

How to make an input-output table for Jordan

Presentation for Statistics Jordan
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Input-output table for Jordan 2010

Million JD	Products (2365)	Industries (117)	Final use	Total
Products (2365)	U	F	q + b	
Industries (117)	V	g		
Imports (1)	b'	i * b'		
Primary input (5)	Y	Y _f	y	
Total	q' + b'	g'	f'	



Status for work with Jordanian IO table

- First version of the table for 2010 is ready
- The table was compiled using the GAUSS software
- Not time yet to convert it into R
- Work with R should continue
- A workable compilation can be done in Excel
- We will go through the necessary steps



Step 1. Get the necessary data ready

	Products (2365)	Industries (117)	Final use	Total
Products (2365)	U	F	q + b	
Industries (117)	V	g		
Imports (1)	b'	i * b'		
Primary input (5)	Y	Y _f	y	
Total	q' + b'	g'	f'	



Step 1. Get the necessary data

	Industries	Total domestic supply	Import	Total supply	Industries	Final demand	Total use
Products (basic prices)	V	q	b	q+b	U	F	q+b
Product taxes, net					tax	tax	
VAT					vat	vat	
Gross Value Added					gva		
Totals	g				f		



Data for V, q and b variables

2010	Recreation, culture, sport	Other services	Priv. househ. or employed persons	Production	Imports	Bridge column	Supply
Transaction code	000	000	000	000	0700	1000	Total
Industry / Com. group	92	93	95	Total			
Wheat	01110			252	126 814		133 026
Maize (corn)	01120			7700	114 734		121 434
Rice	01130			0			0
Sorghum	01140			1023			5 923
Barley	01150			2 617	96 516		99 133
Oats	01160			0	29		29
Millet	01170			0			0
Other cereals	01180			0	54		559
Vegetables	01200			337 89	32 709		370 579
Fruit and nuts	01300			143 946	46 727		206 673
Oilseeds and oleaginous fruits	01400			115 713	29 588		145 701
Potatoes	01510			6 013	66 698		72 711
Sweet potatoes, Cassava, Yams etc.	01590			0	652		652
Coffee, green	01610			0	28 223		28 223
Tea leaves	01620			0	22 375		22 375
Mate leaves	01630			0			0
Cocoa beans	01640			0			0
Spice and aromatic crops, raw	01650			668	17 376		18 044
Simulant, spice and aromatic crops, n.e.c.	01660			0	11 566		11 566
Dried beans, peas, lentils, pulses, n.e.c.	01700			989	10 782		11 771
Sugar crops	01800			0			0
Forex products	01910			201 961	5 078		207 039



➤ Data for the U and F matrices

2010		Household final consumption									
Transaction code	Million TSH	Food	Alcoholic beverages	Non-alcoholic beverages	Food services	Other services	Recreation, culture, sport	Membership organizations, n.e.c.	Health and social care, n.e.c.	Other	Total
Industry / Cons.-group		2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Wheat	51110										131 697
Maize (corn)	51120										110 776
Rice	51130										5 023
Sorghum	51140										86 904
Barley	51150										24
Rye	51160										24
Oats	51170										24
Malt	51180										24
Other cereals	51190										24
Vegetables	51200										44 086
Fruit and nuts	51210										120 877
Olives and olivaceous fruits	51220										13 909
Potatoes	51230										82
Sweet potatoes, Cassava, Yams etc.	51240										25 979
Coffee, green	51250										1 989
Tea leaves	51260										2
Rubber	51270										2
Cocoa beans	51280										15 763
Spice and aromatic crops, other	51290										1 114
Stemless, spiced and aromatic crops, n.e.c.	51300										932
Dried beans, peas, lentils, pulses, n.e.c.	51310										287 661
Sugar crops	51320										1 073
Foreign products	51330										
Cotton, silk, other fibre crops	51340										
Plants for perfumery, pharmacy, or insecticides, fungicides or dyes	51350										

➤ Data for product taxes, less subsidies

2010		Intermediate consumption									
Transaction code	Million TSH	Agriculture, hunting, rel. serv.	Forests, logging, related serv.	Fishing, fish farms, rel. serv.	Mining of coal and lignite, excl. of peat	Crude petroleum and natural gas	Mining of uranium and thorium ores	Mining of metal ores	Other	Total	Product tax, net
Industry / Cons.-group		2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Sales, NPISH membership organizations, non-market	52000	0	0	0	0	0	0	0	0	0	0
NPISH membership organizations, non-market	52007	0	0	0	0	0	0	0	0	0	0
Recreation, culture, sport, market	52009	0	0	0	0	0	0	0	0	0	0
Sales, NPISH recreation, culture, sport, non-market	52006	0	0	0	0	0	0	0	0	0	0
NPISH recreation, culture, sport, non-market	52007	0	0	0	0	0	0	0	0	0	0
Sales, Public recreation, culture, sport, non-market	52008	0	0	0	0	0	0	0	0	0	0
Public recreation, culture, sport, non-market	52009	0	0	0	0	0	0	0	0	0	0
Other services	52010	0	0	0	0	0	0	0	0	0	0
Domestic services	52020	0	0	0	0	0	0	0	0	0	0
Cons. of nonres. on territory	52030	0	0	0	0	0	0	0	0	0	0
Cons. of residents in RDW	52039	0	0	0	0	0	0	0	0	0	0
Totals:	479 158	12 229	58	502	0	-5	0	0	0	0	0
Column totals:											
Targets:											

➤ Data for VAT

2010		Intermediate consumption									
Transaction code	Million TSH	Agriculture, hunting, rel. serv.	Forests, logging, related serv.	Fishing, fish farms, rel. serv.	Mining of coal and lignite, excl. of peat	Crude petroleum and natural gas	Mining of uranium and thorium ores	Mining of metal ores	Other	Total	VAT
Industry / Cons.-group		2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Health and social care, market	53000	0	0	0	0	0	0	0	0	0	0
Sales, NPISH health, social care, non-market	53006	0	0	0	0	0	0	0	0	0	0
NPISH health, social care, non-market	53007	0	0	0	0	0	0	0	0	0	0
Sales, Public health, social care, non-market	53008	0	0	0	0	0	0	0	0	0	0
Public health, social care, non-market	53009	0	0	0	0	0	0	0	0	0	0
Environmental protection, market	54000	0	0	0	0	0	0	0	0	0	0
Sales, Public Environmental protection, non-market	54006	0	0	0	0	0	0	0	0	0	0
Public Environmental protection, non-market	54007	0	0	0	0	0	0	0	0	0	0
Membership organizations, market	55000	0	0	0	0	0	0	0	0	0	0
Sales, NPISH membership organizations, non-market	55006	0	0	0	0	0	0	0	0	0	0
NPISH membership organizations, non-market	55007	0	0	0	0	0	0	0	0	0	0
Recreation, culture, sport, market	56000	0	0	0	0	0	0	0	0	0	0
Sales, NPISH recreation, culture, sport, non-market	56006	0	0	0	0	0	0	0	0	0	0
NPISH recreation, culture, sport, non-market	56007	0	0	0	0	0	0	0	0	0	0
Sales, Public recreation, culture, sport, non-market	56008	0	0	0	0	0	0	0	0	0	0
Public recreation, culture, sport, non-market	56009	0	0	0	0	0	0	0	0	0	0
Other services	57000	0	0	0	0	0	0	0	0	0	0
Domestic services	58000	0	0	0	0	0	0	0	0	0	0
Cons. of nonres. on territory	59000	0	0	0	0	0	0	0	0	0	0
Cons. of residents in RDW	59009	0	0	0	0	0	0	0	0	0	0
Totals:	1 343 835	43 067	27	209	0	4	0	0	0	0	0
Column totals:											
Targets:											
Distance:											

➤ Step 2: Calculate market share matrix D and import share vector

$$D = V(q)^{-1}$$

- It actually just means that the V matrix should be divided by the row sums. For each product it represents the shares that has been produced by each of the domestic industries

$$m = \frac{b}{(b + q)}$$

- It actually just means the share that import b makes of the total supply.

➤ Step 3: Calculate the intermediate consumption matrix DZU

$$DZU = D(I - m)U$$

- D (59*252) represents market shares of each product, (I-m) (252*252) makes sure that imported goods are deducted and only domestically produced goods are considered. U is (252*59).
- The result DZU is 59*59

➤ Step 3. Introduce product taxes, VAT and adjustment for tourists



Step 4. Introduce wholesale and retail trade margins



Step 5. Add gross value added

- Look at Excel sheet