

Updated: 10/25/23

# Vitaliy Novik

Economics PhD Candidate  
vnovik@gwu.edu  
509-793-0834

[Google Scholar](https://www.google.com/scholar/citations?id=VitaliyNovik)  
[Sites.google.com/view/vitaliy-novik](https://sites.google.com/view/vitaliy-novik)  
U.S. Citizen

---

## EDUCATION

May 2024 PhD (expected), Economics, George Washington University (Washington DC)  
Aug 2021 MS, Economics, George Washington University (Washington DC)  
May 2014 BS, *Cum Laude* Chemical Engineering, Washington State University (Pullman, WA)  
Jun 2011 AS, *Honors* Physics, Big Bend Community College – Dual Enrollment Program (Moses Lake, WA)

## FIELDS

Labor, Economics of Education, Applied Microeconomics, Industrial Organization

## THESIS COMMITTEE

Remi Jedwab (co-director)  
Donald Parsons (co-director)  
Stephanie Cellini  
Barry Chiswick

## EMPLOYMENT

Feb 2021 – Research Statistician, U.S. Census Bureau (Suitland, MD)

- Researched businesses without employees and strategies for imputing demographics with administrative data using modern machine learning methods
- Statistically analyzed the demographic imputation of employer entrepreneurs using administrative data
- Researched and released the first experimental tables of firm age for businesses without employees
- Conducted causal and descriptive research using large, restricted, and complex datasets

June 2020 – Founder and Author of economics blog [bigeconomics.org](https://bigeconomics.org)

- Analyzed public data to create visualizations and data tables summarizing key information on colleges, college programs, and college majors
- 200,000 visitors annually

Jul 2023 – Aug 2023 Intro to Microeconomics Instructor (ECON 1011), George Washington University (Washington DC)

- Developed curriculum and all course materials

Updated: 10/25/23

- Instructed and mentored students
- Jan 2020 – Dec 2020 Grader, George Washington University (Washington DC)
- Econ 3161 - Undergrad Public Finance (Prof Bryan Stuart)
  - Econ 2180/6280 - Undergrad/Grad International Macroeconomics (Prof Rafael Lopez-Monti)
- May 2014 – May 2019 Production Engineer, REC Silicon (Moses Lake, WA)
- Responsible for the continuous operation and improvement of the Product Handling unit (a 24/7 process)
  - Conducted statistical analysis and experiments to optimize performance and lower costs
  - Successfully implemented into production a multimillion-dollar experimental process
  - Developed procedures, standardized operations, and provided training for over 25 technicians
- Oct 2017 – Jun 2018 Commissioning Engineer, TR Silicon via REC Joint Venture (Yulin, Shaanxi, China.)
- Provided technical expertise on design of new operational processes
  - Met with vendors in Europe and North America to validate equipment and software
  - Successfully oversaw the on-site implementation of software and equipment and ensured compliance with specifications

## RESEARCH

See [site](#) for working papers

### 1. “The Effect of Parental Resources on College Major Choice” (Job Market Paper)

**Abstract:** How do parental resources affect the choice of college major? Using restricted tax and survey data, I provide novel descriptive evidence on the relationship between parental income and major-choice. I then use the plausibly exogenous variation in parental income loss due to the 2008 Great Recession along with variation in cohort year-of-birth to estimate the causal effect of parental resource loss on major choice. I find that the loss of parental resources shifts children away from Liberal Arts majors and into higher paying STEM (Science, Technology, Engineering, and Math) majors. Children of income-losers choose majors with higher lifetime earnings that exceed the increase in student loans resulting from parental income loss. My results are consistent with a model of major choice in which college students trade off college consumption with future pecuniary returns, with the loss of parental resources increasing the attractiveness of high-return majors.

### 2. “The Role of Learning in Returns to College Major: Evidence from 2.8 Million Reviews of 150,000 Professors” ([link](#))

**Abstract:** Why do some college majors have much higher returns? I ask if differences in returns are due to differences in quality of education across majors. I use a novel dataset where college students rate courses for academic difficulty, and show that academic standards are highly heterogeneous by major. In Molecular Biosciences 84% of professors are rated as average difficulty or higher, while just 36% are in Sociology. Major difficulty explains the majority of variation in survey measured study

hours, suggesting grade inflation has negative effects on learning, and supporting the use of difficulty as a proxy for learning. I show that major difficulty predicts earnings in the ACS. Using an event study approach in the NLSY97 and university-major fixed effects with the College Scorecard, I give evidence that the effect is causal. I estimate that one-third of the variation in major premiums can be explained by differences in learning.

3. **“Garage Entrepreneurs or Self-Employed? An Investigation of Nonemployers by Legal Form”** (with Adela Luque)

**Abstract:** Who are nonemployer businesses and how important are they to the US economy? Given their high start-up and exit rates, what can they teach us about the start-up process? We describe owner demographics of nonemployers and characterize their performance by the four most common legal forms: C-corporation, S-corporation, Partnership, and Sole Proprietorship. Building on the work of Davis et al. (2007), we use the Census’ recently improved (Nonemployer) Integrated Longitudinal Business Database linked to the (Employer) Longitudinal Business Database to examine migration rates to employer status and contribution to employment of firms originating as nonemployers for all sectors and broad time periods. While S-corporation nonemployers are the most likely to migrate, nonemployers who start as sole-proprietors contribute the most jobs and payroll to the economy. We also examine the correlates of migration to employer status and performance in the employer universe using the 2012 Survey of Business Owners. Our findings shed light on the dynamics of entrepreneurship, as well as the role of nonemployers in the economy.

4. **“Randomizing Professor Difficulty - Effects on Major Choice and Student Academic Behavior”** (with Ahmed Rahman and Alexander McQuoid)

**Abstract:** Randomly assigned difficult college professors raise test scores (Insler et al 2021) and a major's difficulty is a key predictor of its financial returns (Novik 2022). Yet course difficulty and its effects are still poorly understood. This paper combines US Naval Academy (USNA) administrative data and the USNA's process of randomized professor assignment along with information from a detailed survey we will implement. We seek to answer how difficult professors effect choice of major, study time, and study intensity. This paper will show how students trade-off difficulty of courses in college with after-college monetary returns to better understand the conflicting results in the literature on education as consumption or a "bad" (Gong et al 2021, Lazear 1977). We also seek to shed light on the precise effects of difficult professors on group study time, assignment study time, time spent studying independently, and so on.

## PRESENTATIONS

- 2023
- Midwest Economics Association (Cleveland, OH)
  - GWU Job Market Conference
  - Federal Statistical Research Data Center Conference at Federal Reserve Board of Governors (Washington DC)
  - International Atlantic Economic Conference (Philadelphia, PA)
  - George Mason University (Arlington, VA)

Updated: 10/25/23

2021-22 GWU Student Association of Graduate Economists Research Pitch  
Virginia Association of Economists (Farmville, VA)  
GWU Development Tea  
Southern Economic Association (Fort Lauderdale, FL)

## **AWARDS**

Nominated by GWU Economics Department as GWU's Graduate Student Representative at 2022 Southern Economics Association Conference to present "The Role of Learning in Returns to College Major: Evidence from 2.8 million Reviews of 150,000 Professors"

Washington State Opportunity Scholarship Recipient, Herbert L. Eastlick Award, Paul Lauzier Scholarship Recipient, REC Silicon Chemical Engineering Scholarship, Big Bend Community College Rotary Club Scholarship, Joseph Vavra Scholarship, Edward and Vieno Scholarship, Washington State University Achievement Award

## **SOFTWARE SKILLS**

Excel, Latex, Python (web-scraping), R (+ R as GIS), SAS, Stata

## **SERVICE**

2021 – 22 Mentored McLean High School student interested in Economics  
2021 – 22 Washington State Opportunity Scholars Program, Mentor for 2 Undergraduate students  
2021 Washington State Opportunity Scholarship – Application Reviewer

## **MISC**

2021-23 Music leader (singing and guitar) at Restoration Church (Washington DC)  
2017 Toastmasters Club President (Moses Lake, WA)  
Fundamentals of Engineering (Chemical Engineering) Certified  
Hobbies: Reading, Music, Hiking