

# Re: Econometrics in Panel data?

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*Source:* <http://coding.derkeiler.com/Archive/Python/comp.lang.python/2006-05/msg01662.html>

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- *From:* [beliavsky@xxxxxxx](mailto:beliavsky@xxxxxxx)
  - *Date:* 10 May 2006 17:25:04 -0700
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Cameron Laird wrote:

In article <mub6j3-sne.ln1@xxxxxxxxxx>, I counseled:

In article  
<44606dd5\$0\$3285\$5a62ac22@xx>,  
DeepBlue <123@xxxxxxx> wrote:

so are you saying that Python is not an appropriate language  
for doing  
econometrics stuff?

Dennis Lee Bieber wrote:

On Tue, 09 May 2006 05:58:10 +0800,  
DeepBlue <123@xxxxxxx> declaimed the  
following in comp.lang.python:

Hi all,

I am new to Python. Just  
wondering can Python able  
to do econometric  
regression in either  
Time-series or pooled  
(panel) data? As well as test  
for hetero, autocorrelation,  
or endogeneity?

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There is not, however, a readily-accessible library targeted  
for this sort of work. If I had the opportunity to work in  
econometrics now, I'd think seriously about R, Lisp, and  
Mathematica, and see what's available among the functional

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languages, along with Python.

Smalltalk, too; I'd throw it in the mix. Much serious econometrics has been done with Fortran, but I have no enthusiasm for pursuing that direction, mostly because I think too much of the computing world is going in a different one.

There are many statistics packages and programming languages used in econometrics and in general, so most of the computing world is going in a different "direction", no matter which package or language you choose.

Enough programmers still use Fortran that major hardware vendors such as Intel, IBM, and Sun are actively maintaining their Fortran 95 compilers and adding features from Fortran 2003. G95 is free, available almost everywhere that gcc is, and good enough for production use IMO.

The recent book

<http://methcenter.psu.edu/newbooks/fortranbook/thebook.html>

Developing Statistical Software in Fortran 95  
by David R. Lemmon and Joseph L. Schafer  
Springer (2005)

discusses how to build statistical software components in Fortran that can be used in statistical packages.

The IMSL and NAG software libraries have extensive statistical functionality and are available in Fortran, among other languages.

It is important for a programming language used for econometrics to conveniently handle multidimensional arrays, and here Fortran outshines C, C++, and Java (NumPy is good, though).

I am a quantitative financial analyst who implements econometrics algorithms. Data sets are getting bigger — use of intraday data is now common — and the CPU time for many algorithms scales as the  $N^2$  or  $N^3$ , where  $N$  is the number of observations. Speed still matters.

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