Claudia Goldin Named 2023 Winner of Nobel Prize in Economics

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Only two women prior to her have won the Nobel Prize in Economics, both of whom have won in conjunction with another researcher. Claudia Goldin, a Harvard professor focusing her efforts on women's labor force participation and gender economics, stands as the third woman (out of 93 winners) to ever be awarded the Nobel Prize in Economics, but the first to do it solo. The prize stands as recognition for "advancing our understanding of women's labor market outcomes" in the developing world. Goldin has utilized her time researching to determine facets that have contributed to the ongoing gender wage gap, despite increasing women's labor market participation.

Her academic career is incredibly impressive: Goldin obtained a bachelor's degree in economics from Cornell University, quickly followed by earning her master's and doctoral degrees from the University of Chicago. Several universities had the privilege of experiencing her brilliant mind as a lecturer and professor, including the University of Wisconsin, Princeton University, Harvard University, and the University of Pennsylvania. She was the first woman to be granted a tenured professorship in economics at Harvard,

later earning notable titles within the university for her admirable work as a professor. Some of her current classes include The Economics of Work and Family – exploring how private household decisions are made, including marriage, number of children, education, and careers – and Education in the Economy, discussing areas involving charter schools, class sizes, for-profit educational institutions, and associated gender issues within them.

In the academic realm of economics, Claudia Goldin is an economic historian and labor economist. The research she's conducted has honed in on how differences in the rate of employment and wages between men and women have varied over time and what these patterns mean in the world of economic history and labor economics.

Resources for Economics Students Interested in Data Science

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If you are a student of economics here at the University of Washington, you may have heard some peers express interest in the field of data science. In fact, in the Economics Undergraduate Board's (EUB) most recent survey of economics majors at UW, 10.95% of respondents reported they were pursuing a minor in data science. This makes data science the second most popular minor among respondents, just behind business at 11.31%.

The field of data science is rapidly becoming more popular and increasingly important to develop an understnadingof in today's world. On top of this, it is tied to economics in many ways. For those of you who want to land a job as a data analyst or scientist, develop data handling skills to

complement your economics education, or are just curious and want to learn more, we at the EUB have compiled some resources, classes, and opportunities that are sure to help you on your data science journey.

Economics Classes

Naturally, one of the best ways for economics students to learn about data science is through classes in the economics major. The first taste of data science that many economics students get comes through the introductory econometrics classes: ECON 382, 482, or 483. Some of you might even be surprised to learn that

Economics Advising Office's Blog: https://uwecon.wordpress.com

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linear regression is a type of machine learning model! Econometrics is the primary way in which the field of economics practices data science. Tools like linear regression models are important for economists because the results of these models estimate the relationships between variables in a dataset. These can then be used to investigate causality, helping answer important questions that can inform policy, such as "How does increasing education for girls affect infant mortality rates?"

For students looking to go beyond the initial econometrics classes, the department offers a few classes that intertwine data science skills and economics. ECON 487 - Data Science for Strategic Pricing, for instance, covers many important data science skills for entry level jobs as economic analysts, data analysts, data scientists, and more. In this class, students dive deep into the ways that firms set optimal prices for different types of consumers and products. Furthermore, this class greatly strengthens one's ability to use R for data wrangling while providing great foundations and practice with several machine learning methods. ECON 484 - Econometrics and Data Science provides an overview of the most popular machine learning techniques and how they can be applied in varied economic contexts. This class provides a foundational understanding of practical machine learning and a unique look into how data science and economics coalesce in industry. Other economics classes that develop related skills include ECON 448 - Population and Development, ECON 424 - Computational Finance And Financial Econometrics, and ECON 488 - Causal Inference.

Data Science Minor

Moreover, some students may wish to explore data science skills, uses, and impacts outside of the economics major through the data science minor. This relatively new UW program familiarizes students with the field through classes on data science across many different departments. The minor's website has a list of data science-related classes across the university, allowing students pursuing the minor to select from a variety of courses and build an interdisciplinary understanding of the practice. Even more, some of the classes that make up the economics major count towards this minor as well, namely STAT 311 and ECON 448, 484, 487, and 488. A seminar course concludes the minor, where professors from all different areas of expertise present on how they are using data science in fascinating ways in their own fields.

Computer Science Classes for Non-Majors

A particularly valuable set of classes for learning data science are the Allen School's non-major course options. This is a collection of computer science classes that are specifically targeted to students who are not majoring in computer science, but want to bolster their programming abilities. Many of these also count towards the data science minor and provide high-quality instruction in skills that are commonly found in job postings for data analytics or data science. A few highlights include CSE 416 - Introduction to Machine Learning, a crash course in machine learning in Python (with exposure to Google Colab, Jupyter Notebooks, and the sklearn library); CSE 414 - Introduction to Database Systems, which covers SQL (using SQLite and MS SQL on Azure) before going into other concepts in relational databases; and CSE 412 - Introduction to Data Visualization, which introduces principles and tools for data visualization (including Tableau).

For those with no programming experience, CSE 160 - Data Programming and CSE 163 - Intermediate Data Programming train students in Python programming with special attention to working with data. The latter is a prerequisite for the aforementioned CSE 4XX classes, and even has a multiple-week data science final group project that is a great experience to talk about in job interviews.

Other Resources

These classes are just some examples among the plethora of ways that economics students at UW get involved with data science. Many might find and participate in RSOs such as the Applied Analytics Club to practice data science skills outside of the classroom and meet other students with similar interests. Some could even get involved in research projects with professors in which they learn some data science skills. Others may check out the UW eScience Institute and explore some of its resources, and keep their eyes open for future data science seminars or career fairs. Perhaps you already have some data science experience and choose to look for internships in data analytics on Handshake. Whatever your goals or passions may be, hopefully this article introduced you to a new way to explore the exciting field of data science.

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It is commonly understood that with economic growth comes an increase in labor market opportunities, indicating a positive correlation between the two. Goldin, however, determined that women's employment is not as simplistic as this basic assumption alludes. Goldin discovered the shift from largely agricultural societies to industrial economies experienced a decline in women's employment, continuing into the beginning of the 20th century. The rationale behind this phenomenon is that industrial careers, factory labor for example, were demanding of women's time and withdrew them from the household. At the time, married women were assumed to remain within the home, acting as caregivers and domestic workers. At the turn of the 20th century, the service sector manifested and increased the number of jobs available to women that allowed them to also maintain their assumed role within the household. Jobs within this new sector included clerical and administrative jobs, often encouraging women to achieve higher levels of education they otherwise would not have pursued. Despite the increases in opportunities, social biases discriminating against women produced obstacles in observing continued growth of women's labor force participation. Norms often assumed of women were weaponized, including dismissal from careers once married, unfavorably perceiving periods of maternal leave, and common behavior of young women to limit their own educational opportunities once these barriers were established. The emergence of birth control pills in the late 1960s helped observe an increase in women's employment, as these contraceptives aided in granting women more control over their own education and careers. As such, the graph of the history of women's employment throughout the United States and likely in other high-income countries is U-shaped.

Additionally, Goldin focused her work on understanding the gender wage gap. She found that despite a decrease in the overall gap in income earned between men and women, sexual discrimination in the labor market sustained an increased wage gap at the beginning of the 20th century. Observing today's patterns, Goldin concluded that women's wages still decrease (or, increase at a lower rate) as soon as they give birth to a child due to the employer's assumption that women are less available or capable of meeting the needs of their professional career. Goldin notes that the inequalities in the labor market, despite women's employment remaining significantly high, are due to inequalities that occur within households. She points to higher levels of female labor force participation during World War II, when subsidized daycare and after-school

programs arose. She also cites our most recent pandemic: a rise in women's paid employment can be associated with increased flexibility of the workplace, allowing domestic work to continue in capacities as needed. This evidence shows that women's employment increases as the demands for their household responsibilities are better met, either by providing them more flexibility in work environment or providing better support options.

Claudia Goldin has contributed tremendously to the world of gender economics, aiding in better understanding how and why women's labor market opportunities have changed over time. She stands as an inspiration for all women within the world of economics and remains a model that many of the basic assumptions made throughout the field of economics can and should be challenged to better understand the world around us. To conclude, Goldin noted at a press conference: "For economists, change is important – change is interesting. Therefore, men are boring and women are interesting."

OPPORTUNITIES

Study Abroad in Economics:

The Department of Economics offers students the opportunity of going to 6 different Study Abroad programs: 4 in Europe – Tilburg University in the Netherlands, University of Bolzano in Italy, Aix-Marseille University in France and Ludwig Maximilien University in Munich, Germany and 2 in Asia – Thammasat in Bangkok, Thailand and Hitotsubashi in Tokyo, Japan. Information sessions will be offered by advising - the deadline for applying to the Study Abroad programs is January 31. See https://econ.washington.edu/study-abroad for more information about these programs including how to apply – email contacts: mturn@uw.edu and ppineda@uw.edu

What if TikTok Seizes the Market Share of Amazon?

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The rising population of TikTok users has exceeded 1 billion globally in 2021. In 2023, there are more than 150 million users across the United States in this new hype content-sharing community. Considering it was founded in 2016, this number is on another level of today's app-based industry. However, TikTok is no longer just a platform to share video content but a platform to sell goods and services to the customers who are behind the screens, scrolling through their little TVs whenever they are bored or just want to watch something interesting to kill their time.

In September 2023, TikTok launched its new shopping feature, TikTok Shop, creating another new revenue stream for its business. According to market-research firm data.ai, the United States ranked #1 by consumer spending in Q1 2022 for TikTok, contributing to 37% of total spending. China was #2, contributing 26% of TikTok's spend in Q1 2022. And this is even before the US users hit 150 million users in 2023. This data has shown the strong e-commerce market in the United States, leading TikTok to generate greater revenue on their TikTok Shop in the coming years.

TikTok Shop may be a place where small e-commerce businesses can be seen which is different from Amazon. In Amazon, when customers look up the keyword of the product, it will always show up the ones that have the most sponsored or most reviews which makes it hard for small businesses to stand out in the market. However, in TikTok Shop, there are three key groups of people involved: the content creators, sellers, and TikTok users, creating a platform that allows small business owners to grow their business with the collaboration of creators and sellers to reach their sales and views on their platform.

However, Amazon's main advantage is the trust of customers which is a field that TikTok still needs to develop over time. On the other hand, the advantage of TikTok is that the average time of users using TikTok is about two hours per day which is a significant time usage compared to other apps. The time people spend on Amazon is only 9.7 minutes per day according to data.ai, which tracks usage on Android devices. Furthermore, people who shop at Amazon normally know what they want to buy in their mind. But in TikTok, people browse the items only because they see the content creators recommend it or the product has gone viral on TikTok and trigger the customers to order the item. To compete with each other, Amazon and TikTok must copy each other, improve their business models, and finally find a better strategy to win customers.

Nonetheless, we know that Amazon has dominated the e-commerce market for the past decades and no one can really beat Amazon today. But what if TikTok takes over some shares of Amazon in the next few years? Will TikTok have the potential to be a significant player in the e-commerce market? If you're one of the TikTokers, will you buy products from the TikTok Shop? We will see if TikTok will win the battle of e-commerce or just fade out like the Instagram Shopping feature or other social media platforms that tried to generate their revenue with a shopping feature. And the answer has yet to come.