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# BOOK REVIEW

## "USING PYTHON FOR INTRODUCTORY ECONOMETRICS"

**Authors:** Florian Heiss and Daniel Brunner

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Economists today need to have knowledge and skills in quantitative tools that enable the analysis of many different economic phenomena and their relationships. It is almost impossible to write a research paper, complete a project, or carry out day-to-day tasks without econometrics and computer support. One popular software is *Python*, because it is a free resource and relatively user-friendly. If readers are already somewhat familiar with *R* (see the book review "Using R for introductory econometrics"), learning *Python* will be faster compared to those who know nothing about it. However, the authors of this book focus on some introductory aspects of *Python* thinking and programming before moving on to econometrics and its applications. The book is available as a hard copy, as a pdf (both must be purchased), and as a free version available at: <http://www.upfie.net/read/index.html>. Thus, authors are motivated to teach these topics in the best way possible, so if anyone is interested in these topics, there is no excuse not to it.

There is a similar motivation for learning econometrics in *Python* to what I mentioned in my previ-

ous book review referring to *R*. That it is free is a great argument, important for students and young researchers who do not have access to financial resources. Moreover, many difficult tasks that need to be calculated and estimated daily in real-world economic applications cannot be done with software that contains click-only options. The mindset of programming and defining objects in *Python* is very natural, and the online help community is enormous.

Like its *R* counterpart, this book includes online files that allow the reader to reproduce all the examples given in the book, and again, the authors follow the econometrics textbook by Wooldridge (2019). This is something very commendable. In fact, most textbooks focusing on a research area like econometrics do not include examples done in software, with data alongside the book. As a result, young people learning new concepts sometimes struggle, as theoretical concepts are often difficult to grasp without something "tangible." This does not mean that you should learn econometrics exclusively through books like this one using examples. After all, when you are solving real-world problems at work, you will be dealing with issues that are not covered in books like this (assumptions about models that you need to know before you use them, the use of more sophisticated methods than those presented in the books, etc.). But if you are learning econometrics, it is very helpful to read a book like this in parallel

so that you learn how to deal with real data and use them to estimate models in specific software.

The structure of this book follows the previous one dedicated to *R*, and since I have already reviewed that book, I will not repeat the same structure. The ideas are the same: you should take an econometrics textbook and learn econometrics there (a good example is the aforementioned book by Wooldridge, if you want to follow the examples in this book). The basic concepts are the same: you learn which modules are used so that certain commands can be activated; the layout of windows in *Python* is similar to that of *R*, and numerous examples and interpretations are given throughout the book.

If you are covering an area in an econometrics textbook, pick up this book and review the examples to fully understand the concept at hand. If you are asking me which book is better, or if it is better to learn *R* or *Python*, well, that depends. I started with *R*, so learning *Python* was much easier than I expected. I suppose it would be similar the other way around. This is because the mindset is similar in terms of defining objects, models, variables, and getting the results you need in econometrics. I would recommend this book, similarly to my previous review, to those who already have some knowledge of econometrics and need to expand their software skills in tackling real-world tasks, and to those who are beginning to learn econometrics to be prepared to use these tools in their work.

## REFERENCES

1. Škrinjarić, T. (2021). Book review "Using R for introductory econometrics". *Ekonomski vjesnik*, 34(1), 243-244.
2. Wooldridge, J. (2019). *Introductory Econometrics, A Modern Approach* (7th ed). Cengage Learning.