# Harper P. Stephens

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## Education

**University of Louisville** Expected May 2027
*Bachelor of Arts in Economics, Mathematics Minor, With Distinction*

- **Cumulative GPA:** 3.51/4.00 | **Economics GPA:** 3.88/4.00
- **Relevant Coursework:** Econometrics, Real Analysis, Linear Algebra, Probability, Economics Thesis
- **Research Interests:** Industrial Organization, Causal Inference, International Economics, Mean Field Games

## Research Experience

**Independent Researcher** Present
*Paper: "Before the Factory Opens: Anticipation and Spatial Adjustment to Announced and Delayed Local Shocks"*

- Develop a continuous-time spatial mean field game with coupled HJB–KFE equations to study anticipatory migration following Intel's announced Ohio semiconductor investment.
- Calibrate an exact discrete inverse equilibrium to 969,829 Census LODES worker residences, incorporating BLS QCEW and publicly announced project employment/pay information.
- Estimate that roughly 46.7% of eventual model-implied spatial adjustment occurs before the initially expected opening; model later information revisions to quantify partial reversal following project delays.
- Extend the model to two-dimensional geography and conduct extensive numerical/structural robustness analysis; 2D geography reduces predicted reallocation magnitude by around 16% while leaving the timing result nearly unchanged.
- Presented at the 2026 Kentucky Economic Association (KEA) Annual Conference.

**University of Louisville** Jan 2026 – May 2026
*Honors Thesis Researcher*

- Investigated how educational technology use-cases affect differences in mathematics, reading, and science achievement using the 2018 Programme for International Student Assessment (PISA) dataset.
- Developed an econometric framework prior to formal econometrics coursework and estimated multivariate regression models to evaluate associations between technology use and student achievement, including marginal effects after controlling for external variables.
- Constructed and cleaned a cross-country PISA sample by accounting for differences across assessment booklets and excluding countries with insufficient observations; conducted variance inflation factor (VIF) diagnostics and additional robustness checks.
- Found that home technology was the strongest statistically significant technology-related predictor of achievement, with socioeconomic status accounting for a substantial portion of the observed relationship; identified heterogeneous relationships between technology use outcomes in different subjects.
- Presented and successfully defended the completed honors thesis before a committee of three faculty advisors.
- Presented at the 2026 Kentucky Economic Association (KEA) Annual Conference.

**The 2026 EconGames** Apr 2026

*Data Analyst / Competitor*

- Competed on an eight-member team against 30 university teams in a 24-hour data-driven business case competition requiring rapid data cleaning, statistical analysis, and evidence-based recommendations.
- Served as the team's sole data analyst, independently cleaning and analyzing race-level data to compare traditional horse-racing timing methods with GPS-based tracking methods for accuracy purposes.
- Evaluated the relative predictive accuracy of traditional and GPS-based timing measures, finding that GPS tracking more accurately captured intervals and differences between horses while traditional timing provided more accurate finishing-time measurements.
- Developed a probability model to estimate the finishing sequence of horses in an upcoming race and used the resulting predictions to successfully identify a winning parlay.

## Leadership & Service

**University of South Carolina Summer Seminar** June 2026

*The Trivium of the Liberal Arts Tradition in Theory & Practice*

- Selected through faculty recommendation for a 15-member discussion-based seminar composed primarily of graduate students and classical-education practitioners.
- Studied *The Odyssey* in Ancient Greek alongside classical texts on logic, rhetoric, and liberal education, developing interdisciplinary perspectives on reasoning and educational practice.
- Advised classical academy founders on curriculum organization, classroom structure, and technology policies, translating economics thesis into recommendations intended to improve student academic performance.

**PEACC Center** Aug 2025 – May 2026

*Volunteer*

- Conducted student outreach during university orientation and campus events, educating incoming students about available resources concerning unhealthy relationships, consent, stalking, abuse, and sexual assault.
- Prepared and distributed informational materials for campus events and assisted with organizing outreach activities to increase student awareness of prevention and support resources.

## Research Presentations

- *Before the Factory Opens: Anticipation and Spatial Adjustment to Announced and Delayed Local Shocks*, Kentucky Economic Association Annual Conference, October 2026.
- *Educational Technology and Cognition: PISA 2018 Evidence on Technology Use and Student Performance*, Kentucky Economic Association Annual Conference, October 2026.
- *Educational Technology and Cognition: PISA 2018 Evidence on Technology Use and Student Performance*, Honors Thesis Defense, University of Louisville, Spring 2026. Presented research methodology, econometric results, figures, and implications for future research to a three-member economics faculty committee; defended research design and findings.

## Working Papers

- *Time, Tools, Technology: Identifying the Educational Returns to Technology Use.* Solo research paper extending honors thesis analysis of the 2018 PISA dataset to identify specific devices, activities, and settings associated with differences in achievement. Applies Rubin's Rules for combining estimates across multiple imputed PISA datasets and incorporates robustness procedures developed in the thesis.

## Professional Experience

**Private Tutor** Sept 2026 – Present

*Intermediate Macroeconomics*

- Advised by my professor to tutor struggling students in intermediate macroeconomics.
- Clarified model specifications, assumptions, and the interconnection of variables between respective models.
- Improved first student's quiz grades by 200% after 2 hours of tutoring.

## Honors & Awards

**Center for Free Enterprise Scholarship Recipient** Aug 2025 – Present

- Selected to participate in multiple semesters focused on economics, political economy, entrepreneurship, and related literature.
- Engaged with published books and research through lectures, seminars, and discussions with economists, researchers, entrepreneurs, and policy professionals; personally selected for meetings with economists, NBER staff, nonprofit organizations, and faculty from other universities.

**President's Council Mentoring Program** Aug 2025 – May 2026

- Selected as one of 40 top-performing sophomores and juniors university-wide for an executive mentorship program pairing students with high-level industry professionals.
- Shadowed two neurosurgeons during monthly clinical and surgical observations, facilitating high-level discussions on medical economics, hospital operations, and U.S. healthcare system dynamics.

## Skills

**Programming:** Python, R, SQL, LaTeX
**Data Analysis:** Econometrics, Regression Analysis, Causal Inference, Difference-in-Differences, Structural Modeling
**Languages:** English (Native), German (Intermediate), Greek (Introductory)