

BRIGHAM YOUNG UNIVERSITY

ECONOMICS

DEPARTMENT MAGAZINE | ISSUE 7 | 2018



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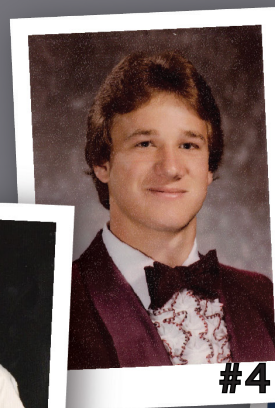
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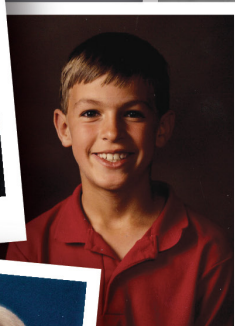
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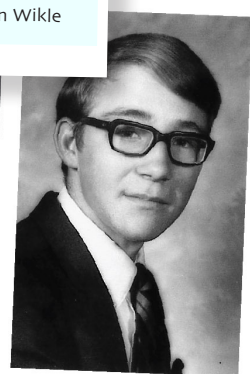
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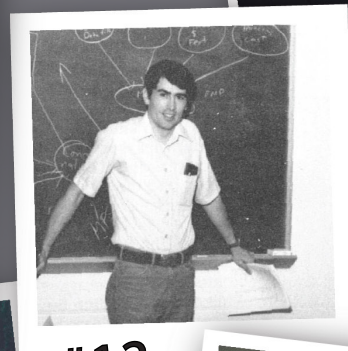
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ECONOMICS

FROM THE CHAIR



Farewell to the FOB! After housing the Economics Department for nearly four decades, the Faculty Office Building is scheduled for demolition early in 2019. It will be replaced by a new two-story structure housing Economics, Statistics, and the

Maxwell Institute. Designs for the new building are nearing completion and the Economics Department is scheduled to move to temporary quarters in the Crabtree building later this year. The new building is expected to be completed in Spring 2020. Check out last year's magazine for some fun facts about the FOB.

This year's magazine is another great production from our staff, led by Jessica McDowell. Thanks to her, Terri Moser, Sohee Choo, and to the faculty and students who contributed to this year's magazine. We also want to welcome our newest faculty members, Riley Wilson and Paul Eliason. We hope you enjoy this year's magazine!

Sincerely,

Mark Showalter
DEPARTMENT CHAIR

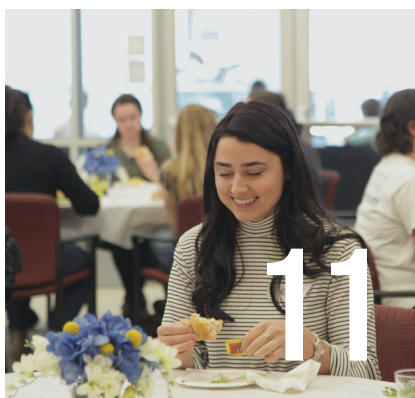
Visit our website, economics.byu.edu, for more information about BYU Economics!

FEATURES



THE RECORD LINKING LAB : CONNECTING ECONOMICS WITH FAMILY HISTORY

Student research assistants in the Record Linking Lab are helping build the FamilySearch Tree while working with universities across the country on economics research projects.



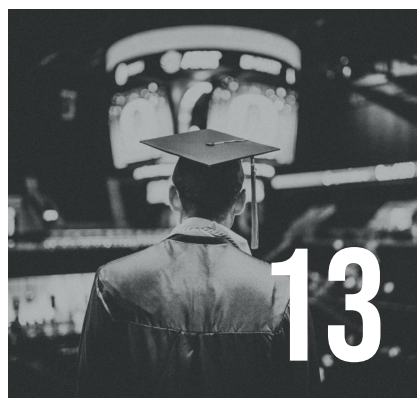
ECONOMICS MAJOR INFO SESSION FOR WOMEN

The Department held its semi-annual female recruiting event in March. Mark Showalter, BYU Econ alumnae, and the Women in Econ presidency spoke to prospective majors about their experiences in the major.



BANKING ON CRYPTOS: A STUDENT'S PERSPECTIVE ON CRYPTOCURRENCIES

What are cryptocurrencies? Will there ever be a global digital currency? Student Kendall Orton shares his thoughts on the subject.



ALL GROWN UP? FINANCIAL AID AND COLLEGE COMPLETION

Jeff Denning shares his research on how financial aid reduces time to degree and how it could be used to increase graduation rates for financially disadvantaged students.

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THE RECORD LINE

CONNECTING ECONOMICS RESEARCH WITH



LINKING LAB

WITH FAMILY HISTORY



By Jessica McDowell

What do family history and economics have in common? On the surface it may not seem like much, but the Record Linking Lab, directed by BYU Economics professor Dr. Joseph Price, is proving that the connections are endless.

Spurred by a desire to combine his love of family history with his research, Dr. Price created the Record Linking Lab (or RLL) to act as a liaison between economics researchers and FamilySearch, the family history website of the Church of Jesus Christ of Latter-day Saints. Since 2016, the RLL has been helping to build the FamilySearch Tree and working with universities across the country on economics projects, all while offering BYU students valuable research opportunities.

BUILDING THE TREE

Through its various projects, the RLL helps build the FamilySearch Tree and expand the potential records that can be added to the Tree, allowing for more and more people to find their families. Similar to Wikipedia, FamilySearch Family Tree is a crowdsourced public good, so it improves every time someone adds a new person to the tree, edits the information for people already on the tree, or attaches a source. It has real meaning for Church members spiritually, but it also allows people all over the world to discover their own families and learn how they are connected.

A major focus of the RLL is to identify ways to combine the efforts of humans with machine learning to make this process of improving the tree as efficient and inclusive as possible. One of the main projects that the RLL has worked on this last summer is to create a census-based tree that will eventually include every one of the 217 million unique people that appear in a census record in the U.S. between 1850 and 1940. The Lab is also helping FamilySearch with Tree-extending hints, or records where part of the family is on the Tree, but the other isn't. Through these hints, individuals working on their family histories can add new people to the Tree.

Furthermore, the RLL has been assisting FamilySearch on projects involving yearbooks, patents, Wikipedia, and others. These projects all involve extracting publicly available data from

the collection of interest and creating usable record collections that FamilySearch users can access and use to further their family history. The research assistants on these projects work at the FamilySearch building in Lehi, Utah once a week to better coordinate efforts between the Lab and FamilySearch.

The Record Linking Lab also partners with the Family History Technology Lab (<https://fhtl.byu.edu/>) through the BYU Computer Science Department. The FHTL has created several family history resources including the popular Relative Finder application. Together, the two labs are working on a handwriting recognition project that would allow more information to be extracted from records. Dr. Price explains, "We're focusing specifically on pre-printed forms that have handwriting on them. The machine can figure out where the printed text is, and then it knows where to look for the handwriting." Once the technology is in place, the labs will be able to quickly and effectively index millions of records.

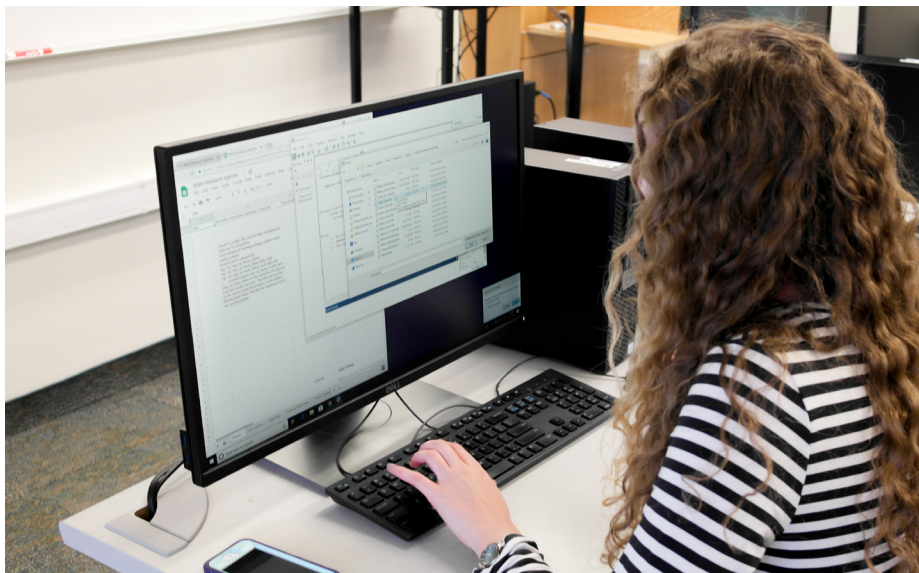
Building the FamilySearch Tree offers more people opportunities to find their ancestors, but it also helps the students who work in the RLL gain a greater appreciation for family history work. Miles Strother, lead RA on the LIFE-M project explains, "I realize how much work needs to be done with family history and the things that need to be done. I have more of a drive to do that in my free time. It's easy to say there are a lot of [Church] members working on it, but then you see how many records haven't been found, and it's astounding."

ECONOMIC RESEARCH

Economic research was the original motivation for creating the RLL. As Dr. Price explains, "I was at a conference, and I bumped into Martha Bailey at Michigan. She told me about this project she was doing—LIFE-M—and I told her about my new love [family history], so we were able to start doing some of LIFE-M with her at BYU. We hired a team of students to work on LIFE-M, and that was really a big part of the start of the Record Linking Lab."

The Longitudinal, Intergenerational Family Electronic Micro-Database Project (or LIFE-M) is a machine learning project using U.S. census data from 1850 to 1950 to link individuals to their vital records. The student RAs have been gathering data on the states of Ohio and North Carolina, and then researchers at University of Michigan have been using machine learning techniques to teach computers how to link these kinds of records automatically. Eventually, computers will be able to link all of the census records for the entire United States.

Miles Strother says that working on this project has changed his perspective on family history: "I've never thought of family history as cutting edge technology. I've realized how much work needs to be done and how much we





can do. . . . [Furthermore], the impact that record linking can have on research is incredible.”

The RLL also partners with researchers at UCLA, Toronto, Brown, Chicago, Northwestern, Stanford, and Yale on a variety of projects. The Mother’s Pension project (with researchers at UCLA, Brown, and Toronto) is analyzing the effects of the first federal welfare program in the United States, the Mothers’ Pension (or Mothers’ Aid program), which offered a stipend to single mothers with dependent children.

The students in the lab have a list of mothers who applied for the program along with the children listed on the applications. The students then use FamilySearch to find information on the life expectancy of the women (and their children), as well as information on whether the women ever remarried. The researchers will be using the data to evaluate the long-run effects of being enrolled in this program and whether it influenced the timing of remarriage and characteristics of the husband, if they remarry.

All of the work that the students do for this project is done directly on the Family Tree at FamilySearch.org, which allows the students to use the tools available on FamilySearch but also extend the Family Tree in ways that will help others with their family history. In fact, the records they are working with are not currently available on FamilySearch or other family history websites and provide important information on the names and birthdates of each of the mothers’ children.

THEY'RE GETTING RECORDS FROM US. WE'RE GETTING RECORDS FROM THEM. I THINK OF IT AS THIS PERFECT SYNERGY OF RESEARCH HELPING FAMILY HISTORY AND FAMILY HISTORY HELPING RESEARCH.”

Dr. Price explains, “What will happen is, we’re making connections, but then other people will come along because it’s their family, and they’ll start to add records too. So, they’re getting records from us. We’re getting records from them. I think of it as this perfect synergy of research helping family history and family history helping research.”

Calvert Cazier, one of the lead research assistants on the project says this is one of the best parts of working on the project. “Every once in a while, we’ll get emails from people on FamilySearch who say, ‘How did you find this person?’ It’s gratifying.”

HELPING STUDENTS

Perhaps most important to the aims of BYU, the Record Linking Lab offers many students, from all different majors and class standing, valuable research opportunities. Because students learn on the job, prior technical training or research experience isn’t necessary to be successful. In fact, many of the research assistants are freshmen or sophomores who have only taken Econ 110 (including one student this

last summer who was hired a few months before starting her freshman year at BYU).

“[The Lab] allows us to hire research assistants in the Econ major from day one,” Dr. Price explains. “So, you can have a freshman who gets to have a research experience right from the very beginning. They don’t have to wait until they have econometrics to do it. . . . Then they’re ready by their sophomore or junior year and have the skills to take on a project of their own or make meaningful contributions to other tasks we do.”

Students who work in the Lab meet in teams, are trained by other more experienced students, and then are given a lot of autonomy and responsibility. Tanner Eastmond, the head RA for the Record Linking Lab, really enjoys this aspect of the Lab. “Dr. Price is good at giving me a challenging problem and letting me learn how to solve it. Working through those problems and learning how to solve them has been very enjoyable to me.”

Price also encourages students to take on leadership roles. He explains, “We have amazing team leaders that help mentor the other

students. Our lab would not be possible without all their effort and skill. I am always amazed at how talented these students are."

Freshman Bryton Godfrey has only worked for one semester and is now one of two lead RAs over the Mother's Pension project. "I've learned valuable leadership skills. I feel like this will help me in whatever major I pursue." This position has also helped him learn more about economic research and economics in general. "It's definitely made me think more about an economics major, doing the kind of work we do. It's made it more appealing to me, whereas I didn't know too much about it before."

Ali Doxey, former head RA of the LIFE-M project, has also enjoyed learning new research skills. "It's reinforced my desire to do economic research. That's something I thought was interesting since my freshman year before working here. It's opened a lot of doors for me to learn new skills in research and talk with people who are ahead of me in the program and see what their plans are."

Working in the Record Linking Lab has also helped her form connections that have allowed her to expand her research network. While working on LIFE-M, she communicated weekly with researchers at University of Michigan. This past summer, she participated in an NSF-funded program at Notre Dame that allowed her to work directly on a project with faculty there about the impact of college openings on the long-run economic outcomes of individuals in those communities.

Students who work in the Lab also have the opportunity to develop and research their own ideas. Using FamilySearch, student Julie Hollenbaugh has been studying the Dustbowl of the 1930s and the individuals who were affected by it. She received a \$1,500 ORCA grant from BYU to link children and parents across multiple censuses and test if the children who left Oklahoma ended up with better long-run economic outcomes than those who stayed. Her project with Dr. Price and Michael Gmeiner (grad student at Northwestern University and BYU Econ alum) entitled "Dustbowl Migration" recently won second place in the BYU Mary Lou Fulton Mentored Research Conference.

The Lab trains students in research methods, statistical software, and programming, allowing them to gain the skills needed to pursue their own projects, work as research assistants for other professors, or prepare for graduate school.

THE FUTURE OF THE RLL

The Record Linking Lab also invites volunteers to do record tasks that help build the FamilySearch Tree. Individuals can visit byuresearch.org/volunteer to help the RLL find and attach death dates, maiden names, parents, etc. to the Tree. Similar to indexing, volunteers do a batch and mark off the work they have done. These micro-tasks make learning how to do family history work easier and more manageable for beginners.

"TWO BIG THINGS WE DO IS HELP TO BUILD THE TREE AND EXPAND THE NUMBER OF RECORDS THAT CAN BE USED TO ADD TO THE TREE."

The Lab also invites youth groups to come and learn how to do family history. Dr. Price describes, "We have a pretty novel way of helping youth with family history. In fact, most of them will have a pretty cool experience and find a family name that they can take to the temple. Finding a death date is something that's helpful for your own family tree, so when youth come in for us to show them, we're going to show them how to find death dates, and they'll do that both for their own family and also for our projects. We also find that even when they're working on one of our projects, they can always hit 'View My Relationship,' and see if they're related to people that they're working on."

The Lab currently employs over 100 undergraduate research assistants and continues to grow. As it grows, Dr. Price hopes to accomplish two major goals. "One, is to link together all the records in the world, so that anyone, anywhere in the world will be able to learn more about their family. And it will be easy for everyone to do family history. Our other goal is to extract usable data from whatever source it might be in. This can include government forms, patent applications, yearbooks, and lots of other records. So, two big things we do is help to build the tree and expand the number of records that can be used to add to the tree."





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The background is a dark teal color with a pattern of glowing binary code (0s and 1s) and several Bitcoin symbols. The Bitcoin symbols are circular with a stylized 'B' and two vertical lines. The binary code is arranged in vertical columns of varying lengths, creating a digital, futuristic feel.

BANKING ON CRYPTOS:

A STUDENT'S PERSPECTIVE ON CRYPTOCURRENCIES

BY KENDALL ORTON

I first heard of cryptocurrencies (or “cryptos”) from my friends, who were bent on becoming the next Bitcoin millionaires. At that time, Bitcoin (the original crypto) was climbing fast, and my friends wanted in on the fun. They gave up after a week with less than they started with.

It wasn't until later I learned that the meteoric price-climb of Bitcoin was in part caused by bad actors and shady transactions across its exchanges.¹ This actually got me more interested. So, what are cryptos? Will we ever have a global digital currency? Do we want that?

Dr. Scott Condie, professor from the BYU Economics Department, gave me some insight; he is cautiously optimistic about the technical innovations cryptos bring to money. He explained one potential innovation, “For example, there’s no technical reason for a transaction to take three days to clear through the bank. Blockchain* technology offers a solution to that issue.”

Bitcoin, the original and most well-known cryptocurrency, was created towards the end of 2008 as an online currency built on a blockchain transaction network to bypass banks and credit cards and allow consumers discretion and make transactions cheaper.² Alternative coins sprang up, some of which have essentially the same code as Bitcoin, while others operate on a substantially different model—as of 2018 there are over 1,500 cryptos.

The original goal of these cryptos was nothing less than to upend the financial market and replace world currencies, which would, in theory, remove the need for central banks and take government out of the money business. Early on, hope was that cryptocurrencies would replace broken national currencies that had lost trust—think of the hyperinflation in Zimbabwe that led to a \$100 trillion dollar note Zimbabweans used to buy bread.



****PUMPING AND DUMPING**

Indeed, many of the thousands of coins were not started as vehicles to invest in new technology or business, but to actively take advantage of public excitement around cryptocurrencies and an unregulated market. One community of Bitconnect investors colluded in schemes to buy up certain coins, “pumping” up their value to get others to join in the frenzy for a few hours; then, at the peak of the pump, the members sold (or “dumped”) at a profit at the expense of everyone else involved. In January 2018, the Bitconnect coin experienced a cataclysmic loss of market cap, falling from \$2 billion to \$20 million in just a few days.⁹

BIG DREAMS.

However, there are problems. For one, volatility in the value of digital coins, though exciting to day traders and young people looking to make a quick million, makes them less useful as currencies—if the U.S. dollar were to vary wildly in value from day to day, buying weekly groceries would be a crapshoot and long-term investing would be a fool’s game. Stability is the heart of a useful monetary system. The goal of replacing current national currencies can only be realized if cryptos are widely circulated—the U.S. dollar is so strong at least in part because it is accepted as payment in so many parts of the world. Unfortunately, the number of merchants accepting cryptocurrencies is going down.³

Perhaps it made sense that Bitcoin, the first cryptocurrency, would overhaul international finance when there was only Bitcoin, but what firm is going to try to keep up with and accept every cryptocurrency under the sun? Currently these coins are more like volatile, speculative investments than currencies.⁴

Acquiring and divesting cryptocurrency looks different than typical currencies as well. You can trade so many dollars for so much Bitcoin, Ethereum, or your preferred cryptocurrency, on markets like any currency or stock. Many are offered as a way to gain ownership of a piece of a firm—these are called Initial Coin Offerings, or ICOs. According to Dr. Condie, “The main difference between these ICOs and other stocks is regulatory requirements; though, that will likely change if ICOs prove to be successful.” Why go through the rigmarole of proving solid business practices and adhering to pesky anti-fraud laws to get on the New York Stock Exchange when you can just offer digital coins to investors on the web?

While most cryptocurrencies are offered like stocks in up-and-coming companies, there has been some worry about totally fraudulent currencies. For instance, the morning after Google announced they would no longer run ads for cryptos, citing fraudulent advertising practices (such as guarantees of 50x returns), global cryptocurrencies lost \$60 billion.⁵ The Security and Exchange Commission began serious probes into the cryptocurrency market at the beginning of 2018, regulating some of the largest exchanges and rooting out bad actors.^{6**}

***BLOCKCHAIN**

Cryptocurrencies are housed entirely in computers. Like most money today, cryptocurrencies are fiat—the code is not based on gold, silver, or oddly shaped rocks. To keep track of who has what and owes what to whom, transactions are kept on a “blockchain,” a public ledger that tracks every transaction of whatever cryptocurrency they’re programmed for.

Imagine playing poker without chips—if each player kept a record of every play, any foul-play is easy to spot. If there was ever a question about how much was owed, each player could consult their ledger.

The blockchain multiplies that process by thousands and uses cryptography (computer security code) to ensure the accounts of every person involved (hence ‘cryptocurrency’). Since the ledger is duplicated on thousands of computers across the world, a hacker would have to hack all the duplicated ledgers all at the same time to make any unauthorized transactions.

One of cryptos' original advertised strengths is also a weakness—the anonymity they afford makes it more difficult to trace money, giving them a premium in the criminal underworld. Cryptocurrencies have been cited in their use in the 'dark web' marketplaces for drugs and stolen goods and in money laundering schemes, where many actors want to remain unknown.⁷ One early adopter of this use of cryptocurrencies created Silk Road, an entirely unregulated online market, and was sentenced to life in prison for large-scale narcotrafficking.⁸

NOW WHAT?

Cryptocurrencies have a long way to go legally and technologically before they live up to the hope of their first programmers of replacing the way we do money. Even so, while the crypto market is developing, they are exciting investments, if you know what you're getting yourself into.

Dr. Condie had some recommendations to those interested in investing in cryptos: "Investing in cryptos will require higher fixed costs than traditional asset classes. If you're willing and curious about their properties and get some utility in researching, that may be enough to overcome the fixed costs, but at most, cryptos should be a small part of a well-diversified portfolio. I would never say to someone who's three years from retirement 'Now's your chance. Live the life you've always wanted!'"

Personally, I'm way too risk-averse to get involved in these markets, but you can bet I'll be paying attention.

¹Gandal, Neil, JT Hamrick, Tyler Moore, and Tali Oberman. "Price Manipulation in the Bitcoin Ecosystem," *Journal of Monetary Economics* (2018). <https://doi.org/10.1016/j.jmoneco.2017.12.004>.

²Nakamoto, Satoshi. "Bitcoin: A Peer-to-Peer Electronic Cash System." <https://bitcoin.org/bitcoin.pdf>.

³<https://news.bitcoin.com/morgan-stanley-believes-bitcoin-acceptance-is-shrinking-others-object/>.

⁴Baur, Dirk G., KiHoon Hong, and Adrian D. Lee. "Bitcoin: Medium of Exchange or Speculative Assets?" *Journal of International Finance Markets, Institutions, and Money* (2017). <https://doi.org/10.1016/j.jintfin.2017.12.004>.

⁵<https://www.nytimes.com/2018/03/14/technology/google-bitcoin-advertising.html>.

⁶<https://www.wsj.com/articles/sec-launches-cryptocurrency-probe-1519856266>.

⁷<https://www.forbes.com/sites/jasonbloomberg/2017/12/28/using-bitcoin-or-other-cryptocurrency-to-commit-crimes-law-enforcement-is-onto-you/#5c1df52f3bdc>.

⁸<https://www.wired.com/2017/05/silk-road-creators-life-sentence-actually-boosted-dark-web-drug-sales/>.

⁹<https://coinmarketcap.com/currencies/bitconnect/>.

Economics Major Info Session for Women

By Jessica McDowell

On March 29th, the Economics Department hosted the semi-annual Major Info Session for Women. This event, aimed towards recruiting women to the major, allows prospective econ majors to meet and get to know current female majors, faculty, and alumnae. Our Department Chair, Dr. Mark Showalter, spoke along with student Hannah Bender and alumnae Tracy Weston and Kristen Edwards. A light lunch and mingle were held after the presentations.



Photos courtesy of FHSS Design



Hannah Bender, representing the Women in Economics group (a subsidiary of Economics Student Association), invited students to join the club and discussed her experience in the economics program. ►



▼ **Tracy Weston** (2011) shared her path to economics (she switched her major seven times!) and how her degree has helped her in the finance industry. She pointed out that all students can be successful.



Kristen Edwards (2001) encouraged students to find their paths and reminded them that there is more than one way to be successful as an econ graduate. She has used economics as a stay-at-home mother for fifteen years and feels well-prepared in her current graduate school economics courses and work with the non-profit Better Days 2020. ▲



◀ **Dr. Showalter** introduced the major, highlighting the benefits of flexibility, networking, and excellent training. He also noted the research/teaching assistant opportunities, the career and internship help economics students can receive, and the scholarship and grant funding available to econ majors.



All Grown Up?

Financial Aid and College Completion

BY JEFF DENNING & JESSICA MCDOWELL

Federal financial aid has received a lot of news coverage lately. Considering the massive amount of student loan debt and rising college tuition, many critics believe the system has failed. These systemic questions have motivated much of Professor Jeff Denning's higher education research. As an Affiliated Researcher with the Texas Higher Education Coordinating Board (THECB), the state agency responsible for the Texas public community colleges and universities, Professor Denning works on a variety of higher education projects. These have included "Was that SMART? Institutional Financial Incentives and Field of Study" with Patrick Turley (2010 BYU Econ alumnus) in *Journal of Human Resources*, "College on the Cheap: Consequences of Community College Tuition Reductions" in *American Economic Journal: Economic Policy*, ongoing projects focusing on the Pell Grant, and, most recently, projects on financial aid.

He explains, "My interest in financial aid is driven by several things. First, it is a huge expenditure of the federal government. It also affects the decision to go to college and complete college for thousands of poor students. Personally, I know that the price of college heavily influenced my decision to attend college, and financial aid affected the decisions I made while I was in college."

In a recent paper, "Born Under a Lucky Star: Financial Aid, College Completion, Labor Supply, and Credit Constraints," forthcoming in *Journal of Human Resources*, Denning shows how financial aid reduces time to degree. This paper was motivated by his own experience as an undergraduate at BYU. "My friend as an undergraduate (and new BYU Econ faculty member), Paul Eliason, and I were similar in a lot of ways—same height, hair color, GPA, majors, etc. However, I was born in January, while Paul was born a few months earlier. During our senior year, we turned twenty-four, and this meant that Paul was treated as financially independent for the purposes of financial aid while I was dependent. As a result, Paul got some grant aid, but I did not. He did buy me lunch, though, which was nice of him."

Federal financial aid in its many forms (grants, loans, work studies) is meant to help students pay for college and then access the benefits of college completion, like higher wages. There are many considerations that determine whether students qualify for aid and how much funding is given, including income and assets and whether or not students are considered "financially independent." Hence, sometimes similar students receive very different amounts of financial aid. In his paper, Denning compares students born just before and just after the birthday



Photo by Cole Keister on Unsplash

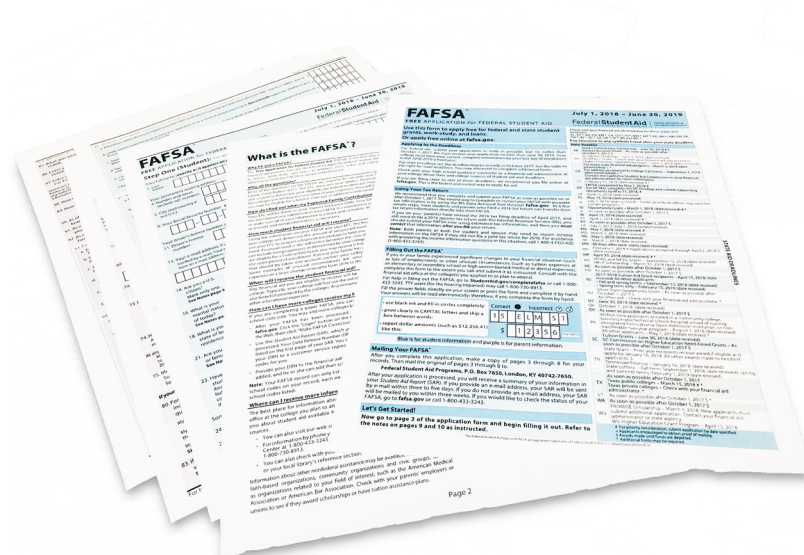
cutoff for financial independence using data on all enrollees at public universities in Texas combined with earnings records.

In collaboration with THECB, Denning used over ten years of administrative data from all Texas public universities and community colleges. He arranged the students by their birthdate and focused on the students whose birthday was close to January 1 and who were turning twenty-four. Because he was able to look at so many years for all public universities, there were over 110,000 students for the main sample. Using techniques he first learned in Economics 488 (Applied Econometrics), he compared students born just after January 1 to students born just before. He showed that students born just before January 1 (like Paul) got more financial aid (over \$900 in grants and \$400 in loans) than students born just after (like Jeff). This additional money induced students to take more credits and graduate from college faster.

Theoretically, financial aid could increase graduation rates for two groups of students: students who would not go to college without the aid and students who would go to college even if they didn't get the aid, but who are helped by the aid once they arrive at college.

Unlike other similar research, Denning's study shows that this second group of students' graduation may be affected by financial aid because he focuses on students who were already enrolled in college. This study is one of the first to focus on students whose enrollment decision was unaffected by financial aid. "I find that students who are barely declared financially independent get more financial aid and, as a result, graduate faster. The results are bigger for students from poorer backgrounds."

With the results of his study, Denning hopes policymakers will target financial aid to financially disadvantaged students who are most likely to see changes in graduation. Ideally, the rules for financial independence could be reexamined to better target resources to students who are most likely to benefit.





[MICHAEL RANSOM]

DO HIGH SCHOOL SPORTS BUILD OR REVEAL CHARACTER? BOUNDING CAUSAL ESTIMATES OF SPORTS PARTICIPATION

Young men and women who participate in high school sports are more likely to graduate from high school, attend college, and have better jobs as adults than those who don't. Many people believe that this is because participation in sports somehow makes people better. A common argument is that high school sports provide opportunities to develop skills such as teamwork, persistence, and leadership that cannot be learned in classrooms, and these skills or traits of character have big payoffs in later life. Furthermore, sports may improve lives by providing activities that keep students out of trouble or by encouraging them to interact with adult mentors that provide guidance. On the other hand, sports participation demands a lot of time from students and thus, may detract from more academic pursuits. Sports programs in high schools are also expensive, so understanding their benefits is an important goal.

Contrary to the stereotype of the "dumb jock," students who participate in organized high school sports are typically better students than those who don't, even before they get on the team. They tend to be stronger readers and are better at math. They are more likely to come from homes where both the mother and father are present. On average, their parents are more educated and earn more money. They are obviously healthier. All of these differences also predict success in later life. Our study, "Do High School Sports Build or Reveal Character? Bounding Causal Estimates of Sports Participation" in *Economics of Education Review* attempts to determine whether there is a causal link between participation in high school sports programs and beneficial outcomes in later life. In other words, are the good

outcomes that we observe for high school student athletes due to their participation in sports, or are they due to their natural advantages?

Using data from three large longitudinal surveys of young men and women, we apply new techniques that make inferences about how unobservable variables influence selection into sports participation using information about the correlation with observable characteristics. We examine a variety of educational and labor market outcomes—high school graduation, college attendance, college graduation, wages, full-time employment. We also consider some lifestyle outcomes—regular exercise, obesity, and alcohol abuse.

Essentially, this study asks, "How much correlation would there need to be between the characteristics that we cannot observe (think grit, dependability, courage) with things that we can observe (such as reading and math ability, parental background, family structure) to explain the fact that high school athletes are more likely to go to college, get good jobs, or have healthy lifestyles?" Our answer is that the correlation between observables and unobservables doesn't have to be very high to explain the better outcomes of student athletes. These results cast doubt on the conventional wisdom that athletic participation teaches important life skills. Essentially, we agree with the famous quote from Heywood Hale Broun, "Sports reveals character, it doesn't build it." **MR**

Ransom, Michael, and Tyler Ransom. "Do High School Sports Build or Reveal Character? Bounding Causal Estimates of Sports Participation." *Economics of Education Review* 64 (2018): 75–89. <https://doi.org/10.1016/j.econedurev.2018.04.002>.

[BRIGHAM FRANDSEN]

TESTING CENSORING POINT INDEPENDENCE



Many important economic outcomes are censored: unemployment durations, top-coded income, and time-to-default are just a few. An outcome is censored when we don't always observe its true value, but sometimes just a lower or upper bound. For example, duration outcomes like unemployment spells are censored because for any spells that are ongoing at the time the data are collected, we do not know how long the spell will eventually be when completed. Analysis of censored outcomes will be misleading unless the censoring is taken into account, and methods to take censoring into account rely on an important assumption: the censoring point (the lower or upper bound) is independent of the true outcome. If this assumption is false, traditional methods based on this assumption will be misleading. The assumption has typically been regarded as an untestable article of faith.

In my paper, "Testing Censoring Point Independence," (forthcoming in *Journal of Business & Economic Statistics*) I show how this assumption can be tested. The insight on which my test is based, and which had

gone overlooked in the literature, is that the key information about whether censoring points are independent of true outcomes comes from (perhaps counterintuitively) uncensored observations. When we know at what points uncensored observations would have been censored, it is possible to analyze outcomes in two distinct ways: traditional methods, which rely on censoring point independence, and what I term a "reduced-sample method" that will coincide with the traditional methods if censoring points are indeed independent, but will differ otherwise. Comparing the results of traditional methods to my reduced-sample method therefore tells us whether censoring points are independent. I demonstrate the test in the context of unemployment durations in three widely used datasets. I find that the assumption can often go awry and deserves scrutiny whenever it is invoked. **BF**

Frandsen, Brigham. "Testing Censoring Point Independence," *Journal of Business & Economic Statistics* (2018). <https://doi.org/10.1080/07350015.2017.1383261>.

[BRENNAN PLATT]

INFERRING ASCENDING AUCTION PARTICIPATION FROM OBSERVED BIDDERS



Economists have frequently studied auctions as a microcosm of how markets determine prices, but that study has become much easier as the rise of online auctions has offered ample data. For instance, eBay runs a second price auction, meaning that the highest bidder wins, but pays only slightly more than the second-highest bidder. Under these rules, bidders have every incentive to bid exactly what they think the item is worth. This truthful revelation of the buyer's personal valuation is empirically convenient to economists; by listing the highest bid of each bidder in descending order, we can effectively trace out a demand curve, which is crucial information for sellers, platforms (e.g. eBay itself), and even regulators.

Even so, the rules of the game also place unintended limitations on the data. eBay operates as an ascending auction, meaning that it displays the standing price (that is, the current second-highest bid) throughout the auction and only allows participants to place bids above that standing price. Thus, a low-valuation customer could visit an eBay listing intending to place a bid only to find that the standing price has already passed his maximum valuation. Empirically, the economist will see no trace of this phantom participant, thereby underestimating the true demand of the item and skewing any profit maximization or other optimization based on demand.

In "Inferring Ascending Auction Participation from Observed Bidders" in *International Journal of Industrial Organization*, I develop a model to determine how frequently these low-valuation customers are missed, allowing us to infer the true number of participants and their demand. The key to this analysis is that participants may arrive in any order, but low-valuation participants are only visible if they were lucky enough to arrive before other bidders. I construct the probability that a participant will be visible and thus infer how many more phantom participants were unseen. For instance, the average eBay auction includes bids from 5.6 distinct bidders, but my estimates find that on average 15.1 participants considered the auction. After a simple adjustment, accurate demand estimates can also be recovered.

In sum, highly structured markets like auctions can be an empirical cornucopia, but it is important to pay careful attention to the rules of the game. You may only be only observing a fraction of what you really want to know. **BP**

Platt, Brennan. "Inferring Ascending Auction Participation from Observed Bidders." *International Journal of Industrial Organization* 54 (2017): 65–88. <https://doi.org/10.1016/j.ijindorg.2017.06.001>.



Breaking through Spiritual Plateaus

During my growing up years and into college, I was very active and tried to stay in good physical shape. However, during the five years I attended graduate school, I did not have as much time to exercise and maintain my physical fitness. So, once I graduated, I was determined to get back into better shape.

BY JAREN POPE

For some reason, at that time, I thought a good barometer of my physical fitness was how many pull-ups I could do. I bought a pull-up bar that would attach to a door frame in our house. I still remember my initial attempt of doing pull-ups after not having done any pull-ups for many years. It was very disappointing. I could not believe how weak my upper body had become. I determined that I would set up a schedule where I would consistently do pull-ups, so that I could build my upper-body strength and improve my overall fitness.

As I began to consistently practice doing pull-ups, my strength rapidly increased. It was very rewarding over the first couple of months to double, triple, and then quadruple the number of pull-ups I could do. However, after consistently doing pull-ups for about six months, I was no longer making any progress. I had hit a physical plateau in my strength training! In the lingo of an economist, diminishing returns had kicked in.

After some discouraging weeks without making any progress in the maximum number of pull-ups I could do, I searched the internet for articles to explain why I was unable to continue progressing, despite the consistency of my pull-up routine.

One representative article says, "Strength training programs require constant adjustment throughout the year or you may find yourself stuck in a rut and hitting plateaus. If you are new to strength training . . . this kind of plateau happens after about six months of . . . training. During the first months of training, you will likely make some dramatic strength gains doing the same routine. Soon, however, these gains begin to level off. To continue making gains, you will need to vary your training techniques . . . to break out of your plateau."¹

Some suggestions for breaking out of the physical plateau were to increase training intensity, vary exercises, change the order of exercises, remove some exercises, or add others. Again, for an economist, this advice made sense. Continuing to do pull-ups in the same way I had been doing for six months was like continuing to increase the production of push-ups while only increasing one factor of production. Over the next few months, I tried varying other factors of push-up production to continue to make gains and was indeed able to make some moderate increases in the number of pull-ups I could do!

Thinking about this experience, I have come to realize that I often hit spiritual plateaus, much like the physical plateau I hit while doing my pull-up training. There are times in my life when I am consistently going through the spiritual motions of reading scriptures, praying, etc., but not really progressing in my spiritual strength. I think the solution to breaking through these spiritual plateaus parallels some of the solutions for breaking through physical plateaus. In Alma's beautiful discourse on faith in the Book of Mormon, he talks about how we must "exercise a particle

Continuing to do pull-ups in the same way I had been doing for six months was like continuing to increase the production of push-ups while only increasing one factor of production.

of faith . . . to plant the seed" (see Alma 32:27 & 36). In other words, it takes spiritual effort to plant the gospel in our hearts.

When it comes to exerting more spiritual effort, we have been consistently counseled by latter-day prophets and apostles to read and study the Book of Mormon more thoroughly. President Monson in his last general conference talk, in the Sunday morning session of April 2017, said this: "My dear associates in the work of the Lord, I implore each of us to prayerfully study and ponder the Book of Mormon *each day* [emphasis added]. As we do so, we will be in a position to hear the voice of the Spirit, to resist temptation, to overcome doubt and fear, and to receive heaven's help in our lives. I so testify with all my heart in the name of Jesus Christ, amen."²

Even though for years, I have tried to follow the counsel of modern day prophets to read the Book of Mormon each day, there have been times when I have felt like I was hitting a spiritual plateau and not really gaining much spiritual nourishment from my reading. However, as I have watched

myself and others around me exert spiritual effort to break through these plateaus, I have observed much spiritual growth. Some methods that have proven useful include:

1. READING AT A DIFFERENT TIME OF THE DAY
2. READING BY TOPIC INSTEAD OF FROM FRONT TO BACK
3. BUYING A CHEAP COPY OF THE BOOK OF MORMON AND TEARING OUT ONE PAGE A DAY, STUFFING IT IN MY POCKET, AND READING IT AT SOME POINT DURING THE DAY
4. SPEED READING FROM START TO FINISH IN JUST A COUPLE OF DAYS
5. SLOWLY READING THE BOOK BY CONCENTRATING ON ONE OR JUST A FEW VERSES AT A TIME
6. FOCUSING ON THE WRITING STYLES AND TOPICS OF THE AUTHORS OF THE VARIOUS BOOKS

Even though for years, I have tried to follow the counsel of modern day prophets to read the Book of Mormon each day, there have been times when I have felt like I was hitting a spiritual plateau and not really gaining much spiritual nourishment from my reading.



The key to breaking through the spiritual plateaus of our life can be found in Alma 32:41-43 where Alma explains that we must nourish . . . the sprouting word until it becomes a tree and bears fruit.

President Nelson shared some of his Book of Mormon reading “exercises” when he said: “Since President Monson’s challenge six months ago, I have tried to follow his counsel. Among other things, I’ve made lists of what the Book of Mormon is, what it affirms, what it refutes, what it fulfills, what it clarifies, and what it reveals. Looking at the Book of Mormon through these lenses has been an insightful and inspiring exercise! I recommend it to each of you.”³

As Alma explains, when we begin to make this spiritual effort and do these spiritual exercises, our faith grows quickly, the word and our minds expand, and the word begins to sprout (see Alma 32: 28 & 34). While this spiritual growth is exciting (like the physical growth I felt in the first months of my pull-

up training), we can easily hit other spiritual plateaus as diminishing returns set in.

The key to breaking through the spiritual plateaus of our life can be found in Alma 32: 41–43 where Alma explains that we must nourish (to provide with food or other substances necessary for growth, health, and good condition) the sprouting word until it becomes a tree and bears fruit. This is done as Alma says “because of your diligence and your faith and your patience with the word in nourishing it.”

I have found as I have tried to “nourish the word” by changing my scripture study routine, being more actively engaged in missionary work, or finding creative ways to serve people around me, I am able to break through spiritual

plateaus in my life. God also gives me unexpected challenges, which I might not have chosen myself, to help me grow spiritually and break through plateaus. I know that as we do our best to continue our spiritual growth that the gospel seed planted deep inside each one of us will “spring up unto everlasting life” (Alma 32:41).

¹<http://sportsmedicine.about.com/cs/conditioning/a/aa020102a.htm>

²Thomas S. Monson, “The Power of the Book of Mormon” Ensign or Liahona, May 2017. <https://www.lds.org/general-conference/2017/04/the-power-of-the-book-of-mormon?lang=eng>

³Russell M. Nelson, “The Book of Mormon: What Would Your Life Be Like without It?” Ensign or Liahona, November 2017. <https://www.lds.org/general-conference/2017/10/the-book-of-mormon-what-would-your-life-be-like-without-it?lang=eng&country=ca>.



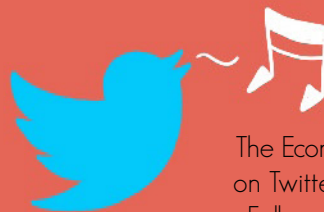
Y

PARTICIPATE IN ON-CAMPUS INTERNSHIPS & SOCIAL INNOVATION

On-campus internships are held every fall and winter semesters through the Marriott School of Business. You can take a three-credit class and work nine hours a week for a real company all while staying on campus. Apply at oci.byu.edu. Similar to on-campus internships, the Ballard Center offers social innovation internships. You can apply at power.byu.edu.

BE A TEACHING ASSISTANT

There's no better way to learn the material than to teach it. All TAs need to have taken Econ 110, 380, and the class they wish to TA for before the semester/term that they apply. TA applications for spring, summer, and fall are due in March, and winter applications are due in November. Applications are at <https://bit.ly/2pn5ZSJ>.



FOLLOW US ON TWITTER

The Econ Department is on Twitter as @BYUecon. Follow us for updates, announcements, and interesting economics news.



MAXIMIZE YOUR SUCCESS: HOW TO GET THE MOST OUT OF YOUR ECONOMICS STUDENT EXPERIENCE

If you're considering a PhD in economics, interested in a research field, or looking to gain valuable research and programming skills, working as a research assistant might be for you. Most professors need students with Stata skills, so take Econ 388 as early as possible to be eligible. There is no formal application process, so go and talk to your professors. Dr. Price also hires students who have not yet completed 388 to work in the Record Linking Lab (rll.byu.edu).



BE A RESEARCH ASSISTANT



Do you need an internship for the summer? Are you looking for a post-graduation job?

Then, you need to attend recruiter info sessions. Most recruiting is done during fall semester and the beginning of winter semester. All of the info sessions related to economics are sent out in the department's weekly email blasts and posted on the economics.byu.edu calendar. RSVP for info sessions at handshake.byu.edu.

ATTEND INFO SESSIONS





CONNECT WITH US ON LINKEDIN

Join, "BYU Economics—Alumni and Student Network." With over 1,400 members, this is the perfect way to connect and network with our amazing alumni. You can find the group at <https://www.linkedin.com/groups/5014521>.



The Career Prep Seminar class (Econ 213R) is held every fall and winter semester and is one credit hour. Learn how to prepare your résumé, act professionally in the workplace, and plan out the rest of your academic career. You will also get the chance to hear from eight alumni guests who have pursued a variety of careers. If you're not sure what to do with your economics degree, this is the class for you.



TAKE THE CAREER PREP SEMINAR COURSE



PARTICIPATE IN THE ALUMNI MENTORING PROGRAM

The Alumni Mentoring program allows you to connect one-to-one with an alumnus in a field that interests you. This is an extracurricular program that lasts one semester. Orientation is usually held the end of January for winter semester and the beginning of May for spring/summer. Visit <https://bit.ly/2OBKHvB> for details.



ATTEND VISITING SCHOLAR LECTURES



Every fall and winter semester, renowned economists from all over the world visit the department and speak on their research. Take advantage of the opportunity to learn from and connect with these researchers. The lectures are usually held on Thursdays at 11:00 AM. Watch the email blasts and flyers for updates. Information can also be found at <https://bit.ly/2MKIURK>.



JOIN ESA



Joining the Economics Student Association (ESA) is a great way to get to know fellow econ majors, participate in fun economics activities, and be a leader. Membership fees are \$20 each academic year and include a t-shirt. If you're a woman in the major, you're also invited to participate in the Women in Econ sub-group of ESA. <https://bit.ly/2pqy2a>.



BYU ECONOMICS
ALUM 2013AARTI
REDDY

Aarti Reddy was sure of her major before starting college, and it wasn't economics. "I originally came to BYU from my home in Nairobi, Kenya for the accounting program. My Dad is an accountant, and accounting was something I was very passionate about in high school. At the time, the BYU accounting program was ranked third in the United States, so it was a very good option. My parents are also very religious and wanted me to go to a conservative school."

After taking all the pre-accounting courses and doing an accounting internship, she realized that accounting wasn't what she had expected. Luckily, taking Econ 110 had piqued her interest in economics, so she wasn't without a major for long. "I was very interested in price theory, so I decided to take Dr. Price's spring section of the class, and I loved everything I was learning. I owe it all to him that I changed my major."

Aarti's internship experience also played a big role in shaping her undergraduate experience and career goals. Besides her accounting internship, Aarti participated in four other internships in human resources, management consulting, economic consulting, and finance. Her final internship with Goldman Sachs in Salt Lake City led to a full-time position after graduation in Private Wealth Management.

After three years at Goldman Sachs, Aarti took a position with EY in Charlotte, North Carolina where she works in the Financial Risk Management sector. As a Senior Associate, she does the risk management analysis for companies EY consults.

She enjoys getting to use the modeling skills she learned in her economics classes while also working with clients and building relationships. She explains, "I love helping clients and then seeing the results of the changes they've made based on my recommendations."

For Aarti, open communication is the most important part of her job, whether it's with a client or with her co-workers and managers. "There's a misconception that you can't go to your partner or managing director and ask them questions, but you actually can do that." She makes it a priority to be available to the people who work under her as well.

Aarti is also passionate about the importance of networking and maintaining friendships. "I got my job at EY, because I knew someone from Goldman Sachs who had left and gone to EY, and then she added me to her project. Because I maintained that relationship, I was able to move to a new company and move up. The tenure of the project was also a lot longer than most of the engagements Senior Associates work on, so that made me a subject matter expert."

In fact, she found every job and internship through someone in her network. She advises economics students to take advantage of all of the networking opportunities available at BYU and to reach out to alumni. "Go to career fairs and attend all of the info sessions. Network at those events, and then continue building those networks. You never know how those relationships might help you in your career." **JM**



BYU ECONOMICS ALUM 1987

CLINT HANNI

Clint Hanni thinks like an economist. It started when he read Milton Friedman's *Free to Choose* in high school and was reinforced after taking Econ 110 his freshman year, which is when he decided to major in economics. "Thinking like an economist" helped him as an econ major at BYU, a law student, and a practicing attorney for the last twenty-seven years. "When I got to law school, I felt like I already had practice thinking critically. Through the study of economics, I learned rigorous thinking, reading, and problem solving, which is basically what I do every day in my job."

Clint's career began at O'Melveny & Myers, a Los Angeles firm. He was interested in corporate law, but because of a recession, they asked him to work in the bankruptcy department for his first six months. Though he worked on interesting high profile bankruptcy cases, he soon transitioned to the corporate department, and he's enjoyed working on M&A and credit finance transactions ever since. As he explains it, corporate law has been a good intersection of his interests. "You could say that I studied the system of capitalism in my economics courses, and then I actually got to go out and experience it firsthand."

After leaving L.A., Clint spent one year as an associate at VanCott Bagley in Salt Lake City and nearly twenty years as an attorney at Stoel Rives. He now works as an attorney at Richards Brandt Miller Nelson and specializes in corporate law, finance, mergers and acquisitions, and charitable work.

Clint loves working with clients and businesses and figuring out how to help them carry out their goals. He explains, "Sometimes clients don't know exactly what they need, and you have to help them to understand where they need to go and how to get there." In fact, his primary focus is always on serving his client better. "It may sound trite, but I think lawyers are too expensive and need to be more efficient in providing their services. It's important to give clients what they need but not to go overboard."

Good communication with his clients has allowed him to serve them to the best of his ability. He also tries to avoid the pitfall of fighting over everything to get his client the best deal. "It's OK to let the other side win a few points. It doesn't always have to be a zero sum game. I've tried to practice law with this in mind, and it's made my practice much more enjoyable."

Though Clint has had a very productive career, working on everything from billion dollar deals to small transactions, his advice to economics students is simple: "Get to know your professors. They are incredible people and can be great examples of how to live your life." To alumni, he recommends, "Take time to think about what really matters to you, and don't spend a lot of time chasing after things that don't matter much in the long run." **JM**

BYU ECONOMICS ALUM 1992

MINDY BROWN



Like many students who start a family while in school, Mindy Wheelwright Brown's priority was graduating as quickly as possible. After switching between a few different majors and minoring in economics, she realized that her econ classes had consistently been her favorites. She says, "I thought an econ major would give me the surest route to leaving with a degree in hand, and it did!"

Though she chose not to enter the workforce after graduating, Mindy has used her economics skills regularly in teaching her children, handling finances and investments, and even starting a non-profit foundation. She describes, "I see life through a pair of economics-lensed glasses—to me, economic principles can explain practically everything, including how to make the most of life and its varied experiences, and those are the things I've tried to teach my four children."

She has even woven the basics of economics into her parenting lessons. "My four kids have been doing cost-benefit analyses since they were toddlers, whether they called them that or not. When we've set out responsibilities or assigned chores, we've often discussed the reality of self-interested behavior and the benefits of creating systems that naturally incentivize people."

Mindy has also used economics in handling her family's and her parents' finances. When her father was called as a mission president, Mindy's parents asked her to manage all of their finances—a daunting task, since her father was a professor of business, administrator, consultant, investor, and board member at the time. "Partly because of my full-time mothering lifestyle and partly because of my economics

degree, they determined I was the best suited to take care of their business dealings while they were away. Before leaving, they helped me set up a home office, introduced me to countless business contacts, and set up a power of attorney, as well as a few other legal documents we needed, and I learned as I went!" Since their return, Mindy has stayed involved with her parents' investments and estate planning, even offering them advice on occasion.

Her involvement has also included launching a family foundation with her parents. She educated herself on how to run a non-profit and then, along with her daughter-in-law, took an intensive non-profit management course at Duke University. For the next year, they created processes and procedures for grant making and worked with a designer on their website. "We're finally up and running and seeing great benefits to those we are helping as well as to our family members who are getting more involved in humanitarian endeavors."

Mindy's path may not look the same as most BYU Economics alumni's, but it affirms that applying economics principles "can help in every part of your life." Her advice mirrors her varied experiences: "I'd advise any student of economics to look at the discipline more as a way of thinking than as a set of formulas or theories. . . . And for any women who think they may not be entering the workforce right away, a strong foundation in economics will help you in every endeavor you undertake in the meantime. It's a successful way of living that allows for plenty of great opportunities for doing good." **JM**

BYU ECONOMICS ALUM 2008



MATT GIBB

Graduating during the height of the Great Recession meant that finding a job was a challenge for Matt Gibb. One hundred and one job applications, twenty first-round interviews, and several more interviews later, he finally landed a job at Compass Lexecon, an economic consulting firm in Washington D.C.

What eventually set him apart from the other candidates was his undergraduate research experience from BYU. "During my final year at BYU I got a chance to work for Dr. Joe Price as a research assistant, and through that I learned about data management and basic Stata through trial and error. When I started work at an economic consulting firm in D.C., I found I was much more prepared to contribute than other new hires from more well-known schools."

After three years in economic consulting, Matt switched coasts to earn an MBA at UCLA. He interned at Mattel in Los Angeles and then took a position as a Senior Supply Chain Analyst there following graduation. What initially attracted him to economics was the use of equations to describe decisions and the application of statistics, and his work in supply chain uses those concepts. "I think quite often about utility maximization in the presence of scarcity and constraints, which is related to the optimization we try to do in supply chain. I also apply ideas related to statistical distributions. Often when we work on target metrics, I push my team to think beyond the percentage score to the distribution of the failures. We work on narrowing that distribution so that when we miss, it will be by a smaller margin."

Matt spent five years in three positions with Mattel and now works as Supply Planning Manager at Reef, a popular sandal and beach clothing company (and a company that especially excites him because of his love of the ocean and surfing). He currently leads a planning team for the Americas and Asia Pacific supply.

Working in supply chain allows Matt to combine his skills and his passion for helping disadvantaged communities. He explains, "After a very impactful mission experience in Madagascar, I had a strong desire to be a part of something that provides opportunities in areas where people struggle to reliably provide food, shelter, and clothing for their families. I'm proud to work with companies that employ people safely and responsibly in some of those places. In addition to meeting basic needs, I have seen how those opportunities for parents allow children to go to school instead of having to contribute income."

Though Matt's career has changed courses over time, his goals have not. Drawing on inspiration from a meeting with his mission president, Matt strives to use the educational opportunities the Lord has given him to provide for his family "while preserving time to serve in the Church and be present in [his] home." He says, "My biggest career goal is to be able to see my kids every day (either morning or night) unless I'm traveling."

His advice to students and alumni mirrors his goals, "In short, don't measure yourself only by your career, and don't let it be too dominant in your major life decisions." **JM**

STUDENT HIGHLIGHTS

Versatility and flexibility helped Alex Vorster decide to major in economics. He explains, "I found Econ 110 very interesting as well as continually challenging. I wanted to study something in business, but I was not sure what exactly I wanted to do after graduation. Econ offered a versatile, yet respectable option."

In addition to his academic career, Alex had an impressive athletic career on the BYU Men's Rugby Team. He started with the team in fall 2014 and was the only starting freshman on the National Championship team. In 2016, he was selected for the Men's Collegiate All-American team and was able to compete with them in Queensland, Australia. He also played for the USA Men's

National Select Rugby team last fall in Montevideo, Uruguay.

On top of schoolwork and rugby, Alex worked for two years as a research assistant with AidData, a research lab focusing on helping policymakers make informed decisions on development investments. He also worked for BYU Moving for four years, and last summer, he participated in an internship with JLL, a commercial real estate brokerage company in Salt Lake City, where he worked for the vice president.

Alex's favorite thing about graduating from BYU Economics is the variety of career options his degree affords. In May, he started his new job as an Actuarial Analyst at Sentinel Security Life Insurance Company in Salt Lake City. **JM**



Alex Vorster

Brittany Farnsworth Russell knew Economics was the right major for her from day one. Because her father and several other family members majored in economics at BYU, she chose it as her major on her college applications. "While taking Econ 110 from Dr. Kearl in my first semester, I knew I had made the right choice, and I never looked back."

She loved Dr. Kearl's class so much that she ended up working as a teaching assistant and was the Head Econ 110 TA for five semesters. Though the position was a little intimidating for her at first, the experience helped her become more confident in her teaching and organization skills. Beyond the expertise she gained, she says, "The best part of the job has to be watching a student who

is struggling with a concept have that 'Aha' moment where things finally click."

Brittany also participated in an ORCA research project under the mentorship of Professor Eide examining "gender differences in the relationship between grade in Econ 110 and choosing to major in Economics." Beyond economics, she sang in BYU's Concert Choir and a BYU a cappella group called 1AChord.

Of her time in the major, Brittany says, "I loved taking classes that challenged me to think critically and gave me tools to better understand the world around me." She is now a student in the MS of Statistics program at BYU. After graduating, she plans to either pursue a PhD in economics or work in data analytics. **JM**



Brittany Farnsworth Russell



Tanner Eastmond

A big congratulations to Tanner Eastmond who was awarded the National Science Foundation (NSF) Graduate Research Fellowship. This prestigious fellowship is given to promising students who are currently or will be pursuing graduate degrees in STEM fields.

Tanner was one of just thirty-six economics students in the entire country to receive the award, which includes full graduate school tuition and a three-year stipend amounting to over \$100,000. His NSF project is investigating "a principal-agent problem where a doctor and patient choose a more expensive procedure when a cheaper, equally viable option is available, just because the insurance pays for it." He explains, "One example is with brand-name drugs when generics are available. I plan to

investigate (1) what the magnitude of this loss is to society, and (2) if there are conditions under which the insurance company can induce the doctor and patient to choose the less expensive procedure."

Tanner graduated in April with a double major in Economics and Mathematics and a minor in Management. During his time in the Economics program, he worked as a research assistant for Professor Price and as the head research assistant for the Record Linking Lab.

Tanner began his PhD in economics at University of California San Diego this fall. He is interested in studying behavioral economics, particularly procrastination and self-control problems, and hopes to work in academia after completing his doctorate. **JM**



John Bonney

Though he originally pursued economics because of his interest in international development, having the opportunity to work on a variety of research projects is what really shaped John Bonney's undergrad experience and his future career goals. "My experiences as a research assistant and a teaching assistant helped me realize the strong interest I have in economic research, and the mentorship of faculty has been pivotal in my class choices and future plans." As a research assistant for professor Price, John designed models and helped with papers involving behavioral, family, and development economics.

In addition to working as a research assistant, John participated in two on-campus internships with Hyundai and Union Pacific and two other internships with SurgeFront, a

small consulting firm in Orem, Utah, and True Partners Consulting in San Jose, California. He also explored his interests in education research volunteering for two educational nonprofits, Project Read Utah and Alpha.

John represented the Economics Department as valedictorian during the April convocation and expressed his gratitude for his family's support, for the economics faculty, and for his peers. He explains, "All of these individuals have made my experience at BYU a thoroughly enjoyable and successful one that I will always cherish." John is now working as a pre-doctoral fellow under Dr. Magne Mogstad at the University of Chicago's Initiative for the Study of Labor Markets. He plans to pursue a PhD in either economics or policy after his two-year position. **JM**

CLASS STATS 20



GRAD SCHOOL



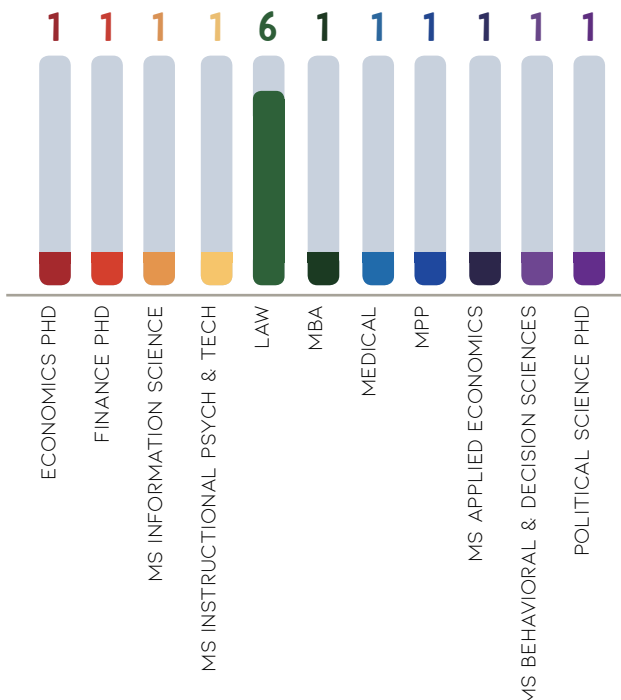
78% PLAN TO ATTEND
GRADUATE SCHOOL



17% HAVE BEEN ACCEPTED
TO GRADUATE SCHOOL

- Arizona State University
- Brigham Young University
- Johns Hopkins University
- Massachusetts Institute of Technology
- University of California-Los Angeles
- University of California-San Diego
- University of Houston
- University of Kentucky
- University of Pennsylvania
- University of Tennessee
- University of Wisconsin-Madison
- Utah Valley University
- Willamette University

GRADUATE PROGRAMS



FAVORITE ECON CLASSES

- 1 BEHAVIORAL ECONOMICS
- 2 APPLIED ECONOMETRICS
- 3 NATURAL RESOURCES
AND ENVIRONMENTAL ECONOMICS
- 4 INDUSTRIAL ORGANIZATION
- 5 GAME THEORY AND ECONOMICS

*ALL RESULTS BASED ON THE SURVEY RESPONSES
OF 120/223 GRADUATING STUDENTS OF THE 2017-
2018 ECONOMICS CLASS.



JOBS



76%

PLAN TO WORK
AFTER GRADUATION



69%

HAVE A FULL-TIME
JOB OFFER



95%

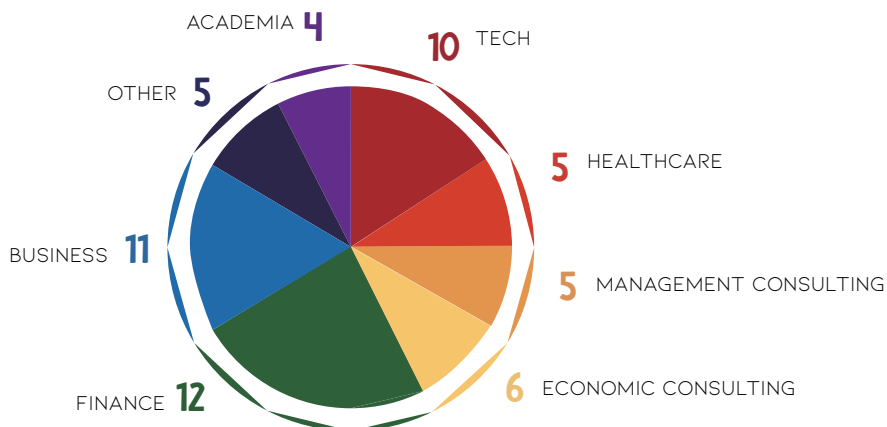
ACCEPTED
A JOB OFFER

- ActiveCare
- Amazon Japan
- American Family Insurance
- Aptive Environmental
- Bain & Company
- Becker Friedman Institute for Research in Economics
- BYU Office of Information Technology
- Charles River Associates
- Cornerstone Research
- E*Trade
- EY-Parthenon
- FireAvert
- Gartner
- Goldman Sachs
- Gray Matter Elite
- Grow.com
- Huron Consulting Group
- IBM
- InsideSales.com
- J.P. Morgan
- JTV
- Kalesta Health Care Group
- LeaderFactor
- Leavitt Partners
- McKinsey & Co.
- Neustar
- Prestige Financial Services
- Qualtrics
- Recursion Pharmaceuticals
- Salesforce.com
- SimpleNexus
- Stanford Institute for Economic Policy Research
- Union Square Advisors
- UnitedHealth Group
- University of Chicago
- Vanguard
- Visa
- Vivint Smart Home
- Vivint Solar
- Walmart
- Westland Construction
- Wharton Real Estate Department

MOST CHALLENGING ECON CLASSES

- 1 INTRODUCTION TO ECONOMETRICS
- 2 INTERMEDIATE PRICE THEORY II (MICRO)
- 3 STATISTICS FOR ECONOMISTS
- 4 APPLIED ECONOMETRICS
- 5 ADVANCED PRICE THEORY (MICRO)

JOB INDUSTRIES



EVERY

BYU ECONOMICS ALUMNI MENTORING PROGRAM

“YOU CAN DO ANYTHING WITH ECONOMICS,” IS A COMMON EXPRESSION AMONG ECON GRADS. WHILE THIS MAKES A DEGREE IN ECONOMICS ATTRACTIVE TO MANY STUDENTS, FOR SOME, IT MAKES CHOOSING A CAREER PATH EVEN MORE DIFFICULT.

Choosing a Career Path

Jonathan Bennett (2017) felt the pressure of deciding on a career when he enrolled in the Economics Department's Alumni Mentoring Program winter semester of his junior year. Though he had considered a career in management consulting, after being matched with a mentor who had consulting experience, he realized it wasn't for him.

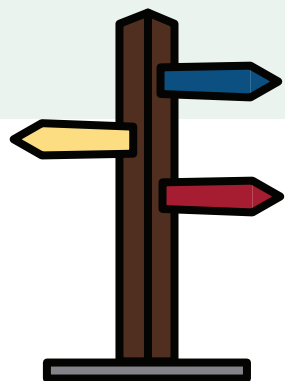
“I had a mentor who started out in management consulting right after he graduated from BYU. As I asked him questions about his experience, it got me thinking about whether or not that is what I really wanted to do. This took me back to the drawing board on my future career plans, which was really stressful, but it caused me to make some really important decisions that led to me finding the job that I did.”

As part of a department-wide effort to assist students in learning about the many options for economics majors (which includes the creation of the Career Prep Seminar lecture course and more involvement with company recruiters), one of the goals of the Alumni Mentoring Program is to help students explore potential careers available to economics majors.

During Jonathan's last year and a half of school, he participated in the Mentoring Program three separate times. Each mentoring session pushed him closer to knowing what to do after graduation, from consulting to data science and technology. “I wanted to get a wide variety of experiences from multiple people. I felt like the more people I could talk to about what they did, the more knowledge I would have to make my own career decisions. It was also fun. I had a good time meeting with extremely successful people and asking them questions about how they got to where they were at.”

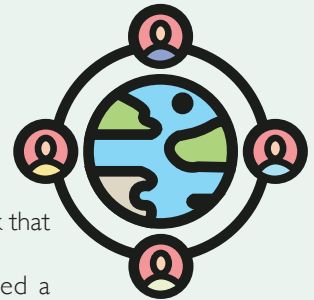
Now, Jonathan works at Workfront, a project management software company based in Lehi, Utah. “I had no clue when I signed up to be an econ major that I would end up becoming a Business Intelligence Engineer. I didn't even know that the Business Intelligence field existed. But my mentors helped me see

NEE



A ME

ONE



that there were more opportunities than I had previously thought."

Networking

Beyond deciding on a career path, many economics students struggle with knowing how to reach their career goals. The Alumni Mentoring Program allows students to hear practical advice from someone who was once in their same position. Mentors advise students on what classes they should take, how to refine their résumés, and how to prepare for interviews in their chosen fields. They also share their networks with the students they mentor, when appropriate.

For Nathan Giullian (2017), the mentoring experience taught him the importance of connections. Through his first mentor, Nathan was able to land an internship with Centura Health, a non-profit healthcare system in Colorado. While interning over his junior year summer, he participated remotely in the Mentoring Program a second time with a mentor who had consulting experience. This experience led him into his current career as a consultant at Cicero Group in Salt Lake City. "[My mentor] knew a lot of people at Cicero and took the time to introduce me on LinkedIn and through email to set up case practice calls.

Those calls gave me the skills and network that got me a job at Cicero."

The Mentoring Program also played a vital role in helping him start his consulting career. He explains, "Without the Mentoring Program, I would not have had the network I needed or a great internship to get a great job right out of college. The Econ program at BYU prepares you to excel in the private sector by giving you critical thinking, data analysis, and writing skills . . . the Mentoring Program also gives you a network to get a great private sector job." As students participate in the Alumni Mentoring Program, they get the chance to see what the "real" post-graduate world looks like and connect with professionals who can help them reach their goals.

Beyond the classroom

Over the last four years, more than 150 students and 100 mentors have participated in the Alumni Mentoring Program. The alumni who choose to participate give back to BYU Economics in a meaningful way, and the students who take part gain an invaluable one-on-one experience with a helpful and understanding advocate. As Nathan Giullian remarks, "Every Econ student should participate in the Mentoring Program."

By Jessica McDowell

MENTOR

FAQS

Who can participate in the Alumni Mentoring Program?

All current econ majors and minors are invited to participate regardless of class standing. All BYU Economics alumni are invited to join our pool of mentors. Email alumni-economics@byu.edu to participate.

How long does the program last?

Unlike other mentoring opportunities available on campus that match students and alumni for a single lunch or conversation, this program formally lasts for three months.

When is the Alumni Mentoring Program held?

The program is held twice a year, during winter semester and during spring/summer semester.

How are students and mentors matched?

Interested students fill out a survey that asks specific questions about their interests, career goals, and concerns. They are then matched to a mentor from the prospective mentors list by the Alumni and Internship Coordinator.

Is the Alumni Mentoring Program a class?

The program is an extracurricular activity, so students do not receive credit for participation.

What is required of me?

Students: You must attend the orientation meeting at the beginning of the semester; initiate three conversations with your mentor over the course of the semester; report those conversations to the Alumni and Internship Coordinator; and attend the closing social (or write a one-page essay if you are unable to attend the social).

Mentors: Be responsive and available for three conversations during the course of the semester. These conversations can be in person, over the phone, or via web chat.

What do students and mentors talk about?

Over the course of the semester, students lead three discussions with their mentors on topics like exploring employment options, beginning a career, work-life balance, and using economics in the workplace. Students are given sample questions that they can ask, or they can come up with their own questions.

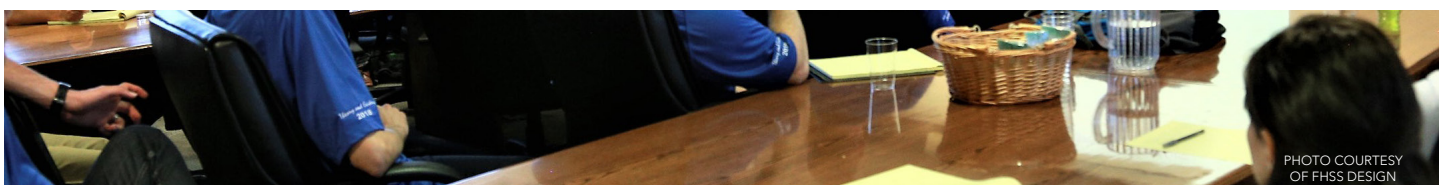
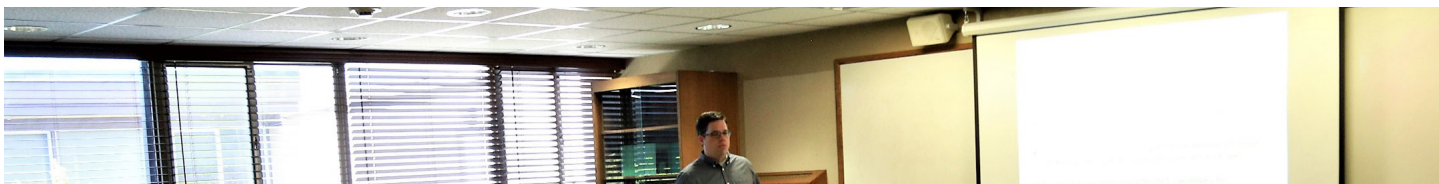
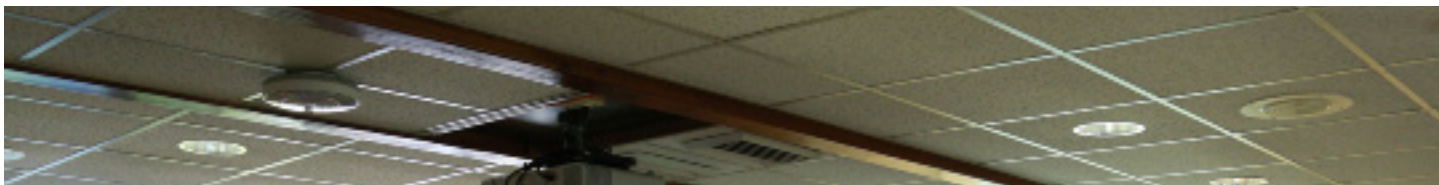


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OF FHSS DESIGN

IN THE NEWS

GRADUATE STUDENT CONFERENCE

The Economics Department hosted its biannual Graduate Student Conference over June 7–8, 2018. Twenty economics graduate students from universities across the country came to share their research and receive feedback from the BYU Econ faculty. Over the two days, the graduate students gave presentations, shared meals with the faculty, and answered questions for undergraduate students at a special breakfast.

STUDENTS PUBLISH SAFETY INSPECTIONS PAPER

The research of two BYU Economics students was recently published in *Contemporary Economic Policy*. Alex Hoagland and Trevor Woolley studied the effects of vehicle safety inspections in New Jersey. You can read their paper, "It's No Accident: Evaluating the Effectiveness of Vehicle Safety Inspections" at this link: <https://onlinelibrary.wiley.com/doi/full/10.1111/coep.12284>.

MARY LOU FULTON CONFERENCE WINNERS

Congratulations to students Mitch Anderson and Josh Kunzler who won first place among the seventeen entries from the Economics Department at the Mary Lou Fulton Conference on April 12th. This is a research conference hosted by the college each winter semester where students create a poster presentation on their research project. They were mentored by professors Michael Ransom and Lars Lefgren, and their research project is entitled, "Trains and Traffic."

JAREN POPE ON UTAH'S HOUSING SHORTAGE

Professor Jaren Pope was interviewed by *The Daily Universe* on Utah's housing shortage. In the article, he explains how the issue is fundamentally about supply and demand and discusses how the Great Recession impacted the housing market. Read the full article here: <http://universe.byu.edu/2018/01/23/first-housing-shortage-in-decades-taking-a-toll-on-utah-buyers-renters1/>

JOCELYN WIKLE ON UTAH'S GENDER PAY GAP

Professor Jocelyn Wikle was one of several women who were interviewed for an article on the gender pay gap in Utah. She shares her thoughts on the connections between education, motherhood, and employment for women. Read her thoughts and others' at <http://universe.byu.edu/2018/01/23/bridging-the-gap-how-utahs-gender-wage-gap-affects-women-and-girls/>

FUTURE OF THE FOB

Starting in winter 2019, the Economics Department will be temporarily housed in the Crabtree Building and the Clyde Building, while the FOB is torn down and rebuilt. The temporary address of the main office will be 435 Crabtree Building, Provo, UT 84602.

BYU ECONOMICS ON TWITTER

Come follow @BYUECON on Twitter for the most up-to-date news on what our students, faculty, and alumni are doing! **JM**

MATT BUTLER



CAN YOU TELL ME A LITTLE ABOUT YOUR CAREER/EDUCATION?

I graduated from the University of California, Berkeley in 2011. After graduation, I started working for the Church doing an evaluation of the impact of the Perpetual Education Fund on the secular and religious outcomes for program participants. Today, I work in the Risk Management Division for the Church.

WHAT ARE SOME OF YOUR HOBBIES OR THINGS YOU ENJOY DOING IN YOUR FREE TIME?

My primary hobby is reading. I enjoy reading history books. The book I read most recently was *The Plantagenets: The Warrior Kings and Queens Who Made England* by Dan Jones.

WHERE ARE YOU FROM/WHERE DID YOU GROW UP?

I grew up two blocks south of BYU campus just across from Liberty Square and the recently shuttered Wash Hut.

WHAT IS YOUR RESEARCH SPECIALTY?

Labor Economics.

WHAT EXCITES YOU MOST ABOUT COMING TO TEACH AT BYU AGAIN?

The ability to incorporate practical professional experiences into the classroom. The first time I taught at BYU, I was still in graduate school and wasn't able to provide personal, non-academic professional examples of how important and useful economics had been in my career. JM



PAUL ELIASON

CAN YOU TELL ME A LITTLE ABOUT YOUR CAREER/EDUCATION?

I graduated from BYU in 2010 with a BA in Economics and Mathematics and then worked as a research assistant at the Board of Governors of the Federal Reserve system for two years. I finished a PhD program in Economics at Duke University in 2018.

WHAT IS YOUR RESEARCH SPECIALTY?

Empirical industrial organization and health care.

WHAT ARE SOME OF YOUR HOBBIES OR THINGS YOU ENJOY DOING IN YOUR FREE TIME?

I love spending time in the mountains, especially rock climbing, hiking, and backpacking. I run a fair bit. I also enjoy cooking, especially with squash.

WHERE ARE YOU FROM/WHERE DID YOU GROW UP?

I was born in Monterey, California. When I was six, we moved to Oconomowoc, Wisconsin, where we lived until I was fifteen. Then, we moved to Rockford, Illinois. Today, I definitely identify as a Wisconsinite.

WHAT EXCITES YOU MOST ABOUT COMING BACK TO TEACH AT BYU?

I am very excited to work and interact with great students that BYU gets—students who are interested, hard-working, and engaged in economics. My own experience studying economics has really changed the way I think about the world and seek truth. I am looking forward to continuing to share that with others. JM

RILEY WILSON



CAN YOU TELL ME A LITTLE ABOUT YOUR CAREER/EDUCATION?

I graduated from BYU in 2013 with a BA in Economics and Russian and a math minor. I then went to the University of Maryland, where I just completed my PhD in economics, with a focus in public economics, labor economics, and applied micro more generally. While at Maryland, I worked closely with Melissa Kearney exploring topics in household formation, and towards the end of my time there with Nolan Pope—another BYU Econ alum!

WHERE ARE YOU FROM/WHERE DID YOU GROW UP?

I was born and raised in West Jordan, Utah.

WHAT ARE SOME OF YOUR HOBBIES OR THINGS YOU ENJOY DOING IN YOUR FREE TIME?

I love spending time outside with my family, whether it is hiking, running, or at the beach. I am also proud to say I am the reigning champion of the College

Park, Maryland 5K Stroller Division. (I won't tell you how many strollers there were).

WHAT IS YOUR RESEARCH SPECIALTY?

My research is at the intersection of public and labor economics, and I explore topics like households' decisions to move to labor market opportunities, marriage and fertility decisions among disadvantaged households, and how information affects households' decisions.

WHAT EXCITES YOU MOST ABOUT COMING BACK TO TEACH AT BYU?

I think there are two things. First, when I came out for the interview, I was impressed once again by the quality of the students. They were so sharp and eager to learn, and it made me excited to be able to share something that I am so interested in. Second, I don't think I could ask for a better group of colleagues who are interested in economic questions similar to the ones I research. I think I will be learning a lot from them as my research progresses. **JM**



CAN YOU TELL ME A LITTLE ABOUT YOUR EDUCATION AND CAREER?

I came to BYU to study business and after taking Dr. Kearl's class was convinced that economics was a much better option. I then went to work at Charles River Associates in L.A. under Dr. Brian Palmer, who is also a BYU Econ graduate. After that, I pursued a Masters in Computer Science at UT Austin with a focus on machine learning. Now, I work as a data scientist at Ancestry.

WHERE ARE YOU FROM/WHERE DID YOU GROW UP?

It depends how you define "from." Since undergrad, I have lived in L.A., Austin, Seattle, and now Utah. Growing up, I lived in Utah, California, Oklahoma, Arizona, Tennessee, and lastly Maryland.

WHAT ARE SOME OF YOUR HOBBIES OR THINGS YOU ENJOY DOING IN YOUR FREE TIME?

I enjoy spending time with my wife and three kids as well as continuing to learn about machine learning

and playing some competitive video games. For a while, I was working on building my own self-driving remote control car and now am diving into deep learning for natural language processing. I probably shouldn't admit it, but I play League of Legends and Fortnite.

WHAT ARE SOME OF THE TOPICS YOU COVER IN THE MACHINE LEARNING CLASS?

We cover Git, Python, data cleaning and visualization, machine learning models, and some deep learning. The class is open source and can be found here: https://github.com/tfolkman/byu_econ_applied_machine_learning

WHAT HAS BEEN THE BEST PART OF COMING BACK TO TEACH AT BYU?

It has been really awesome to be able to take some of the things I have learned and found valuable in my career and teach them to BYU students. Also, it has been great to learn from students' perspectives and understand what concepts they most enjoy and find valuable. **JM**

TYLER FOLKMAN

Brigham Young University
Department of Economics
130 Faculty Office Building
Provo, UT 84602



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