PyIO 2.0 Quick Start

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Installation

If you want to see the source codes and revise it, please follow those steps. Otherwise, please download the without installation version.

Need to install Python

1. Download and install Python 2.4
   from http://www.python.org/download/releases/2.4.4/
2. Download and install Python 2.4 Numeric-24.2
   from http://sourceforge.net/projects/numpy/files/
   (Documentation for Numeric is here or as a pdf file)
3. Download and install Python 2.4 pywin32-213
   from http://sourceforge.net/projects/pywin32/
4. Download and install wxPython 2.8.10.1 for Python 2.4
   fromhttp://downloads.sourceforge.net/wxpython/wxPython2.8-win32-unicode-2.8.10.1-py24.exe
5. Download “Pyio2.0.zip” from http://www.real.uiuc.edu/pyio/pyio2.0.zip

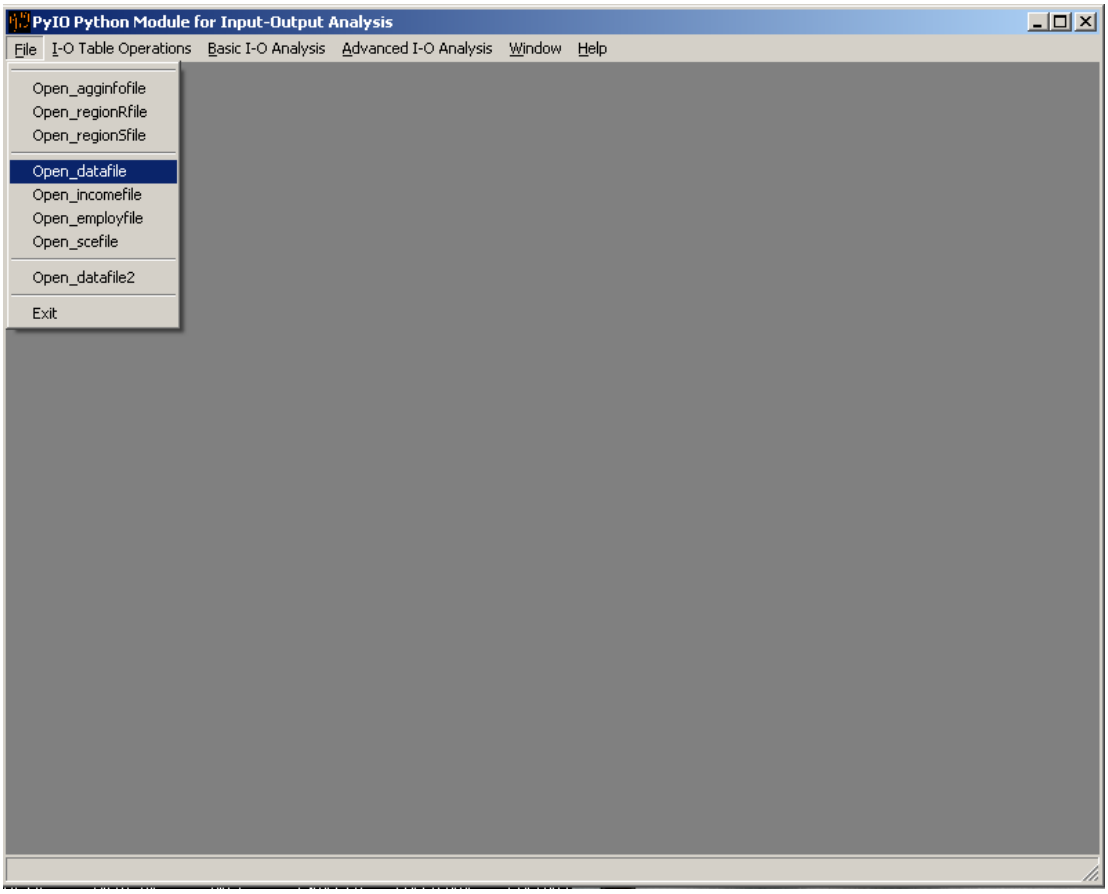
Do NOT need to install Python

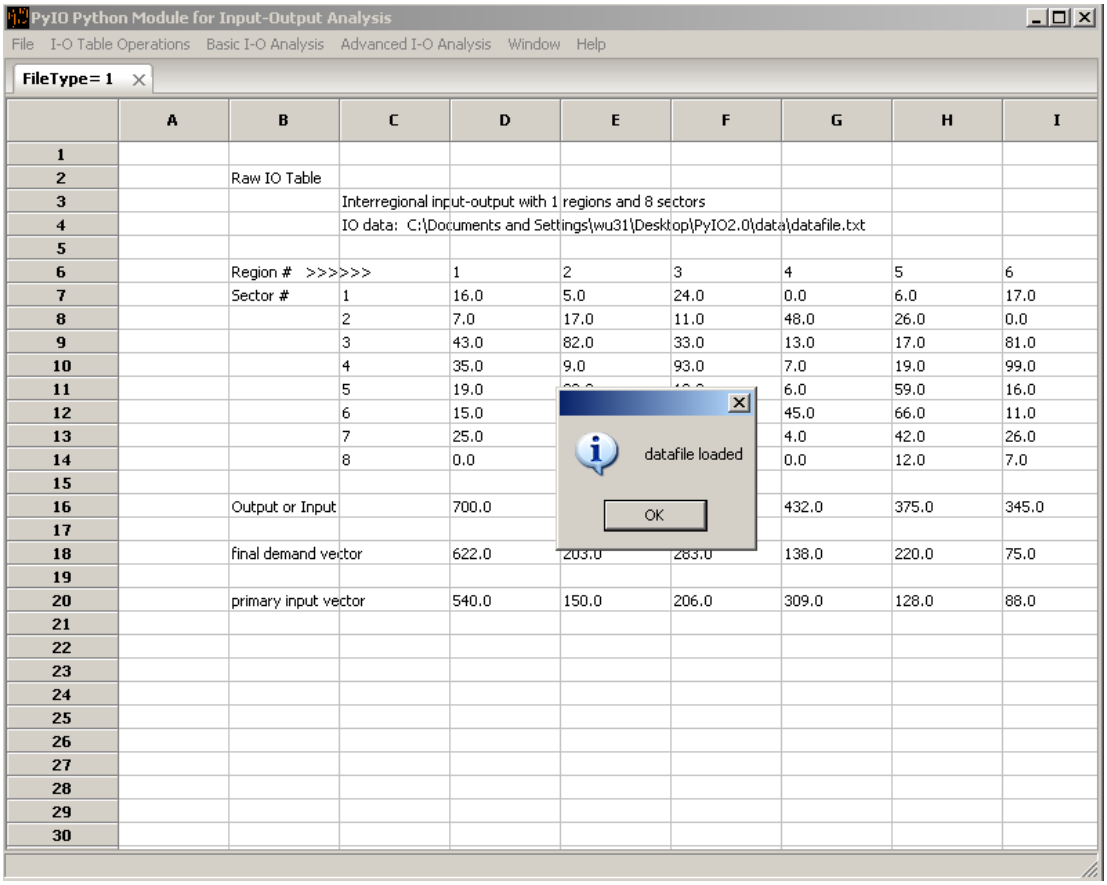
1. Please download “Pyio2.0.zip” from
   http://www.real.uiuc.edu/pyio/pyio2.0.zip
2. Unzip the file and execute “pyio2.0.exe”

Instructions

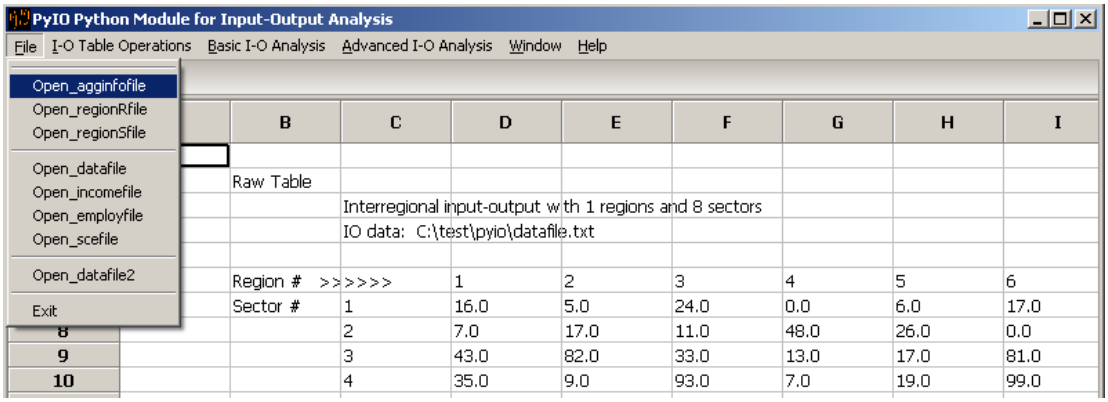
I-O Table Operations

1. Sectoral aggregations
   File -> Open_datafile[datafile.txt]
   File -> Open_agginfofile[agg_info.txt]
   I-O Table Operations -> To aggregate sectors

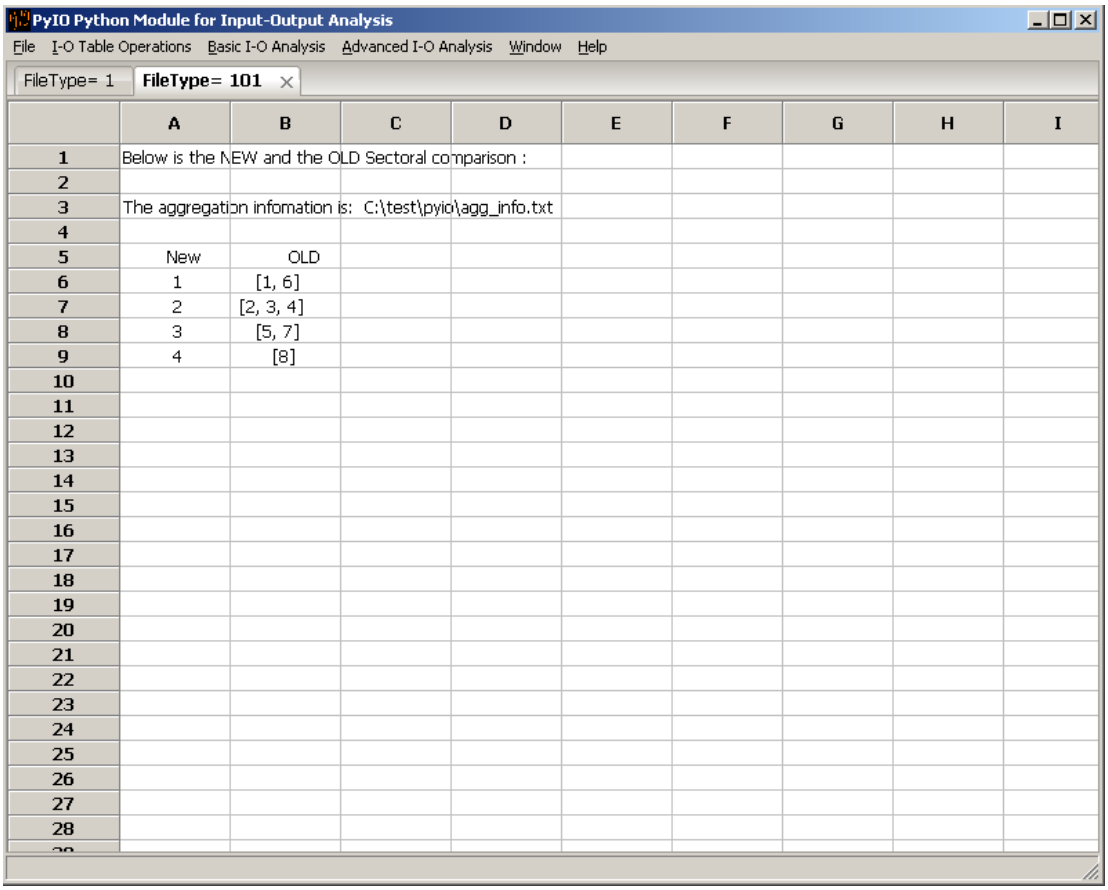




	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



	A	B	C	D	E	F	G	H	I
				1	2	3	4	5	6
			1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0



	A	B	C	D	E	F	G	H	I
1	Below is the NEW and the OLD Sectoral comparison :								
2									
3	The aggregation infomation is: C:\test\pyio\agg_info.txt								
4									
5	New	OLD							
6	1	[1, 6]							
7	2	[2, 3, 4]							
8	3	[5, 7]							
9	4	[8]							
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
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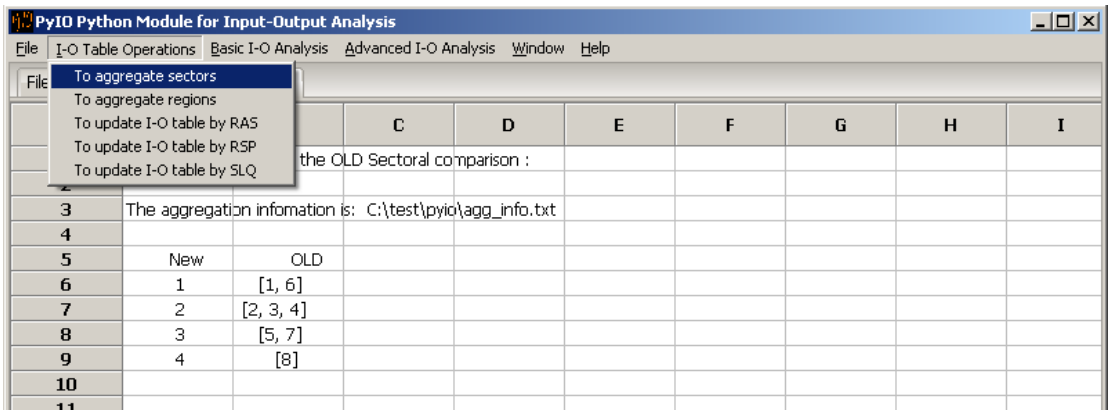
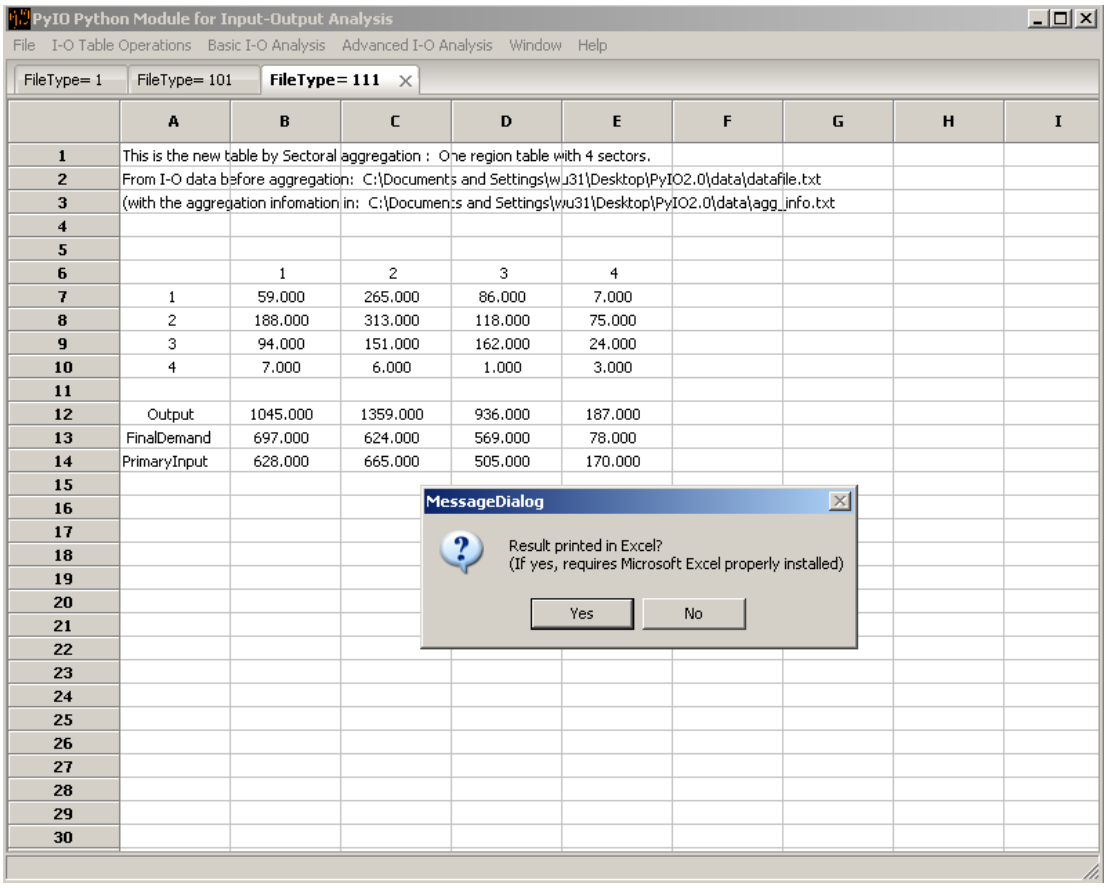
27									
28									





2. Spatial aggregations

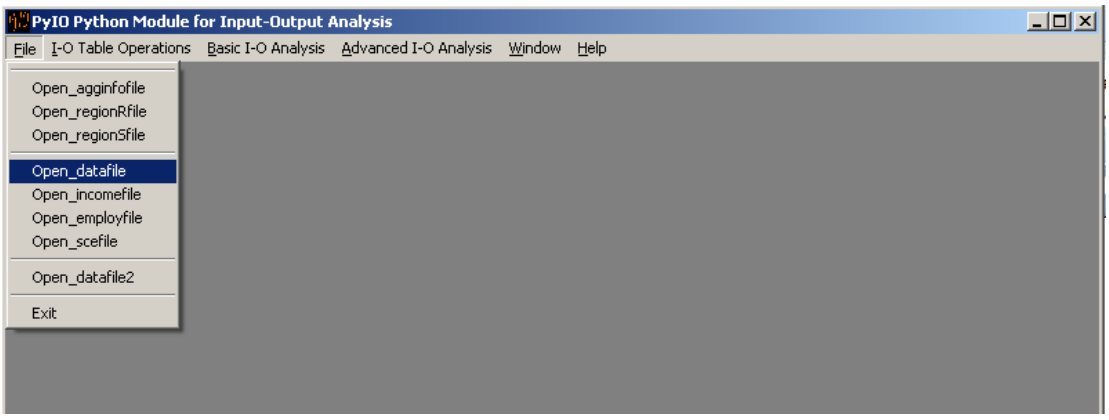
   *under construction

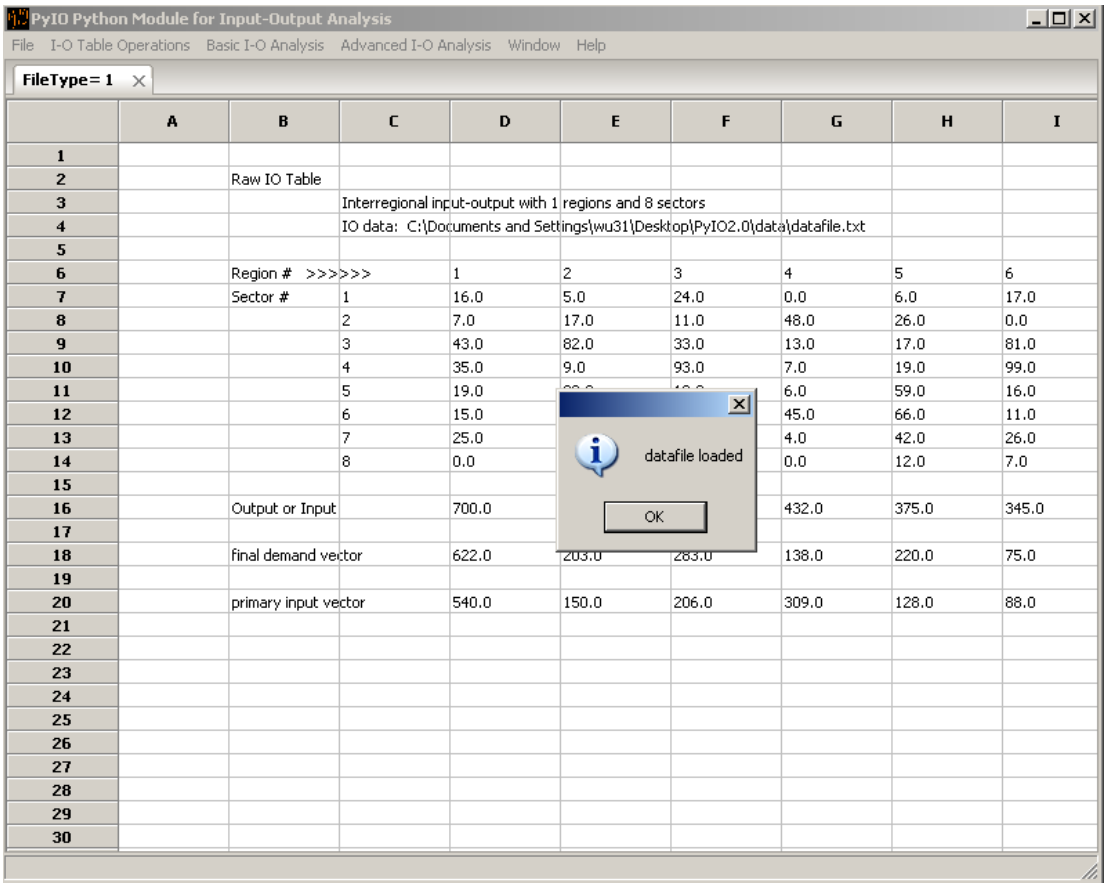
3. To update I-O table by using RAS method

   File -> Open_datafile[datafile.txt]

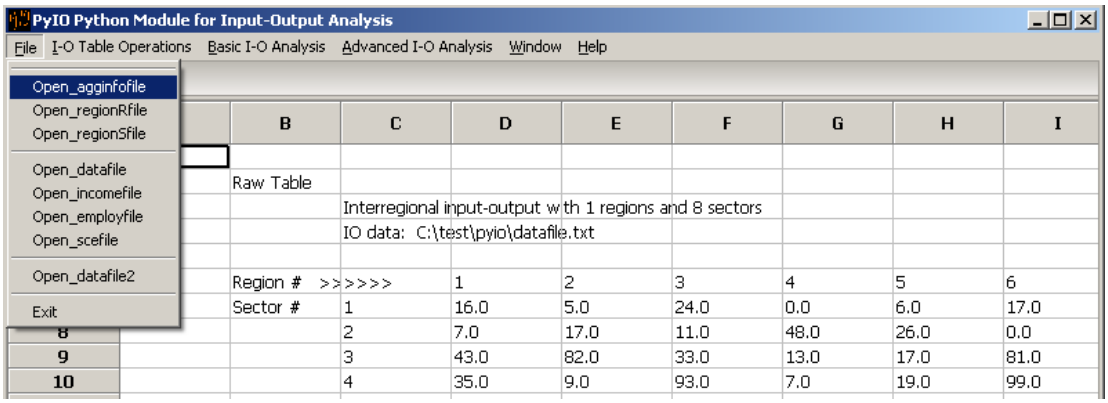
   File -> Open_regionRfile[region_R.txt]

   I-O Table Operations -> To update I-O table by RAS

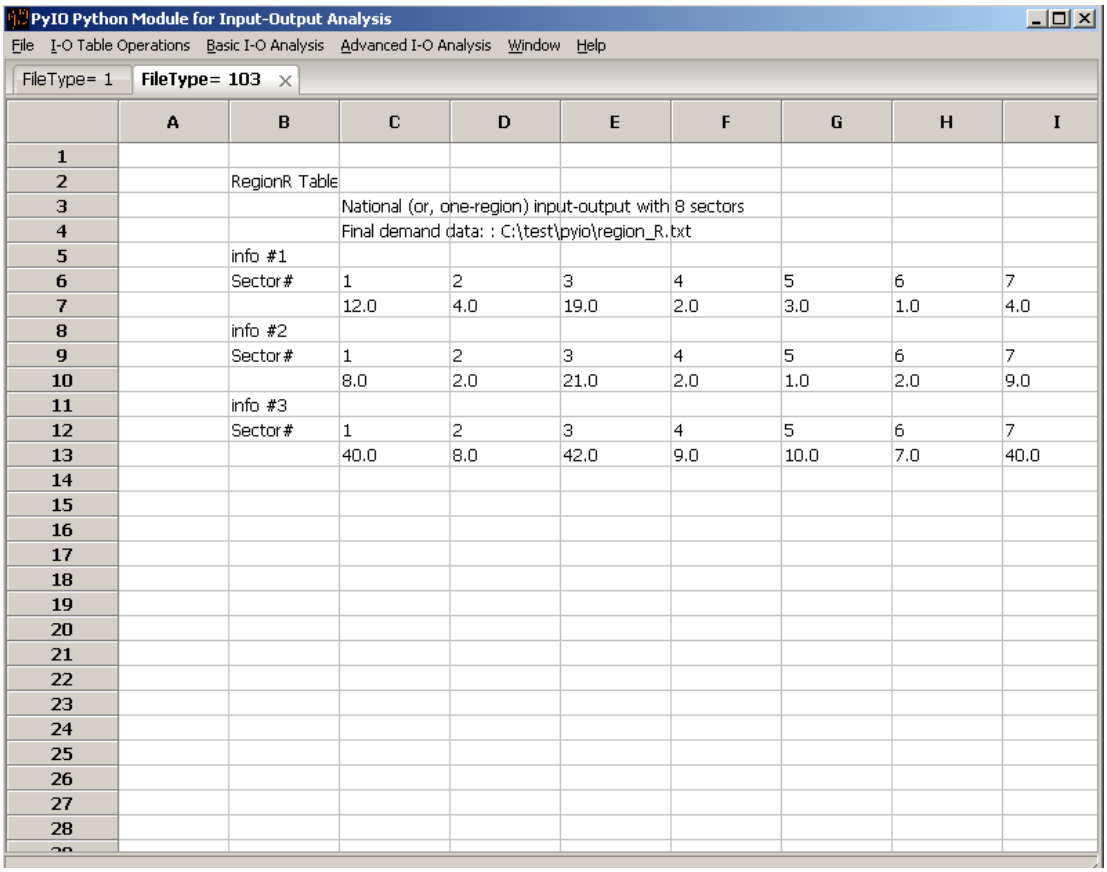




	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



	B	C	D	E	F	G	H	I
	Raw Table							
		Interregional input-output with 1 regions and 8 sectors						
		IO data: C:\test\pyio\datafile.txt						
	Region # >>>>>>	1	2	3	4	5	6	
	Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8		2	7.0	17.0	11.0	48.0	26.0	0.0
9		3	43.0	82.0	33.0	13.0	17.0	81.0
10		4	35.0	9.0	93.0	7.0	19.0	99.0



	A	B	C	D	E	F	G	H	I
1									
2		RegionR Table							
3			National (or, one-region) input-output with 8 sectors						
4			Final demand data: : C:\test\pyio\region_R.txt						
5		info #1							
6		Sector#	1	2	3	4	5	6	7
7			12.0	4.0	19.0	2.0	3.0	1.0	4.0
8		info #2							
9		Sector#	1	2	3	4	5	6	7
10			8.0	2.0	21.0	2.0	1.0	2.0	9.0
11		info #3							
12		Sector#	1	2	3	4	5	6	7
13			40.0	8.0	42.0	9.0	10.0	7.0	40.0
14									
15									
16									
17									
18									
19									
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22									
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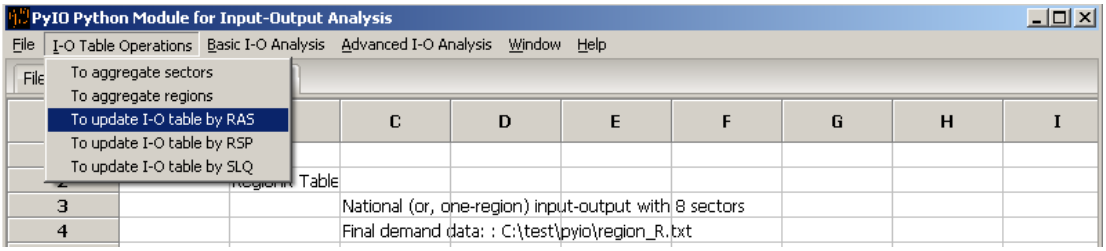
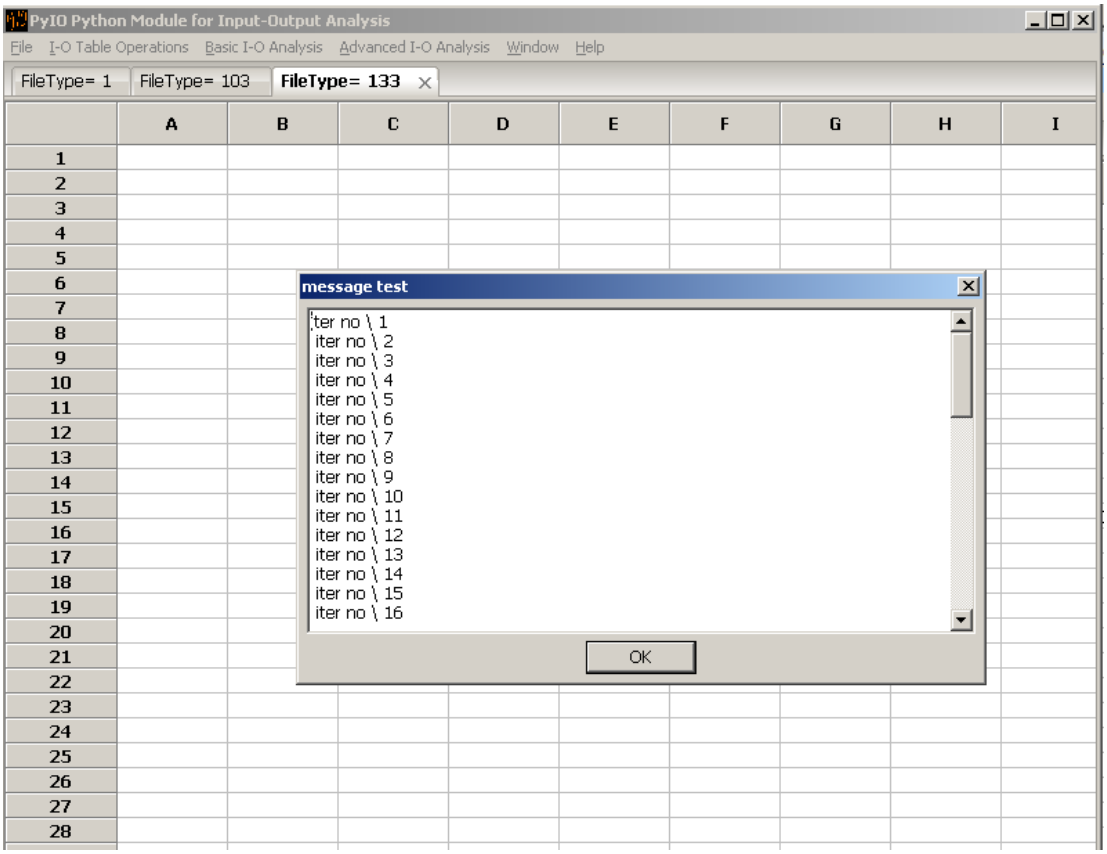
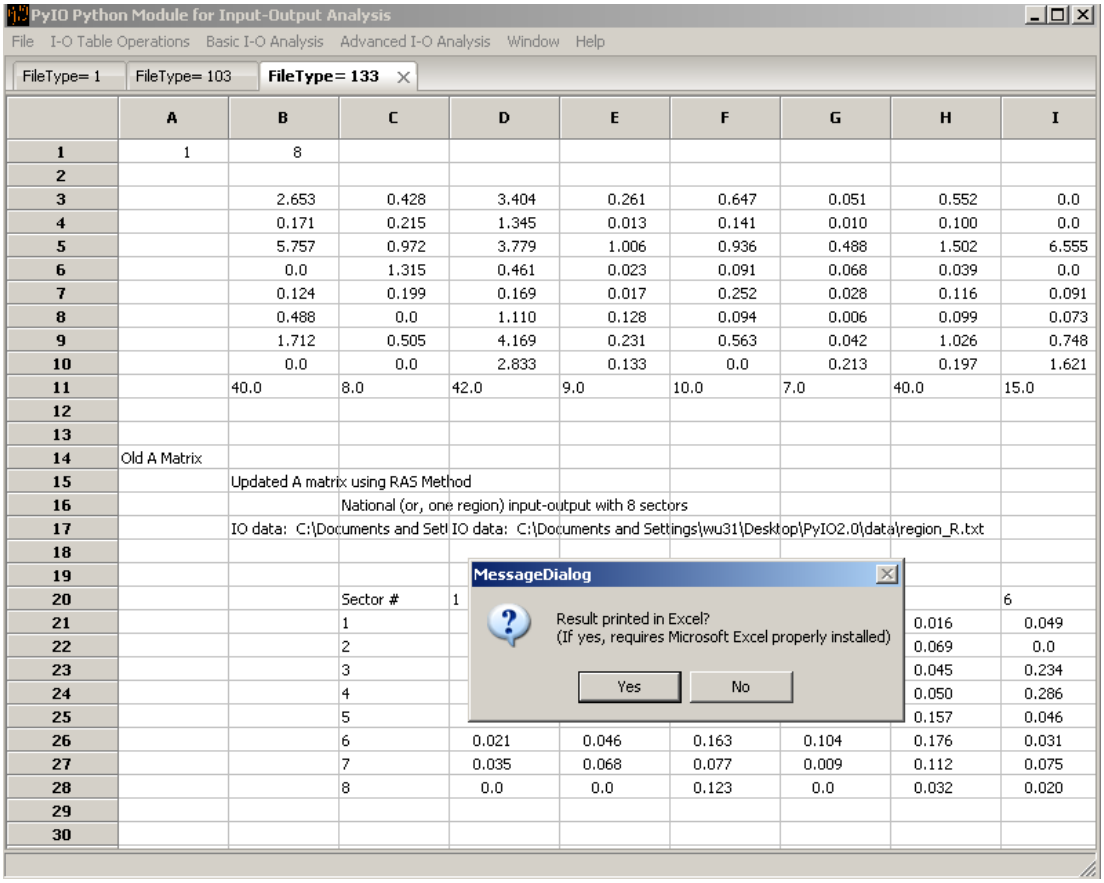
24									
25									
26									
27									
28									



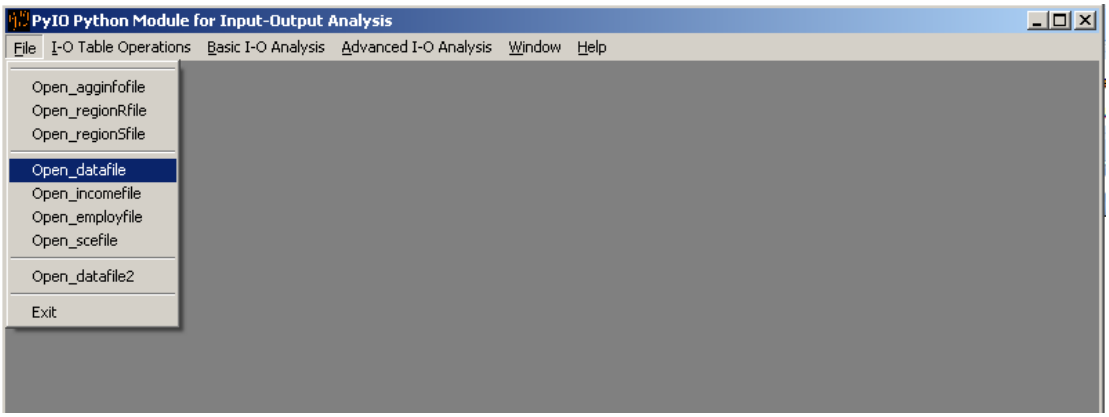
	C	D	E	F	G	H	I
3	National (or, one-region) input-output with 8 sectors						
4	Final demand data: : C:\test\pyio\region_R.txt						

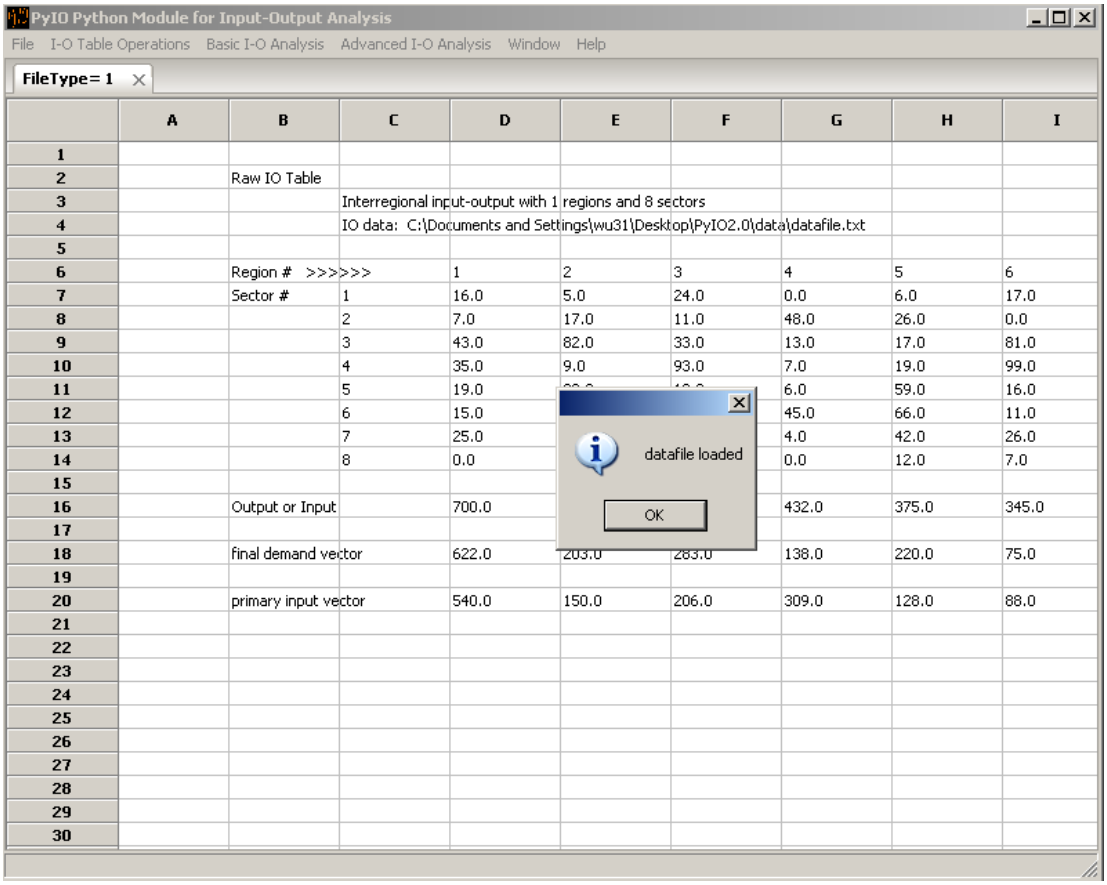




	A	B	C	D	E	F	G	H	I
1	1	8							
2									
3		2.653	0.428	3.404	0.261	0.647	0.051	0.552	0.0
4		0.171	0.215	1.345	0.013	0.141	0.010	0.100	0.0
5		5.757	0.972	3.779	1.006	0.936	0.488	1.502	6.555
6		0.0	1.315	0.461	0.023	0.091	0.068	0.039	0.0
7		0.124	0.199	0.169	0.017	0.252	0.028	0.116	0.091
8		0.488	0.0	1.110	0.128	0.094	0.006	0.099	0.073
9		1.712	0.505	4.169	0.231	0.563	0.042	1.026	0.748
10		0.0	0.0	2.833	0.133	0.0	0.213	0.197	1.621
11		40.0	8.0	42.0	9.0	10.0	7.0	40.0	15.0
12									
13									
14	Old A Matrix								
15		Updated A matrix using RAS Method							
16			National (or, one region) input-output with 8 sectors						
17		IO data: C:\Documents and Set	IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\region_R.txt						
18									
19									
20			Sector #	1					6
21			1					0.016	0.049
22			2					0.069	0.0
23			3					0.045	0.234
24			4					0.050	0.286
25			5					0.157	0.046
26			6	0.021	0.046	0.163	0.104	0.176	0.031
27			7	0.035	0.068	0.077	0.009	0.112	0.075
28			8	0.0	0.0	0.123	0.0	0.032	0.020
29									
30									

4. To update I-O table by RSP (Regional Supply Percentage)
   File -> Open_datafile[datafile.txt]
   File -> Open_regionRfile[region_R.txt]
   I-O Table Operations -> To update I-O table by RSP





	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>		1	2	3	4	5	6
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
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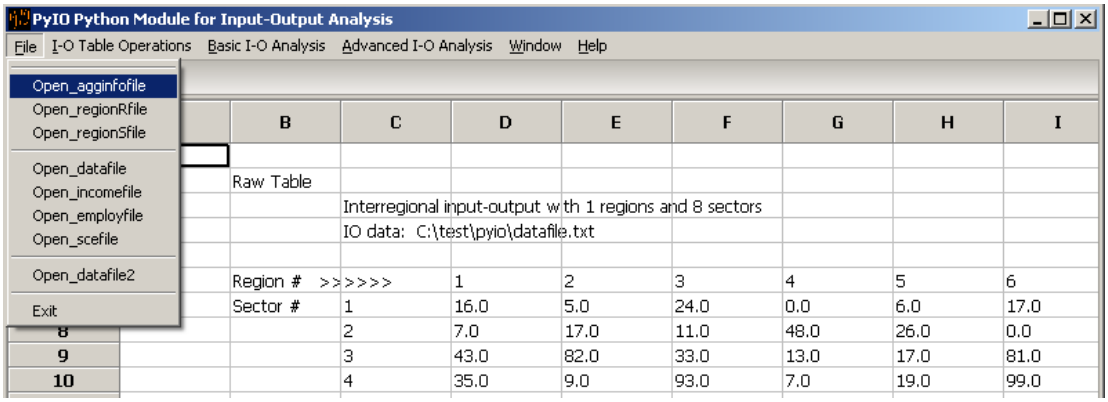
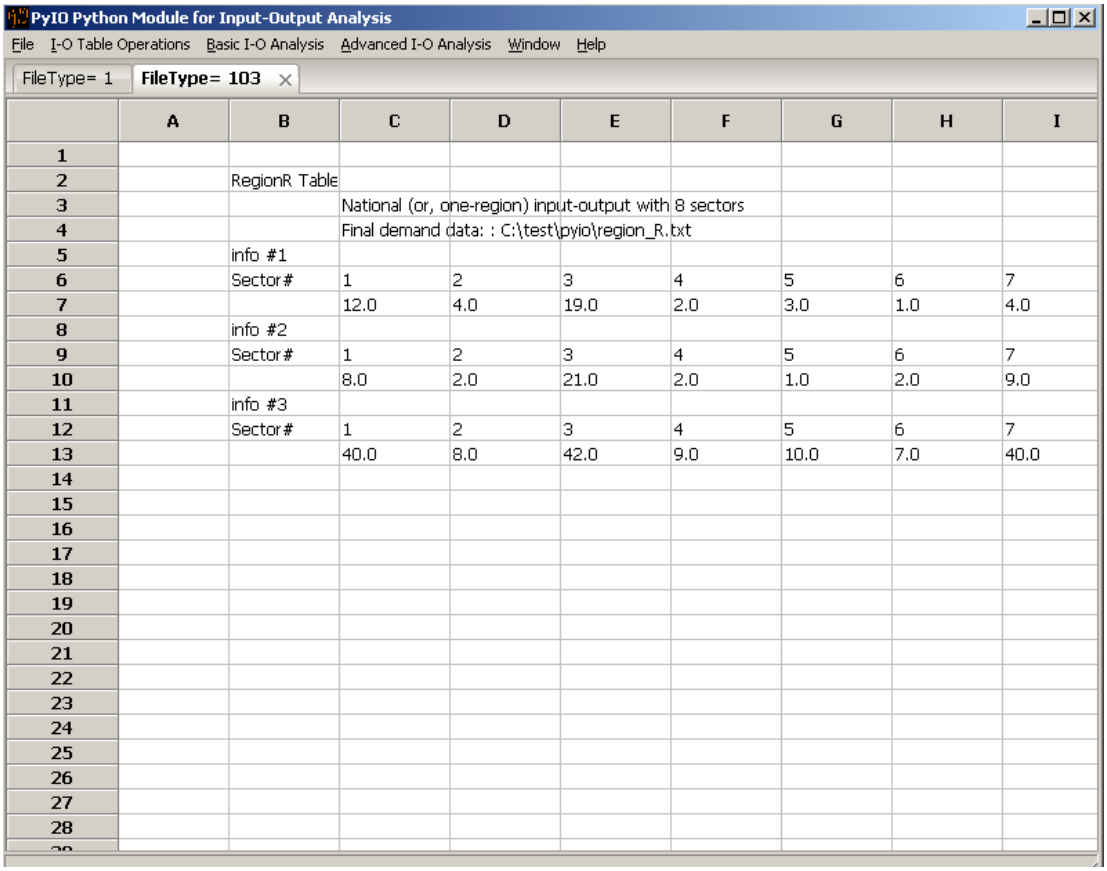
26									
27									
28									
29									
30									



	A	B	C	D	E	F	G	H	I
1									
2		Raw Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\test\pyio\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0



	A	B	C	D	E	F	G	H	I
1									
2		RegionR Table							
3			National (or, one-region) input-output with 8 sectors						
4			Final demand data: : C:\test\pyio\region_R.txt						
5		info #1							
6		Sector#	1	2	3	4	5	6	7
7			12.0	4.0	19.0	2.0	3.0	1.0	4.0
8		info #2							
9		Sector#	1	2	3	4	5	6	7
10			8.0	2.0	21.0	2.0	1.0	2.0	9.0
11		info #3							
12		Sector#	1	2	3	4	5	6	7
13			40.0	8.0	42.0	9.0	10.0	7.0	40.0
14									
15									
16									
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18									
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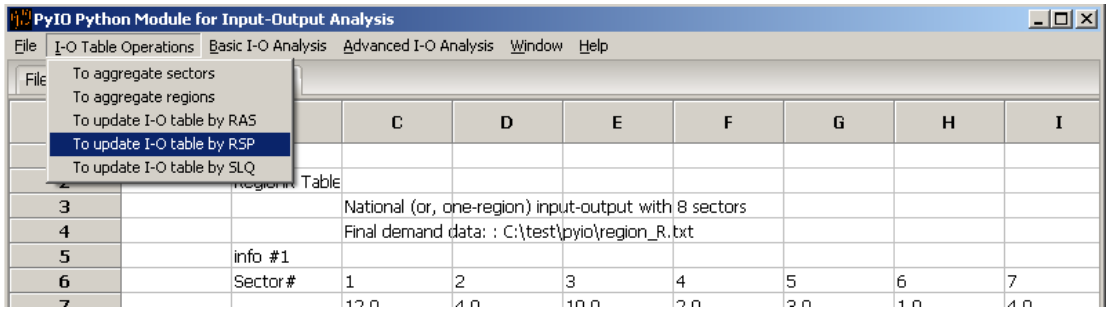
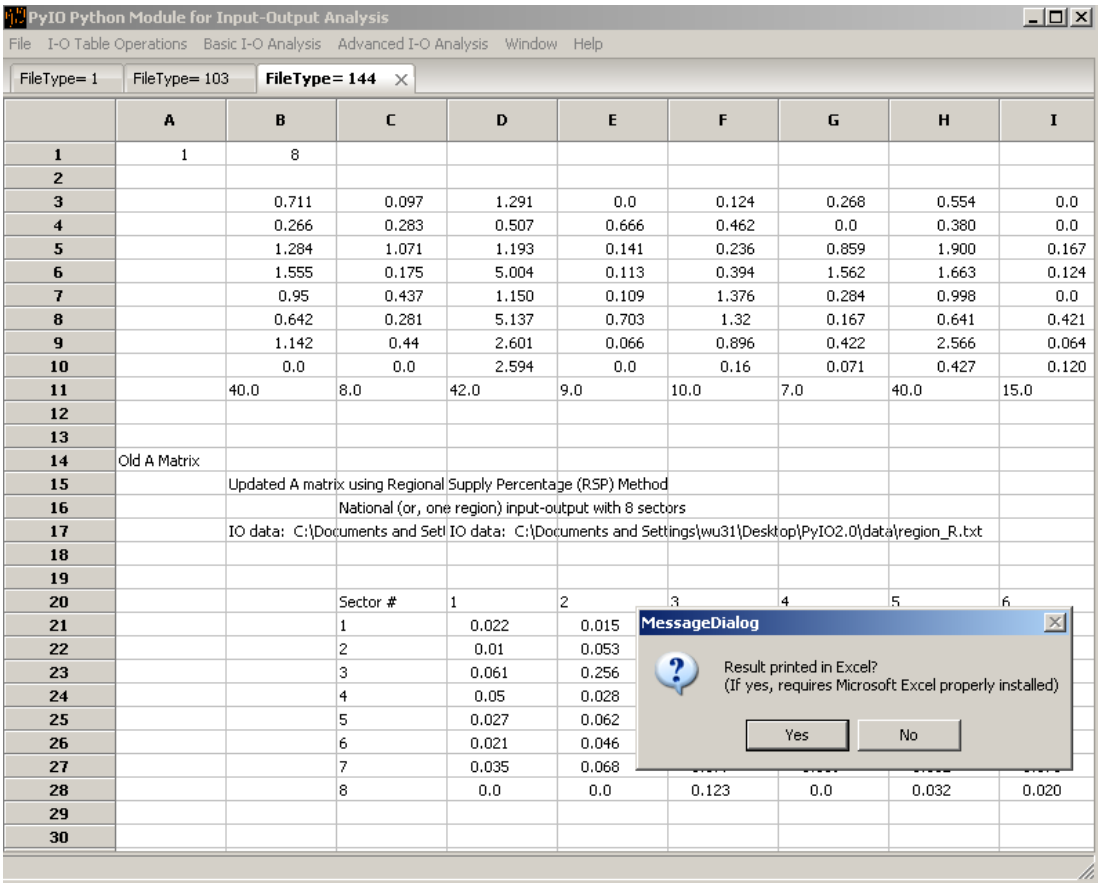
27									
28									

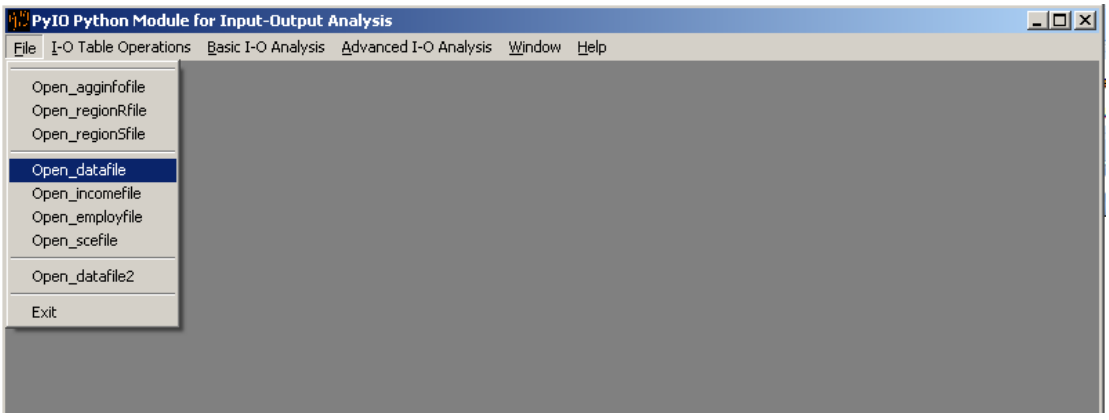


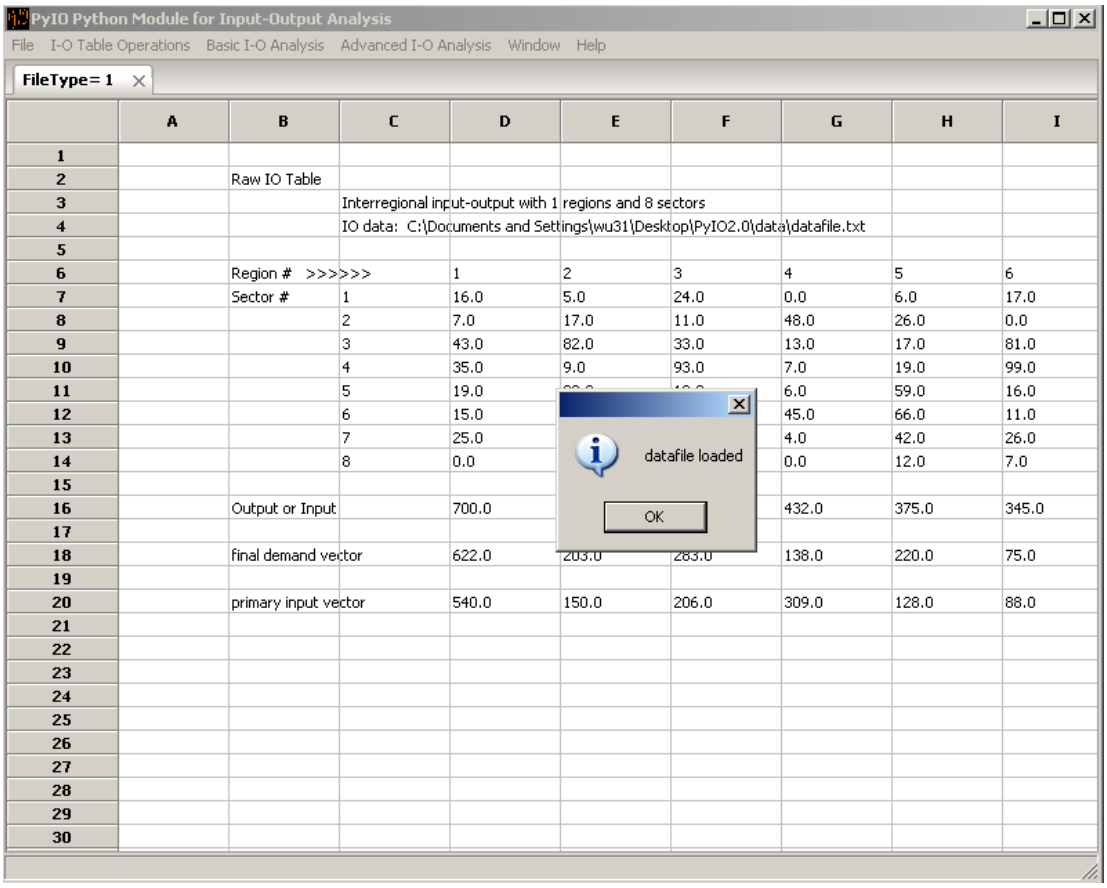
	A	B	C	D	E	F	G	H	I
3			National (or, one-region) input-output with 8 sectors						
4			Final demand data: : C:\test\pyio\region_R.txt						
5		info #1							
6		Sector#	1	2	3	4	5	6	7



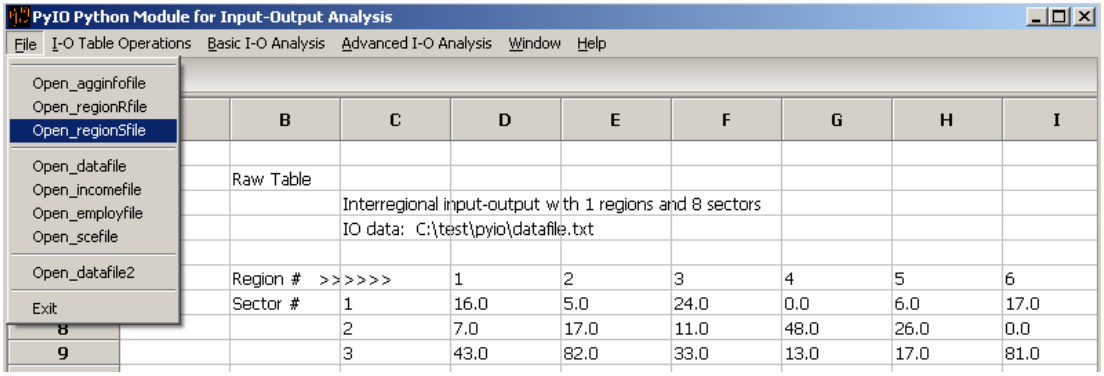
	A	B	C	D	E	F	G	H	I
1	1	8							
2									
3		0.711	0.097	1.291	0.0	0.124	0.268	0.554	0.0
4		0.266	0.283	0.507	0.666	0.462	0.0	0.380	0.0
5		1.284	1.071	1.193	0.141	0.236	0.859	1.900	0.167
6		1.555	0.175	5.004	0.113	0.394	1.562	1.663	0.124
7		0.95	0.437	1.150	0.109	1.376	0.284	0.998	0.0
8		0.642	0.281	5.137	0.703	1.32	0.167	0.641	0.421
9		1.142	0.44	2.601	0.066	0.896	0.422	2.566	0.064
10		0.0	0.0	2.594	0.0	0.16	0.071	0.427	0.120
11		40.0	8.0	42.0	9.0	10.0	7.0	40.0	15.0
12									
13									
14	Old A Matrix								
15		Updated A matrix using Regional Supply Percentage (RSP) Method							
16			National (or, one region) input-output with 8 sectors						
17		IO data: C:\Documents and Setl	IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\region_R.txt						
18									
19									
20			Sector #	1	2	3	4	5	6
21			1	0.022	0.015				
22			2	0.01	0.053				
23			3	0.061	0.256				
24			4	0.05	0.028				
25			5	0.027	0.062				
26			6	0.021	0.046				
27			7	0.035	0.068				
28			8	0.0	0.0	0.123	0.0	0.032	0.020
29									
30									

5. To update I-O table by SLQ (Simple Location Quotient)
   File -> Open_datafile[datafile.txt]
   File -> Open_regionRfile[region_S.txt]
   I-O Table Operations -> To update I-O table by SLQ ->[output_S.txt]

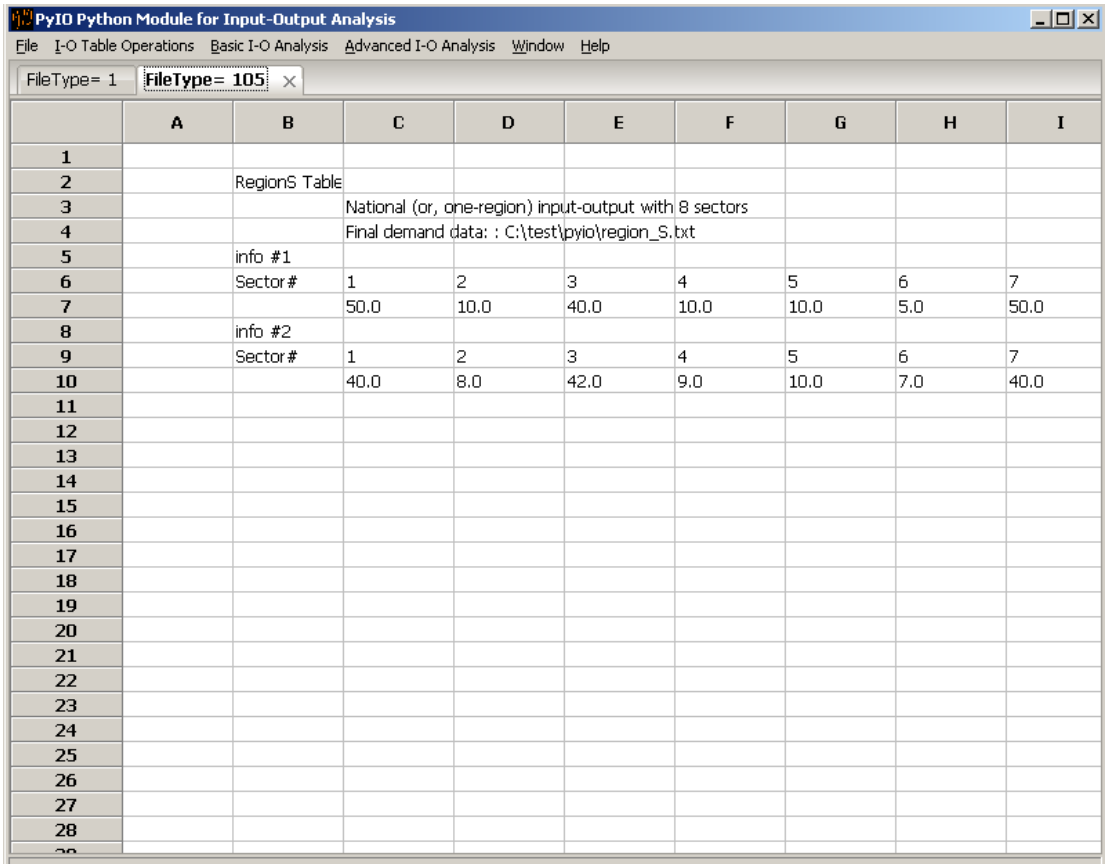




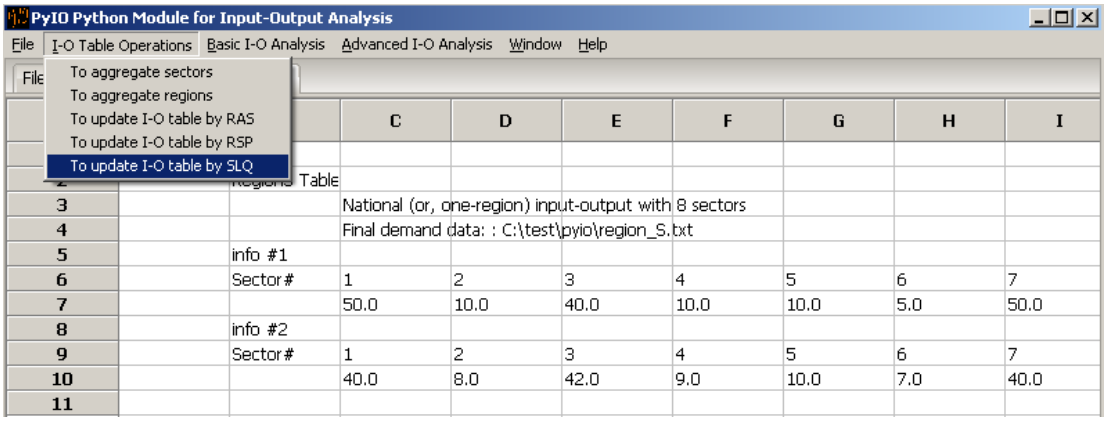
	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



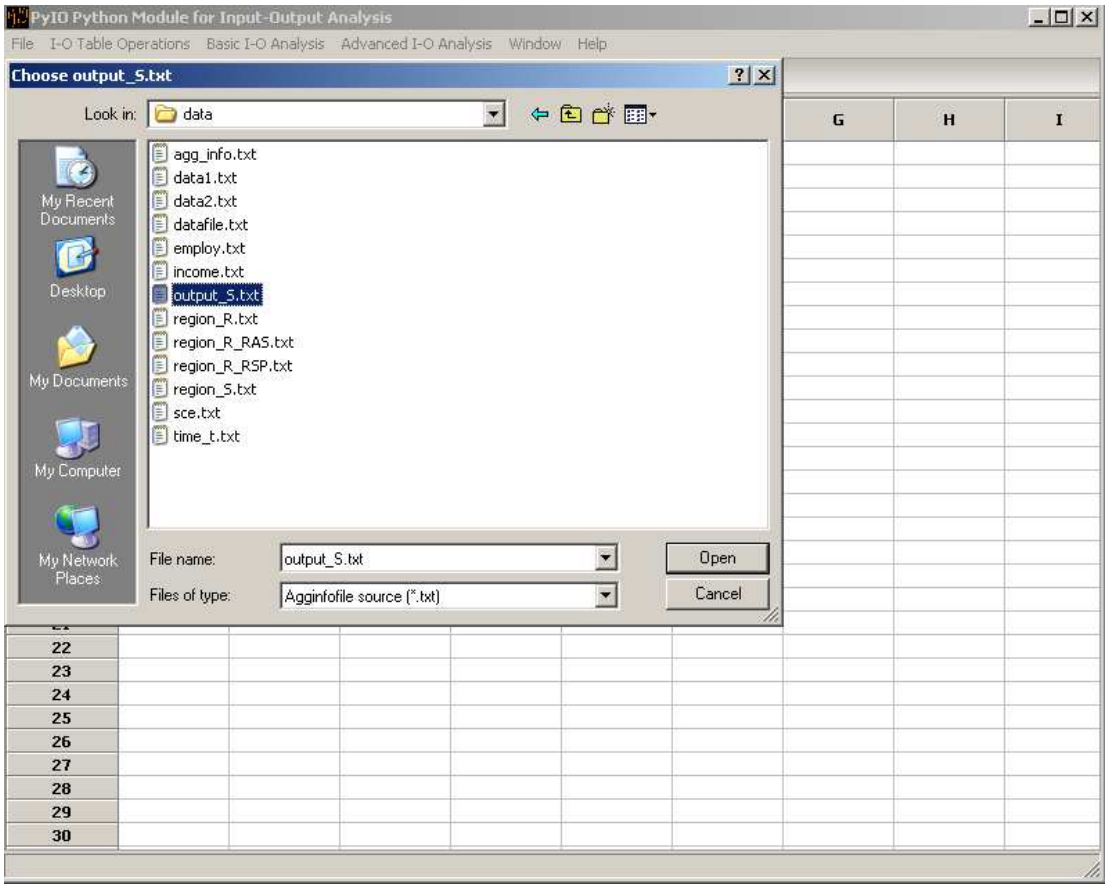
	B	C	D	E	F	G	H	I
	Raw Table							
		Interregional input-output with 1 regions and 8 sectors						
		IO data: C:\test\pyio\datafile.txt						
	Region # >>>>>>	1	2	3	4	5	6	
	Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8		2	7.0	17.0	11.0	48.0	26.0	0.0
9		3	43.0	82.0	33.0	13.0	17.0	81.0

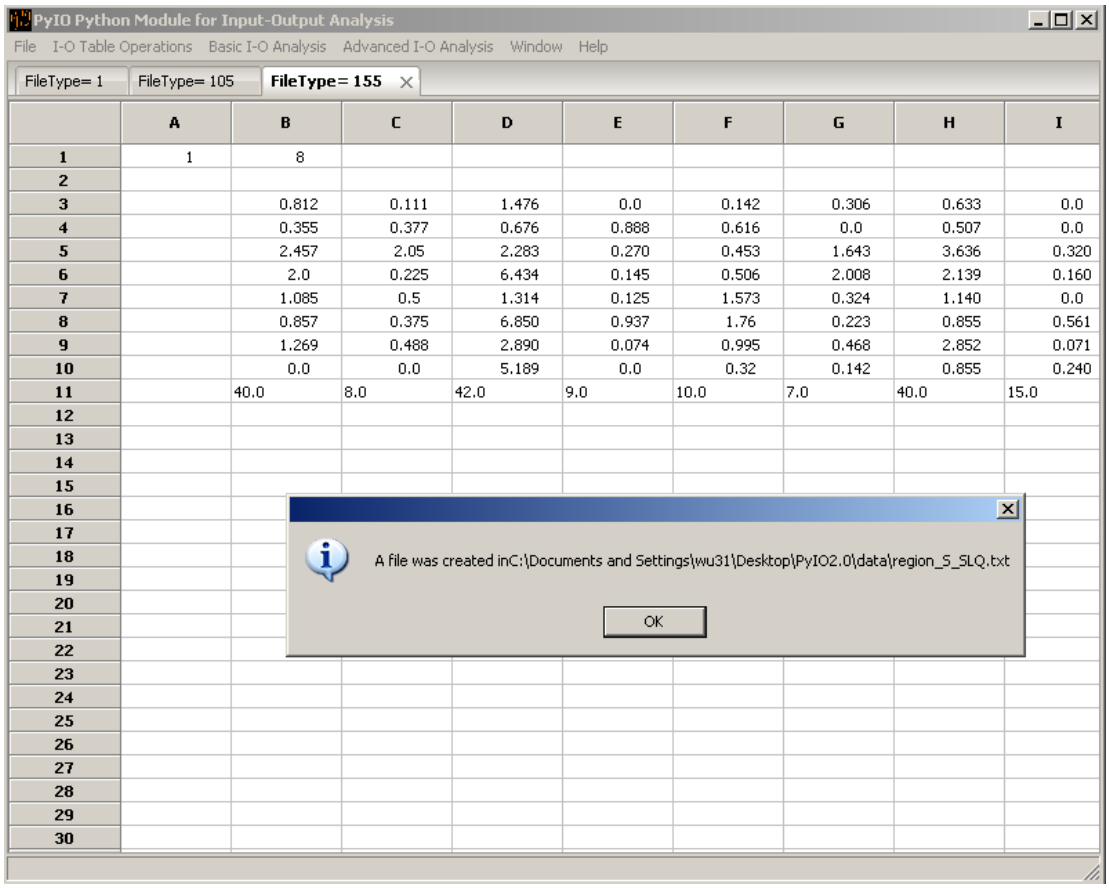


	A	B	C	D	E	F	G	H	I
1									
2		RegionS Table							
3			National (or, one-region) input-output with 8 sectors						
4			Final demand data: : C:\test\pyio\region_S.txt						
5		info #1							
6		Sector#	1	2	3	4	5	6	7
7			50.0	10.0	40.0	10.0	10.0	5.0	50.0
8		info #2							
9		Sector#	1	2	3	4	5	6	7
10			40.0	8.0	42.0	9.0	10.0	7.0	40.0
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

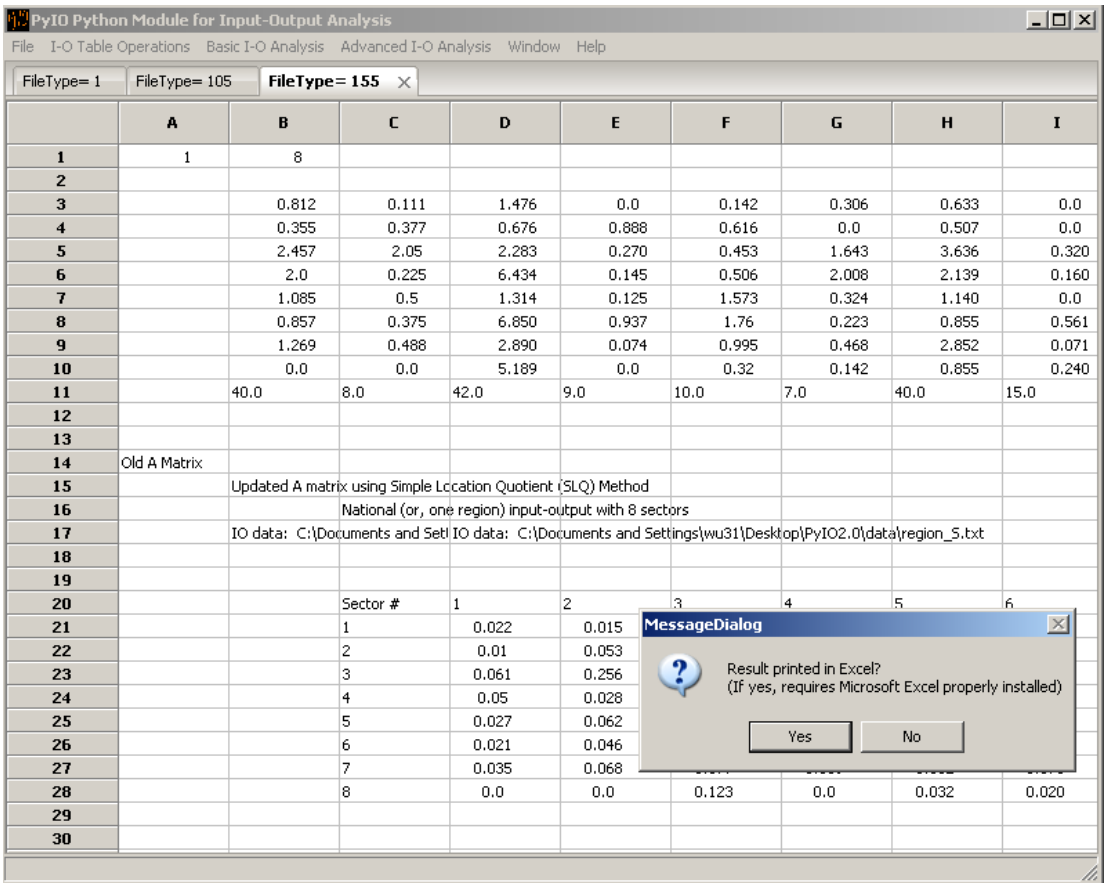


	C	D	E	F	G	H	I
3	National (or, one-region) input-output with 8 sectors						
4	Final demand data: : C:\test\pyio\region_S.txt						
5							
6	1	2	3	4	5	6	7
7	50.0	10.0	40.0	10.0	10.0	5.0	50.0
8							
9	1	2	3	4	5	6	7
10	40.0	8.0	42.0	9.0	10.0	7.0	40.0
11							





	A	B	C	D	E	F	G	H	I
1	1	8							
2									
3		0.812	0.111	1.476	0.0	0.142	0.306	0.633	0.0
4		0.355	0.377	0.676	0.888	0.616	0.0	0.507	0.0
5		2.457	2.05	2.283	0.270	0.453	1.643	3.636	0.320
6		2.0	0.225	6.434	0.145	0.506	2.008	2.139	0.160
7		1.085	0.5	1.314	0.125	1.573	0.324	1.140	0.0
8		0.857	0.375	6.850	0.937	1.76	0.223	0.855	0.561
9		1.269	0.488	2.890	0.074	0.995	0.468	2.852	0.071
10		0.0	0.0	5.189	0.0	0.32	0.142	0.855	0.240
11		40.0	8.0	42.0	9.0	10.0	7.0	40.0	15.0
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

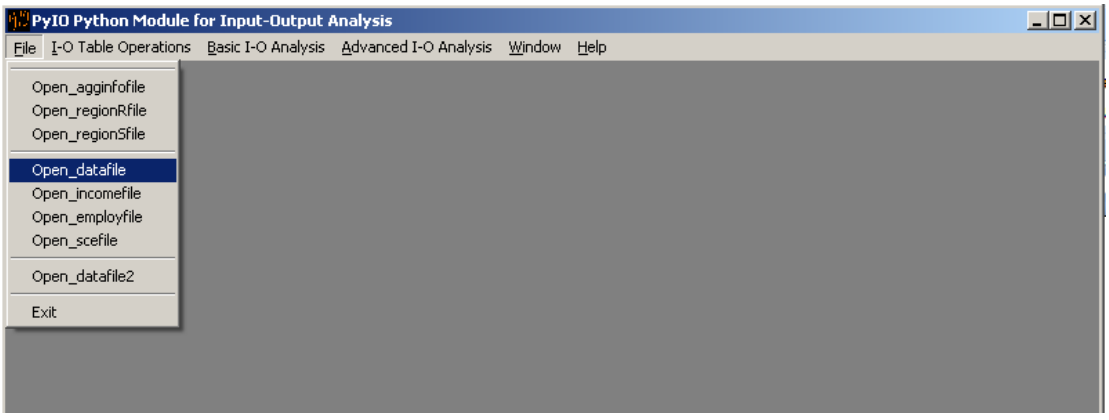


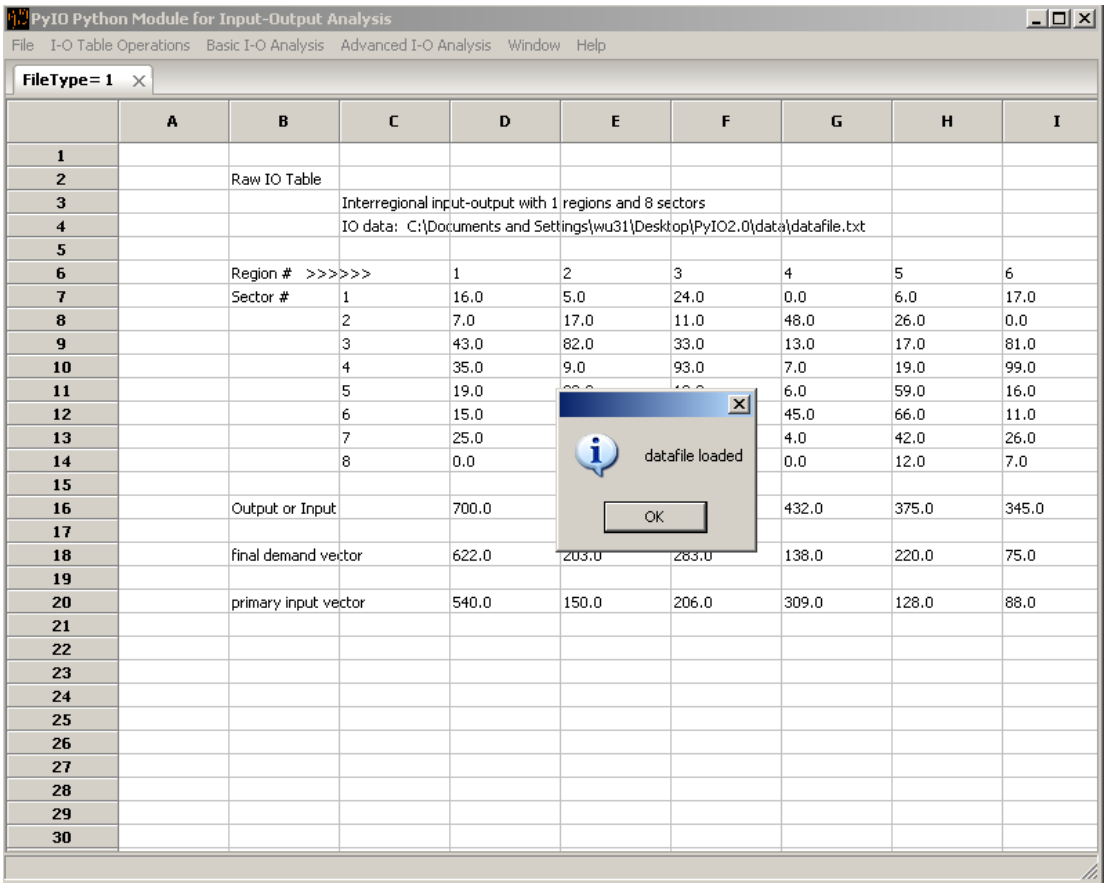
Basic I-O Analysis

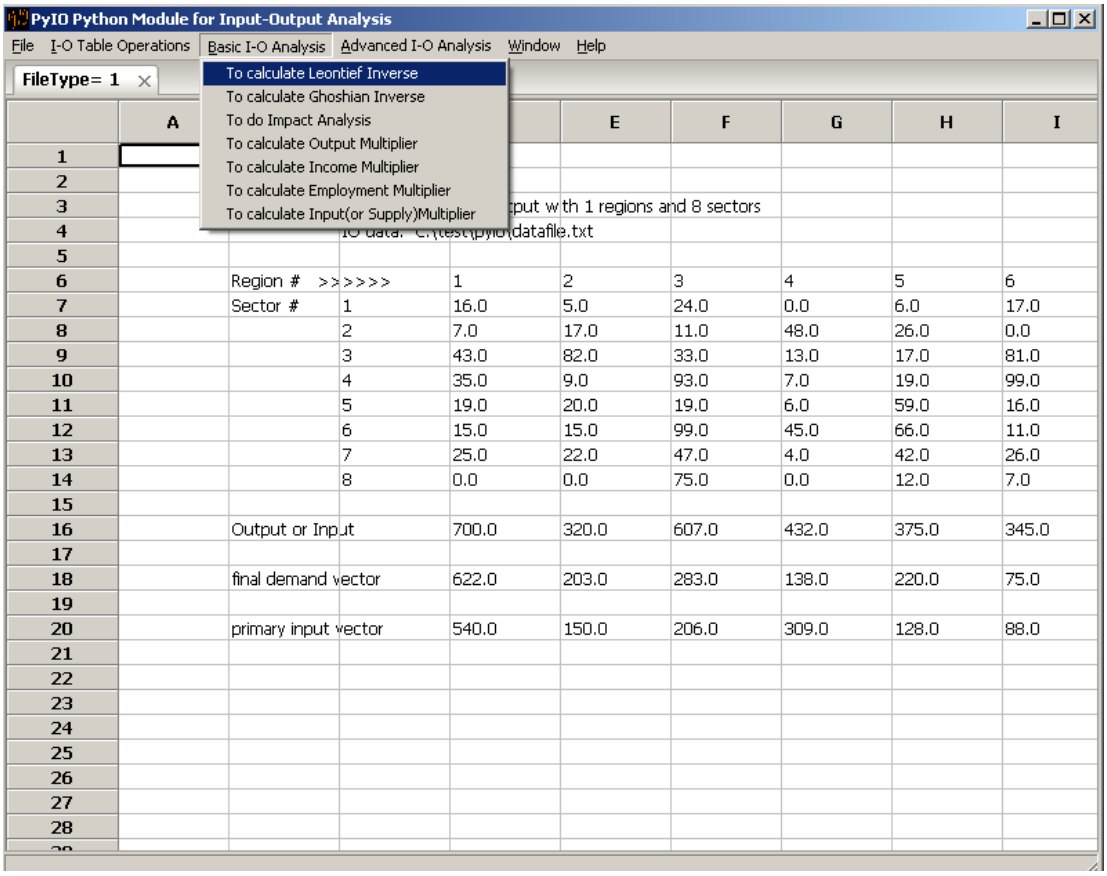
1. To calculate Leontief Inverse

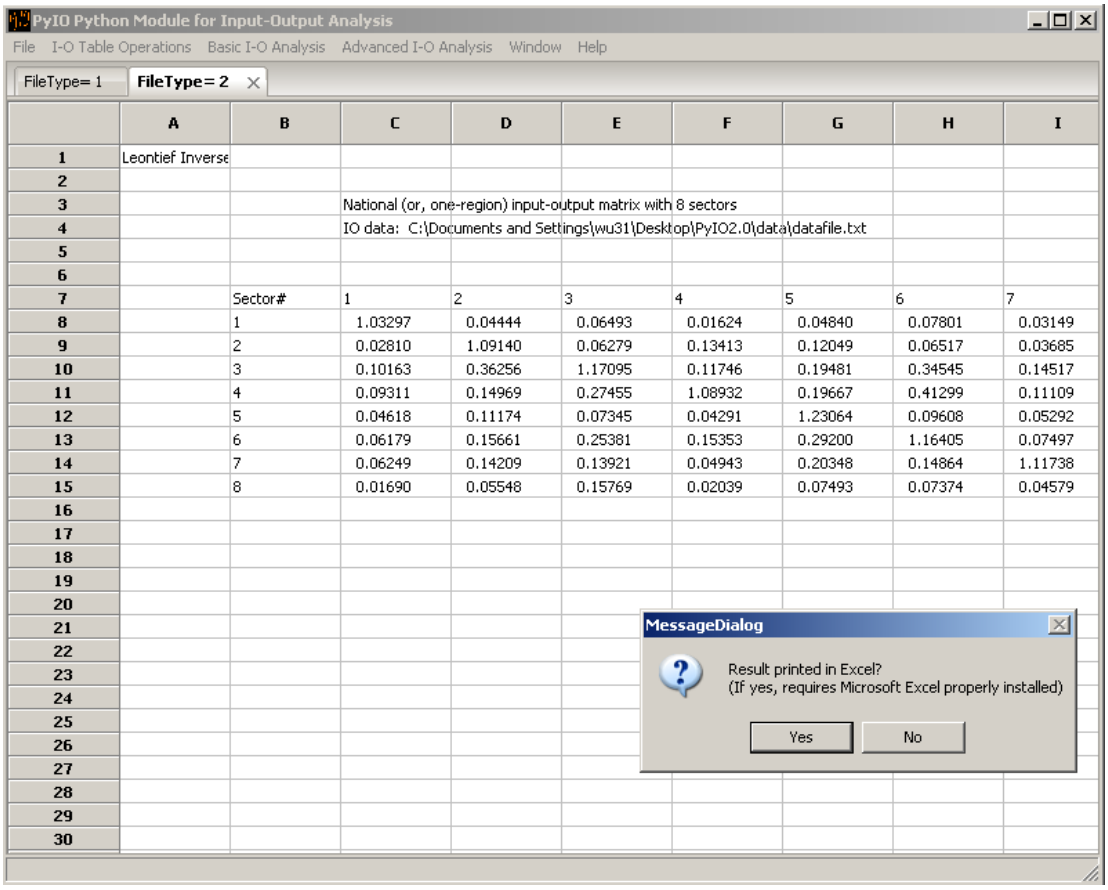
   File -> Open_datafile[datafile.txt]

   Basic I-O Analysis -> To Calculate Leontief Inverse




PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Raw IO Table
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Region # >>>>>> 1 2 3 4 5 6
Sector # 1 16.0 5.0 24.0 0.0 6.0 17.0
2 7.0 17.0 11.0 48.0 26.0 0.0
3 43.0 82.0 33.0 13.0 17.0 81.0
4 35.0 9.0 93.0 7.0 19.0 99.0
5 19.0 6.0 59.0 16.0
6 15.0 45.0 66.0 11.0
7 25.0 4.0 42.0 26.0
8 0.0 0.0 12.0 7.0
Output or Input 700.0 432.0 375.0 345.0
final demand vector 622.0 138.0 220.0 75.0
primary input vector 540.0 150.0 206.0 309.0 128.0 88.0
datafile loaded
OK


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier
Region # >>>>>> 1 2 3 4 5 6
Sector # 1 16.0 5.0 24.0 0.0 6.0 17.0
2 7.0 17.0 11.0 48.0 26.0 0.0
3 43.0 82.0 33.0 13.0 17.0 81.0
4 35.0 9.0 93.0 7.0 19.0 99.0
5 19.0 20.0 19.0 6.0 59.0 16.0
6 15.0 15.0 99.0 45.0 66.0 11.0
7 25.0 22.0 47.0 4.0 42.0 26.0
8 0.0 0.0 75.0 0.0 12.0 7.0
Output or Input 700.0 320.0 607.0 432.0 375.0 345.0
final demand vector 622.0 203.0 283.0 138.0 220.0 75.0
primary input vector 540.0 150.0 206.0 309.0 128.0 88.0

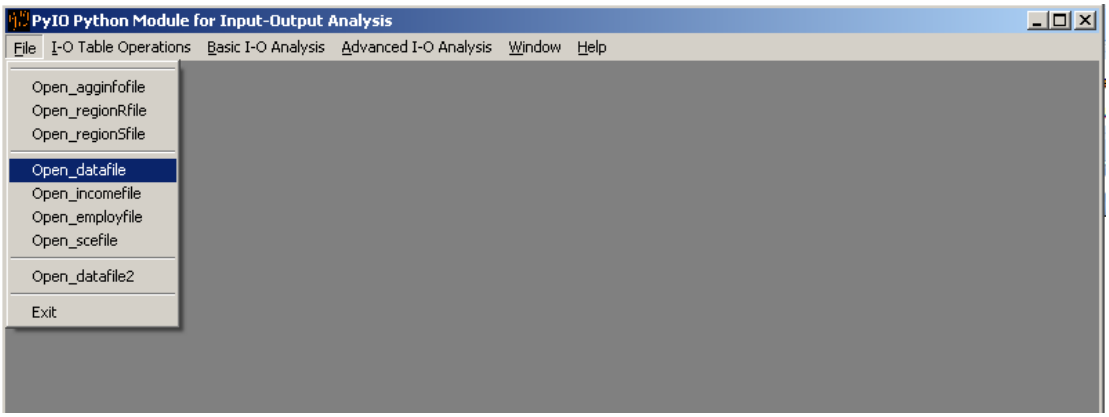


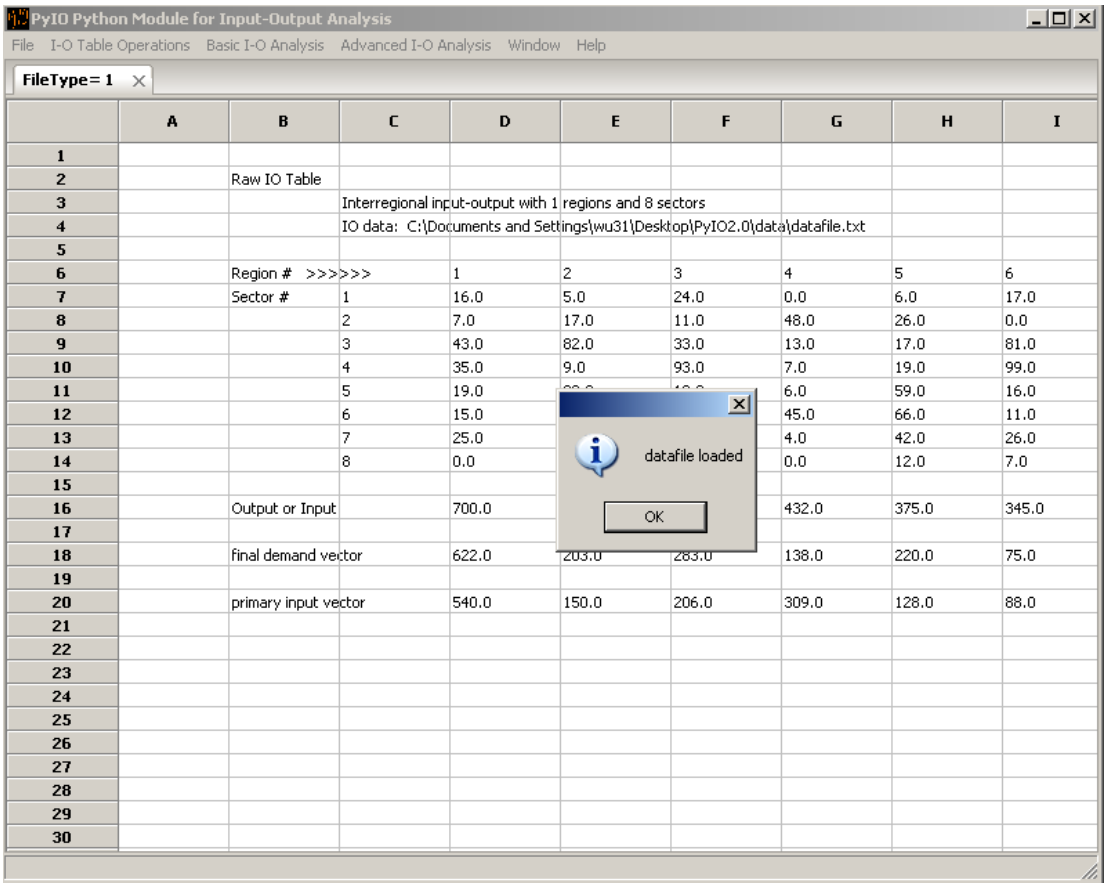
	A	B	C	D	E	F	G	H	I
1	Leontief Inverse								
2									
3			National (or, one-region) input-output matrix with 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6									
7		Sector#	1	2	3	4	5	6	7
8		1	1.03297	0.04444	0.06493	0.01624	0.04840	0.07801	0.03149
9		2	0.02810	1.09140	0.06279	0.13413	0.12049	0.06517	0.03685
10		3	0.10163	0.36256	1.17095	0.11746	0.19481	0.34545	0.14517
11		4	0.09311	0.14969	0.27455	1.08932	0.19667	0.41299	0.11109
12		5	0.04618	0.11174	0.07345	0.04291	1.23064	0.09608	0.05292
13		6	0.06179	0.15661	0.25381	0.15353	0.29200	1.16405	0.07497
14		7	0.06249	0.14209	0.13921	0.04943	0.20348	0.14864	1.11738
15		8	0.01690	0.05548	0.15769	0.02039	0.07493	0.07374	0.04579
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

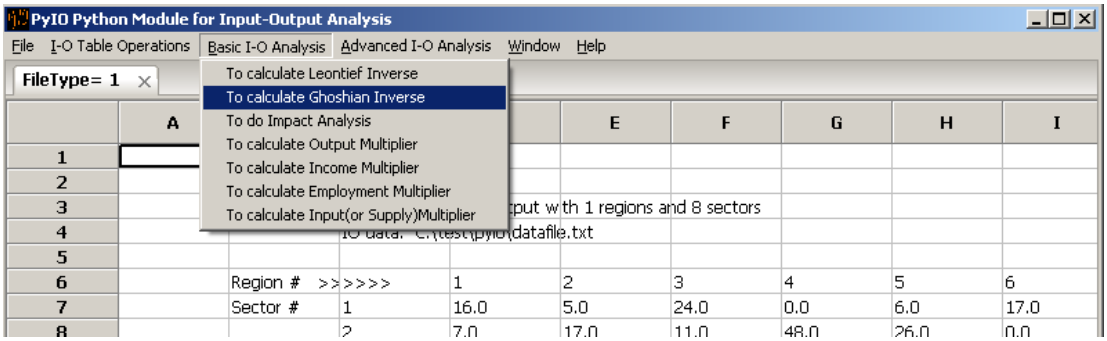
2. To calculate Ghoshian Inverse

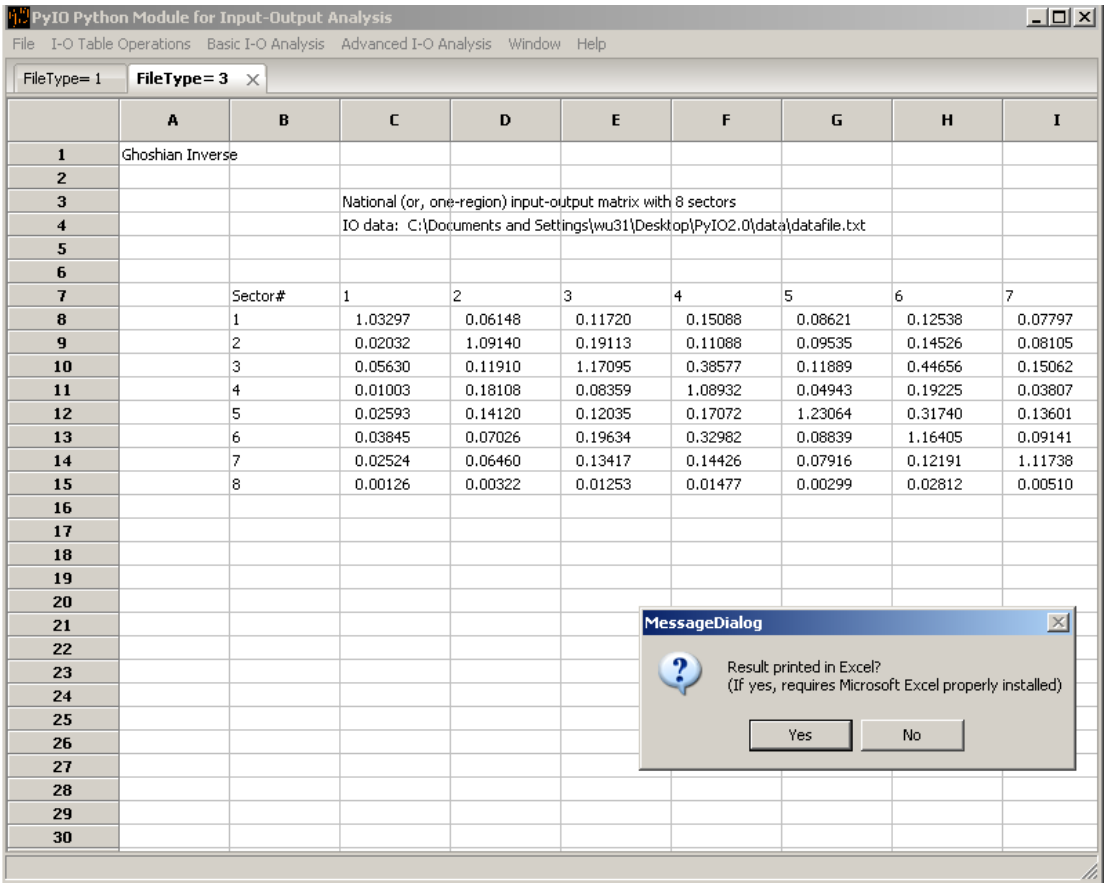
   File -> Open_datafile[datafile.txt]

   Basic I-O Analysis -> To calculate Ghoshian Inverse




PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Raw IO Table
Region # >>>>>>
Sector #
Output or Input
final demand vector
primary input vector
datafile loaded
OK


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier

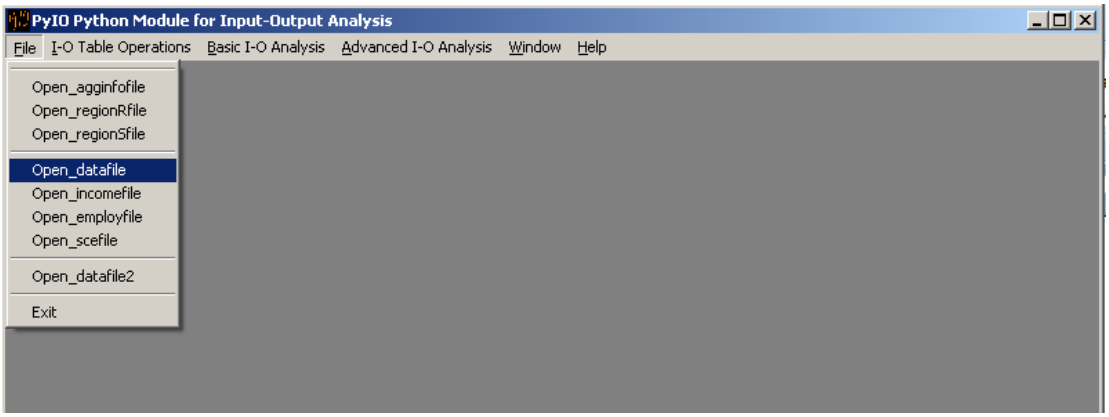


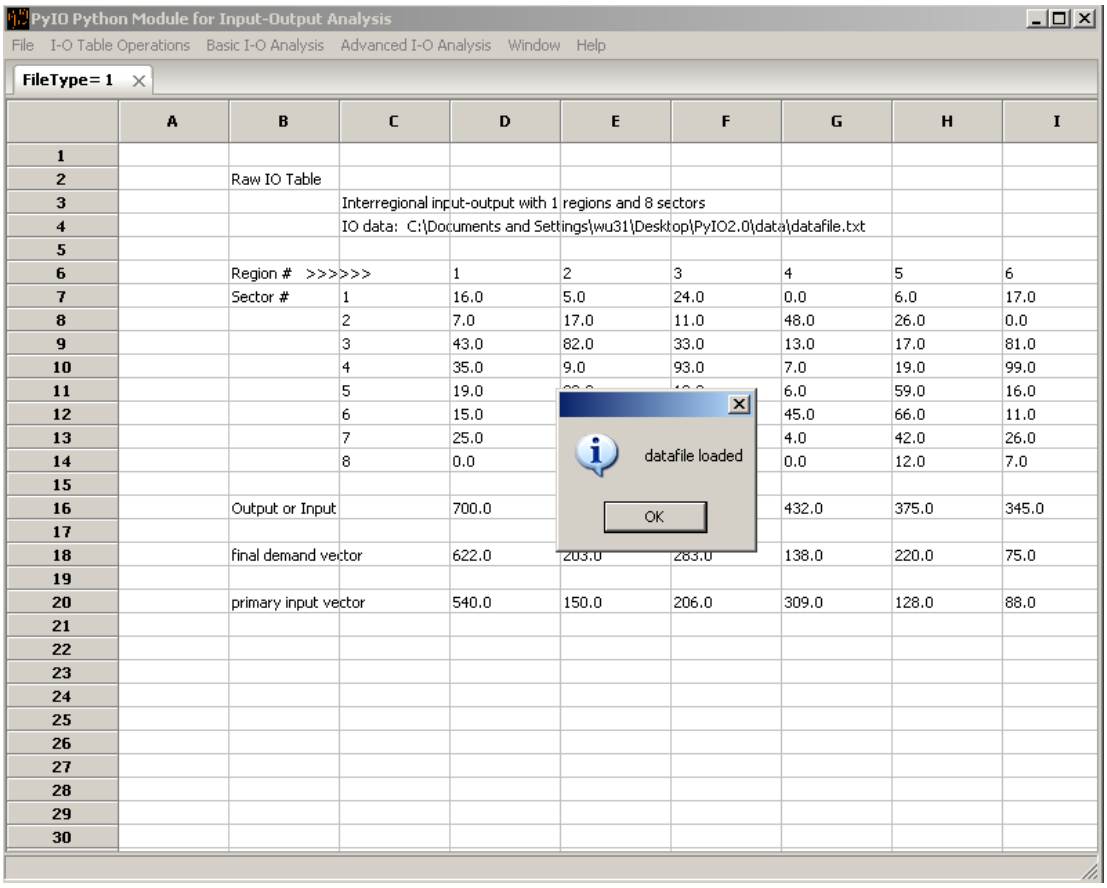
3. To do Impact Analysis

   File -> Open_datafile[datafile.txt]

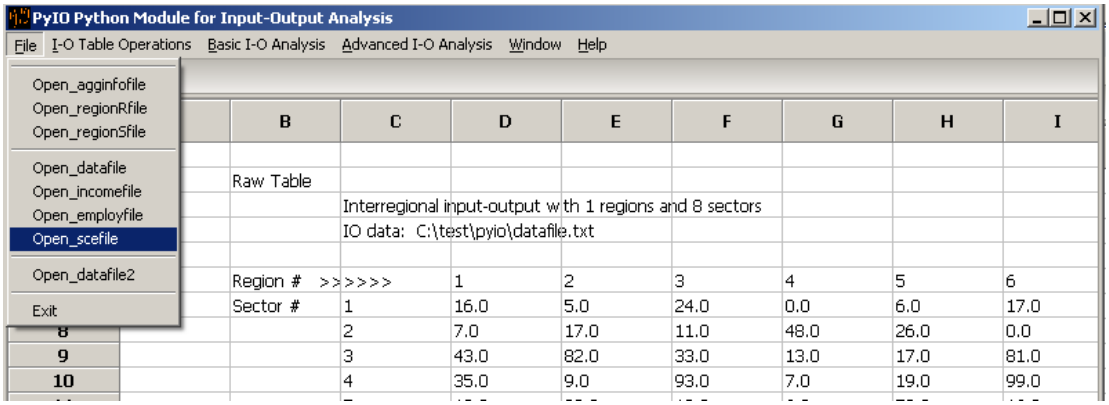
   File -> Open_scefile[sce.txt]

   Basic I-O Analysis -> To do Impact Analysis

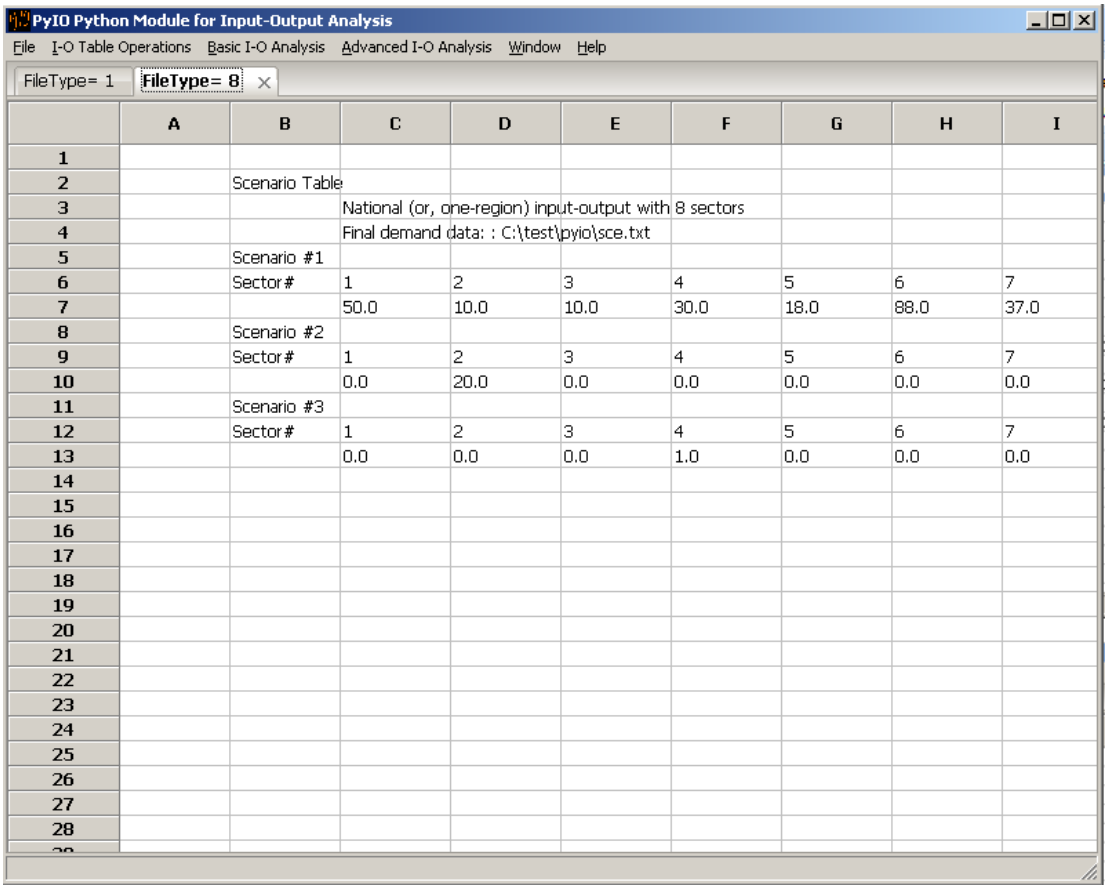


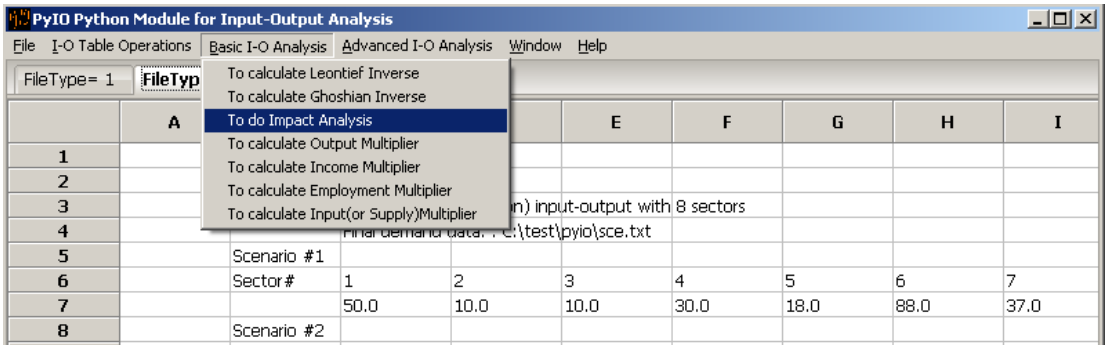


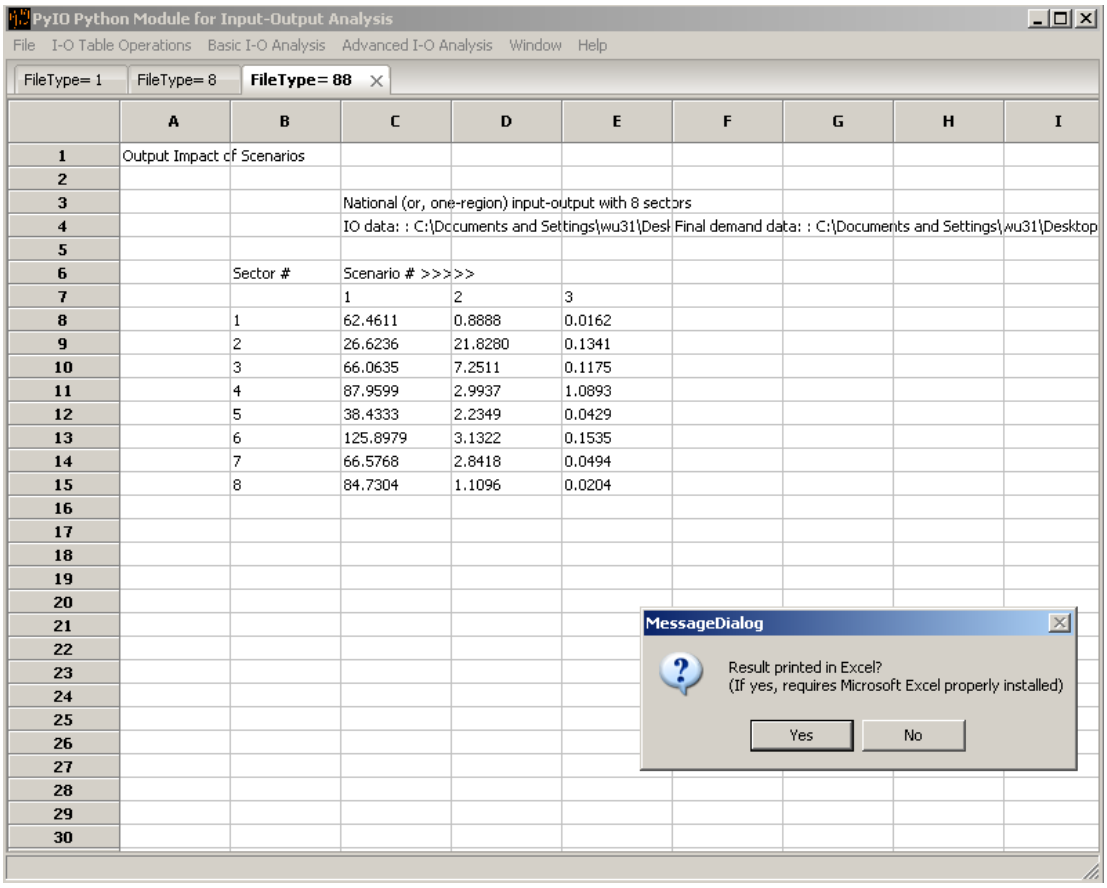
	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



	B	C	D	E	F	G	H	I
	Raw Table							
		Interregional input-output with 1 regions and 8 sectors						
		IO data: C:\test\pyio\datafile.txt						
	Region # >>>>>>	1	2	3	4	5	6	
	Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8		2	7.0	17.0	11.0	48.0	26.0	0.0
9		3	43.0	82.0	33.0	13.0	17.0	81.0
10		4	35.0	9.0	93.0	7.0	19.0	99.0


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
FileType= 8
Scenario Table
National (or, one-region) input-output with 8 sectors
Final demand data: : C:\test\pyio\sce.txt
Scenario #1
Sector#
1 2 3 4 5 6 7
50.0 10.0 10.0 30.0 18.0 88.0 37.0
Scenario #2
Sector#
1 2 3 4 5 6 7
0.0 20.0 0.0 0.0 0.0 0.0 0.0
Scenario #3
Sector#
1 2 3 4 5 6 7
0.0 0.0 0.0 1.0 0.0 0.0 0.0

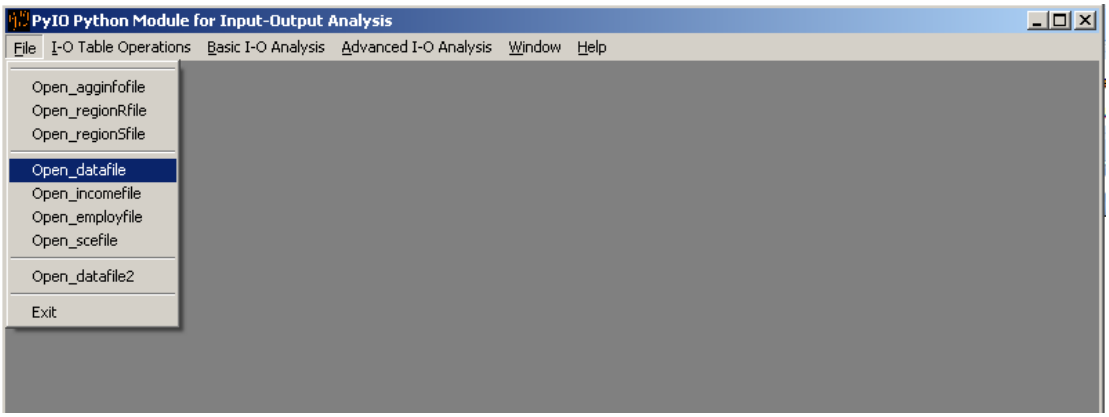

PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier
Scenario #1
Sector#
1 2 3 4 5 6 7
50.0 10.0 10.0 30.0 18.0 88.0 37.0
Scenario #2

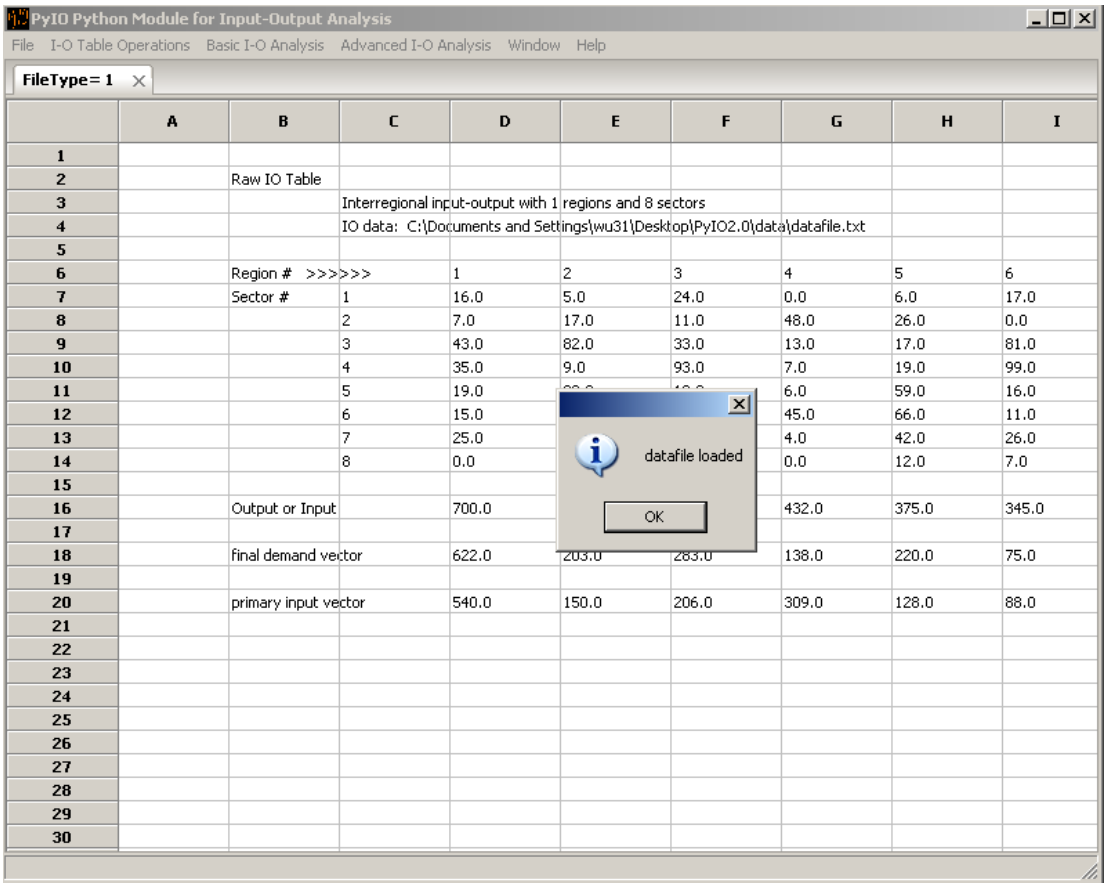


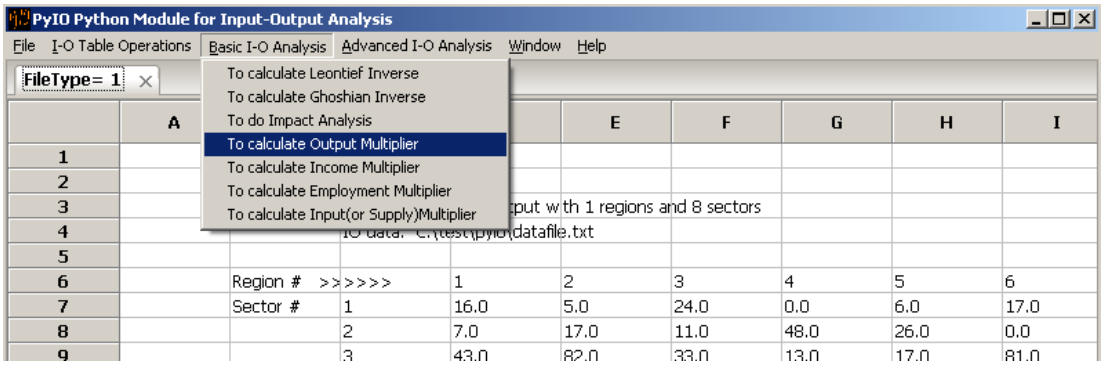
4. To calculate Output Multiplier

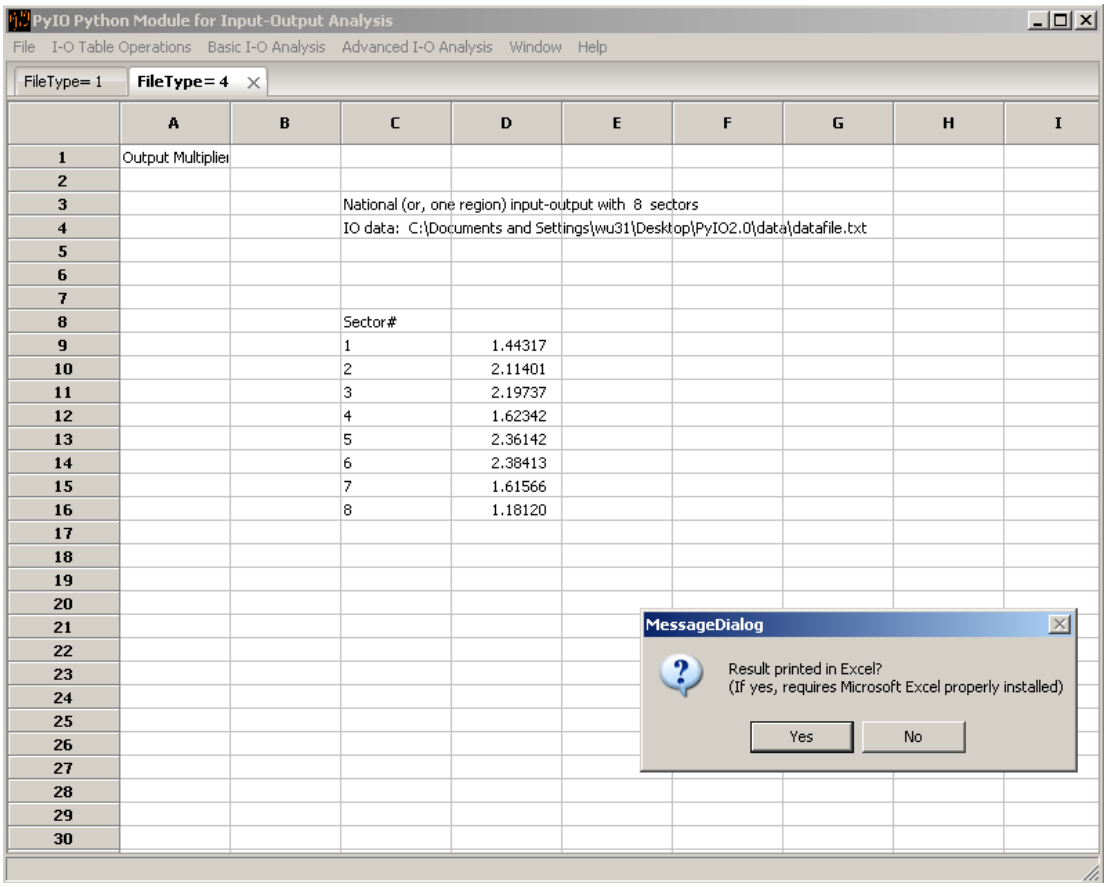
   File -> Open_datafile[datafile.txt]

   Basic I-O Analysis -> To calculate Output Multiplier




PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Raw IO Table
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Region # >>>>>> 1 2 3 4 5 6
Sector # 1 16.0 5.0 24.0 0.0 6.0 17.0
2 7.0 17.0 11.0 48.0 26.0 0.0
3 43.0 82.0 33.0 13.0 17.0 81.0
4 35.0 9.0 93.0 7.0 19.0 99.0
5 19.0 6.0 59.0 16.0
6 15.0 45.0 66.0 11.0
7 25.0 4.0 42.0 26.0
8 0.0 0.0 12.0 7.0
Output or Input 700.0 432.0 375.0 345.0
final demand vector 622.0 138.0 220.0 75.0
primary input vector 540.0 150.0 206.0 309.0 128.0 88.0
datafile loaded
OK


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier
Region # >>>>>> 1 2 3 4 5 6
Sector # 1 16.0 5.0 24.0 0.0 6.0 17.0
2 7.0 17.0 11.0 48.0 26.0 0.0
3 43.0 82.0 33.0 13.0 17.0 81.0

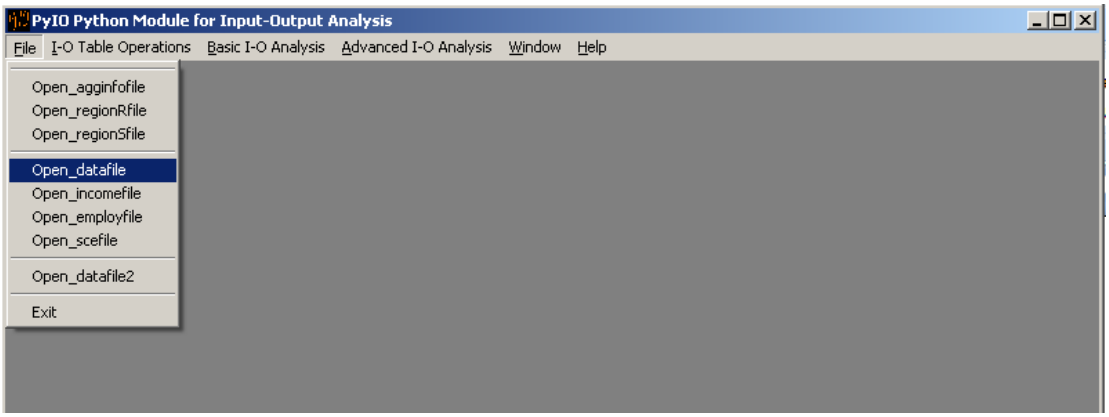


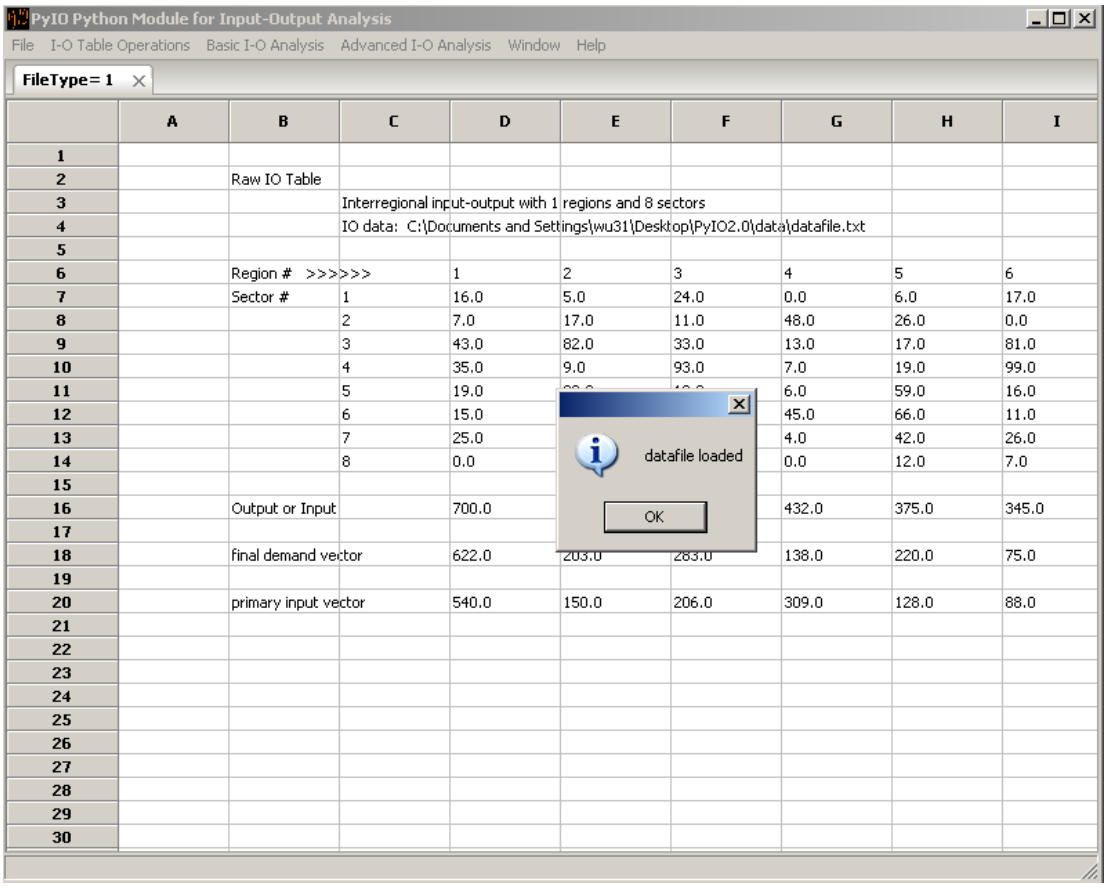
5. To calculate Income Multiplier

   File -> Open_datafile[datafile.txt]

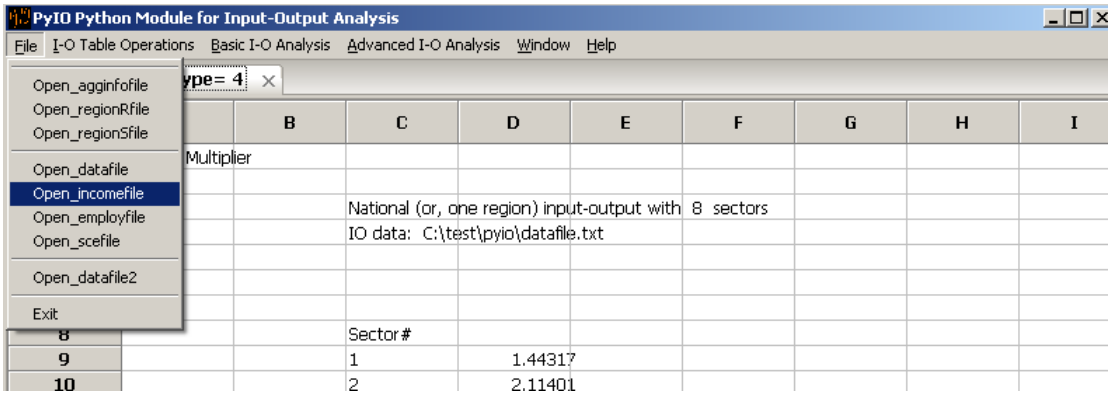
   File -> Open_Incomefile[income.txt]

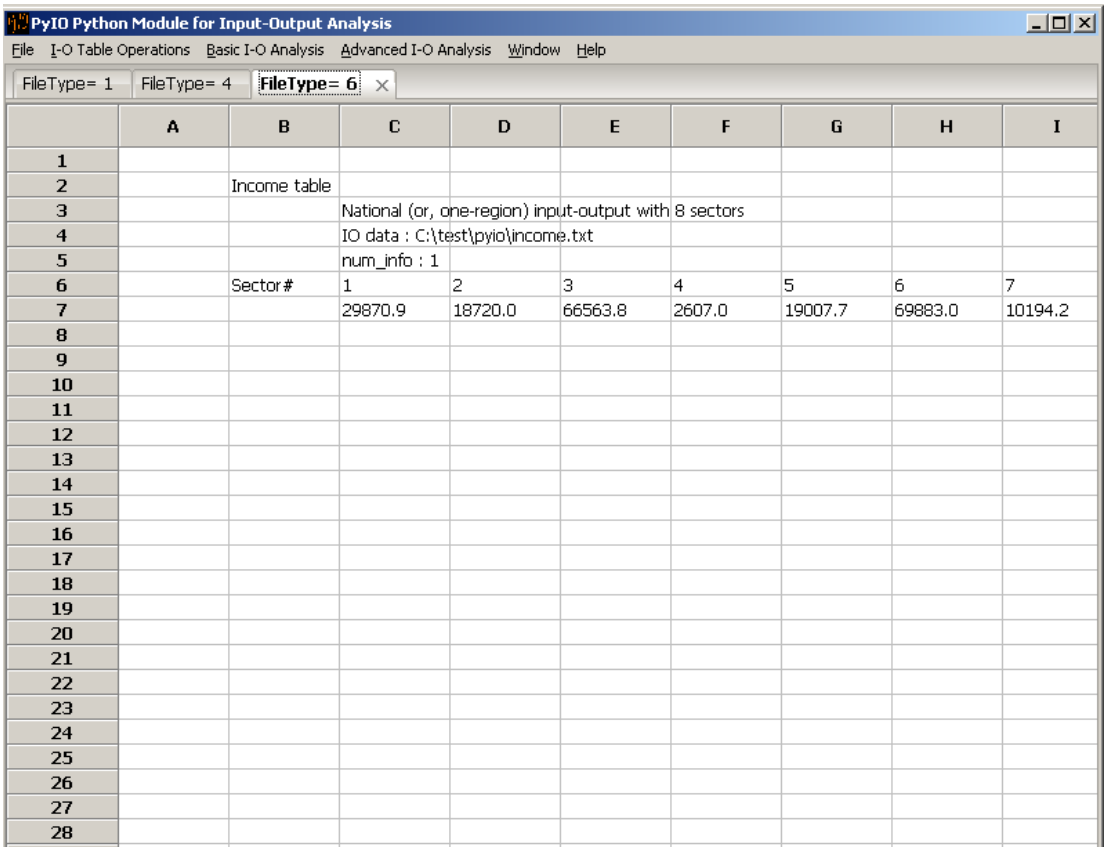
   Basic I-O Analysis -> To calculate Income Multiplier

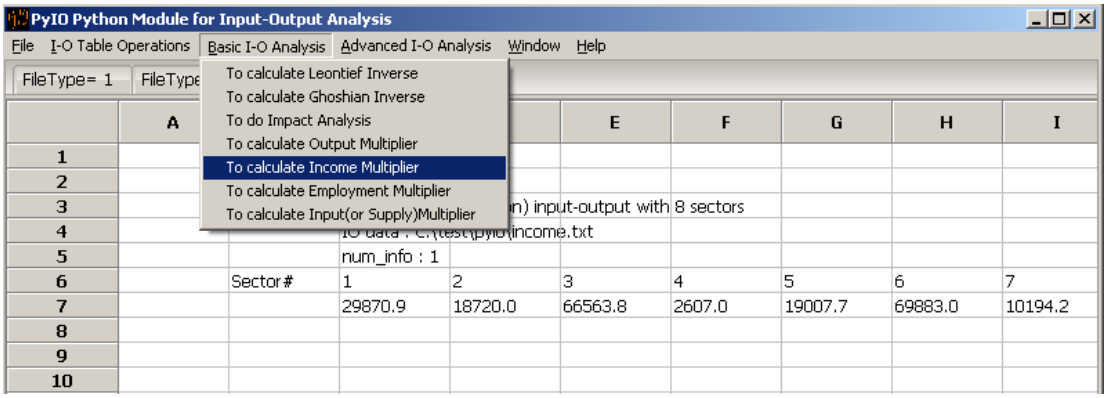


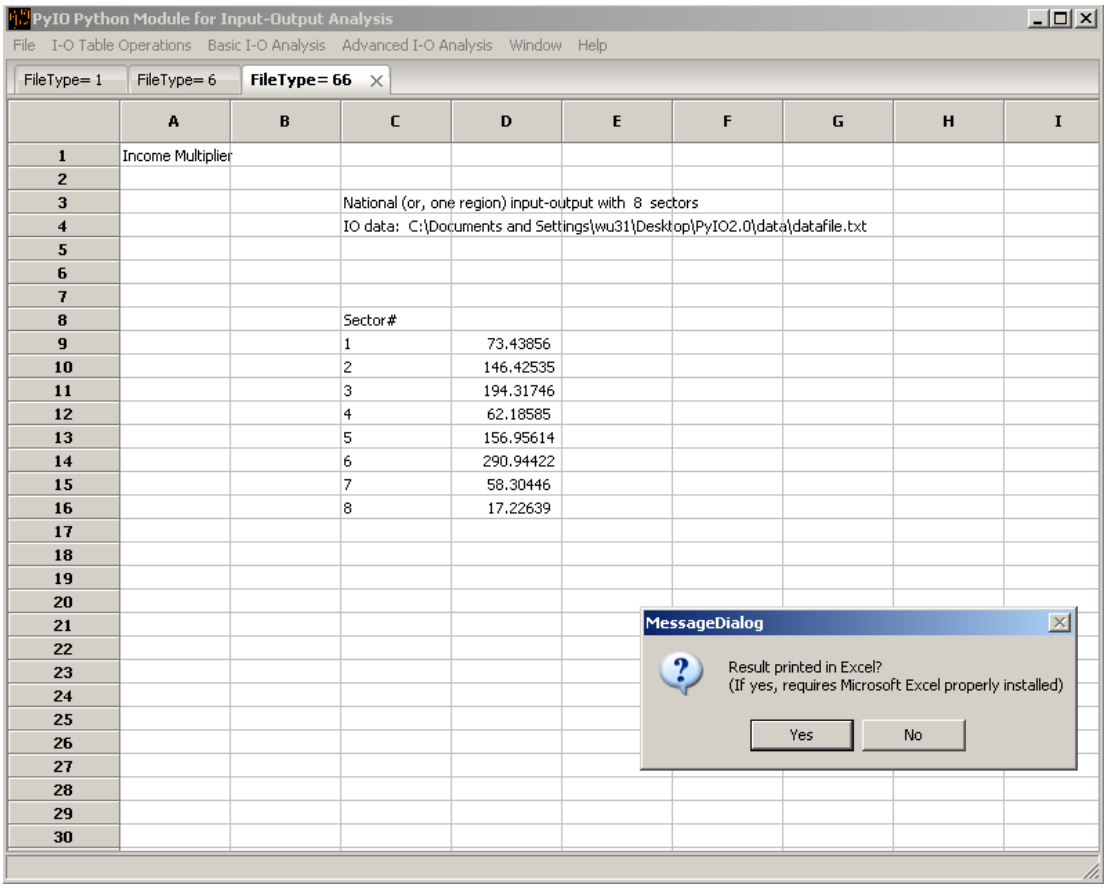


	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									




PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
FileType= 1
FileType= 4
FileType= 6
Income table
National (or, one-region) input-output with 8 sectors
IO data : C:\test\pyio\income.txt
num_info : 1
Sector#
1
2
3
4
5
6
7
29870.9
18720.0
66563.8
2607.0
19007.7
69883.0
10194.2


PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier
num_info : 1
Sector#
1
2
3
4
5
6
7
29870.9
18720.0
66563.8
2607.0
19007.7
69883.0
10194.2

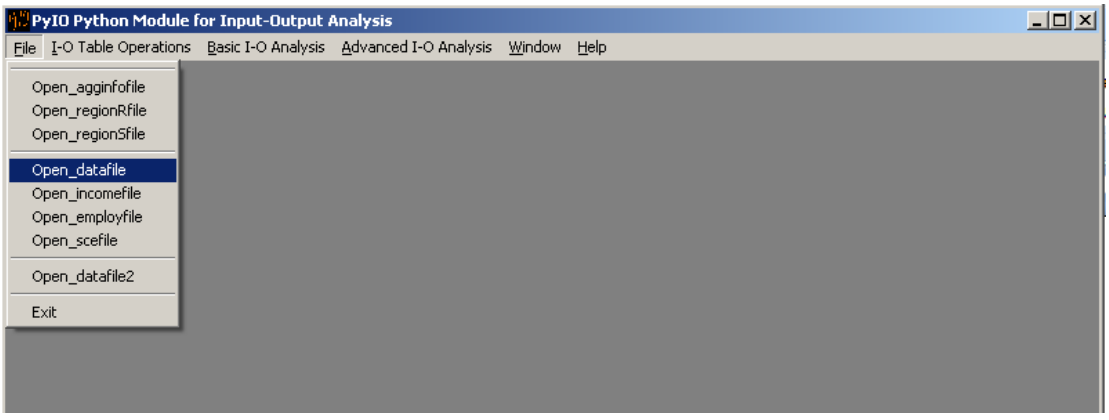


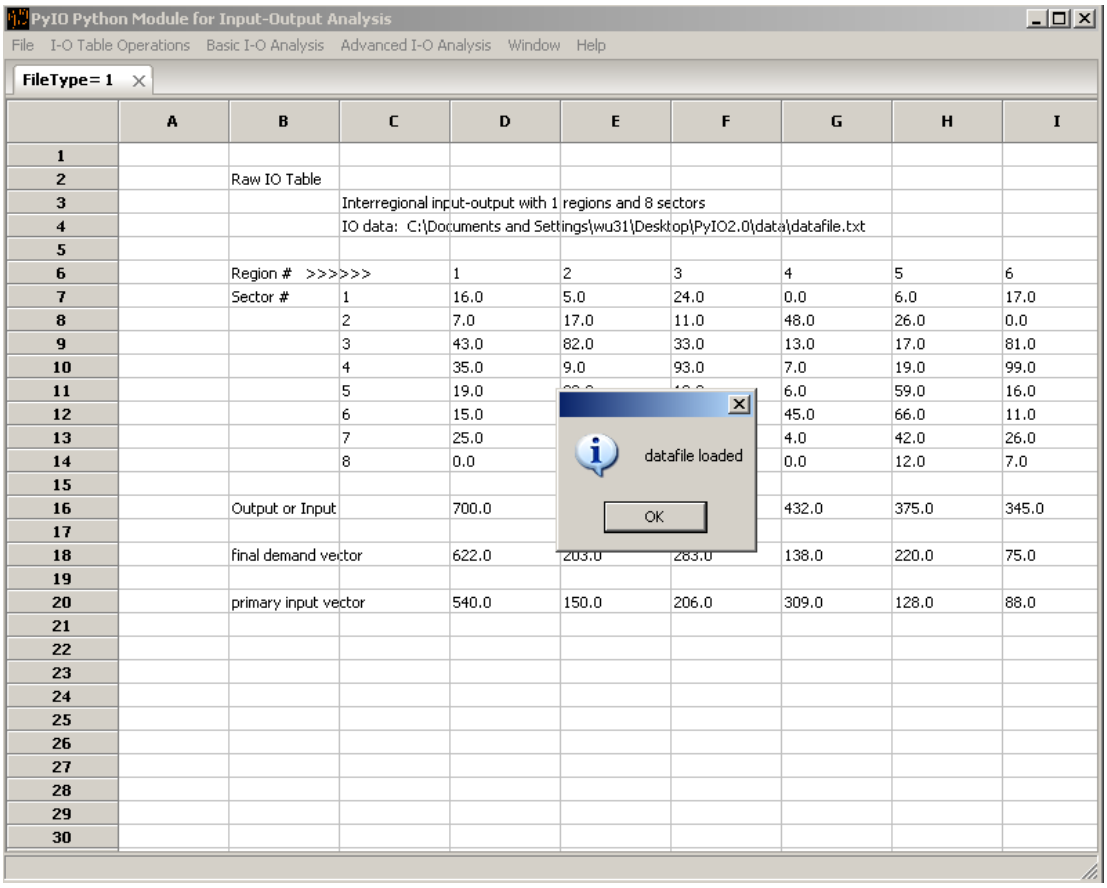
6. To calculate Employment Multiplier

   File -> Open_datafile[datafile.txt]

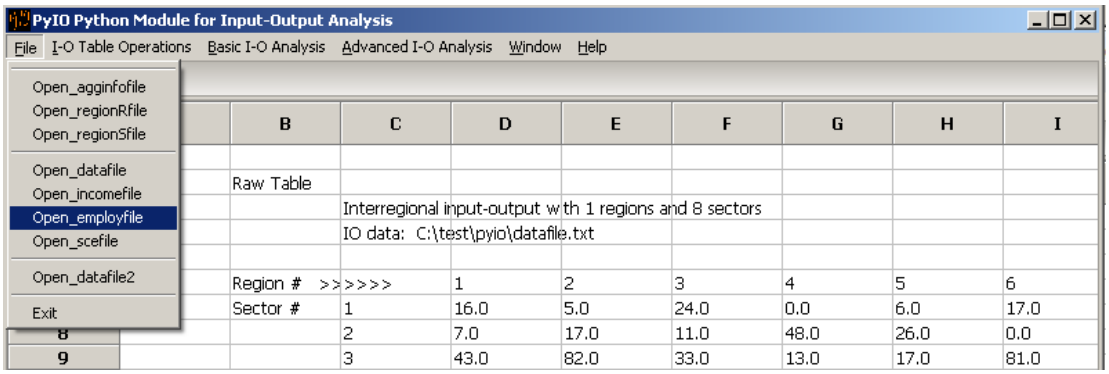
   File -> Open_emloyfile[employ.txt]

   Basic I-O Analysis -> To calculate Employment Multiplier

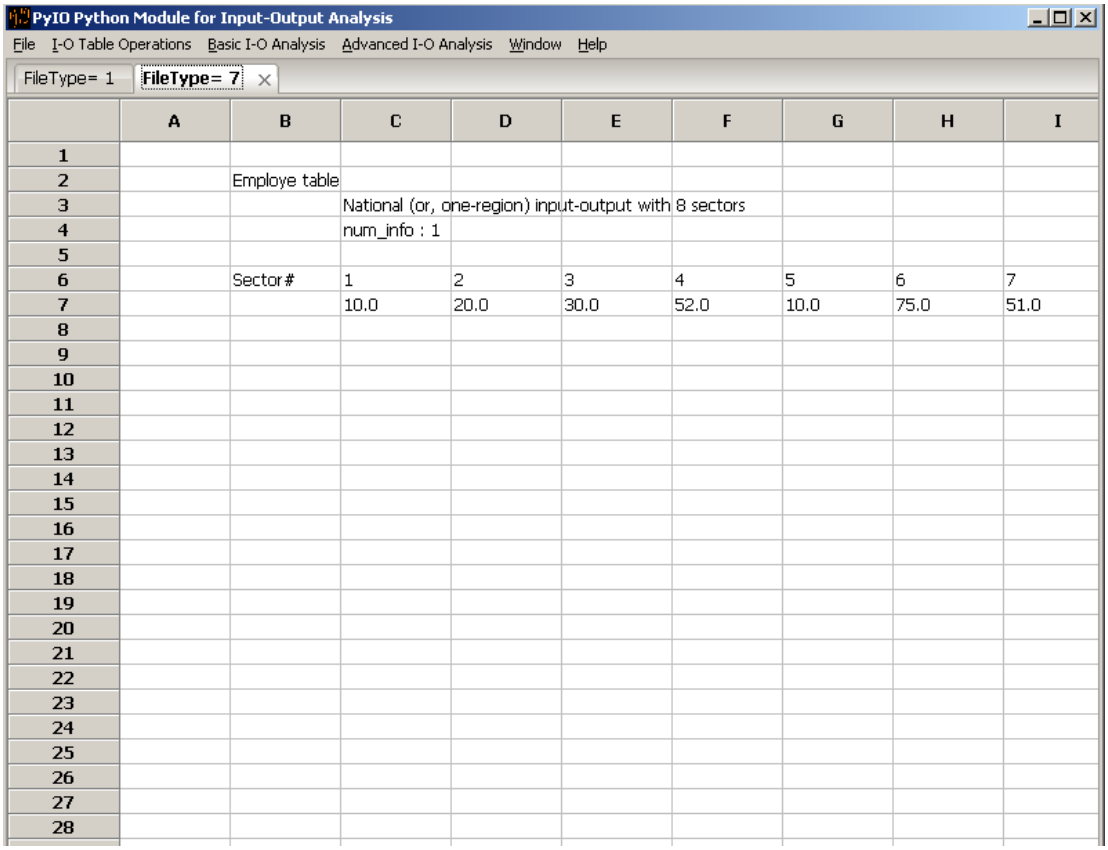


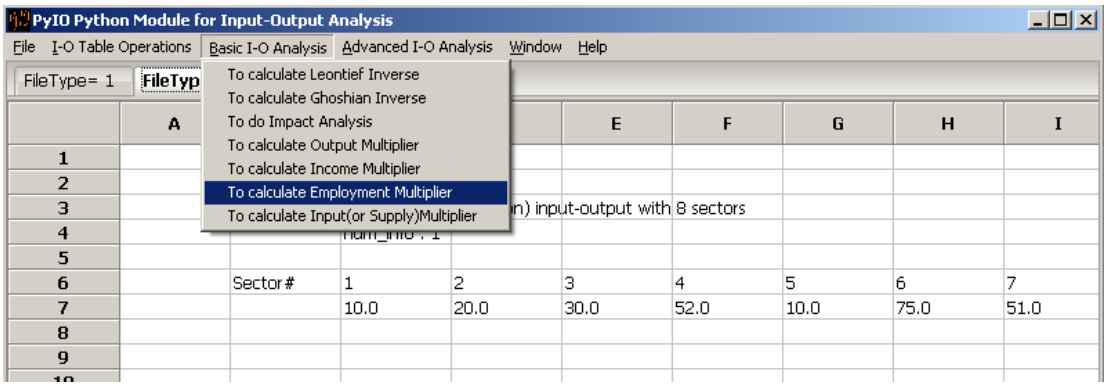


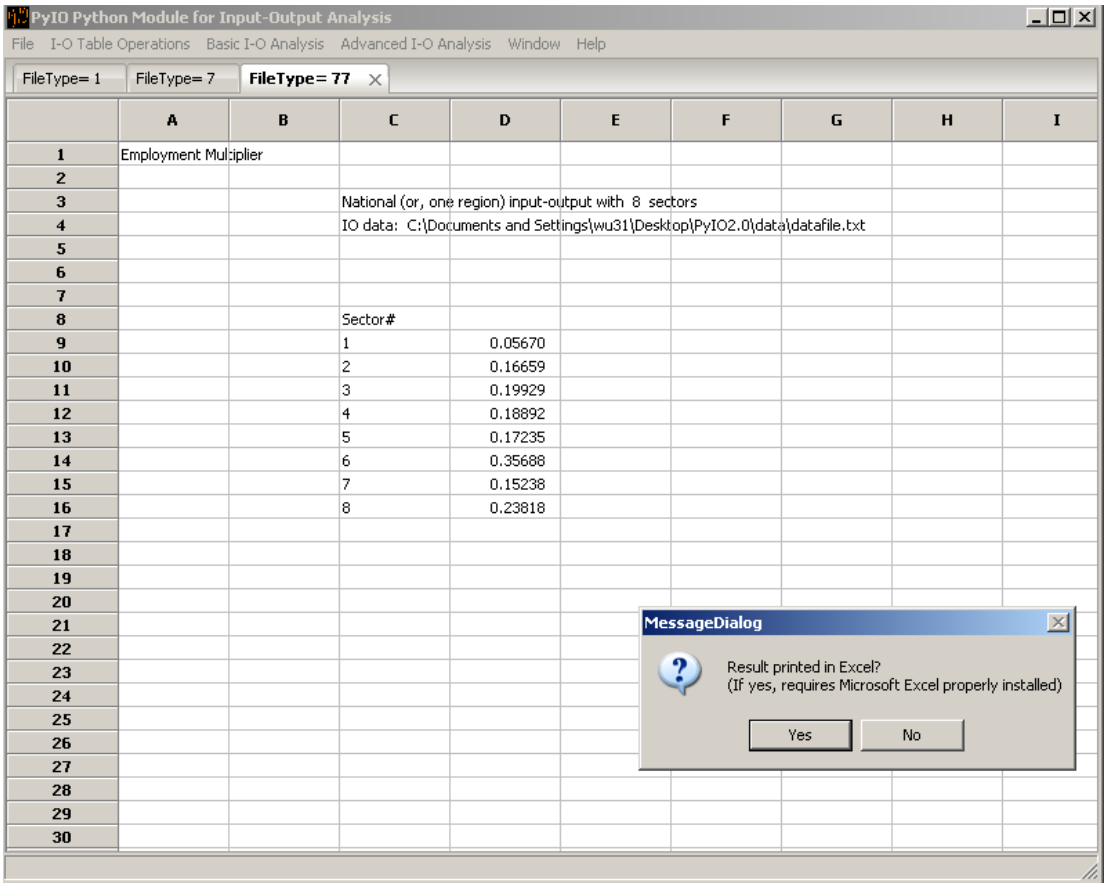
	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



	B	C	D	E	F	G	H	I
	Raw Table							
		Interregional input-output with 1 regions and 8 sectors						
		IO data: C:\test\pyio\datafile.txt						
	Region # >>>>>>	1	2	3	4	5	6	
	Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8		2	7.0	17.0	11.0	48.0	26.0	0.0
9		3	43.0	82.0	33.0	13.0	17.0	81.0


PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
FileType= 1
FileType= 7
Employe table
National (or, one-region) input-output with 8 sectors
num_info : 1
Sector#
1
2
3
4
5
6
7
10.0
20.0
30.0
52.0
10.0
75.0
51.0

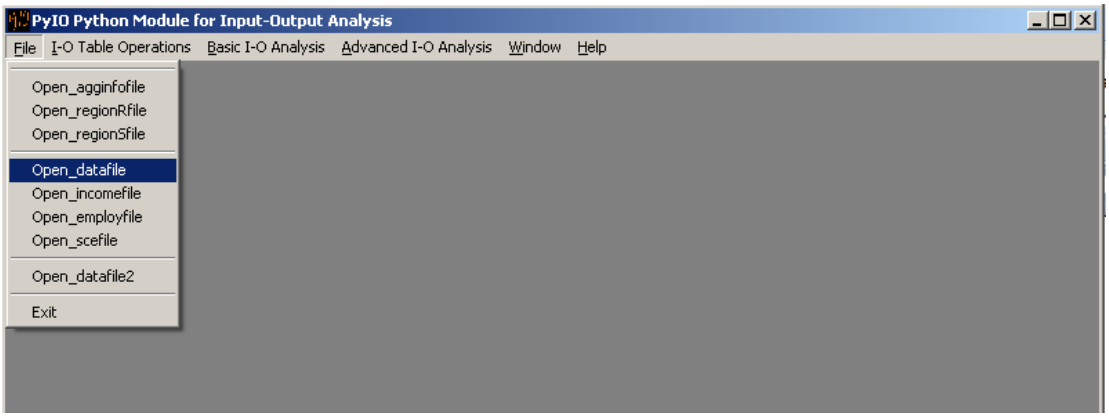

PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
To calculate Leontief Inverse
To calculate Ghoshian Inverse
To do Impact Analysis
To calculate Output Multiplier
To calculate Income Multiplier
To calculate Employment Multiplier
To calculate Input(or Supply)Multiplier
Sector#
1
2
3
4
5
6
7
10.0
20.0
30.0
52.0
10.0
75.0
51.0

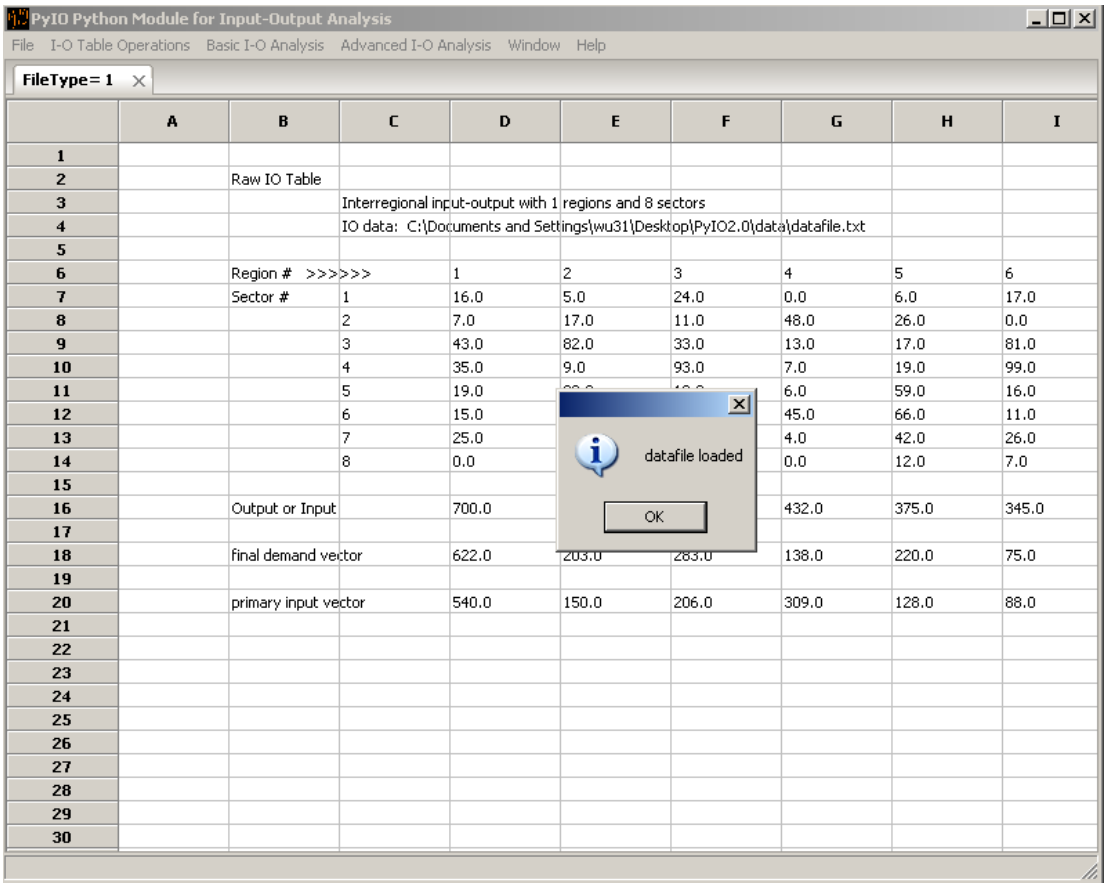


7. To calculate Input (or Supply) Multiplier

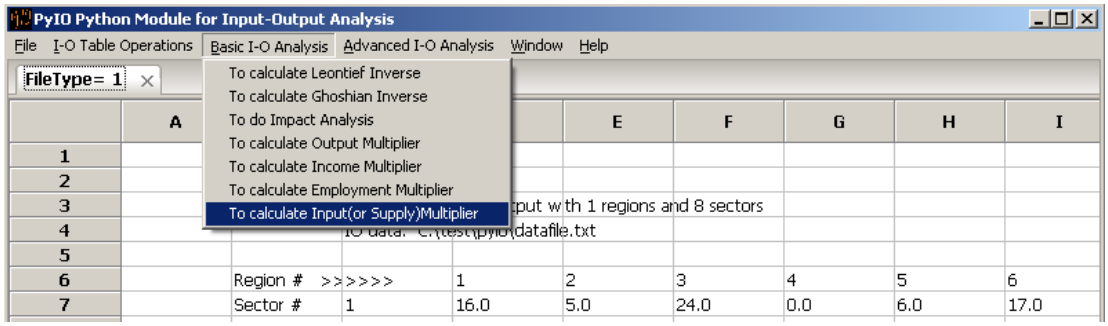
   File -> Open_datafile[datafile.txt]

   Basic I-O Analysis -> To calculate Input (or Supply) Multiplier

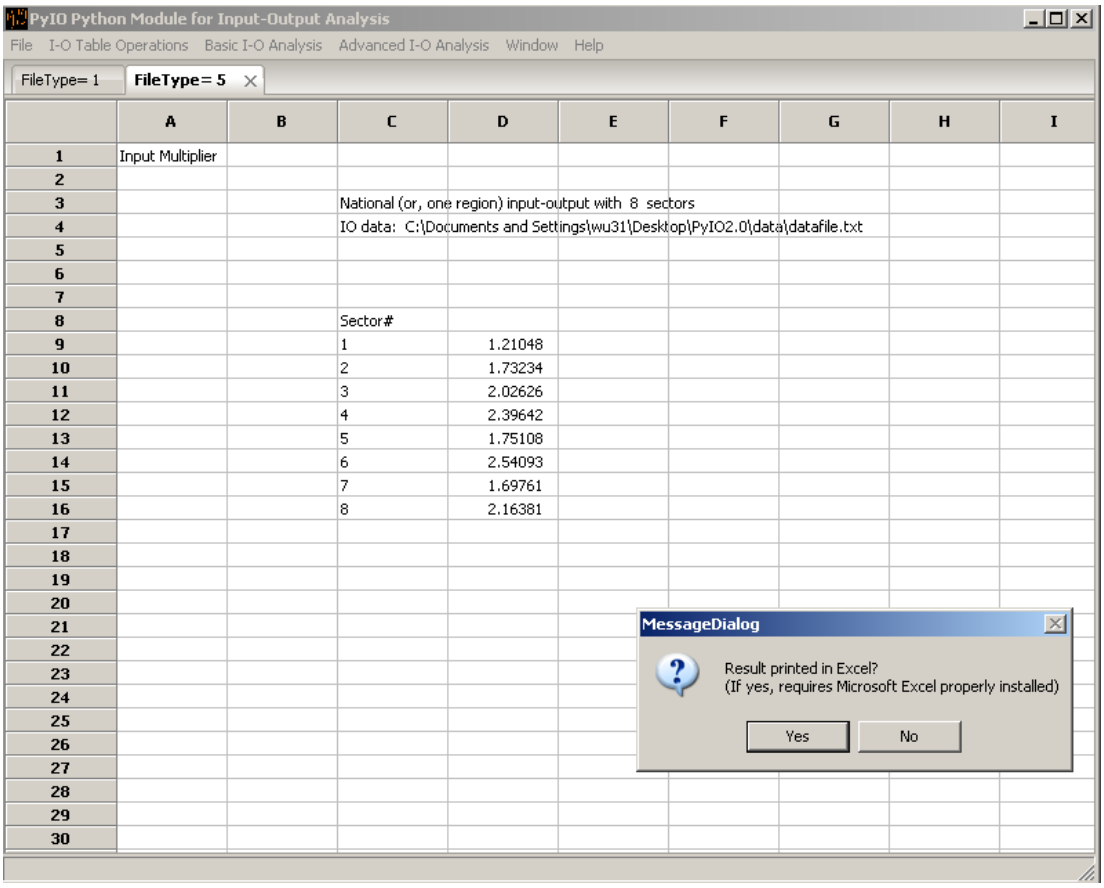




	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



	A	B	C	D	E	F	G	H	I
1									
2									
3									
4									
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0

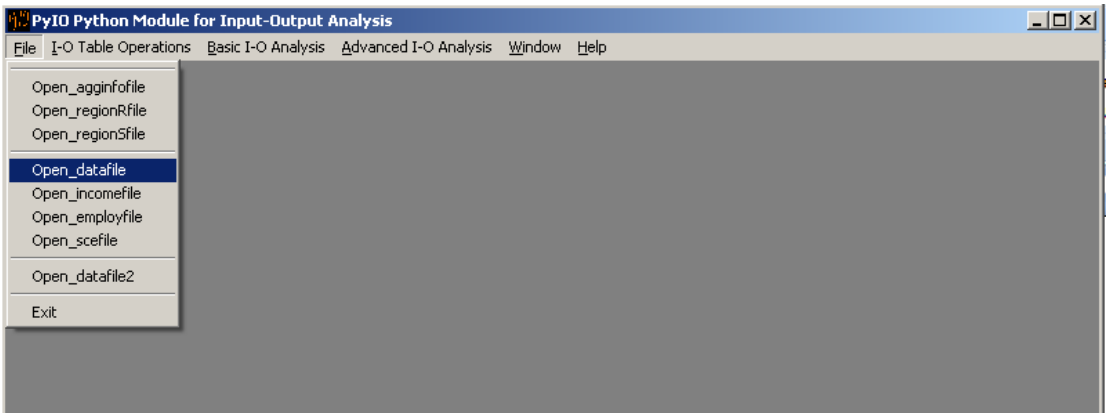


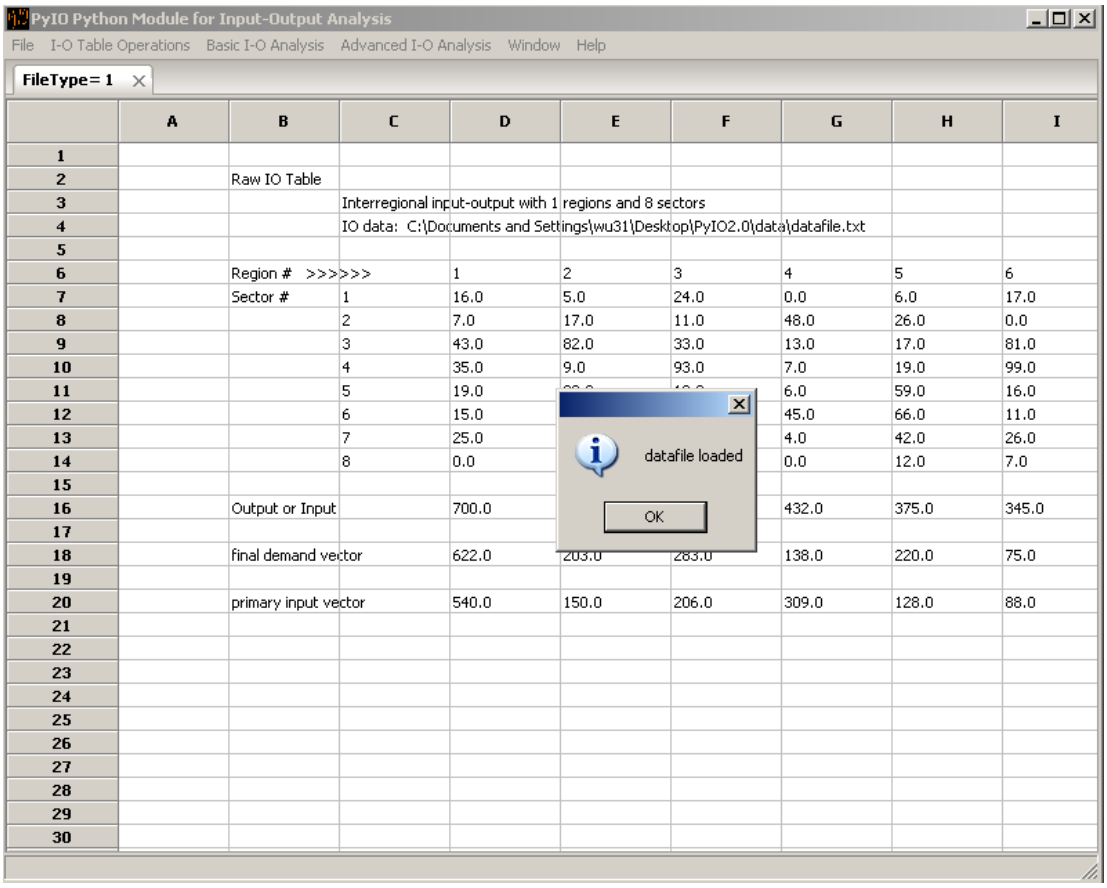
Advanced I-O analysis

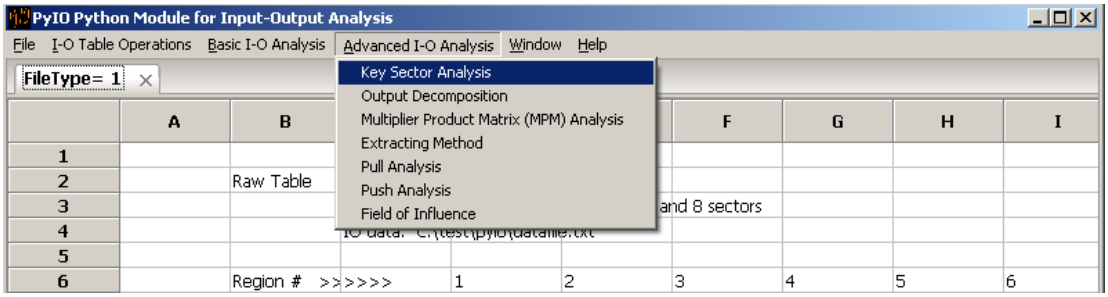
1. Key Sector Analysis

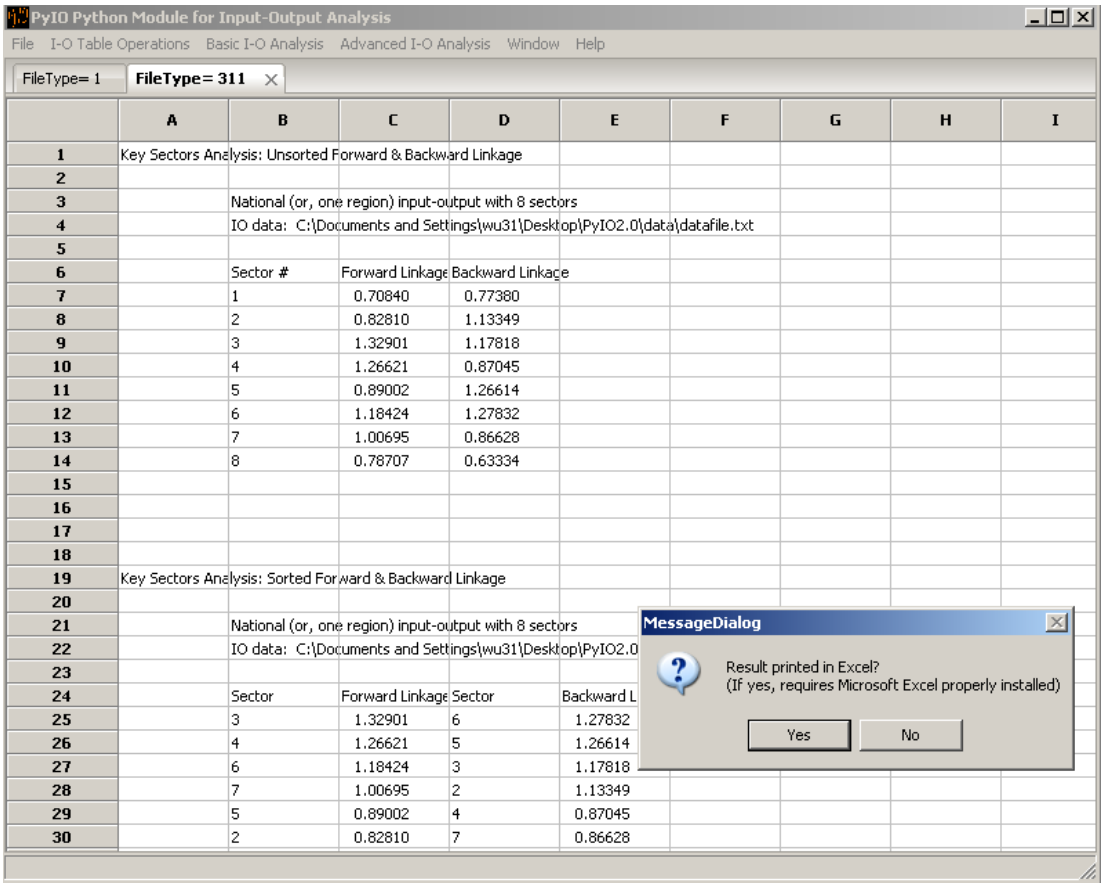
   File -> Open_datafile[datafile.txt]

   Advanced I-O analysis-> Key Sector Analysis




PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Raw IO Table
Region # >>>>>>
Sector #
Output or Input
final demand vector
primary input vector
datafile loaded
OK


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Key Sector Analysis
Output Decomposition
Multiplier Product Matrix (MPM) Analysis
Extracting Method
Pull Analysis
Push Analysis
Field of Influence
Raw Table
Region # >>>>>>

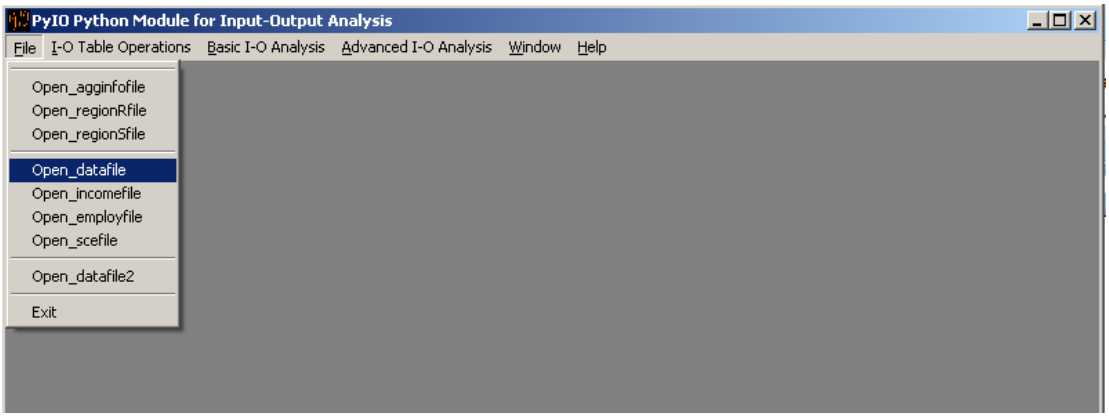


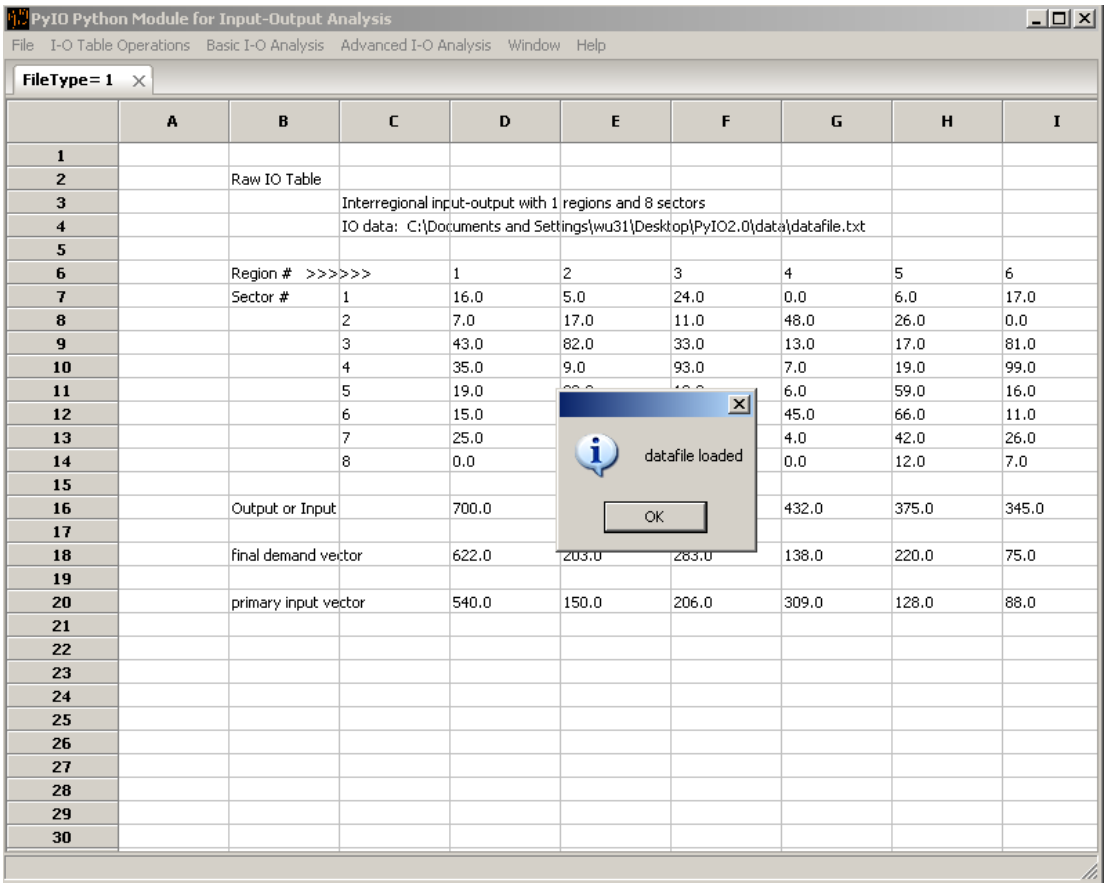
2. Output Decomposition

   File -> Open_datafile[datafile.txt]

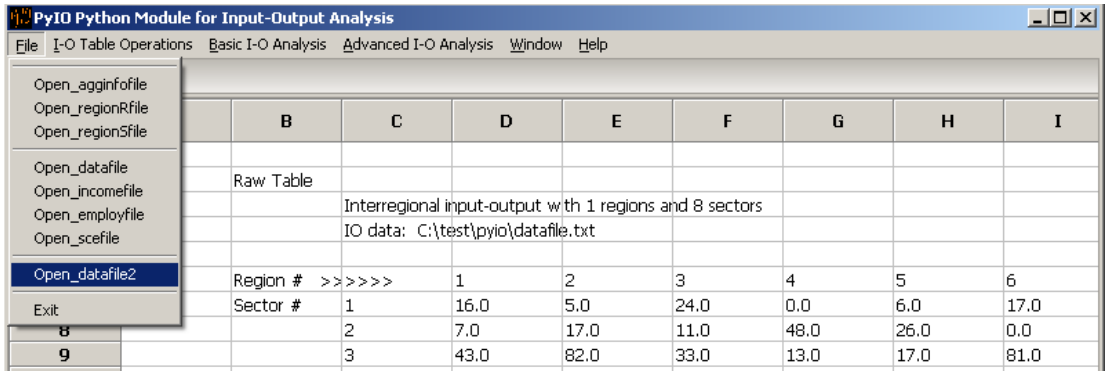
   File -> Open_datafile2[data2.txt]

   Advanced I-O analysis-> Output Decomposition

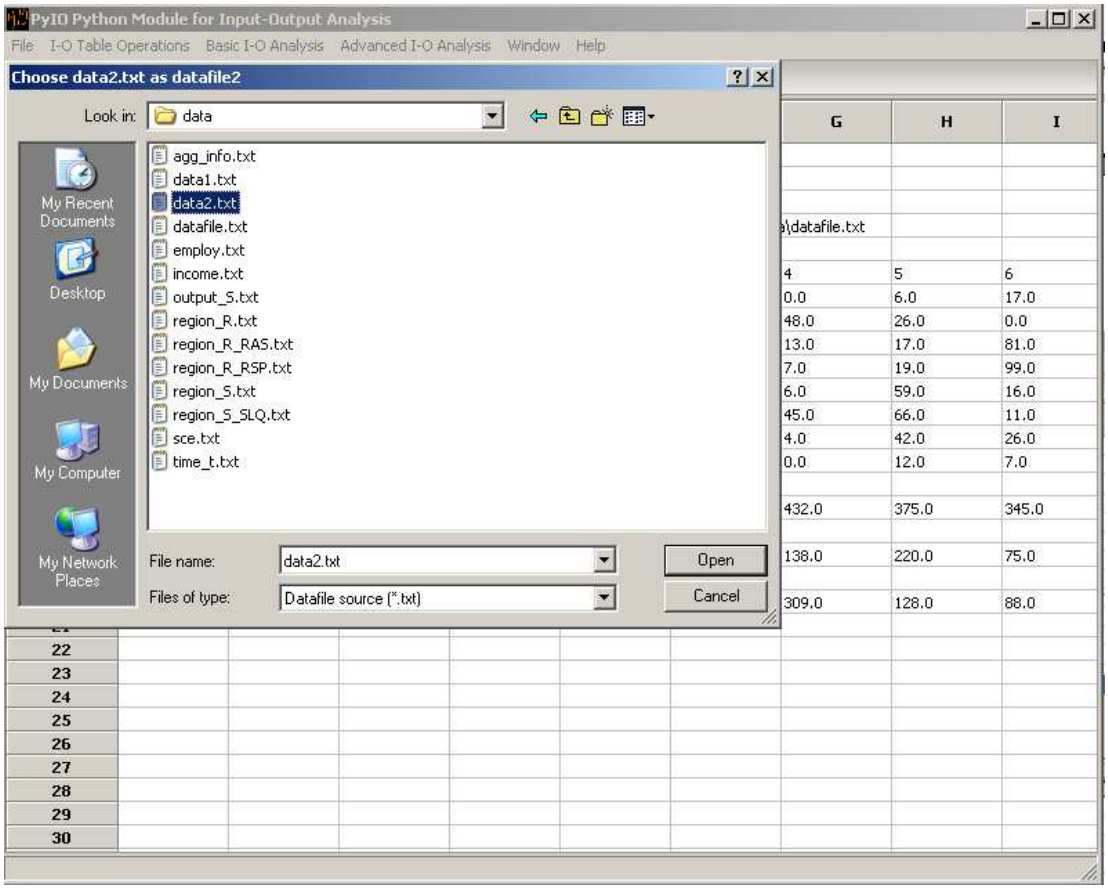


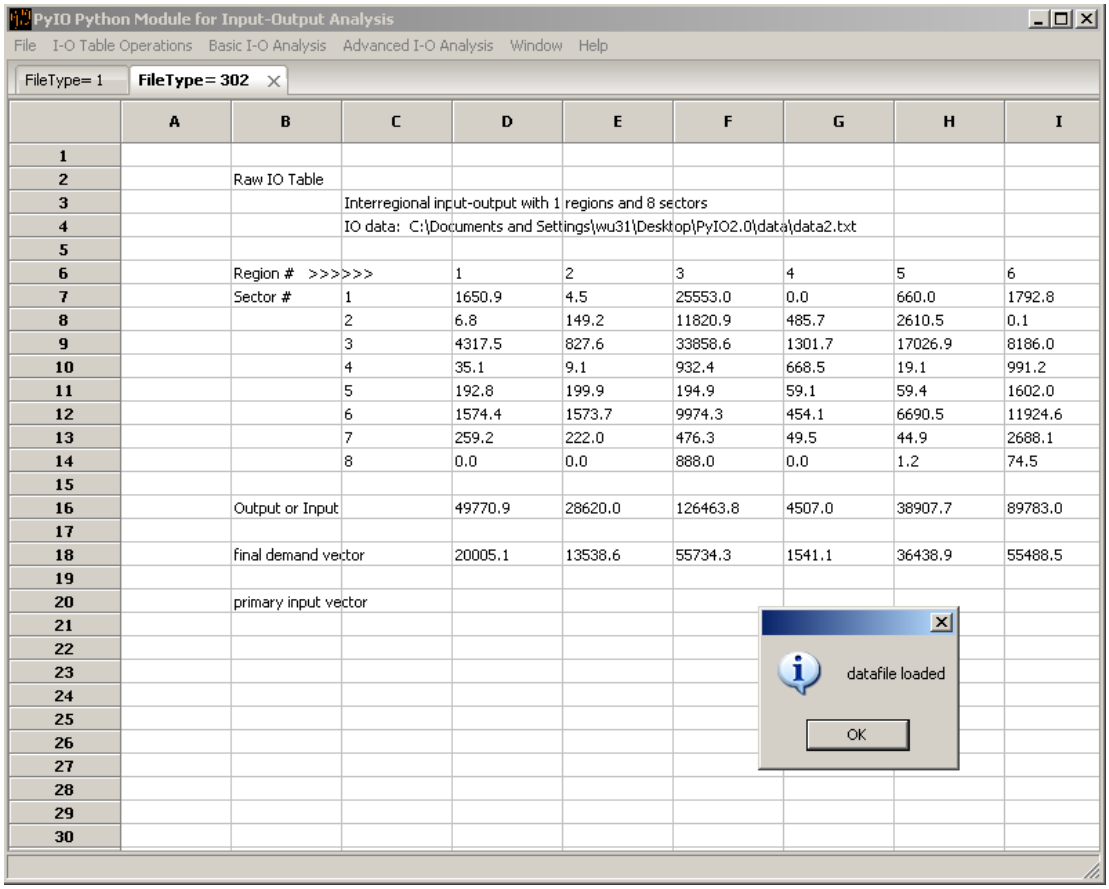


	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

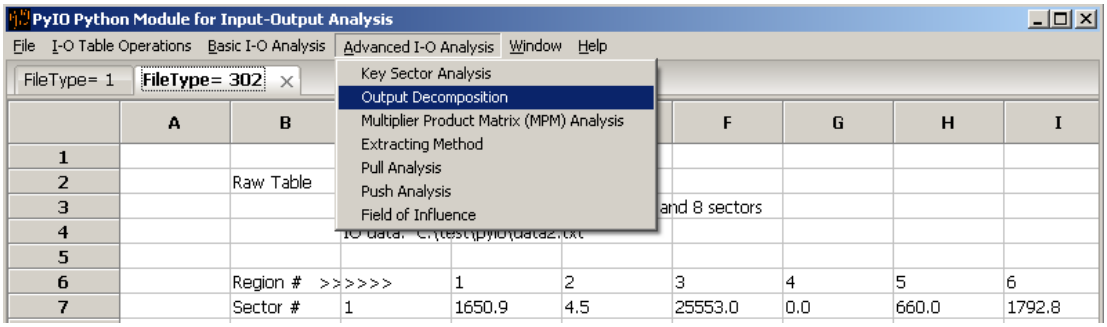


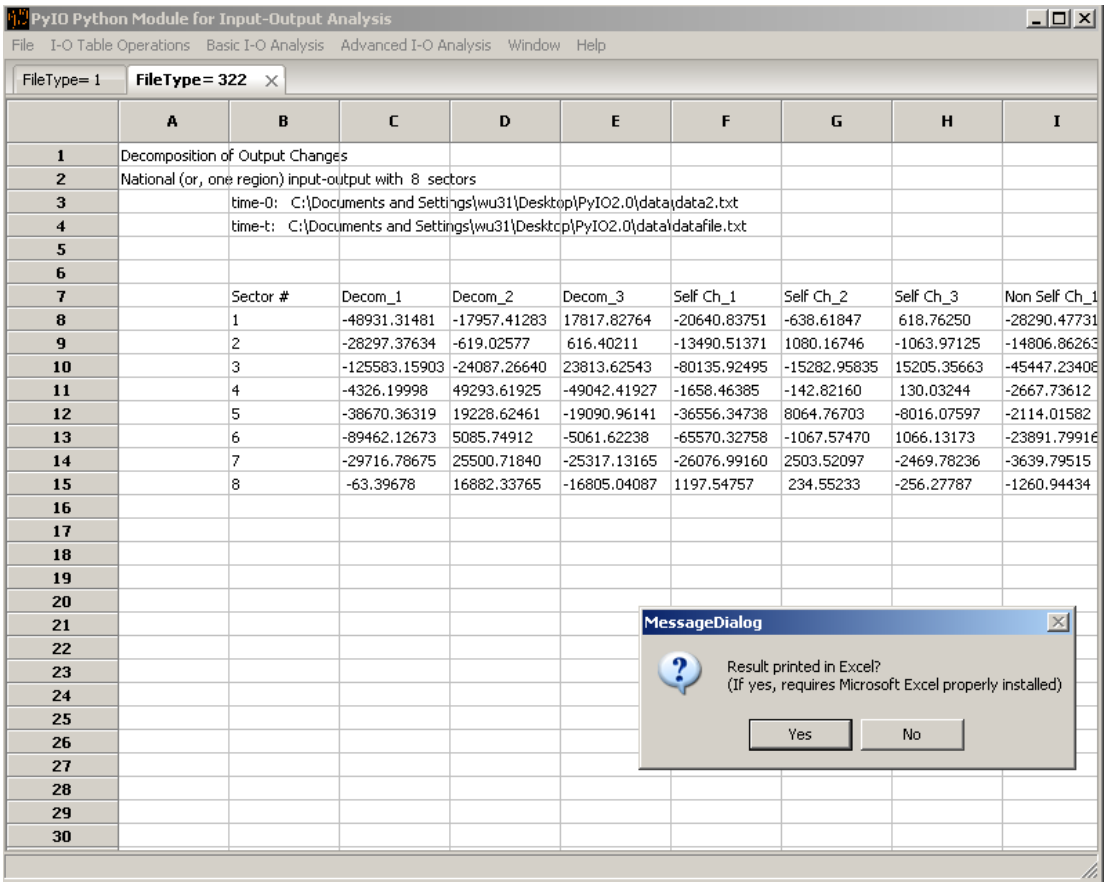
	B	C	D	E	F	G	H	I
	Raw Table							
		Interregional input-output with 1 regions and 8 sectors						
		IO data: C:\test\pyio\datafile.txt						
	Region # >>>>>>	1	2	3	4	5	6	
	Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8		2	7.0	17.0	11.0	48.0	26.0	0.0
9		3	43.0	82.0	33.0	13.0	17.0	81.0



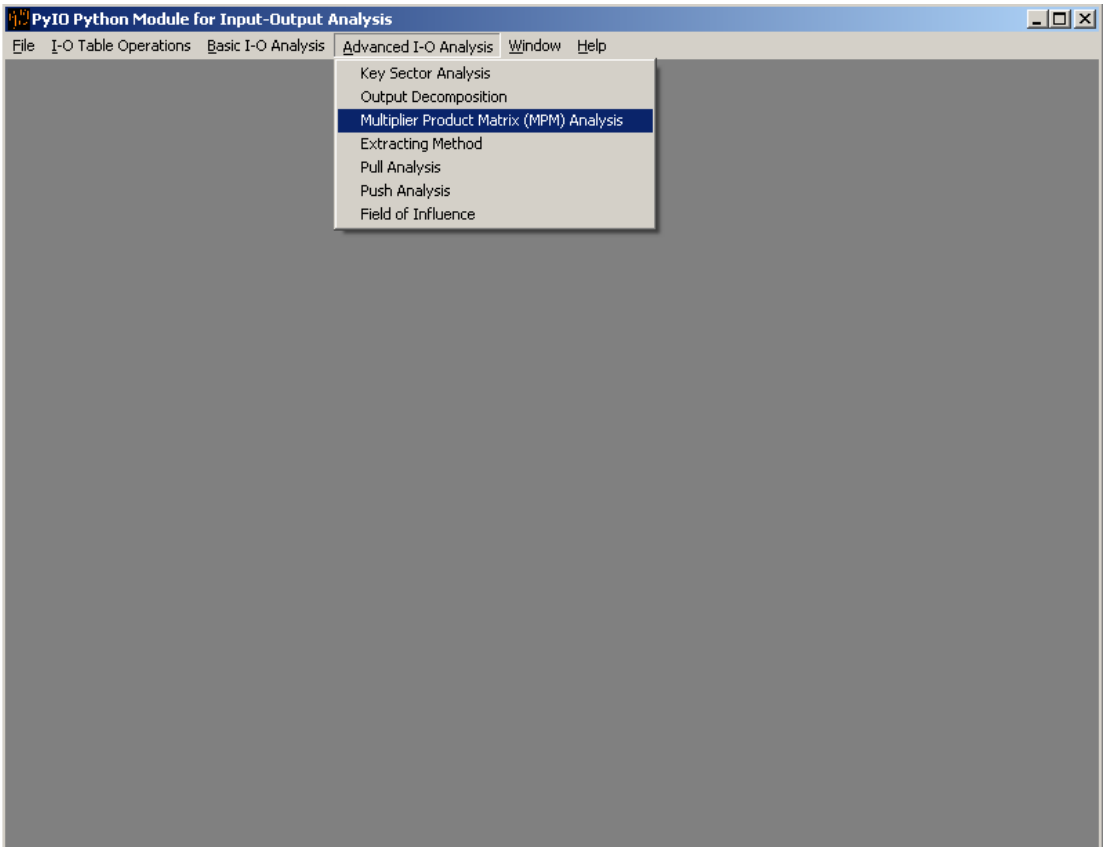


	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\data2.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	1650.9	4.5	25553.0	0.0	660.0	1792.8
8			2	6.8	149.2	11820.9	485.7	2610.5	0.1
9			3	4317.5	827.6	33858.6	1301.7	17026.9	8186.0
10			4	35.1	9.1	932.4	668.5	19.1	991.2
11			5	192.8	199.9	194.9	59.1	59.4	1602.0
12			6	1574.4	1573.7	9974.3	454.1	6690.5	11924.6
13			7	259.2	222.0	476.3	49.5	44.9	2688.1
14			8	0.0	0.0	888.0	0.0	1.2	74.5
15									
16		Output or Input		49770.9	28620.0	126463.8	4507.0	38907.7	89783.0
17									
18		final demand vector		20005.1	13538.6	55734.3	1541.1	36438.9	55488.5
19									
20		primary input vector							
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									





3. Multiplier Product Matrix (MPM) Analysis
   Advanced I-O analysis->Multiplier Product Matrix (MPM) Analysis -> #year -> benchmark year-> [datafile.txt]……


PyIO Python Module for Input-Output Analysis
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Advanced I-O Analysis
Window
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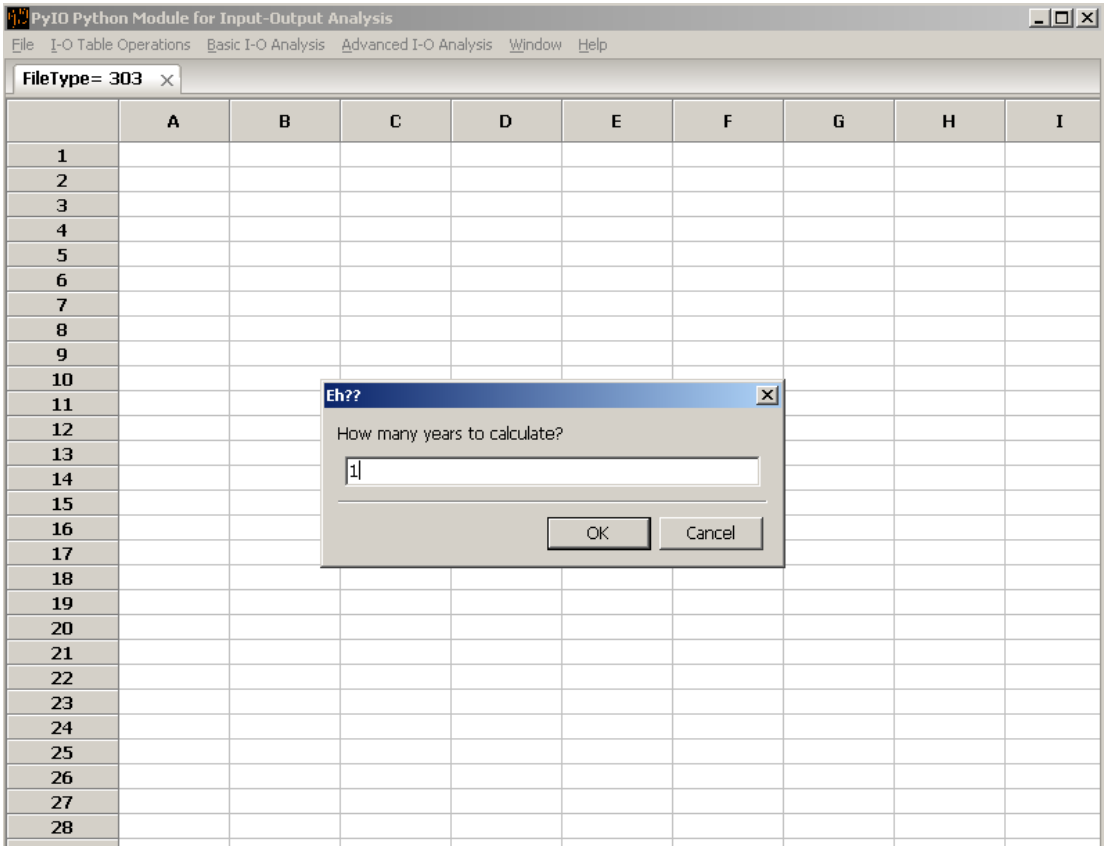
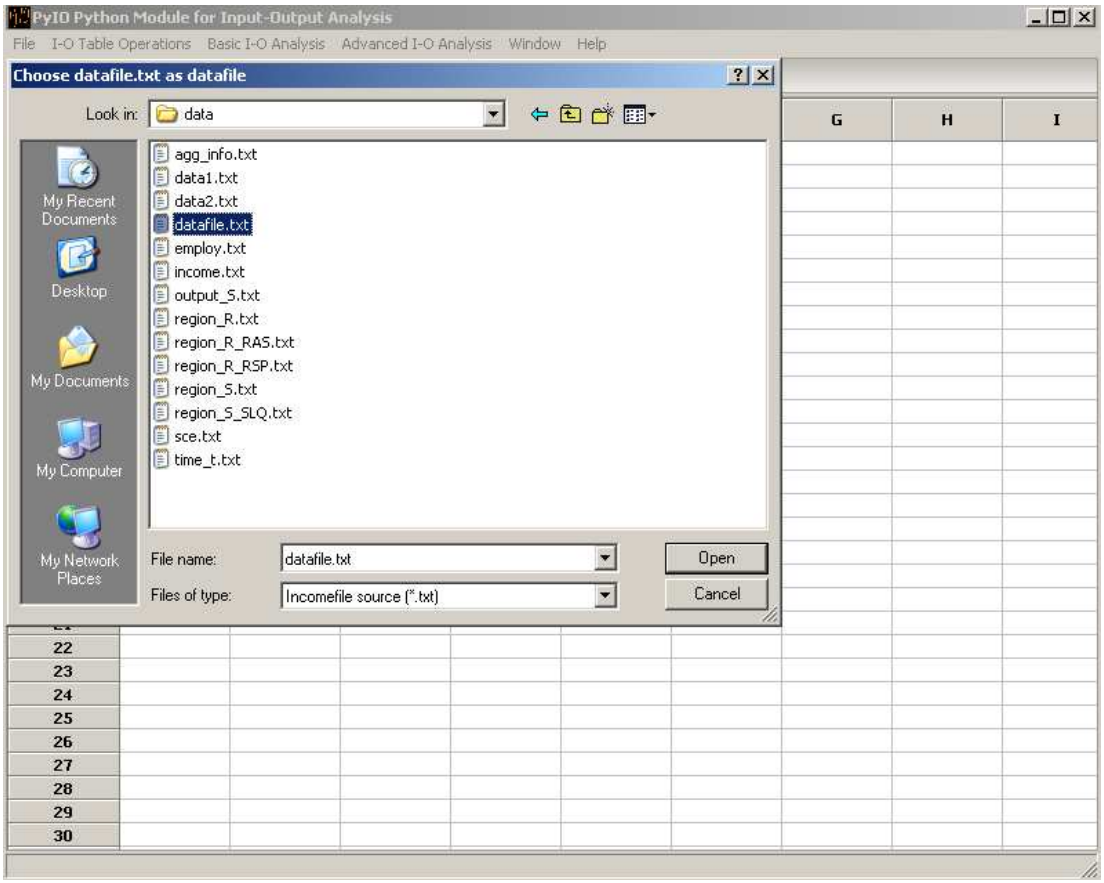
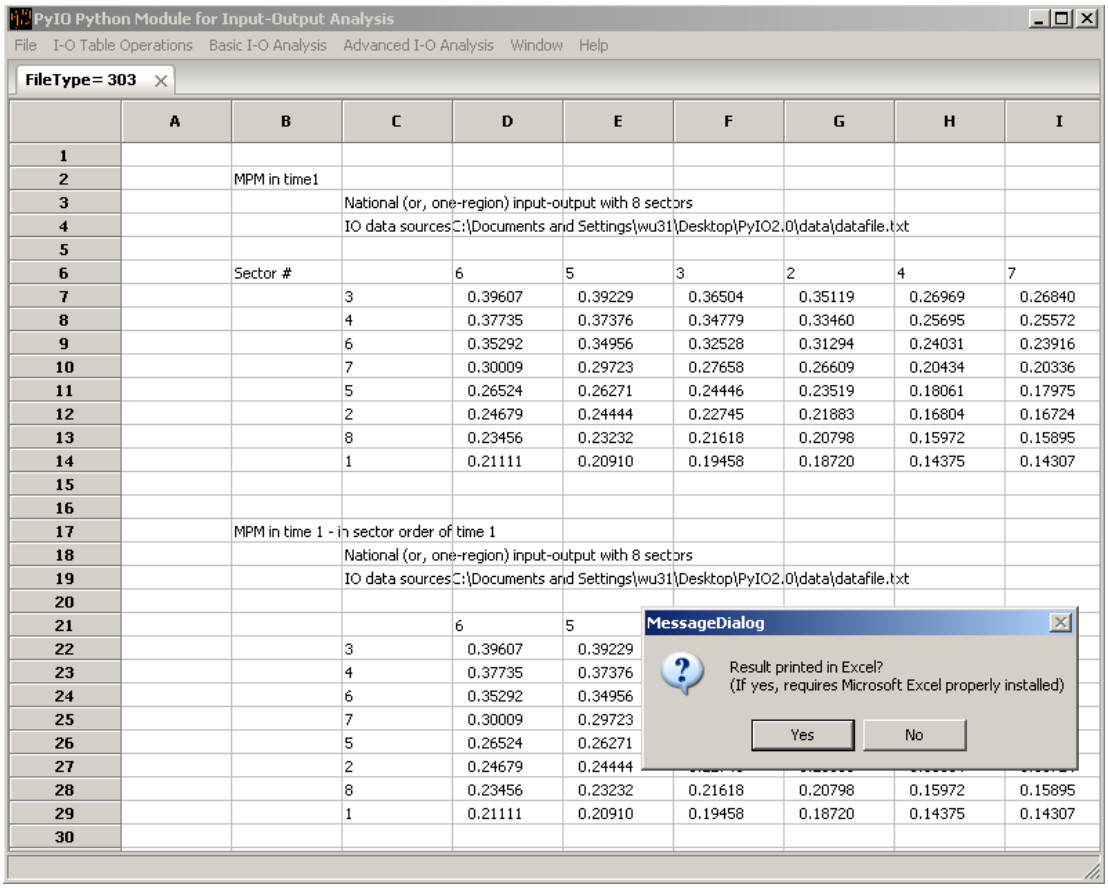
Output Decomposition
Multiplier Product Matrix (MPM) Analysis
Extracting Method
Pull Analysis
Push Analysis
Field of Influence


PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
FileType= 303
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
Eh??
How many years to calculate?
1
OK
Cancel



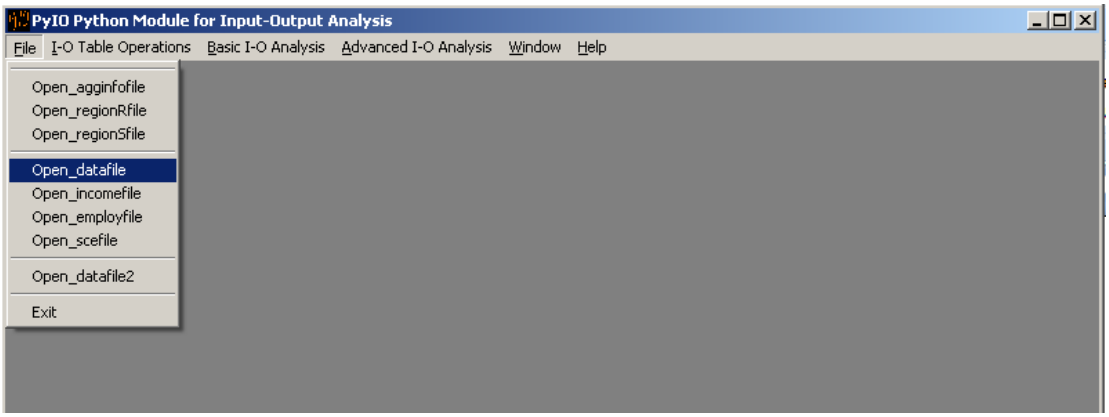


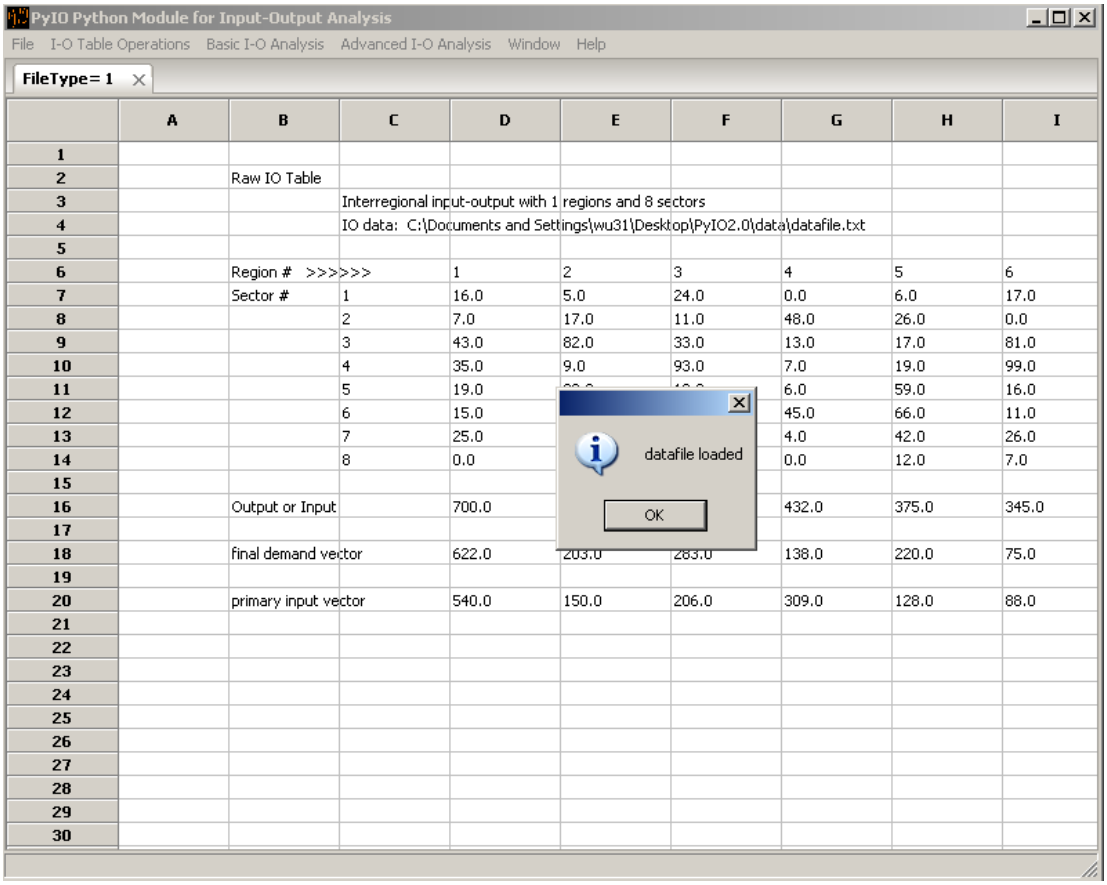
	A	B	C	D	E	F	G	H	I
1									
2		MPM in time1							
3			National (or, one-region) input-output with 8 sectors						
4			IO data sources C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Sector #		6	5	3	2	4	7
7			3	0.39607	0.39229	0.36504	0.35119	0.26969	0.26840
8			4	0.37735	0.37376	0.34779	0.33460	0.25695	0.25572
9			6	0.35292	0.34956	0.32528	0.31294	0.24031	0.23916
10			7	0.30009	0.29723	0.27658	0.26609	0.20434	0.20336
11			5	0.26524	0.26271	0.24446	0.23519	0.18061	0.17975
12			2	0.24679	0.24444	0.22745	0.21883	0.16804	0.16724
13			8	0.23456	0.23232	0.21618	0.20798	0.15972	0.15895
14			1	0.21111	0.20910	0.19458	0.18720	0.14375	0.14307
15									
16									
17		MPM in time 1 - in sector order of time 1							
18			National (or, one-region) input-output with 8 sectors						
19			IO data sources C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
20									
21				6	5				
22			3	0.39607	0.39229				
23			4	0.37735	0.37376				
24			6	0.35292	0.34956				
25			7	0.30009	0.29723				
26			5	0.26524	0.26271				
27			2	0.24679	0.24444				
28			8	0.23456	0.23232	0.21618	0.20798	0.15972	0.15895
29			1	0.21111	0.20910	0.19458	0.18720	0.14375	0.14307
30									

4. Extracting Method

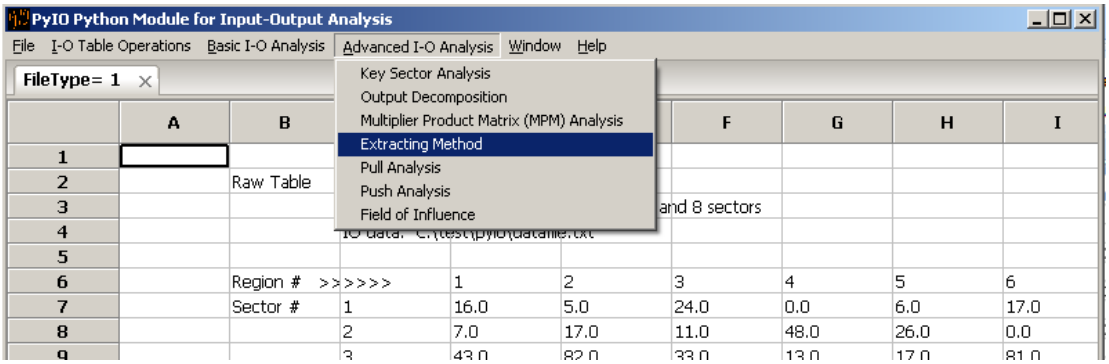
   File -> Open_datafile[data.txt]

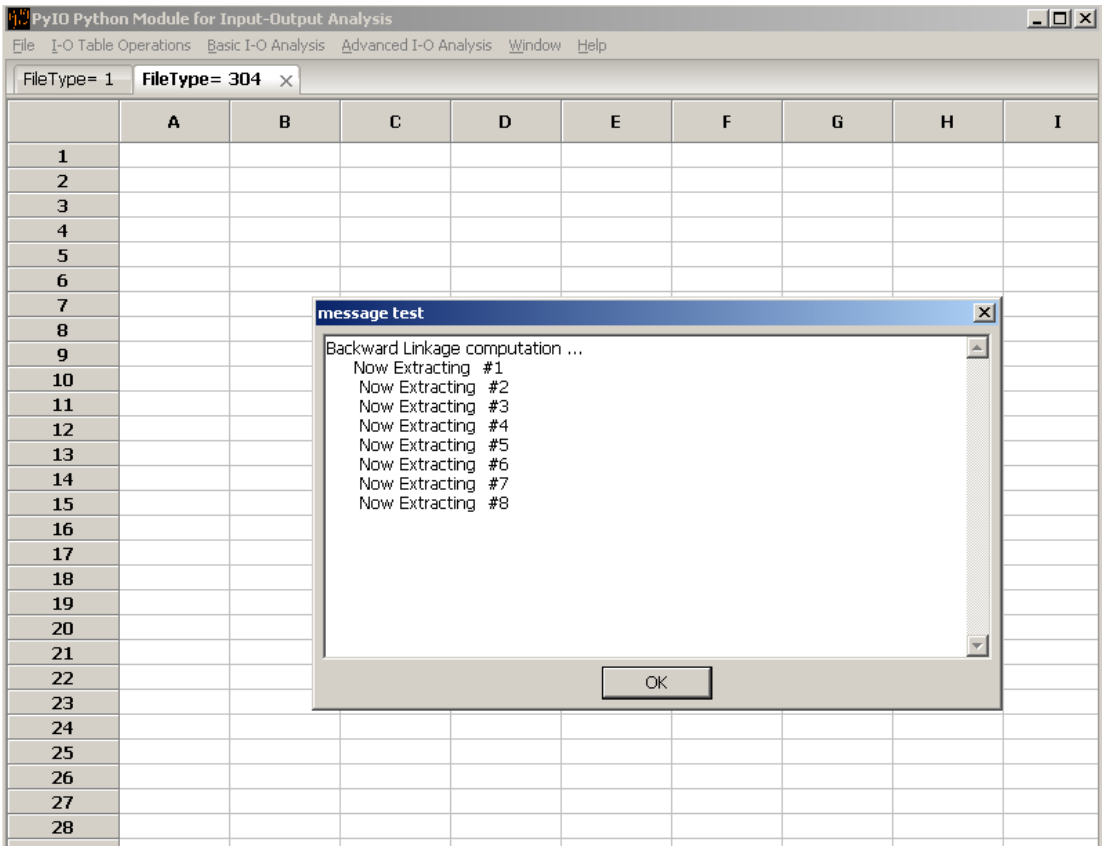
   Advanced I-O analysis-> Extracting Method

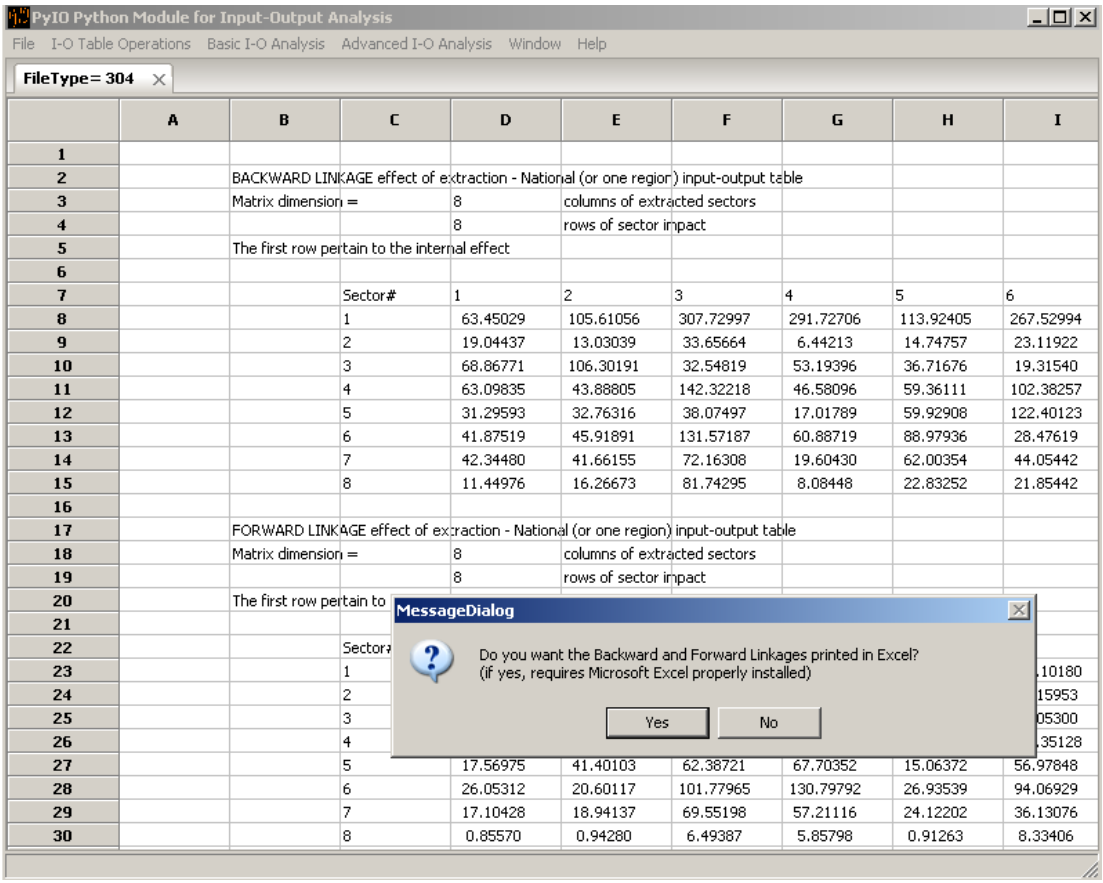




	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>		1	2	3	4	5	6
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									


PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
Key Sector Analysis
Output Decomposition
Multiplier Product Matrix (MPM) Analysis
Extracting Method
Pull Analysis
Push Analysis
Field of Influence
FileType= 1
Raw Table
and 8 sectors
Region # >>>>>>
Sector #

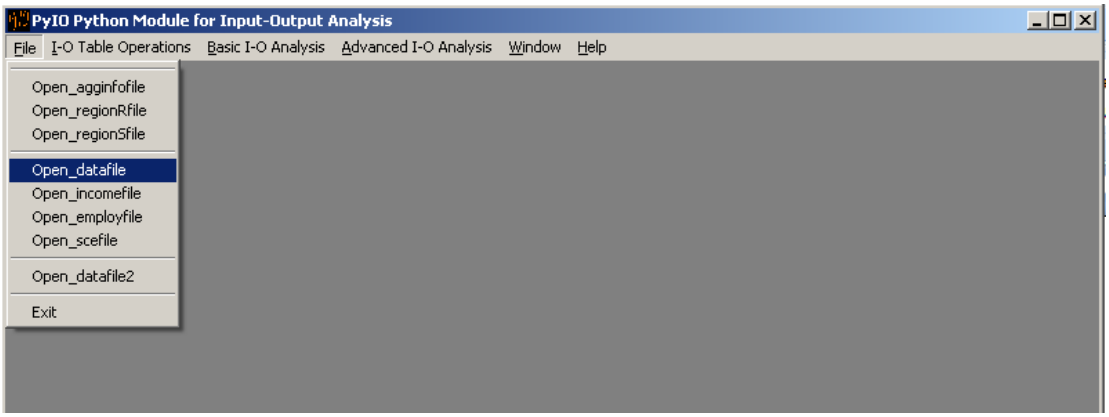

PyIO Python Module for Input-Output Analysis
File
I-O Table Operations
Basic I-O Analysis
Advanced I-O Analysis
Window
Help
FileType= 1
FileType= 304
message test
Backward Linkage computation ...
Now Extracting #1
Now Extracting #2
Now Extracting #3
Now Extracting #4
Now Extracting #5
Now Extracting #6
Now Extracting #7
Now Extracting #8
OK

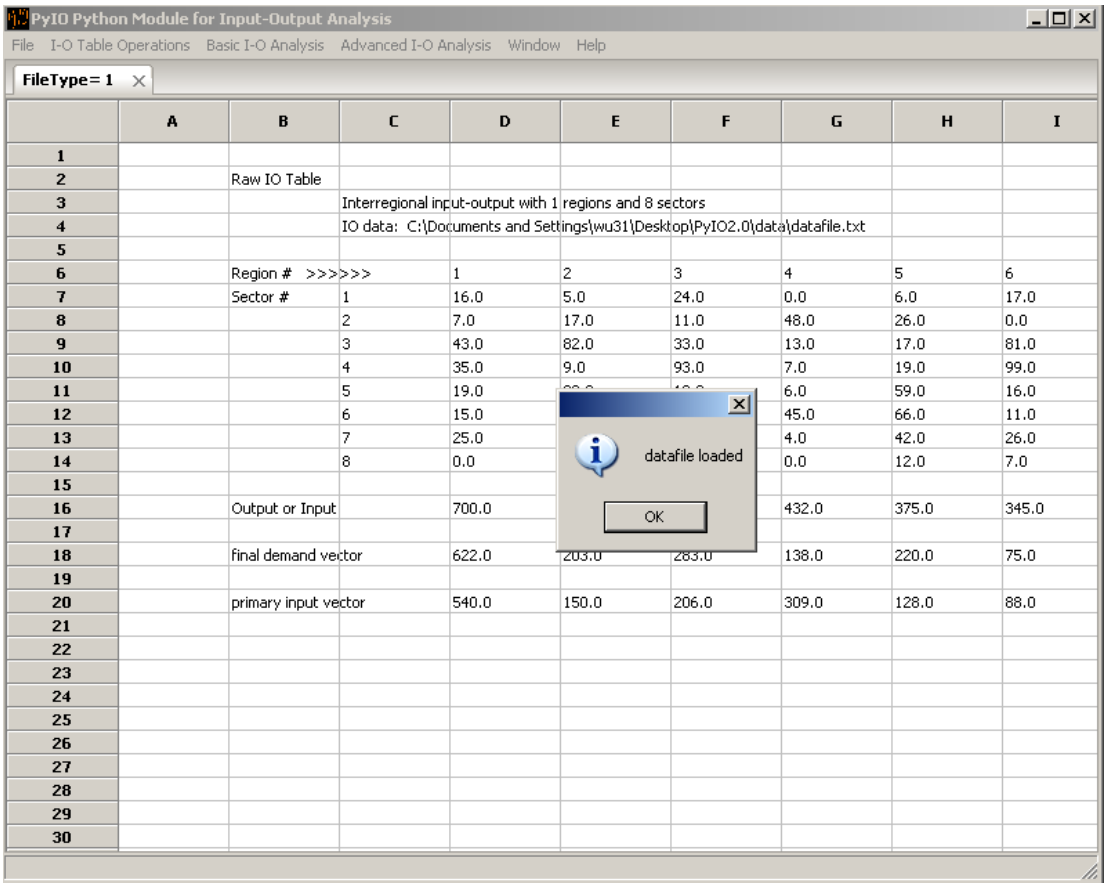


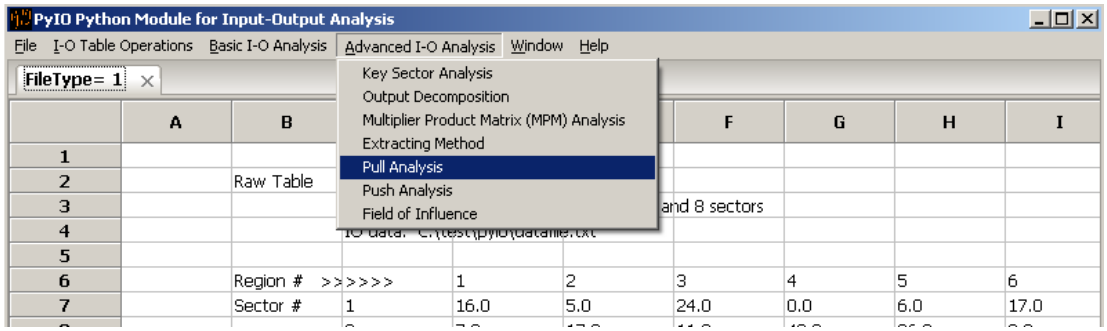
5. Pull Analysis

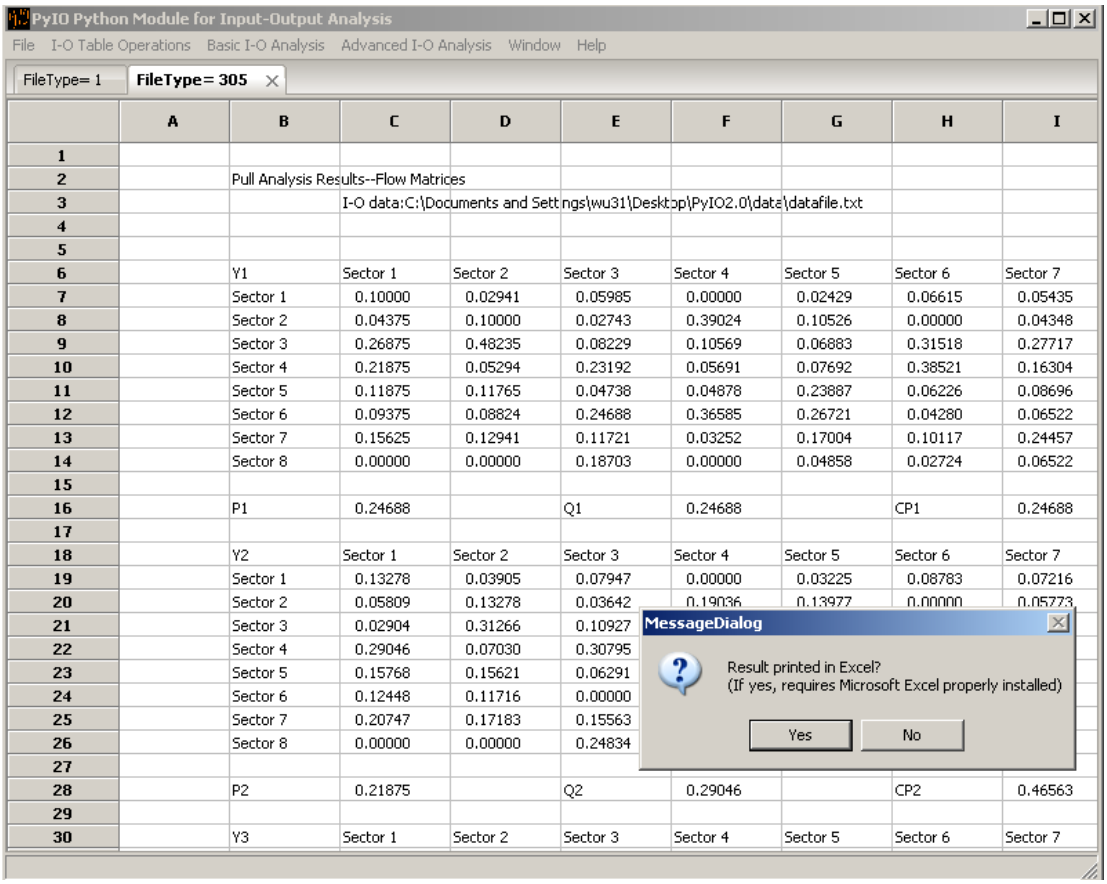
   File -> Open_datafile[data.txt]

   Advanced I-O analysis-> Pull Analysis




PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Raw IO Table
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Region # >>>>>>
Sector #
Output or Input
final demand vector
primary input vector
datafile loaded
OK

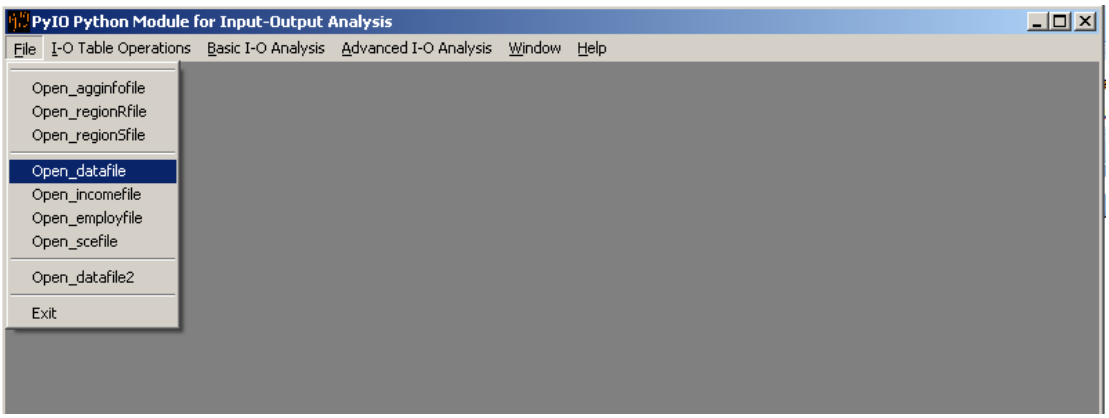

PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Key Sector Analysis
Output Decomposition
Multiplier Product Matrix (MPM) Analysis
Extracting Method
Pull Analysis
Push Analysis
Field of Influence
Raw Table
Region # >>>>>>
Sector #

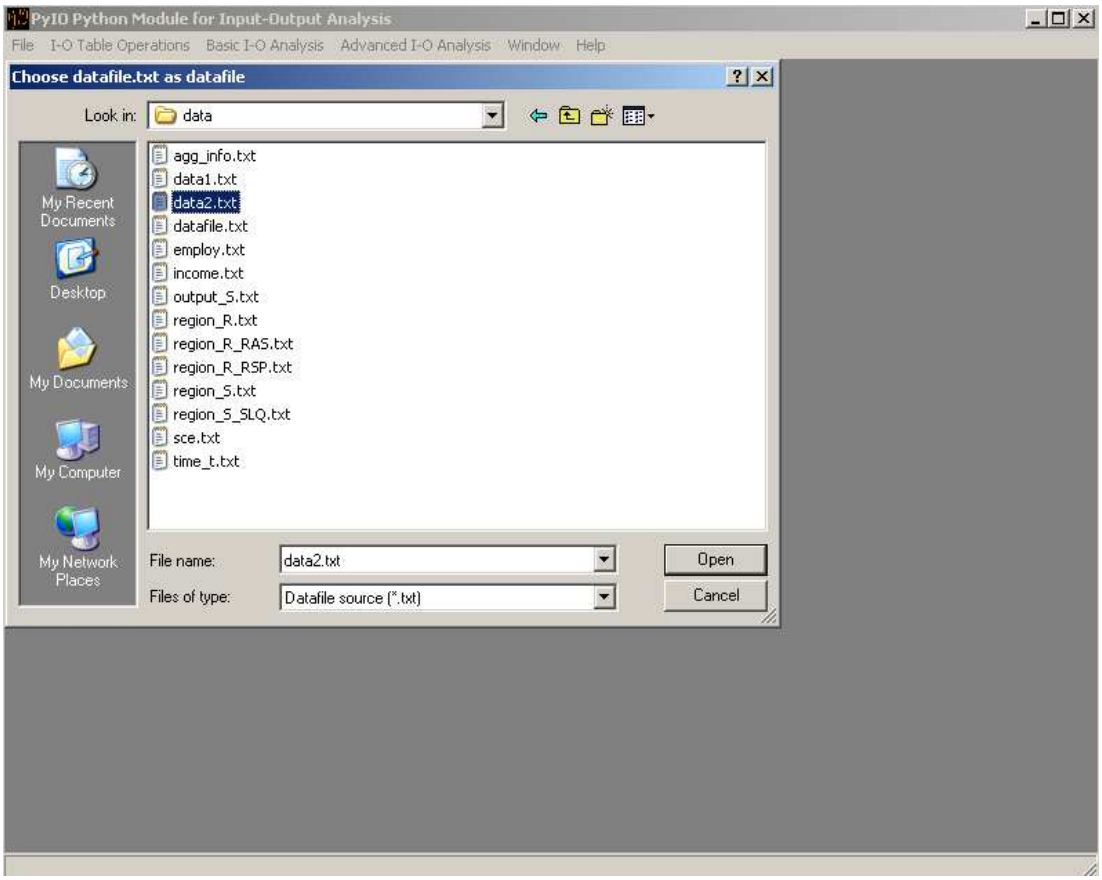


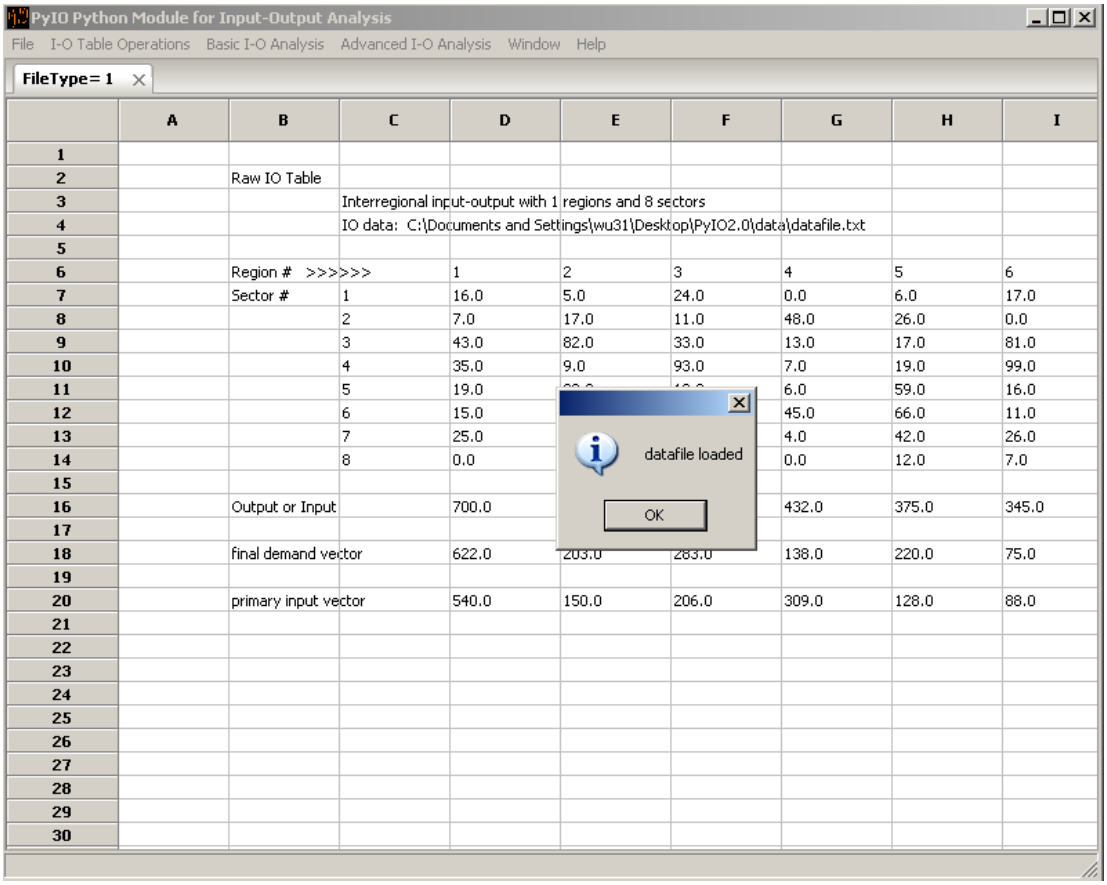
6. Push Analysis

   File -> Open_datafile[data2.txt]

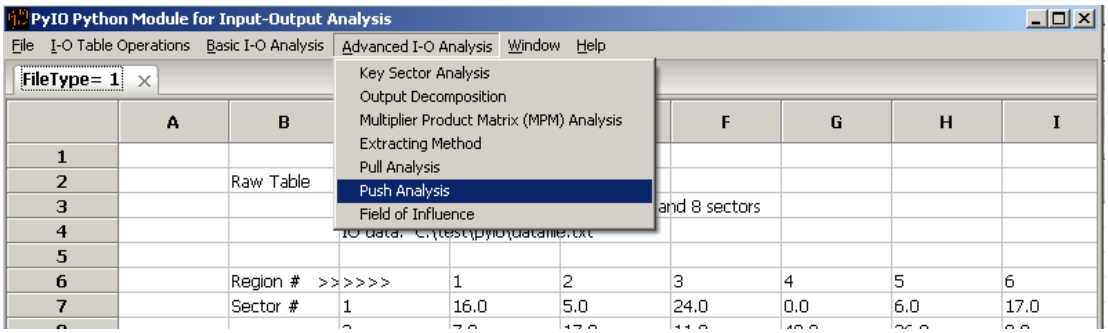
   Advanced I-O analysis-> Push Analysis

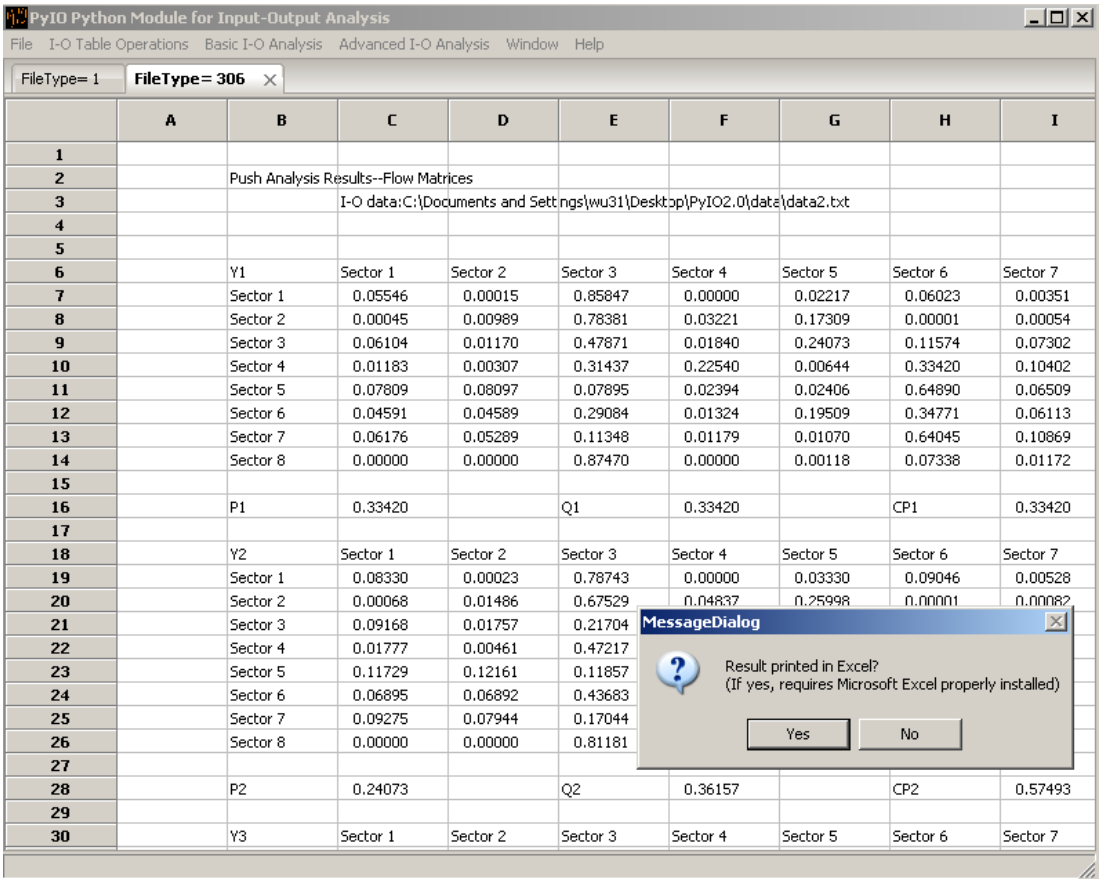






	A	B	C	D	E	F	G	H	I
1									
2		Raw IO Table							
3			Interregional input-output with 1 regions and 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6		Region # >>>>>>	1	2	3	4	5	6	
7		Sector #	1	16.0	5.0	24.0	0.0	6.0	17.0
8			2	7.0	17.0	11.0	48.0	26.0	0.0
9			3	43.0	82.0	33.0	13.0	17.0	81.0
10			4	35.0	9.0	93.0	7.0	19.0	99.0
11			5	19.0			6.0	59.0	16.0
12			6	15.0			45.0	66.0	11.0
13			7	25.0			4.0	42.0	26.0
14			8	0.0			0.0	12.0	7.0
15									
16		Output or Input		700.0			432.0	375.0	345.0
17									
18		final demand vector		622.0	203.0	283.0	138.0	220.0	75.0
19									
20		primary input vector		540.0	150.0	206.0	309.0	128.0	88.0
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									



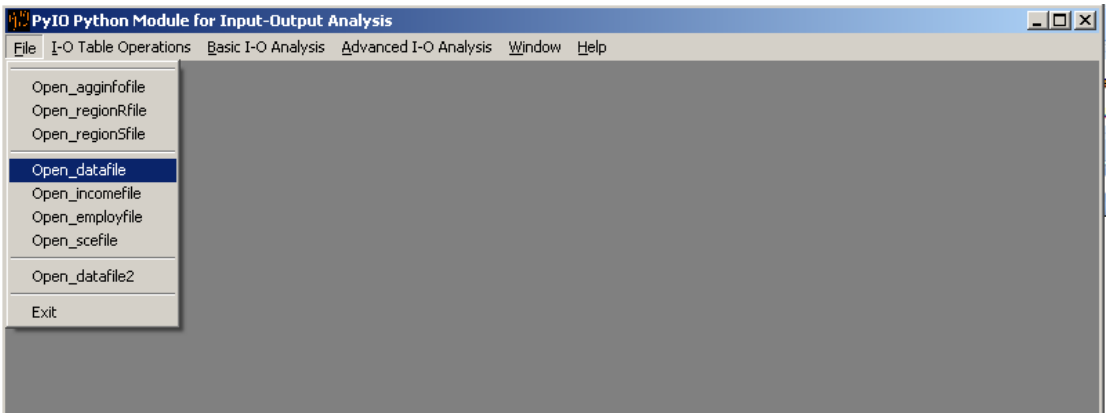


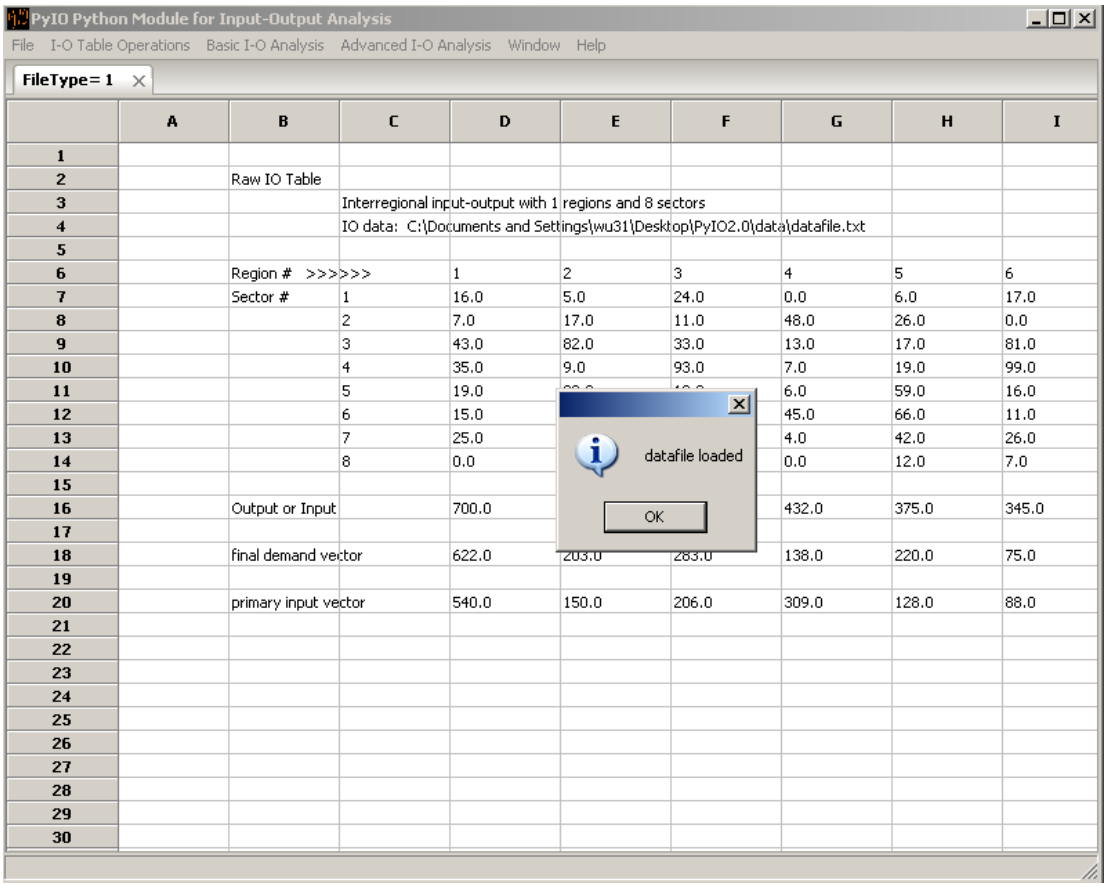
7. Field of Influence

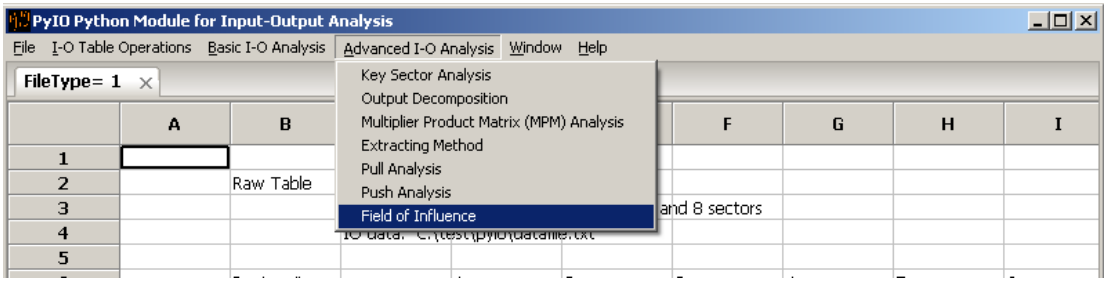
   File -> Open_datafile[data.txt]

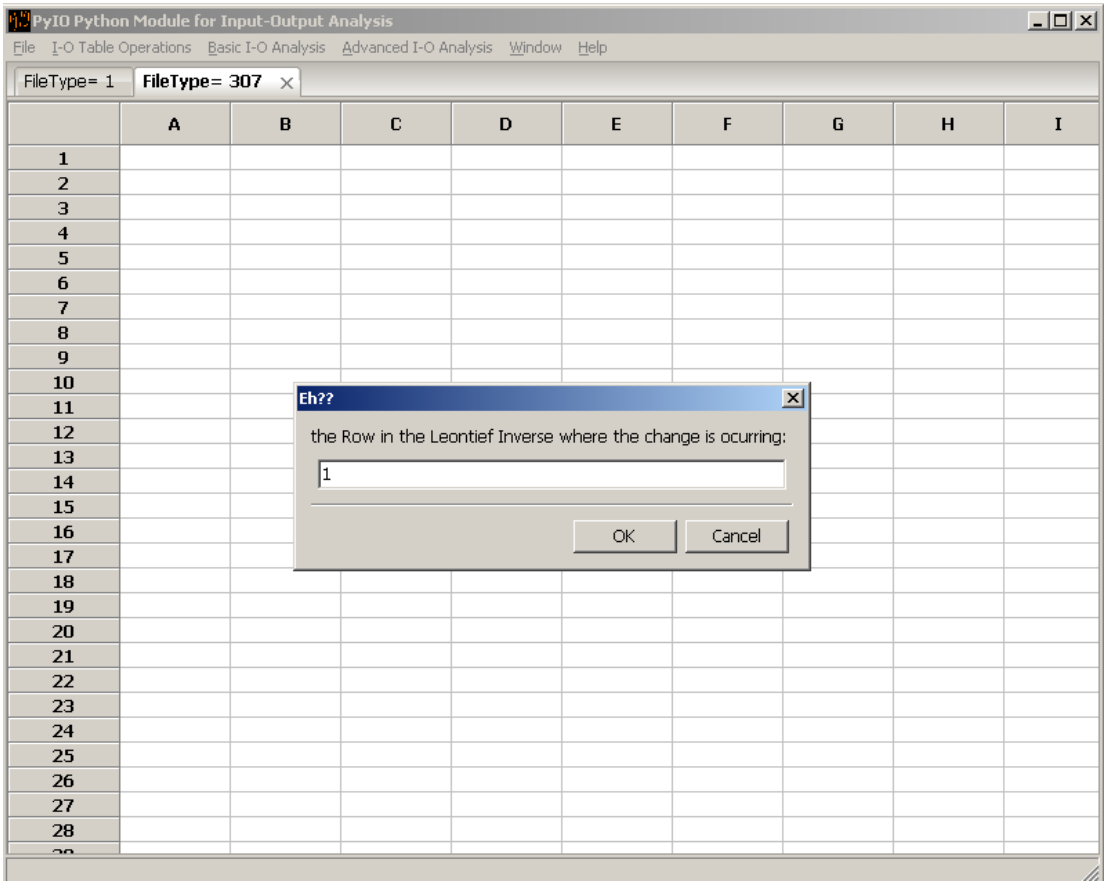
   Advanced I-O analysis-> Field of Influence

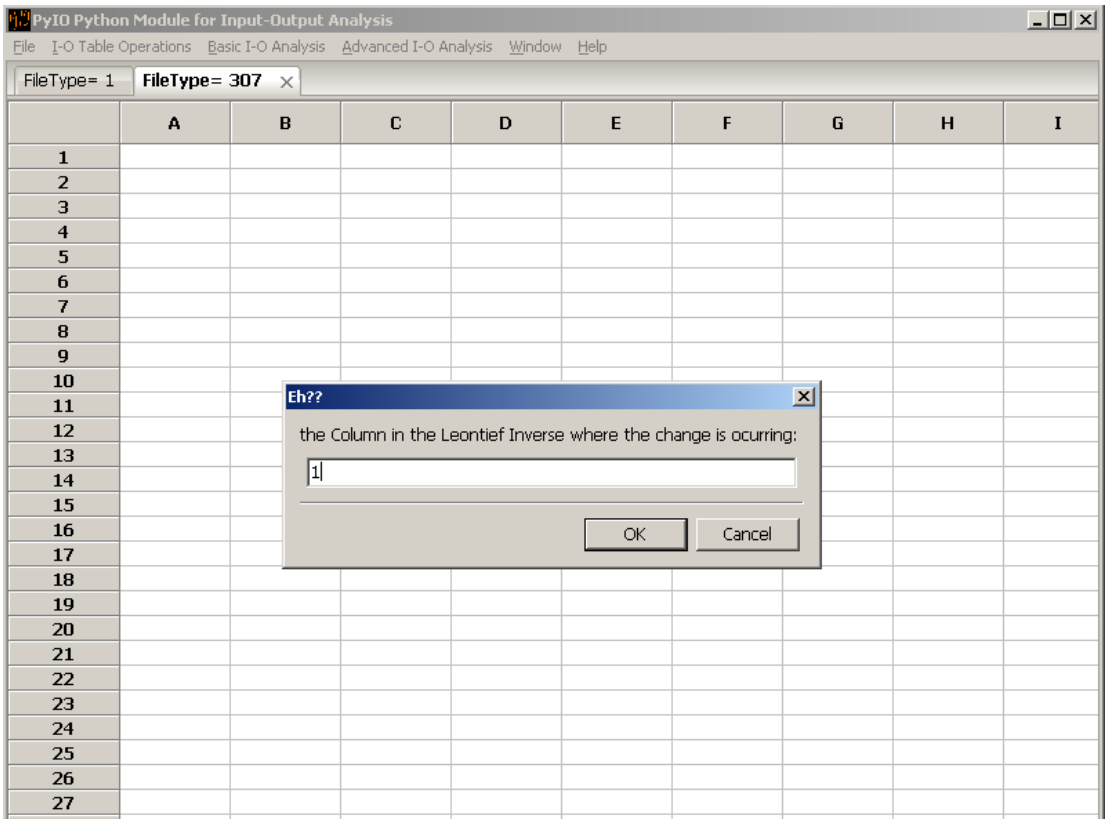
   -> #row ->#column

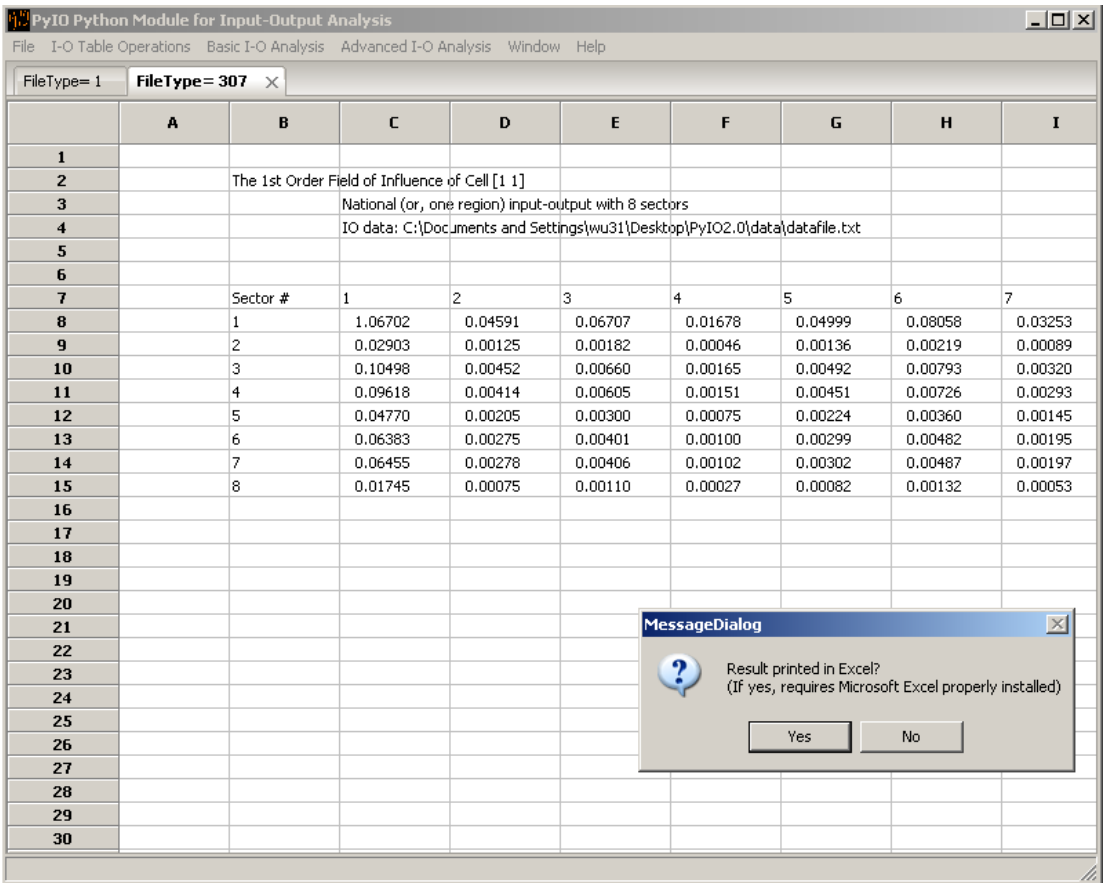



PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Interregional input-output with 1 regions and 8 sectors
IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt
Raw IO Table
Region # >>>>>>
Sector #
Output or Input
final demand vector
primary input vector
datafile loaded
OK


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
Key Sector Analysis
Output Decomposition
Multiplier Product Matrix (MPM) Analysis
Extracting Method
Pull Analysis
Push Analysis
Field of Influence
Raw Table


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
FileType= 307
A B C D E F G H I
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Eh??
the Row in the Leontief Inverse where the change is ocurring:
1
OK
Cancel


PyIO Python Module for Input-Output Analysis
File I-O Table Operations Basic I-O Analysis Advanced I-O Analysis Window Help
FileType= 1
FileType= 307
A B C D E F G H I
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
Eh??
the Column in the Leontief Inverse where the change is ocurring:
1
OK
Cancel



	A	B	C	D	E	F	G	H	I
1									
2		The 1st Order Field of Influence of Cell [1 1]							
3			National (or, one region) input-output with 8 sectors						
4			IO data: C:\Documents and Settings\wu31\Desktop\PyIO2.0\data\datafile.txt						
5									
6									
7		Sector #	1	2	3	4	5	6	7
8		1	1.06702	0.04591	0.06707	0.01678	0.04999	0.08058	0.03253
9		2	0.02903	0.00125	0.00182	0.00046	0.00136	0.00219	0.00089
10		3	0.10498	0.00452	0.00660	0.00165	0.00492	0.00793	0.00320
11		4	0.09618	0.00414	0.00605	0.00151	0.00451	0.00726	0.00293
12		5	0.04770	0.00205	0.00300	0.00075	0.00224	0.00360	0.00145
13		6	0.06383	0.00275	0.00401	0.00100	0.00299	0.00482	0.00195
14		7	0.06455	0.00278	0.00406	0.00102	0.00302	0.00487	0.00197
15		8	0.01745	0.00075	0.00110	0.00027	0.00082	0.00132	0.00053
16									
17									
18									
19									
20									
21									
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24									
25									
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28									
29									
30									