

## Danish input-output-consistent investment matrices

Danish standard input-output tables display the supply of investment goods from domestic production as well as from imports in one single column for each of the 12 types of investment in the Danish input-output tables. Thus for analytical purposes it is possible to assess the consequences on domestic production and imports of an increase in the total demand of the particular investment. However, quite a lot of effort is put into the compilation of so-called investment matrices. For each of the 12 types of investments a use table in the dimension product by investing industry exists. They measure the amount of capital goods invested by each of the 69 investing industries for each type of investment.

This set of matrices is linked with the input-output tables by drawing on the same market share matrices that are used for the compilation of the ordinary input-output tables. Thus all of the investment goods among the approximately 2350 products are attributed to the industries where they are produced and finally they are split between domestic production and imports. The result are input-output consistent matrices in the dimension 117 supplying (domestic or foreign) industries by 69 investing industries. Two additional matrices indicate the content of among other things VAT and taxes tied to the supply of investment goods.

The following types of investments are covered by the matrices.

**Table 1. Types of investment covered**

No.	GFCF transaction code	Text
1	5110	Dwellings
2	5121	Buildings other than dwellings
3	5122	Other structures and land improvements
4	5131	Transport equipment
5	5132	Computer hardware
6	5133	Telecommunication equipment
7	5139	Other machinery and equipment and weapon systems
8	5150	Cultivated biological resources
9	5171	Research and development
10	5172	Mineral exploration and evaluation
11	5173	Computer software and databases
12	5179	Entertainment, literary or artistic originals and other intellectual property products

The data has been organized in 5 different files for each type of investment. The naming of the files is based on the transaction code displayed in table 1.

**Table 2. Matrix names and dimensions**

File name	Dimension	Description
DZ<GFCF transaction>_yy	117 * 69	Domestic supply from 117 industries by 69 investing industries
DM<GFCF transaction>_yy	117 * 69	Imports from 117 foreign industries by 69 investing industries
DC<GFCF transaction>_yy	117 * 69	Custom duties by 69 investing industries
IV<GFCF transaction>_yy	5 * 69	Non-product specific imports by 69 investing industries
YM<GFCF transaction>_yy	5 * 69	Primary inputs by 69 investing industries

**Table 3. List of 117 industries supplying investment goods.**

	Industry	Text
1	010000	Agriculture and horticulture
2	020000	Forestry
3	030000	Fishing
4	060000	Extraction of oil and gas
5	080090	Extraction of gravel and stone
6	090000	Mining support service activities
7	100010	Production of meat and meat products
8	100020	Processing and preserving of fish
9	100030	Manufacture of dairy products
10	100040	Manufacture of grain mill and bakery products
11	100050	Other manufacture of food products
12	110000	Manufacture of beverages
13	120000	Manufacture of tobacco products
14	130000	Manufacture of textiles
15	140000	Manufacture of wearing apparel
16	150000	Manufacture of leather and footwear
17	160000	Manufacture of wood and wood products
18	170000	Manufacture of paper and paper products
19	180000	Printing etc.
20	190000	Oil refinery etc.
21	200010	Manufacture of basic chemicals
22	200020	Manufacture of paints and soap etc.
23	210000	Pharmaceuticals
24	220000	Manufacture of rubber and plastic products
25	230010	Manufacture of glass and ceramic products
26	230020	Manufacture of concrete and bricks
27	240000	Manufacture of basic metals
28	250000	Manufacture of fabricated metal products
29	260010	Manufacture of computers and communication equipment etc.
30	260020	Manufacture of other electronic products
31	270010	Manufacture of electric motors, etc.

32	270020	Manufacture of wires and cables
33	270030	Manufacture of household appliances, lamps, etc.
34	280010	Manufacture of engines, windmills and pumps
35	280020	Manufacture of other machinery
36	290000	Manufacture of motor vehicles and related parts
37	300000	Manufacture of ships and other transport equipment
38	310000	Manufacture of furniture
39	320010	Manufacture of medical instruments, etc.
40	320020	Manufacture of toys and other manufacturing
41	330000	Repair and installation of machinery and equipment
42	350010	Production and distribution of electricity
43	350020	Manufacture and distribution of gas
44	350030	Steam and hot water supply
45	360000	Water collection, purification and supply
46	370000	Sewerage
47	383900	Waste management and materials recovery
48	410009	Construction of new buildings
49	420000	Civil engeneering
50	430003	Professional repair and maintenance of buildings
51	430004	Own-account repair and maintenance of buildings
52	450010	Sale of motor vehicles
53	450020	Repair and maintenance of motor vehicles etc.
54	460000	Wholesale
55	470000	Retail sale
56	490010	Passenger rail transport, interurban
57	490020	Transport by suburban trains, buses and taxi operation, etc.
58	490030	Freight transport by road and via pipeline
59	500000	Water transport
60	510000	Air transport
61	520000	Support activities for transportation
62	530000	Postal and courier activities
63	550000	Hotels and similar accommodation
64	560000	Restaurants
65	580010	Publishing
66	580020	Publishing of computer games and other software
67	590000	Motion picture and television programme production, and sound recording activities
68	600000	Radio and television broadcasting
69	610000	Telecommunications
70	620000	Information technology service activities
71	630000	Information service activities
72	640010	Monetary intermediation
73	640020	Mortgage credit institutes, etc.
74	650000	Insurance and pension funding
75	660000	Other financial activities
76	680010	Buying and selling of real estate

77	680030	Renting of residential buildings
78	680023	Owner-occupied dwellings
79	680024	Renting of non-residential buildings
80	690010	Legal activities
81	690020	Accounting and bookkeeping activities
82	700000	Business consultancy activities
83	710000	Architectural and engineering activities
84	720001	Scientific research and development (market)
85	720002	Scientific research and development (non-market)
86	730000	Advertising and market research
87	740000	Other technical business services
88	750000	Veterinary activities
89	770000	Rental and leasing activities
90	780000	Employment activities
91	790000	Travel agent activities
92	800000	Security and investigation activities
93	810000	Services to buildings, cleaning and landscape activities
94	820000	Other business service activities
95	840010	Public administration
96	840022	Rescue service ect. (market)
97	840021	Defence, public order, security and justice activities (non-market)
98	850010	Primary education
99	850020	Secondary education
100	850030	Higher education
101	850042	Adult and other education (market)
102	850041	Adult and other education (non-market)
103	860010	Hospital activities
104	860020	Medical and dental practice activities
105	870000	Residential care activities
106	880000	Social work activities without accommodation
107	900000	Theatres, concerts, and arts activities
108	910001	Libraries, museums and other cultural activities (market)
109	910002	Libraries, museums and other cultural activities (non-market)
110	920000	Gambling and betting activities
111	930011	Sports activities (market)
112	930012	Sports activities (non-market)
113	930020	Amusement and recreation activities
114	940000	Activities of membership organizations
115	950000	Repair of personal goods
116	960000	Other personal service activities
117	970000	Activities of households as employers of domestic personnel

**Table 4. Investing industries**

No	Industry code	Industry text
1	01000	Agriculture and horticulture
2	02000	Forestry
3	03000	Fishing
4	06090	Mining and quarrying
5	10120	Mfr. of food products, beverages and tobacco
6	13150	Textiles and leather products
7	16000	Mfr. of wood and wood products
8	17000	Mfr. of paper and paper products
9	18000	Printing etc.
10	19000	Oil refinery etc.
11	20000	Mfr. of chemicals
12	21000	Pharmaceuticals
13	22000	Mfr. of rubber and plastic products
14	23000	Mfr. of other non-metallic mineral products
15	24000	Mfr. of basic metals
16	25000	Mfr. of fabricated metal products
17	26000	Mfr. of electronic components
18	27000	Electrical equipment
19	28000	Mfr. of machinery
20	29000	Mfr. of motor vehicles
21	30000	Mfr. of ships and other transport equipment
22	31320	Mfr. of furniture and other manufacturing
23	33000	Repair and installation of machinery and equipment
24	35000	Electricity, gas, steam and air conditioning supply
25	36000	Water collection, purification and supply
26	37390	Sewerage; waste collection, treatment and disposal activities etc.
27	41430	Construction
28	45000	Wholesale and retail trade and repair of motor vehicles and motorcycles
29	46000	Wholesale
30	47000	Retail sale
31	49000	Land transport and transport via pipelines
32	50000	Water transport
33	51000	Air transport
34	52000	Support activities for transportation
35	53000	Postal and courier activities
36	55560	Accommodation and food service activities
37	58000	Publishing activities
38	59600	Motion picture and television program prod., sound recording; radio and television broadcasting
39	61000	Telecommunications
40	62630	IT and information service activities
41	64000	Financial service activities, except insurance and pension funding
42	65000	Insurance and pension funding

43	66000	Other financial activities
44	68100	Buying and selling of real estate
45	68300	Renting of non-residential buildings
46	68203	Renting of residential buildings
47	68204	Owner-occupied dwellings
48	69700	Legal and accounting activities; activities of head office; management consultancy activities
49	71000	Architectural and engineering activities
50	72001	Scientific research and development (market)
51	72002	Scientific research and development(non-market)
52	73000	Advertising and market research
53	74750	Other professional, scientific and technical activities; veterinary activities
54	77000	Rental and leasing activities
55	78000	Employment activities
56	79000	Travel agent activities
57	80820	Security and investigation; service to buildings and landscape; other business service activities
58	84101	Rescue service ect. (market)
59	84202	Public administration ect.
60	85101	Adult and other education (market)
61	85202	Education (non-market)
62	86000	Human health activities
63	87880	Residential care
64	90920	Arts and entertainment; libraries, museums and other cultural activities; gambling and betting
65	93000	Sports activities and amusement and recreation activities
66	94000	Activities of membership organizations
67	95000	Repair of personal goods
68	96000	Other personal service activities
69	97000	Activities of households as employers of domestic personnel

The content of the final two smaller tables are

**Table 5. IV<GFCF transaction> \_yy (Non-product specific imports)**

1	Transactions concerning Danish oil-activities in the North Sea
2	Tourism, Expenditure – revenue
3	Expenditure of Danish ships in foreign harbours
4	Non-product specific non-public imports
5	Non-product specific public imports

**Table 6. YM<GFCF transaction> \_yy (Primary inputs)**

1	Taxes on products, net
2	Value added tax
3	Empty
4	Empty

5	Empty
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