



INDIANA UNIVERSITY

DEPARTMENT OF ECONOMICS

College of Arts and Sciences
Bloomington

A proposal for the Learning Analytics Fellows Program

Do general or specific characteristics of E201 and E202 affect the number of Economics majors?

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Abstract:

According to the Economics Department Self-Study (November, 2014): *Over the last decade, amidst rising concerns about the returns to college education, the quantity of demand for Economics education has strongly responded: our undergraduate major concentration has grown by 257% to become the third largest undergraduate major in the College. This trend has exhibited remarkable consistency throughout the decade, through ups and downs of the job market.*

So what has caused this trend? I plan to see if class size, instructor selection, class pedagogy, and student preferences and expectations have an effect on this trend. In other words, does taking E201 and E202 at Indiana University – Bloomington result in a net increase the number the Economics majors?

Project Description

Purpose:

Having seen overall enrollments increase at Indiana University – Bloomington as well as Economics majors. I would like to use IU's Tableau to determine if the enrollments in E201 (Introductory Microeconomics) and E202 (Introductory Macroeconomics) classes taught at Indiana University – Bloomington directly affect the increasing enrollments of Economics majors. Obviously, this does not mean we are simply gaining additional majors. I would suspect we are also losing prospective Economics majors as well. So what is causing students to change their major to or from Economics?

Specifically, I would like to determine if class size, instructor selection, class pedagogy or student preferences affect the enrollments for Economics majors. Also, I would like to see how many Economics majors transferred credit for E201 and E202 from another institution and whether it had any effect on the Economics major.

Does class size matter? Do students who enroll in the large sections of E201 and E202 lead to more or Economics majors? Since most students end up enrolling in the large sections of E201 and E202 mainly taught by Senior Lecturers, do these large classes have any effect on Economics majors when compared to smaller sections taught either in the summer or by a graduate student (Associate Instructor)? In addition, is there an optimal size for these large sections or traditional sections? In other words, does increasing the amount of students enrolled in a particular course affect the number of Economics majors? Also, I would like to see if the recent addition of E201 and E202 online had any effect on Economics majors.

Although, this is related to class size, I would like to look deeper into instructor specific classes to see if the choice of instructor had any effect on Economics majors. In other words, does there appear to be specific instructors who have an effect on Economic majors?

Furthermore, I would like to see if the specific pedagogy of the class had any effect on Economic majors. In other words, does the type or number of exams, amount and type of low stakes assessments (homework, quizzes, etc.), and in class activities have any effect on Economics majors?

Finally, I would like to see to what extent does student preferences or expectations have any effect on Economics majors. How many students enroll at IU – Bloomington as an Economics major? How many students enrolled in E201 and E202 as an Economics major and changed their major the next semester or year to a related or different major? How many students were not Economics majors before enrolling in E201 and E202 and changed to the Economics major the next semester or year from a related or different major?

I plan to use Tableau's data to determine when the students declared their major along with where and when they took E201 & E202. Specifically, looking at the explicit E201 and E202 classes, their class size, instructor and pedagogy. I will use the instructor's syllabus to determine the pedagogy of the class as well as the classes GPA at the end of the semester.

Significance:

If we can identify the causes of the changes in Economics majors, then we may be able to efficiently allocate additional resources towards these positive factors. For example, if it is determined there is an upper limit to the number of students in a typical or large class section, then additional resources may be used to increase the number of sections offered for E201 and E202 as opposed to simply increasing enrollments in existing classes.

Anticipated Outcomes:

If the positive factors that contribute to increasing Economics majors can be determined, then these factors may be supported to encourage more students to study economics. On the other hand, if there are negative factors in the E201 and E202 classes that adversely affect Economic majors, then there may be ways to resolve these issues and not lose potential Economics majors.

Research Methodology:

Although, I am not completely versed In Tableau, I plan to use specific student data (GPA, major, completed classes, residency, and other descriptive statistics) as well as class size, instructor, class GPA, and the instructor syllabus to determine the class pedagogy. For student preferences and expectations I plan the reward/penalty method comparing a student's expected grade to her actual grade as well as a student's course selections. I will see if any class size, instructor, pedagogy and student preference and expectations have any effect on Economics majors. Also, I will see if these factors have changed over time. Thus, I may be able to see if there other factors not identified in this proposal (ex. luck) that have increased our majors.

Means to Measure Success:

I plan to identify trends in the data that should identify the causes of the net increase in Economics majors. In other words, if one or more of these variables causes a change in Economics majors, then the data should hold up over time as well and not just limited to one semester or year.

In conclusion, I would like to determine why the Economics major has increased recently. Also, how many students have switched out of Economics? When did they do so? Does it have to do with how we teach E201 and E202? If so, can we retain the students who have dropped the Economics major, while promoting the factors that have increased the Economics major in order to sustain this increase and have more undergraduate Economics degrees?

Thank you for your consideration and attention in this matter.

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