



Input-Output Analysis

Dr. Suahasil Nazara
Faculty of Economics University of Indonesia
Jakarta - Indonesia

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Session 2.3

Introduction to PyIO

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Stories from the 1930s

“Leontief believed that the economy can be broken down into sectors [*whose*] interrelationship can be described in the form of a mathematical matrix...called an “input-output analysis.”

Leontief’s initial set of sectors led to a 12x12 matrix...to invert that ... it took him [*Cornfield*] about a week, and the end result was the conclusion that the number of sectors had to be expanded. ...

[*With* trepidation, they [*Leontief and Cornfield*] ended with the simplest matrix they thought would be feasible, a 24x24 matrix.

[*It is estimated*] that it would take him several hundred years of seven-day work-weeks to invert...”

Taken from David Salsburg (2001), *The Lady Tasting Tea*, pp. 177-8.

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Computing environment

- That was in the 1930s
- Nowadays, inverting a matrix is a matter of seconds
Other operations may even be faster
- Alternative softwares are Excel, Matlab, Stata, etc.
- Input-output analysis has come to a stimulating level –
all comprises of routines

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IO module in Python = PyIO

- PyIO is a module for Input-Output analysis, written in Python, a general-purpose open source computer programming language
- The punch line: Python is freely downloadable; open source means that you can actually look at the code, change, modify, and distribute it further if you want
- Developed by the Regional Economics Applications Laboratory (REAL), University of Illinois at Urbana-Champaign, Illinois, USA
www.real.uiuc.edu

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Let's look at PyIO in practice...

Refer to manual

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