

## **How Should the Graduate Economics Core Be Changed?**

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Nothing defines economics like the courses in micro, macro and econometrics that form the backbone of graduate PhD programs, generally called the Core. Recently, as part of a Creativity Workshop that brought graduate students from a variety of programs together to discuss how to introduce more creativity into economic research, we discussed what worked in the core and what didn't.<sup>1</sup>

While the students were generally satisfied with the training they were getting in the core, there was concern whether it was doing all that it could do. The consensus was that the core should be designed to teach graduate students those aspects of economics that should be understood by all economists graduating today. While there are reasonable debates about what should be included in the core, most students felt that the current core does not provide that training. The workshop members addressed that question and came up with a number of suggestions for possible changes in the core that might make it better meet the “common element” theme. We present them below as they relate to microeconomics, macroeconomics and econometrics. We recognize that implementing change will not be easy, and we strongly believe that each department should be free to teach what it wants in the core. We offer our suggestions not with the expectation that they will be implemented, but rather to encourage discussions of the core within departments that often do not take place because of the pressures of time.

### **Micro Recommendations**

Among the three portions of the core, students seem to be happiest with the micro curriculum. All the students at the workshop generally agreed that most of the material covered is useful in all fields of economics, and that it is material that all economists “should know.”

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<sup>1</sup> The Creativity Workshop was organized by the Committee on Economic Education and led by David Colander, Avinash Dixit, and John Siegfried. It was funded by the Teagle Foundation, the Tobin Project and the American Institute of Economic Research.

One recommendation is based on the observation that many students entering their graduate program have a blurred understanding of the rationale for using seemingly unrealistic assumptions and models, and that many students still find it hard to express their ideas in models once they've finished their coursework. These concerns could be addressed if some part of the micro core courses discussed explicitly and epistemologically the purpose of building models. Rather than just teach students models, students should be challenged to write and solve a number of models of their own. An example of what we mean is the core course offered at the University of Chicago, taught by Gary Becker and Kevin Murphy. Unlike the courses offered at other schools of students represented at the workshop, this course addresses modeling as a concept and skill of its own and assigns the students open-ended homework problems where they must supply the model. We feel that a course in this style helps students think more creatively, and if taught properly, would help them to understand both the strengths and limitations of models.

A second recommendation is to devote more time to teaching alternative approaches to microeconomics, for example, some more focus on behavioral economics. Many students wanted a presentation of alternative approaches, and a discussion of the empirical evidence in favor or against various theories and their underlying assumptions. Students felt that such a presentation would encourage them to engage more deeply not only with the newer material, but also with the more traditional material. This, in turn, would encourage diversity in students' approach to research.

To add something requires dropping something else. Although we did not look for specific sections of the micro sequence that should be eliminated, most of the students felt that some of the proofs in most schools' current micro core sequence could be delayed until the micro theory field courses in the second year. Those proofs that remain in the core should be those that provide strong economic intuition and are based on economic forces. We are specifically not recommending that the core sequence be made easier, but rather that topics be chosen with more consideration for their usefulness to all economists.

## **Macroeconomics**

The core courses that most students see as problematic are the macro courses. Across institutions, students come out of their first year macro sequences frustrated by the lack of context with which models are presented; they do not understand why they learn the models that they do or why those models are important. Compared to other courses, students perceive the macro sequence to be poorly motivated and poorly structured. They find it difficult to relate what they learn in the courses to the real-world economy. The majority of students felt that the first-year core macro sequence should fulfill the following goals:

- Introduce all students to the questions and models studied by macroeconomists.
- Equip students who intend to specialize in macroeconomics with the basic tools they will need.

- Help students to understand and participate in public discussions about macroeconomic policy.

To better achieve these goals, we suggest that departments devote a substantial portion of the beginning of the sequence (3-4 weeks) to a discussion of current macroeconomic institutions and the history of macroeconomic thought. While most programs assume that students have this knowledge, the reality is that they often don't, and without it, it is difficult to put what they are being taught in perspective.

A discussion of context would motivate current macroeconomic issues such as inflation, the role of central banks, the existence of unemployment, fiscal policy, national debt, etc, and how can we use macroeconomic models to answer these questions. Such a change would provide students with some much-needed context for the models that are presented to them and would leave them better prepared to relate what they learn in the course to the real world economy. After students are presented with that context, then the attention can turn to other modeling issues.

Many felt that macro models are not core to economics in the same way as microeconomic models. As the macro sequence is taught now, it is advanced micro, so some of what is currently taught might get moved to a macro field course. What students felt should be common to all new PhDs is an understanding of macroeconomic institutions and policies, and certain techniques that are used in macro. Currently, the institutions and policy discussions are not presented, while there is an overemphasis on particular models and techniques. Thus, we could see less time being devoted to the macro core - perhaps it could be a one semester course, with much of the content currently taught moved to the field courses. Such a reduction would allow an expansion of either the micro portion of the core designed to get students to actually build models, or the econometrics portion of the core, designed to show students how the models can be brought to the data.

### **Metrics Suggestions**

The increasing power of computers and the greater availability of data have removed many of the constraints on empirical research that were previously binding. Consequently, there has been an explosion of empirical research in economics, and the students believe the changing nature of the discipline ought to be reflected in the core curriculum.

First and foremost, the students argued that graduate training should aim to produce practitioners (and consumers) of econometrics rather than econometric theorists. The focus of the econometrics core should change accordingly. This statement need not imply a reduction in the rigor of econometric education. Rather, econometric training ought to be constructed around applied themes and to confront practical issues, instead of remaining in the abstract. The study of asymptotics, for example, should not totally crowd out small sample issues. Topics should cover the types of problems students are likely to experience in their research and be heavily anchored in a wide variety of examples from the applied econometrics literature. Second, the students agreed that the

scope of econometrics taught should encompass all methods practiced by a sufficiently broad set of economists, even if this requires increasing the amount of time allocated to econometrics within the core.