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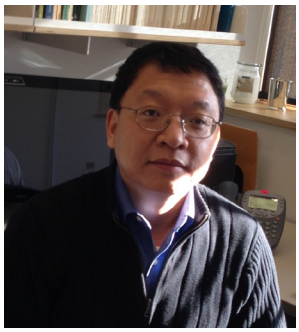
New Faculty Interview: Yanqin Fan and Quan Wen

By Nate Coleman

Among the newest additions to our department this year is the husband-wife duo Quan Wen and Yanqin Fan. Professors Wen and Fan, both senior members in the profession, join us from their previous positions at Vanderbilt University in Nashville, Tennessee, an environment of stark contrasts from Seattle. When asked about the differences between VU and the UW, Professor Wen noted that the most significant difference is the size of the undergraduate classes. Both Professor Wen and Fan have enjoyed the high energy environment that comes with these larger class sizes. It is very interesting to note that Professors Wen and Fan together make our second intradepartmental couple, joining Stephen and Michelle Turnovksy. Wanting to learn more about this, I turned the conversation towards their early years.



As I'm sure most of us as economics majors are curious to hear what it is like being in a relationship with another economist, I inquired about the history of their romance. They met in their undergraduate mathematics program while studying in China. Professor Wen noted that it is quite natural to find a partner in their academic program as their whole class went through the same courses over the four years, struggles and triumphs. After finishing their undergraduate program, the couple went to London, Ontario where they completed their PhDs in Economics at the University of Western Ontario.

Continued on page 2

Econometrics and Its Importance with Clark Lundberg

By Matthew Hill

Within the field of economics, econometrics is a powerful yet frequently misunderstood or completely unknown topic. Econometrics is a rigorous and challenging subject, but the background offers students critical hard skills to pursue quantitative research in industry and academia. To help promote Econometrics and understand its role in the field of Economics, I sat down with Clark Lundberg, who is instructing ECON 483: Applied Econometrics this fall quarter, to gain further insight into the subject. Clark Lundberg is currently a doctoral candidate whose research deals with developing econometric models for use in finance and macroeconomics.

What is econometrics and why should students study the subject?

"Econometrics is the means by which we, as economists, actually interact with the real world through data. Econometrics offers us the statistical tools to interact directly with data—without a way to validate models and predicted relationships, economic theory would exist in vacuum. This is not only essential to the practice of economics as a discipline, but it is also an extremely marketable skill set."

What makes Econometrics different from statistics?
"Econometrics certainly draws from statistics, especially regression models. It might be fair to say that much

Continued on page 2

Economics Advising Office's blog : http://uwecon.wordpress.com

Continued: Professorial Couple

Continued from page 1

One potential issue with being a married couple in academia is the challenge of finding two opportunities at the same location or close by each other, so I asked if this had been a problem when they faced the job market as a couple. Professor Wen informed me that it has not been an issue for them as their expertise lay in different realms of economics. Professor Wen specializes in microeconomics and game theory, while Professor Fan focuses on econometrics; two very different subsets of economics. He noted that the separation of their particular interests within the fields helps keeps the two unified, as their professional paths do not cross as much as one might imagine. This helps keep the conversation at home about which bike ride to take rather than which empirical model best fits the data on household consumption in Thailand. Professor Wen's research specifically has more to do with the applications of game theory to industrial organization problems, such as determining the effects of regulatory policy on a specific market.

Professor Fan's work drives her to answer questions regarding the effectiveness of Econometrics as a tool of analysis. As an undergraduate you might find Professor Wen at the front of your Econ 400 class. Currently you would find Professor Fan teaching a graduate course in econometrics, although sometime in the future she may be introducing you to econometrics in 482 or 483.

If you ever see either of these two roaming the halls of Savery, make sure to say hello and welcome them to our great University of Washington.

Continued: Clark Lundberg Talks Software

Continued from page 1

of econometric theory is a subset of statistics, however the practice of econometrics is heavily motivated by economic theory. Additionally, most econometrics tools were primarily developed or adapted to deal with observational data—data not obtained through a designed experiment—although this is changing some."

How is econometrics applied to economic principles?
"In general, econometricians tend not to engage in data mining, but rather begin formulating statistical models based on economic principles, theories, or even well-developed intuition. Econometrics is a way to validate and test predictions motivated by economic principles. Often the data does not support a proposed economic theory and so econometrics allows for corrections and refinements of the theory."

What kind of background is needed to be successful in econometrics?
"Econometrics requires not only a background in basic statistics but also a solid understanding of economics. This is why we require economics classes through intermediate macroeconomics and an introductory statistics class. Most students find that their statistics knowledge is a bit rusty at the beginning of an econometrics class; this doesn't usually present a lingering problem but having had recent exposure to statistics can be helpful."

What statistical languages are used in econometrics? Do students need previous programming backgrounds to be successful in econometrics?
"STATA is one of the more popular econometrics programs, but the R language is growing in popularity. I use R in my own research and in my classes because it is open source (free), very flexible in how it can be used, and is fairly popular in industry. Any statistical programming language will have a learning curve but we do our best to introduce these programs one step at a time. There are usually only a few students per class that have prior programming experience so don't be intimidated if you've never programmed before."

Econometrics allows economists to test principles in the context of real data. Although econometrics sounds challenging simply due to its intensively technical nature, exposure to the topic helps students further understand economic principles and theories, as well as provides applied experience with statistics and computer programming. For students interested in pursuing econometrics, the University of Washington currently offers four courses to undergraduates: ECON 382: Intro to Econometrics; ECON 424: Computational Finance & Financial Econometrics; ECON 482: Econometric Theory & Practice; and ECON 483: Applied Econometrics. A special thanks goes to Clark Lundberg for kindly offering his time to assist the Economizer.

The Internships of Economics Majors

By Pragya KC

Economics is a versatile and open-ended major that has a broad range of applications. Although economics is widely associated with business and finance, economics students have expanded its use in their internship and job experiences. To learn more about how students use their economics training, I interviewed four students with four contrasting internship experiences: David Van Cleve, who currently interns at Microsoft's treasury department as an econometrician; Travis James, who interned with the Washington Business Alliance this past summer; Jessica Lin, who has been working with Seattle City Light as a risk management intern; and Emily Lee, who works in management at a consignment store.

As a financial econometrician, David has had to hone his technical skills, like being more familiar with programs like Matlab and Excel. Before this opportunity in Microsoft, David had not considered financial economics as a potential career path because he hadn't enjoyed the courses based on the subject. However, in retrospect, he says, "after really enjoying my internship for two months, I've learned that disliking a course is certainly not a reason to avoid careers in a related field." Furthermore, he says, materials taught in class are often very different than how they are applied in a job setting. Therefore, it's important not to write off a particular subject solely based on classroom experiences. David encourages students to leave their comfort zones and approach internships that they wouldn't pursue under normal circumstances. This sentiment was extremely common among the four students that were interviewed.

This past summer, Travis James worked at the Washington Business Alliance, a non-profit organization, filling various roles and responsibilities including project management, statistical analysis of education, government, and healthcare data. During his internship, Travis worked with a group of interns, many of whom were students from the University of Washington. His particular focus was researching economic development indicators, access to financial capital, and infrastructure. Although Travis is interested in the fields of finance and applied mathematics, he values his experience with the Washington Business Alliance because it gave him a perspective to see the inner-workings of the public policy world that economics doesn't explore very much. In his past experiences, he has worked as a financial investment intern as well as an intern in an international tax firm in Argentina. Travis believes that such experiences provide him with a well-rounded perspective on how economic principles function in the real world.

Jessica Lin currently works with Seattle City Light as a risk management intern. She began her internship in July and works to minimize risks of energy trades and investments. She says that the main objective of the risk management team is to monitor energy traders so that they do not engage in trade with "counterparties that have poor credit ratings, financial standing, or credit history." Her job responsibilities do not align directly with concepts taught in Economics courses, but skills that she has gained in those courses have helped her greatly in approaching her job duties. Jessica advises internship hopefuls to actively network and take advantage of the resources provided by the department and the career center are musts. She enjoys her job because it combines both qualitative and quantitative skills.

In a departure from more traditional economics internship experiences, Emily Lee, a senior studying political science and economics, works in management at a consignment store. Taking her internship to an academic setting, she is mentored by Michelle Turnovsky and receives academic credit for her internship. As with other students, the economics courses she took at the University of Washington greatly helped her perform her job duties: especially microeconomics, macroeconomics, and game theory courses. In conjunction with her economics coursework, Emily has combined independent research and her internship experience to gain an integrated perspective of not only her job but economics as a subject. Emily plans to attend law school, and although economics seems disconnected with the field of law, she says that being an economics major provides her with a unique set of skills that will help her achieve her long-term goals.

These four students present four unique ways in which economics students have explored the job market. They also demonstrate that economics can be used in various varying ways in career-settings. However, the most important aspect of this is to pursue opportunities and take full advantages of chances that the university and the prospering businesses in Seattle offer us as students. Regardless of what sub-topic one may be interested in, seeking opportunities and networking are common themes for people who have found success in having enjoyable and meaningful internship experiences.

The Washington State Economy: A Historical Perspective

By Travis James

From Microsoft and Boeing to timber and hydroelectric power, Washington State's economy is characterized by diversity. This diversity has helped mitigate the economic shocks that the nation has experienced and ensured our continual growth and prosperity. However, when examining the events that have led to the state's current economic climate, one in particular stands out as the spark that initiated a virtuous cycle.

The 1850s Gold Rush created an immediate need for infrastructure in California, substantially increasing that state's demand for timber. Washington was in the perfect position to meet the new demand--more than half of the state was covered in forest. On January 3rd, 1900, Fred Weyerhaeuser purchased 900,000 acres of land in the forested part of state. Weyerhaeuser's purchase, along with modernization of the timber industry, projected timber into economic dominance for several decades. The seemingly random chance of finding gold in California, coupled with a plentiful (and necessary) natural resource, gave our local economy the momentum to ensure future prominence on the national economic landscape.

The next critical event in Washington's economic development was World War II. Boeing had been founded in 1916, and by the 1940s the firm was uniquely situated to meet the federal government's need for military-grade aircrafts. This, along with federal funding for the Manhattan Project, fueled a shift from timber-based exports to a more diversified economy. A strong manufacturing base and new, federally funded infrastructure launched Washington to the forefront of national economic development. In the post-war period, military spending continued to pour into facilities such as the Hanford nuclear reservation, the Bremerton naval shipyard, and Boeing's bomber production site. At the same time, trade with Asia boomed, increasing exports for the state.

Economic diversity and a favorable business climate began to attract outside firms to the state in the 1970s. Many of these firms originated in California, and were specialized in software engineering and high-tech goods and services. In addition to Microsoft, the recent success of Amazon and Expedia have further bolstered Washington's already positive economic outlook. Additionally, the combination of high-tech jobs and Boeing's persistent international orders have helped offset the negative consequences of the 1990s and 2008 recessions.
Washington's current economic environment is composed of large corporations, self-sustainability, and a constant eye toward the future. There are eleven S&P 500 companies headquartered in the greater Seattle area, and others such as Facebook and Google having offices in the city. Furthermore, Eastern Washington's strong agricultural industry, a river system providing the most hydroelectric power of any U.S. state, and a solid backbone of timber and aerospace make Washington an economically competitive and prosperous state. Future growth will depend on Washington's ability to sustain innovation and development. With one of the premier research facilities in the UW, a focus on technological development, and a strong business atmosphere, growth seems likely. If growth is persistent, Washington will remain at the national forefront of economic development.

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EDITORS: Rachel Frank, Travis James, Reid Johnsen, Pragya KC
WRITERS: Nate Coleman, Matthew Hill, Travis James, Pragya KC
CONTACT: Please e-mail us with your questions, comments, or concerns at eub@uw.edu

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