ISIC* industry 999). This second treatment removes 7 mappings (100 non-unique mappings out of now 823 mappings overall remain).

Removal of non-unique mappings to “other” *ISIC* manufacturing industries. In a third treatment step, non-unique mappings are dropped from the raw *SITC*-to-*ISIC* concordance if these non-unique mappings point to “other” *ISIC* manufacturing industries (*ISIC* industry 390). This third treatment removes 6 mappings (93 non-unique mappings out of now 814 mappings overall remain).

Manual removals. In a fourth treatment step, non-unique mappings are dropped from the raw *SITC*-to-*ISIC* concordance for *SITC* sectors as specified in Table 2. Table 2 lists the *SITC*-to-*ISIC* mappings that are retained for *SITC* sectors with otherwise non-unique mappings. This fourth treatment removes 14 mappings (65 non-unique mappings out of now 803 mappings overall remain).

Removal of non-unique mappings to *ISIC* non-manufacturing products. In a fifth treatment step, non-unique mappings are dropped from the raw *SITC*-to-*ISIC* concordance if these non-unique mappings point to *ISIC* non-manufacturing industries whenever there is a manufacturing-non-manufacturing. Non-manufacturing industries have *ISIC* rev. 2 codes below 300. This fifth treatment removes 3 mappings (59 non-unique mappings out of now 800 mappings overall remain).

Manual treatments based on existing OECD concordance. In a sixth and final treatment step, all remaining non-unique mappings are drop-

Table 2: Manually Retained Mappings from *SITC* to *ISIC*

<i>SITC</i>		<i>ISIC</i>
0711	Coffee, Not Roasted, whether or not decaffeinated	111
2120	Mink Skins, Raw Furskins, and Pieces of Furskins	113
2440	Cork, Natural, Raw and Waste (including natural cork)	121
2651	Flax, Raw or Processed but not spun; Flax Tow and Waste	111
2772	Natural Abrasives, n.e.s.	290
2871	Copper Ore and Concentrates, Copper Matte, Cement Copper	230
2872	Nickel Ores and Concentrates, Nickel Mattes	230
2873	Aluminium Ores and Concentrates (including alumina)	230
2911	Bones, Horns, Ivory, Hooves, Claws, Coral, Shells and similar products	130
2919	Materials of Animal Origin, n.e.s.	130
2929	Materials of Vegetable Origin, n.e.s.	121

Note: Mappings for the listed *SITC* (rev. 2) sectors at the 4-digit level are not unique in a raw *SITC*-to-*ISIC* concordance based on HS 6-digit crosswalks. The listed mappings are manually retained.

ped from the raw *SITC*-to-*ISIC* concordance for *SITC* sectors as specified in Table 3. Table 3 lists the *SITC*-to-*ISIC* mappings that are retained for *SITC* sectors with otherwise non-unique mappings, based on the existing OECD concordance. This sixth and final treatment removes 60 mappings (only unique mappings remain, 768 mappings overall).

For this final step, note that the existing OECD concordance for manufacturing industries erroneously maps to an *ISIC* code group starting with 380. No such group exists in *ISIC* revision 2. Table 4 lists the corrected mappings.

2 File Contents

The file `sitc2isic.csv` contains the concordance.

`sitc2isic.csv` (768 obs.)

	Variable	Description
1.	<code>sitc2</code>	SITC (Rev.2) 4-digit sector (string) ^a
2.	<code>sitc4dgt</code>	SITC (Rev.2) 4-digit sector (numeric)
3.	<code>isic2</code>	ISIC (Rev.2) 3-digit sector ^b

^aObservations are 768 *SITC* sectors.

^bObservations are 40 *ISIC* sectors.

References

FEENSTRA, ROBERT C., LIPSEY, ROBERT E., DENG, HAIYAN, MA, ALYSON C., and MO, HENGYONG (2005): "World Trade Flows: 1962-2000," *NBER Working Paper*, 11040

HOEKMAN, BERNARD, MATTOO, AADITYA, and ENGLISH, PHILIP (eds.) (2002): *Development, trade, and the WTO: A handbook*. World Bank, Washington, D.C.

Table 3: Manually Retained Mappings Based on OECD Concordance

<i>SITC</i>		<i>ISIC</i>
0564	Flour, Meals and Flakes of Potatoes, Fruit and Vegetables n.e.s.	311
0819	Food Waste and Prepared Animal Feed n.e.s.	312
5121	Acyclic Alcohols and their Derivatives	351
5221	Chemical elements	351
5335	Glazes, Driers, Putty	352
5622	Mineral or Chemical Fertilizers, Phosphatic	351
5983	Organic Chemical Products n.e.s.	352
5989	Chemical Products and Preparations n.e.s.	352
6123	Parts of Footwear of any material except metal and asbestos	324
6573	Coated or Impregnated Textile Fabrics and Products n.e.s.	321
6618	Construction Materials of asbestos-cement or fibre-cements	369
6931	Wire, Cables, Cordage, Ropes, Plaited Bans, Slings and the like	371
6954	Interchangeable Tools for Hand or Machine Tools	382
7148	Gas Turbines n.e.s.	382
7149	Parts, n.e.s. of the Engines and Motors of group 714	384
7499	Other Non-electric Parts and Accessories of Machinery n.e.s.	382
7732	Electrical Insulating Equipment	362
7758	Electro-thermic Appliances n.e.s.	383
7788	Other Electrical Machinery and Equipment n.e.s.	383
7861	Trailers and Transports Containers	384
7919	Railway Track Fixtures and Fittings, Parts n.e.s. of heading 791	384
7928	Aircraft n.e.s. and Associated Equipment	384
8124	Lighting Fixture and Fittings, Lamps, Lanterns, and Parts n.e.s.	381
8212	Furniture for Medical, Surgical, Dental or Veterinary Practice	385
8219	Other Furniture and Parts thereof n.e.s.	381
8510	Footwear	324
8959	Other Office and Stationary Supplies	352
8993	Candles, Matches, Combustible Products	352

Note: Mappings for the listed *SITC* (rev. 2) sectors at the 4-digit level are not unique in a raw *SITC*-to-*ISIC* concordance based on HS 6-digit crosswalks. The listed mappings are retained based on an existing OECD concordance for manufacturing industries between *SITC* rev. 2 at the 5-digit level and *ISIC* rev. 2 (see footnote 1).

Table 4: Corrected Mappings in OECD Concordance

<i>SITC</i>		<i>ISIC</i>
282--	Ferrous waste and scrap; remelting scrap ingots of iron or steel	37---
282--	Ferrous waste and scrap; remelting scrap ingots of iron or steel	371--
282--	Ferrous waste and scrap; remelting scrap ingots of iron or steel	3710-
2882-	Other non-ferrous base metal waste and scrap, n.e.s.	37---
2882-	Other non-ferrous base metal waste and scrap, n.e.s.	372--
2882-	Other non-ferrous base metal waste and scrap, n.e.s.	3720-
68914	Magnesium waste and scrap	37---
68914	Magnesium waste and scrap	372--
68914	Magnesium waste and scrap	3720-

Note: Mappings for the listed *SITC* (rev. 2) sectors at the 5-digit level point to *ISIC* sectors that do not belong to *ISIC* revision 2. The listed mappings are accordingly corrected mappings.