

Valerie K. Bostwick

Office Address

Department of Economics
The Ohio State University
1945 N High St., 410 Arps Hall
Columbus, OH 43210

<http://vkbostwick.weebly.com/>
vkbostwick@gmail.com
(703) 346-3150

Citizenship and Visa Status

U.S. Citizen

Academic Positions

Postdoctoral Researcher, The Ohio State University, 2016-current

Education

Ph.D. Economics, University of California, Santa Barbara, 2016
M.A. Economics, University of California, Santa Barbara, 2011
B.A. Economics, Princeton University, 2007, *Magna cum laude, minor in Political Economy*

Research Fields

Economics of Education, Applied Microeconomics, Labor Economics

Publications

Bostwick, Valerie K. (2018). "Saved By the Morning Bell: School Start Time and Teen Car Accidents." *Contemporary Economic Policy*, vol. 26, issue 4, pages 591–606.

Adolescents today suffer from chronic sleep deprivation due to a combination of biological changes to the circadian clock and early morning school bell times. Many school districts are now considering delaying high school start times to accommodate the sleep schedules of teens. This paper explores whether such policy changes can have an unexpected impact on teen car accident rates. This impact could function both through a direct effect on teen sleep deprivation and indirectly through changes to the driving environment, that is, shifting the time and conditions under which teens commute to school. By focusing on late-night accidents and employing a difference-in-differences strategy using adult drivers as a control group, I find evidence of a persistent sleep deprivation mechanism. A 15-minute delay in school start time causes a significant decrease in late-night teen accidents of approximately 23%. However, I also find evidence of an opposing mechanism that is present during the morning commuting hours. A 15-minute delay in high school start time leads to a 21% increase in morning teen car accidents.

Bostwick, Valerie K. (2016). "Signaling in Higher Education: The Effect of Access to Elite Colleges on Choice of Major." *Economic Inquiry*, vol. 54, issue 3, pages 1382–1401.

I propose a model of postsecondary education in which major field of study can be used by individuals to signal productivity to employers. Under this signaling model, I show that geographic areas with high access to elite universities result in fewer science, technology, engineering, and mathematics (STEM) majors among lower ability students at non-elite colleges. This is distinct from the prediction of a full information model in which access to elite schools should only affect high ability individuals directly. Using data from the National Center for Education Statistics' Baccalaureate & Beyond survey, I find evidence that is consistent with the signaling model prediction, specifically a 2.3–3.7 percentage point or 16%–25% decrease in the probability of choosing a STEM major among lower ability students in areas with greater access to elite colleges.

Bostwick, Valerie K. and Steigerwald, Douglas (2014). "Obtaining Critical Values for Test of Markov Regime Switching." *Stata Journal*, vol. 14, issue 3, pages 481–498.

For Markov regime-switching models, testing for the possible presence of more than one regime requires the use of a non-standard test statistic. Carter and Steigerwald (2013, *Journal of Econometric Methods*) derive in detail the analytic steps needed to implement the test of Markov regime-switching proposed by Cho and White (2007, *Econometrica*). We summarize the implementation steps and address the computational issues that arise. A new command to compute regime-switching critical values, `rscv`, is introduced and presented in the context of empirical research.

Working Papers

Bostwick, Fischer, and Lang. "Semesters or Quarters? The Effect of the Academic Calendar on Postsecondary Student Outcomes" **(Job Market Paper)**

We examine the impact of U.S. colleges and universities switching from an academic quarter calendar to a semester calendar on student outcomes. These calendar conversions are widespread, directly affecting nearly 2 million students at 132 colleges and universities since 1987. Using panel data on the near universe of four-year nonprofit institutions in the U.S. and leveraging quasi-experimental variation in calendars across institutions and years, we show that switching from quarters to semesters negatively impacts on-time graduation rates. Using detailed administrative transcript data from one large state system, we replicate this analysis at the student-level and investigate several possible mechanisms for the reduction in on-time graduation. A switch from quarters to semesters reduces four-year graduation rates and nearly one-half of this effect is due an increase in first-year dropouts. The remaining portion of the decline in on-time graduation can be attributed to delayed time-to-degree. Event study analyses show that these negative effects persist well beyond the transition. The investigation of potential mechanisms reveals that the calendar switch: (1) lowers first-year grades; (2) decreases the probability of enrolling in a full course load; and (3) delays the timing of major choice.

Bostwick, Valerie K. and Weinberg, Bruce. "Nevertheless She Persisted? Gender Peer Effects in Doctoral STEM Programs." NBER Working Paper no. 25028

We study the effects of peer gender composition, a proxy for female-friendliness of environment, in STEM doctoral programs on persistence and degree completion. Leveraging unique new data and quasi-random variation in gender composition across cohorts within programs, we show that women entering cohorts with no female peers are 11.9pp less likely to graduate within 6 years than their male counterparts. A 1 sd increase in the percentage of female students differentially increases the probability of on-time graduation for women by 4.6pp. These gender peer effects function primarily through changes in the probability of dropping out in the first year of a Ph.D. program and are largest in programs that are typically male-dominated.

Conference and Seminar Presentations

2018	Association for Public Policy Analysis & Management Annual Fall Research Conference Southern Economic Association Annual Meetings Pacific Northwest Labor Day Population Association of American Annual Meeting IZA Workshop on Gender and Family Economics Association for Education Finance and Policy Annual Conference
2017	University of California-Davis Economics Department Society of Labor Economists Conference Western Economic Association International Annual Conference
2016	Association for Education Finance and Policy Annual Conference Western Economic Association International Annual Conference Southern Economic Association Annual Meetings Regional Science Association International Annual North American Meetings

2015 All-California Labor Economics Conference
2011 Summer Institute on the History of Economics, Duke University

Research Experience, Affiliations, and Other Employment

2017-present US Census Bureau – Special Sworn Status
2013-2016 Graduate Student Fellow & Laboratory Assistant, Broom Center for Demography
2012-2016 Econometrics Research Group, University of California, Santa Barbara
2012-2016 Human Capital Research Group, University of California, Santa Barbara
2012-2013 Research Assistant for Douglas Steigerwald
2012 Research Assistant for Paulina Oliva
2011-2012 Research Assistant for Peter Rupert, Economic Forecasting Project
2009-2010 Economic Research Analyst, Federal Trade Commission, Bureau of Economics
2007-2009 Research Associate, Economists Incorporated

Referee Service

Education Finance and Policy
Industrial and Labor Relations Review
Stata Journal
Journal of Labor Research
Science and Public Policy

Honors, Fellowships, and Grants

2016 Travel Grant, Economics Department, University of California, Santa Barbara
2015 Travel Grant, Broom Center for Demography
2010 Andron Fellowship, University of California, Santa Barbara
2010 Raymond K. Myerson Family Trust Graduate Fellowship, University of California, Santa Barbara

Teaching Experience

Spring 2016 Principles of Macroeconomics
Fall 2015 - Winter 2016 Principles of Microeconomics
2014-2015 Ph.D. Econometrics
Winter 2014 - Spring 2014 Principles of Macroeconomics
Fall 2013 Probability & Statistics for Econometrics (Master's level)
Spring 2013 Principles of Macroeconomics
Fall 2012 Probability & Statistics for Econometrics (Master's level)
Spring 2012 Principles of Macroeconomics
Fall 2011 - Winter 2012 Principles of Microeconomics

References

Bruce Weinberg
Dept. of Economics
Ohio State University
Columbus, OH 43215
(614) 292-5642
weinberg.27@osu.edu

Douglas Steigerwald
Dept. of Economics
UC Santa Barbara
Santa Barbara, CA 93106
(805) 893-3151
doug@econ.ucsb.edu

Kelly Bedard
Dept. of Economics
UC Santa Barbara
Santa Barbara, CA 93106
(805) 893-5571
kelly@econ.ucsb.edu