

Using Data to Dispel Economic Misconceptions

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Why?

- Students have economic misconceptions
- Misconceptions hinder learning

Research Goal

- Implement pedagogical treatments to dispel misconceptions

Methods and Measurement

- Pre- and post- questionnaire – 40 questions, ungraded, instructed to answer “I don’t know” if the students did not know any answer

Mean Response 2013 Actual

(1) Who is the US’s largest trading partner?

China (58%) Canada

(2) What percentage of US workers earn the minimum wage?

31.1 % 2.3%

(3) What percentage of the US federal budget do the following expenditures comprise?

Social security: 17.5 21.5

Medicare: 11.6 13.2

Education: 11.5 2.3

Interest on Debt 9.7 6.1

Four other categories surveyed

Experimental Design

Four semesters were randomly assigned to one of three treatment groups and a control group

Pedagogical Treatments

(I) Research and Presentation from Thomas Sowell’s *Economic Facts and Fallacies*

(II) Data Analysis and In-Class Assignment

(III) Both projects

Data and Statistical Model

- 446 student responses
- Separated “I don’t know” responses from answer-provided
- Probit (Percentage Canada)
- OLS

$$y_{t,q} = \alpha + treatment_{t,q} + end\ of\ semester * treatment_{t,q} + \varepsilon_{t,q}$$

Select Results

	OLS Minimum Wage	Probit Trade: Canada	Probit Trade: China
End of Semester* Control	-1.79 (4.94)	0.45*** (0.073)	-0.28*** (0.088)
End of Semester* Research	-10.6 (9.22)	0.46*** (0.072)	-0.46*** (0.086)
End of Semester* Research & Data	-10.7*** (4.05)	0.48*** (0.071)	-0.35*** (0.086)
End of Semester* Data	-6.11 (4.00)	0.46*** (0.072)	-0.37*** (0.086)

	Social Security	Medicare	Education	Interest on Debt
EoS*Control	-0.36 (3.26)	0.19 (2.80)	-0.16 (2.76)	-3.34 (3.80)
EoS*Research	2.57 (7.19)	-2.30 (5.27)	2.81 (3.19)	-0.56 (5.79)
EoS*Research & Data	6.38** (2.82)	1.72 (1.89)	-2.78* (1.61)	-1.38 (1.99)
EoS*Data	6.29** (2.76)	-0.54 (1.63)	-1.79 (1.87)	0.44 (2.01)

Conclusion

- All approaches provided some increase to student learning, decreasing misconceptions *on the margin*
- The Research & Data treatment saw the greatest effects
- Students also increased their “I don’t know” responses in the Research & Data treatment (not shown above)

