

BRIGHAM YOUNG UNIVERSITY

# ECONOMICS

DEPARTMENT MAGAZINE



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WHY WE RUN

# CLASSIC QUOTES

from economists past and present



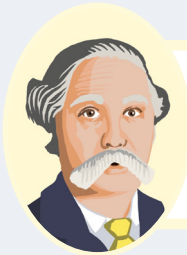
"People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices." —Adam Smith, pioneer of political economy

"I guess I should warn you, if I turn out to be particularly clear, you've probably misunderstood what I've said." —Alan Greenspan, 13th Chair of the Federal Reserve Board

"Listening to others, especially those with whom we disagree, tests our own ideas and beliefs. It forces us to recognize, with humility, that we don't have a monopoly on the truth." —Janet Yellen, 78th US Secretary of the Treasury



"In the long run we are all dead." —John Maynard Keynes, early macroeconomist



"The most valuable of all capital is that invested in human beings." —Alfred Marshall, English economist

"Economics is a very difficult subject. I've compared it to trying to learn how to repair a car when the engine is running." —Ben Bernanke, 14th Chair of the Federal Reserve and 2022 Nobel Prize recipient



"Everything is worth what its purchaser will pay for it." —Syrus, first century B.C.

"Awareness of our problems thus does not necessarily mean that they get solved. It may just mean that we are able to perfectly anticipate where we will fail." —Abhijit V. Banerjee, Professor of Economics at MIT and 2019 Nobel Prize recipient



"Profits are not made by differential cleverness, but by differential stupidity." —David Ricardo, British political economist

"The first lesson of economics is scarcity: there is never enough of anything to fully satisfy all those who want it. The first lesson of politics is to disregard the first lesson of economics." —Thomas Sowell, American economist



"Nothing is as permanent as a temporary government program." —Milton Friedman, American economist and 1976 Nobel Prize recipient

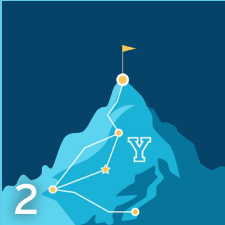


"The truth springs from arguments amongst friends." —David Hume, philosopher

# ECONOMICS

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ISSUE #11 2022

## FEATURES



### BYU Econ Roadmaps: A New Tool for Econ Majors

Learn about the BYU Econ Department's online system for helping students navigate the major while preparing for their careers.



### LDS Philanthropies: Your Donations Matter

Read the heartfelt expressions of gratitude from economics students who have benefited from your generous donations.



### Gallery in Print: The Creative Minds of the BYU Econ Department

Admire the art and poetry of our talented students, faculty, and alumni in this printed art gallery.



### Spiritual Insights: Why We Run

Dr. James Cardon shares his insights on the importance of working toward spiritual progress with urgency.

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**DEPARTMENT CHAIR:** Lars Lefgren **WRITERS:** Jessica McDowell, Jenna Palacios **FACULTY WRITERS:** James Cardon, Jeff Denning, Paul Eliason, Brigham Frandsen, Richard Patterson, Brennan Platt **EDITORS:** Josie Fillmore, Lars Lefgren, Jessica McDowell, Jenna Palacios **STUDENT EDITORS:** Kaedran Anderson, Anna Mudrow **DESIGN:** Jenna Palacios **ILLUSTRATION:** Naomi Bladh (front cover), Anna Mudrow (inside front cover; pp. 11–13; pp. 20–21) **ART:** Includes images and icons from Unsplash, Freepik, and Pixabay.



## LETTER FROM THE CHAIR

**OVER THE PAST** academic year, the department returned to exclusively in-person teaching. It has been wonderful to be able to engage more frequently and effectively with students, colleagues, and alumni. Amid the challenges of the past two years, the department has sought to update the curriculum, improve student advisement, and increase career opportunities for our students. We are happy to report on these efforts, which are coming to fruition.

In recent years, the department observed that an increasing fraction of our students were being hired into positions that required the ability to organize and evaluate data. For years, the econometrics sequence had seemed sufficient to generate the skills required for our students to succeed in these positions. The department believed, however, that updated and additional training in this domain would be helpful for our students. Consequently, the department began offering a class in machine learning. Just this year, we began requiring an additional econometrics course, focused on causal inference, for all students. We also restructured the curriculum of other courses to increase exposure to programming and data visualization. We are confident that these changes will allow department graduates to stay at the forefront of undergraduate economics education.

The department has also sought to improve efforts in student advisement and career placement. This has been done in partnership with the department's academic advisor, Lindsey Blau, and Career Director, Amanda Peterson. These individuals are now collocated with the department faculty in the West View Building. This has increased access to and visibility of these services to students. Early reports suggest that students meet earlier and more often with both of these specialists than before.

To complement these efforts, the department has created Roadmaps, which is a planning tool that helps students customize their schedules and prepare for careers based on their professional goals. The department has also applied to make the Career Preparation Seminar required for all students. We hope that these efforts will help students set goals earlier and take the required steps to achieve those goals.

We thank you, our generous alumni, for supporting this new generation of students through your willingness to mentor them and the financial support you provide to the department and university. You form an integral part of the BYU Economics community.

Sincerely,



Lars Lefgren

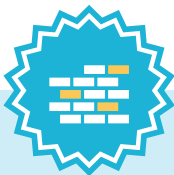
# BYU ECON ROADMAPS

**A tool designed to help econ students navigate the major while they prepare for their careers.**



Scan this QR Code to view the Roadmaps. You can also learn more at [economics.byu.edu/econ-roadmaps](https://economics.byu.edu/econ-roadmaps).

## ACADEMIC ROADMAPS



### ECON FOUNDATION

Declare your major, complete the prerequisites, and meet with an advisor.



### ECON CORE

Check off the 300-level classes in the major and map your electives.



### GRADUATION YEAR

Apply for graduation and learn about recruiting opportunities on campus.

## CAREER ROADMAPS



### CAREER PREP

Fine-tune your application materials and create a professional online presence.



### JOB SEARCH

Search for jobs and internships and learn how to land an offer.



### GRAD SCHOOL PREP

Explore graduate programs and prepare for the application process.



# ROADMAPS 101

Students at BYU may feel overwhelmed by the road ahead of them. There are challenging classes to pass and big life decisions to make, and on top of it all, they feel pressure to prepare for the career path they may or may not have already chosen. With this in mind, the BYU Econ Department designed a tool to help students succeed. This tool is called Econ Roadmaps, and it can help students manage the pressures of their undergrad while taking steps toward their future careers.


















There are six Roadmaps, all listed on the facing page. The first three Roadmaps cover the academic terrain of the economics program, from freshman year to final semester. The last three Roadmaps cover topics in career prep and grad school prep. Ideally, students will start with the first Roadmap and work their way through each one as they progress through the major. However, if they don't discover these Roadmaps until their sophomore, junior, or even

senior years, the Roadmaps can still be an asset to them. They can simply enroll in the Roadmaps that meet their current needs.

We recommend that students complete multiple Roadmaps concurrently, according to their needs and interests. For instance, if a student knows she is interested in attending graduate school, we encourage her to enroll in the Grad School Prep Roadmap as early as possible.

Roadmaps will help students plan their courses, explore their interests, and prioritize experiential learning opportunities. Roadmaps will also help the department track student progress and better meet their needs. If you're interested in learning more about this tool, you can view the Roadmaps by scanning the QR code on the opposite page or visiting [economics.byu.edu/econ-roadmaps](https://economics.byu.edu/econ-roadmaps) for more information.

Recommended timeline for Roadmap enrollment

	 ECON FOUNDATION	 ECON CORE	 GRADUATION YEAR	 CAREER PREP	 JOB SEARCH	 GRAD SCHOOL PREP (OPTIONAL)
FRESHMAN YEAR						
SOPHOMORE YEAR						
JUNIOR YEAR						
SENIOR YEAR						

## STUDENT FEEDBACK

"I love especially that you talk about meeting with a career director."

"Lots of practical info dispensed quickly with resources."

"It is helpful the way the courses are mapped out and sorted by topic."

"This was a great resource to know what I need to do before graduation."

"I think these resources are really helpful and will be instrumental in making students' experience in the econ program as smooth as possible."

"The Roadmaps experience was a very good experience and very informational. It helped me understand the material that I need and the areas I need to focus on for the career that I am interested in."

"I appreciated that exploring career paths and how to prepare for those by graduation appeared in the first module—that is something I wish I was aware of when I first started considering econ."

"The suggestions for classes to take for each career path was super helpful and I'll definitely be going back to that page as I get to that stage in the major."

"It was super easy, super helpful and something that I will use again! Thanks!"



# Y<sup>TM</sup> OUR DONATIONS *Matter*

by Jessica McDowell

*The following students received scholarships in 2022 from the BYU Economics Department funded by generous alumni donors like you. Read on to view their expressions of gratitude.*

**"I WANT TO EXTEND** my gratitude to you for your generous donation to my education and future. It has taken a long time for me to find the academic path that best fits my strengths and interests, which has been a source of great frustration for me until this past year. It has been difficult financially to fund my journey alongside that of my wife's, but with your help, we were able to make it to the finish line. I hope you know that your help is going towards a worthwhile cause! Thank you so much for your generosity and thoughtfulness." —Joseph Connor

**"I WANT TO THANK** you for your generous donation. As I received the notification of the scholarship award, my jaw dropped, and my heart soared. I don't know how I would be able to make ends meet and be able to continue school without your assistance. You truly are giving me the opportunity to further my education so that I can learn how to become a greater tool for good. Thank you for this opportunity, I promise you that I will never forget your generosity." —Corey Crockett

**"I'D LIKE TO EXPRESS** my appreciation for your donations to my educational career through this scholarship. With my wife and I both going to school full time, it's hard to find time to both excel at academics and work enough to pay the bills. Not only am I indebted for your financial assistance, but I'm also grateful for the recognition of my academic achievement. I've worked harder to do well in my classes over the last year and a half than almost anything else in my life. Thank you so much for your generosity! It means the world to me." —Jacob Hansen

**"THANK YOU FOR YOUR** generous donation and investment in my education. I feel so privileged to be able to attend BYU, and humbly grateful for even more financial aid through scholarships. Because of your generous investment, I can find some peace of mind. Being a diabetic is extremely expensive, I am trying to go to Berlin this summer, and working through college while taking the maximum number of credits is difficult. All these factors have combined to give me an unparalleled gratitude for scholarships. I could not perform at the best of my abilities without your help. Thank you, from the bottom of my heart." —Mackenzie Larsen

**"ON BEHALF OF MY FAMILY** and me, I thank you for the wonderful gift you are giving me. I know this money will help with my college career and all the goals I plan on accomplishing. I am so grateful for your contribution, and I hope someday I will be able to assist another person in achieving their goals. I will stay focused in school to maintain my scholarship's qualifications and to get the most out of this experience. Your generosity is greatly appreciated, and this opportunity makes me even more excited to continue life at BYU!" —Emma Webster



*To donate to the Economics Department and help more students like these, visit [bit.ly/econdonation](https://bit.ly/econdonation) or scan the QR code. Our fund is titled "FHSS-Economics Program-BYU."*

# Gallery in Print

by  
Jenna  
Palacios

## The Creative Minds of the BYU Econ Department

Many months ago, somewhere in the vast expanse of the internet, I came across this quote by author Nathaniel Hawthorne: "Religion and art spring from the same root and are close kin. Economics and art are strangers."

Although I myself am not an economist, this quote immediately struck me as false. I've been surrounded by too many artistically gifted econ faculty, students, and alumni to truly believe that economics and art are strangers. The minds that pose intelligent research questions, write algorithms, and analyze data are often the same minds that produce beautiful art in many forms. Many econ students I have met personally have minors or double majors in artistic fields. Many of our alumni are pursuing careers or hobbies outside the realm of economics and applying their skills in diverse and unique ways. There seems to be something

about the field of economics that breeds creativity; it fuels its scholars to ask original questions, take novel approaches to solving problems, and use their unique knowledge and skills to improve the world—and the people—around them. And isn't that the objective of art, as well?

Whether economics breeds creativity or creative individuals are drawn to economics, I can't say. But I can say there are many artistically talented professors, students, and alumni in the Economics Department, and I'm delighted to share a small sample of their work with you.\*

\*These student submissions were gathered through an Art and Poetry Contest sponsored by the department in winter semester 2022. This article showcases the top three submissions and our honorable mentions.



*"The Louder the Better" by student Nathan Osborn. 10"x13" digital art.*

Just before sunset  
The light forges its own gold  
You must spend it all

It's you and me now  
We've made a nest together  
I'll take the first shift

When was the last time  
You focused with all your heart  
And saw the whole world

*Three haikus written by adjunct professor Dr. Steven Waters.*





*"Watercolor Bird" by student Michael Francis. 5"x7" watercolor painting.*

### **What Will You Do With Your Truth?**

You didn't declare brightness  
The light that simply is  
Stole that darkness from you  
And laid you bare.

*Poem written by student Rebecca Batty.*

### **Motherly Thoughts of an Econ Student**

Maximizing utility,  
Maximizing sleep—  
They're the same thing, right?

I go to class and learn about supply and demand, but my baby already knows this.  
Hunger drives demand while I stay up at night to meet supply.

I change my attitude like I change diapers. This is demanding. I must remember  
Struggling does not make me a bad mother. Don't assume causation.

If I get myself ready for the day and my husband takes over for a few hours,  
everyone will be happier at home — a nash equilibrium.

Somehow, increased spending on our grocery bill still has me hungry for midnight snacks.

What is the opportunity cost of putting baby down "drowsy?"

Taking time for myself in period  $t$ , yields higher output in period  $t+1$ .

How come housework isn't included in GDP?

I understand that inputs like work and labor create a scalable output but the love I feel  
for this new, small person is exponentially higher than I expected.

*Poem written by student Taylor Brittner Larsen.*

### An Economist Writing Poetry

Adam Smith would allocate  
syllables like scarce resources,  
maximize utility  
of meaning with letter constraints,  
dreaming of invisible hands  
applauding with poetry snaps.

*Poem written by student Jakob Gertsch.*



*"Kayak" by student Addie Hopkinson. Digital art.*



*Photo by alumna Christelle Xu ('15).*



*Alumna Christelle Xu ('15) holding one of her paintings.*



### Young Girl Going Blind

I didn't notice her at first. With friends,  
playing tea. She didn't stand out. But her hands  
set her apart. The way they held her cup,  
drew out her smile. It almost hurt. The sounds

of others standing lifted her. One voice  
was louder than the rest, so they followed it  
from room to room, letting laughter loose  
then chasing it. She lagged behind the group, her face

a face fit more to trudging down an aisle  
to a stage to entertain a crowd,  
eyes full, like someone took a hose and sprayed  
light into a pool or foam into a tide.

When I saw her she had paused to catch her breath,  
like there was some new challenge in their path  
the others couldn't see. She stopped, then took off both  
her shoes as if, from that point on, she'd fly instead.

*A translation of Rilke by alum Michael Judd ('07).*



*Painting by Anna Mudrow, student Office Specialist in the Economics Department.*



*Painting by Anna Mudrow.*



## The Invention of Fractions

*God himself made the whole numbers: everything else is the work of man. ~Leopold Kronnecker*

God created the whole numbers:  
the first born, the seventh seal,  
Ten Commandments etched in stone,  
the Twelve Tribes of Israel —  
Ten we've already lost —  
forty days and forty nights,  
Saul's thousand and David's ten thousand.  
'Be of one heart and one mind' —  
the whole numbers, the counting numbers.

It took humankind to need less than this;  
to invent fractions, percentages, decimals.  
Only humankind could need the concepts  
of splintering and dividing,  
of things lost or broken,  
of settling for the part instead of the whole.

Only humankind could find the whole numbers,  
infinite as they are, to be wanting;  
though given a limitless supply,  
we still had no way  
to measure what we keep  
in our many-chambered hearts.

*"The Invention of Fractions" was first published in A Pilgrim's Guide to Chaos in the Heartland (Concrete Wolf), and was read by Garrison Keillor on his NPR show, The Writer's Almanac.*

*Poem written by alumna Jessica Goodfellow ('87).*



*Two watercolor paintings by emeritus faculty Dr. Richard Butler. To download more of Dr. Butler's paintings for free, visit [bit.ly/butlerdownloads](http://bit.ly/butlerdownloads). To view his YouTube channel and learn watercolor techniques, scan the QR code below.*



Videos

SPIRITUAL INSIGHTS

# WHY WE RUN



*by Dr. James Cardon*



“HOPE IS PART OF  
WHAT MAKES  
US RUN.”

Some time ago many of the BYU Economics faculty were excited about Christopher McDougall's book *Born to Run*. I enjoyed the enthusiastic hallway conversation, but for me running is not a natural or enjoyable activity. On the other hand, I do recognize that there are times when running is essential.

### WHY DO WE RUN?

People run for pleasure or health, from excitement, out of terror, for competition, or to gain an advantage. The Greek victory over the Persians at Marathon in 490 B.C. provides two interesting examples of the value of running. First, a key to the victory was that the heavily armored Greeks ran to meet the lightly armored Persians, closing the distance quickly and thereby negating the otherwise devastating effect of the enemy archers. It turns out that this was the first time that Greeks had advanced at a run. More famously, the victors afterward sent a runner back to Athens to announce the victory—the original marathon. Legend has it that the runner died after announcing the victory. Another legend says that his epitaph read “26.19.”

### RUNNING IN THE SCRIPTURES

A quick search of the scriptures reveals several references to running, both literal and figurative. Speaking figuratively, a Proverb notes that “the wicked flee when no man pursueth: but the righteous are bold as a lion.”<sup>1</sup>

A more positive example is found in the Easter morning race of Peter and John to the sepulchre to confirm the news brought by Mary Magdalene. We do not know for certain what went on in the minds of these runners, but we sense their torment and, at last, their wonder at the empty tomb. My favorite example, though, is the Book of Mormon story of the four men who ran to the judgment seat to test the prophecy of Nephi that the Chief Judge had been murdered.<sup>2</sup> Here we are told precisely what they were thinking: the men clearly doubted Nephi and were anxious to see him proven wrong. In either case, why run? Why not just wait and see? Both groups felt an overwhelming urgency to know, immediately and with their own eyes, what had happened.

Many of life's challenges require focused and immediate attention. Our path back to our Heavenly Father requires some sense of urgency. Nephi's exposition of the Doctrine of Christ<sup>3</sup> notes that after we participate in the first principles and ordinances of the gospel, we must endure to the end. We are also taught that we should press forward. I believe the acts of enduring to the end and pressing forward are not interchangeable. The former suggests, perhaps, keeping our covenants and staying on course. Pressing forward incorporates a sense of urgency, if not undue haste, in progressing along that path.

We are told to press forward employing the three critical virtues of faith, hope, and charity. Faith and charity typically receive top billing in our culture, but hope is also required. Sometimes hope is thought of as the beginning of faith and is therefore merely a precursor. Disliking perfect collinearity, I like to think of hope as a desire or longing for good things. Having faith in Christ and in His Atonement is different from hoping for or longing for the promised blessings. Part of the role of hope is to provide that sense of urgency and to make us strive for better things. We often point to the Brother of Jared as an example of great faith, forgetting that hopeful Jared was the one who had all the great ideas. Hope is part of what makes us run.

### WHY THE RUSH?

Brigham Young taught that “we live far beneath our privileges” when it comes to enjoyment of spiritual gifts.<sup>4</sup> Capital accumulation raises labor productivity and wealth. We all understand that investing early in human capital will bless us—financially and otherwise—all our lives. Likewise, early investment in spiritual gifts lifts our spirits and raises our capacity for service and learning. This knowledge lends urgency to our spiritual development.



## HOW URGENT?

Both prudent runners and devoted disciples must set an appropriate pace. This requires solving a very complex dynamic optimization problem. As everyone knows, overexertion today will reduce performance tomorrow. There are many demands on our time and energy, many of them in the “better” or “best” categories.<sup>5</sup> This is the kind of problem that economists are trained to solve, balancing today’s benefits with tomorrow’s in the proper way. Doing our “best” needs to be understood within the context of such a problem. Perhaps our first marathoner made a mistake, though given the unusual circumstances, perhaps not.

## SETTING THE OPTIMAL PACE

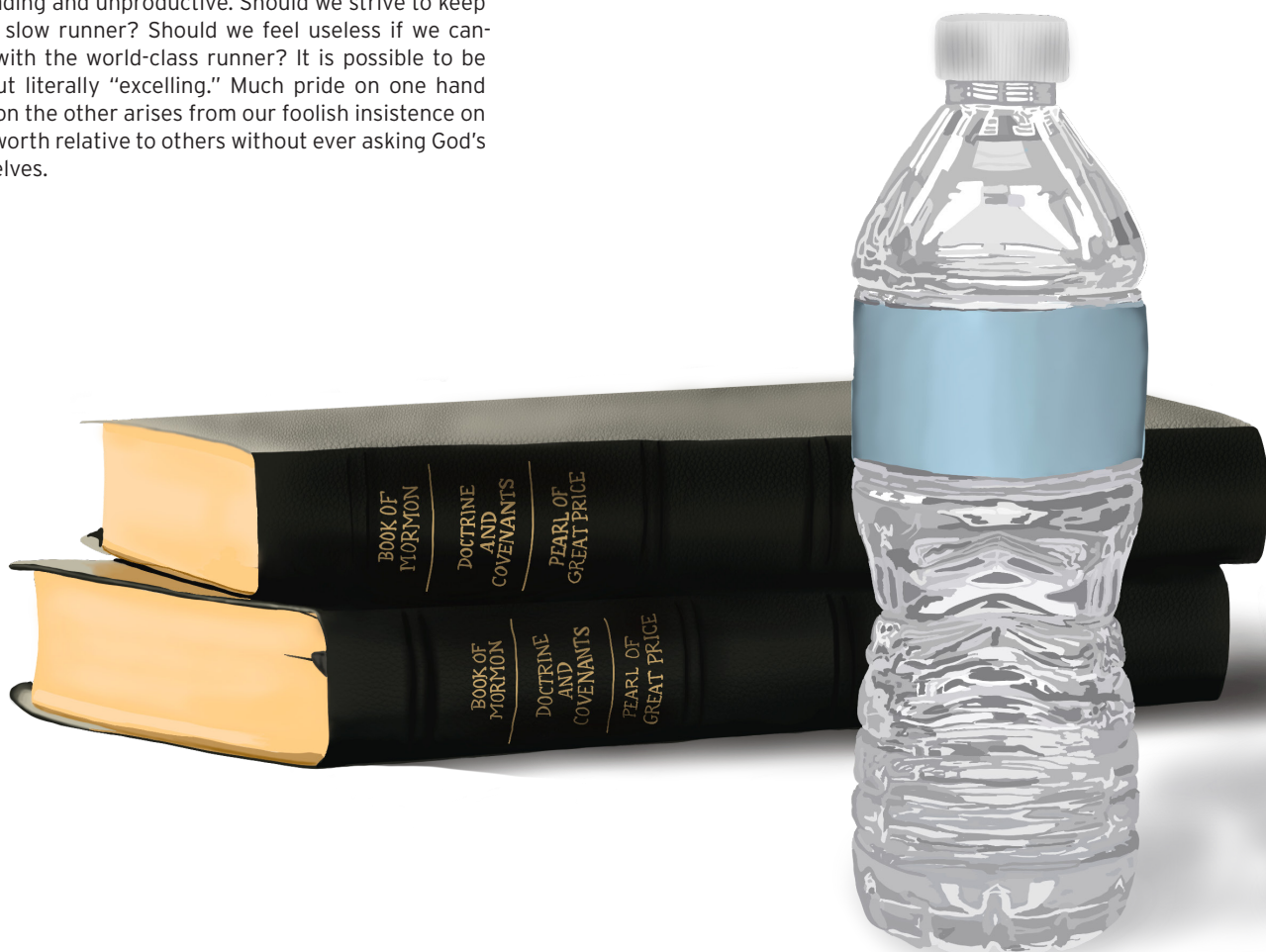
Running is often competitive, so comparison with others is natural and probably inevitable. Comparison can prompt us to work harder in all aspects of life, but it can also fool us into adopting an overly competitive mindset, striving always to be faster or better or richer than everyone else. Since members of the Church are all on the same path, it is natural to compare ourselves with others or let others set the pace for us in spiritual things. King Benjamin tells us that diligence is the standard,<sup>6</sup> and the Lord gave Joseph Smith the same counsel regarding translation of the Book of Mormon.<sup>7</sup> We run a race, but we do not compete for a prize.

Similarly, only God can properly judge whether we are meeting a standard of diligence because only He knows our true capacity. Neal Maxwell, speaking on how to overcome feelings of inadequacy, said, “Only the Lord can compare crosses, but all crosses are easier to carry when we keep moving.”<sup>8</sup> Further, comparisons are often misleading and unproductive. Should we strive to keep just ahead of a slow runner? Should we feel useless if we cannot keep pace with the world-class runner? It is possible to be excellent without literally “excelling.” Much pride on one hand and much guilt on the other arises from our foolish insistence on measuring our worth relative to others without ever asking God’s opinion of ourselves.

Setting lofty goals in any area of life can be motivating, but we should be careful here also. Speaking of the Sermon on the Mount, Elder Holland taught, “I believe that Jesus did not intend His sermon on this subject to be a verbal hammer for battering us about our shortcomings. No, I believe He intended it to be a tribute to who and what God the Eternal Father is and what we can achieve with Him in eternity.”<sup>9</sup> Paul gives us the comforting counsel to run life’s race with patience.<sup>10</sup> We need faith, hope, and charity, and we must be diligent.

A wise friend paused during a temple recommend renewal to point out that “strive is an elastic word.” It seems to capture the quality of diligence that we seek. The prize for which we run is, after all, certain if we simply keep on the path and keep moving forward. But as we strive to run “the race that is set before us”<sup>11</sup>—to learn, to serve, to progress—let us remember to be kind and patient with others and with ourselves. **JC**

- 
1. Proverbs 28:1.
  2. Helaman 9:1-2
  3. 2 Nephi 31
  4. Brigham Young. *Discourses of Brigham Young*. Deseret Book Company, 1925. p.50.
  5. Dallin H. Oaks, “Good, Better, Best,” *Ensign*, Nov 2007, p. 104-8.
  6. Mosiah 4:27.
  7. Doctrine and Covenants 10:4.
  8. Neal A. Maxwell. “Notwithstanding My Weakness,” *Ensign*, November 1976.
  9. Jeffrey R. Holland, “Be Ye Therefore Perfect—Eventually,” *Ensign*, Nov 2017, p.40.
  10. Hebrews 12:1-2
  11. Hebrews 12:1





## Eleanor Golightly

**ELEANOR GOLIGHTLY** ('15) chose to study economics at BYU because she had "always excelled at math and was curious about economics." She took Dr. Kearl's 110 class and loved this introduction to economic thinking. Later, as a research assistant for Dr. Price, she was amazed by the "breadth of impact of economic research" and the way it contributed to topics that intrigued her. Her love of the BYU Econ program led her to pursue a PhD in economics at the University of Texas at Austin.

For most of graduate school, Eleanor planned to pursue a career in academia, but as she was wrapping up her dissertation, she became curious about pursuing a different option. She says, "I attended the NABE Tech Economics Conference, and my eyes were opened to another potential career path—one that would still allow me to use all the skills I'd developed in years of studying economics, but in what I saw as a more collaborative and faster-paced environment." She felt excited by the prospect of applying her research skills in the tech industry. "I realized that I valued a setting with a more typical work schedule, and working on a team for a common goal, as opposed to further solitary research," she says. She is proud of what she accomplished in her time at UT Austin and reflects, "My graduate school experience taught me that I can do just about whatever I set my mind to."

Eleanor defended her thesis in 2020 and secured her first post-grad job as an economist at Wayfair, an internet retailer

headquartered in Boston, Massachusetts. She works on the Customer Algorithms team with a group of economists and data scientists. They help set Wayfair's price margins via pricing algorithms. "My job includes experimental design, causal analysis, and delivery of data-focused results to help inform optimal pricing strategy across Wayfair's catalog," Eleanor says. She feels most successful when she's collaborating with her colleagues to find "innovative solutions to challenges" and remarks that the economists at Wayfair stand out from their colleagues in other disciplines for their expertise in causal inference. Eleanor herself is passionate about this topic and says, "Clean identification is usually challenging and takes both knowledge and creativity, but it is always worth chasing for causality." She loves seeing her company implement her team's work.

Eleanor encourages current econ students to seize the unique opportunity BYU provides to be research assistants and teaching assistants during their time as undergraduates. "These roles can teach you so many skills," she says. For those who are interested in pursuing PhDs, Eleanor says, "Getting a PhD is hard! If you're on the fence, take a couple of years to work first—try out an industry job, or develop your research interests—to return to school with clearer purpose and motivation." Finally, she encourages students to learn how to code and work with data, because those skills "will almost surely pay off wherever you go."



## Tyler Folkman

**TYLER FOLKMAN** ('11) initially took Econ 110 to avoid taking American Heritage, but ended up thoroughly enjoying the class and earning an A. At the end of the semester, Dr. Kearl reached out to Tyler to encourage him to continue studying economics. "Given my lack of clarity in what I wanted to do, that was enough to push me to keep taking econ classes and pursue it as a major," Tyler says. He graduated from BYU and became an economic consultant for Charles River Associates in Los Angeles.

While at CRA, Tyler became fascinated by machine learning. It was the early 2010s, when the idea of machine learning was really taking off, and the hype made Tyler realize that "there was more than just linear regression to the world." He concurrently became interested in programming and says, "I was starting to learn that to really fundamentally ship . . . smart features to the world, you have to know how to code something stronger than just Stata or SAS." He started applying to graduate programs in computer science and chose to attend the University of Texas at Austin for his studies. "I studied there for a while in a lab doing machine learning, really upping my programming game," he says.

From there, Tyler was able to secure an internship at Amazon as a software engineer, officially marking his "big career transition . . . from pure analytics and econometrics to coding." After grad school, he worked for three years as a data scientist at Ancestry building systems to automate genealogical processes. One of those systems worked to resolve duplicate entities in genealogical records; another system pulled obituary

information from newspapers. He led a team of "really, really smart data scientists" in these endeavors, gaining managerial skills that would come in handy later.

Tyler's next move was in 2019 to Branded Entertainment Network (BEN). BEN uses machine learning to place products with creators; they work with social media influencers, content creators, and entertainment platforms to "help facilitate brands getting their products where people's eyeballs are and not in traditional ads." He was one of their first data science hires, and has since worked his way up to the position of Chief Technology and AI Officer. In his role, he focuses on strategic leadership to make sure a team of about sixty people do "the best things they can be doing to move [the] company forward."

While studying economics creates a solid foundation in mathematical and analytical thinking, Tyler recommends that econ students strengthen their computer science skills if they want to pursue data science. That includes learning how to "write good code in modern programming languages" (he specifically recommends Python) and "how to make computers do what you want them to do." Above all, Tyler says, "Don't be afraid to go after the thing you want to go after." He has learned through experience that making a career shift is not only possible, but it can lead to success. He strives to spend at least thirty minutes every day learning something new and firmly believes that "continual learning is pretty critical to be successful."



## Marlo M. Oaks

**GROWING UP ON** Stadium Lane in Provo, Marlo M. Oaks ('94) often went to BYU sports games with his family. He attended the summer and fall semesters at BYU after graduating from high school, then left on his mission to Hong Kong. When he returned to BYU, Marlo started studying economics. "I thought economics . . . would be really good preparation for life," he says, "and it was." He specifically mentions being grateful for the econ program's focus on free markets and capitalism, which has had a significant impact on his career.

Marlo's first job briefly took him to a bank in Hong Kong. He then moved to Los Angeles, California, to work for Farmers Insurance as a director of investments. Shortly after Marlo came to Farmers, it was sold to a large European company, and most of Marlo's coworkers left. He had the unique opportunity to "start with a clean sheet of paper" and make decisions about how the company should be shaping its investment portfolios. "Having the opportunity very early in my career to have such an impact . . . and to gain exposure to the entire investment process was really unique," Marlo says.

In the early 2000s, when scandals were rocking the investment world, Marlo asked himself, "Is there a way we can anticipate problems in our portfolios before they happen?" This question inspired him to build a credit scoreboard that captured market information such as the probability of default in Farmers' bond portfolios. In 2007, Marlo's scoreboard indicated "significantly higher delinquency rates" with 2006 vintage subprime mortgage bonds. His team sold all \$100 million invested in those bonds. That decision ended up being a good move and a career highlight for Marlo. "To be very clear, we were not making a market call," he explains. "It was about balancing the risk and return tradeoff. We lost eight basis points in yield by purchasing different securities.

But, we slept better at night." Unlike a majority of companies, Farmers Insurance came out of the 2008 financial crisis strong and was able to purchase AIG's direct automobile insurance business in March 2009, increasing the portfolio's size by 25 percent.

After 15 years with Farmers, Marlo transitioned to Intermountain Healthcare's investment group. "My favorite part of that was actually working on the community foundation portfolios," he says. "I really just enjoyed seeing the impact the funds had on real lives." He then transitioned to the "sell side" of the market by doing investment banking for eight years at Peace Field Limited and Crewe Investment Banking.

When the position of Utah State Treasurer opened up, Marlo was initially hesitant to apply because he lacked a background in politics. But the actual job description was hard to ignore; he learned the role is essentially "the investment industry; it's investment management; it's investment banking, and there's a significant people component." It was a unique combination of Marlo's experience and skills. "It's really hard to find a role in the investment world that brings all those things together," he says, so he decided to submit his name as a candidate.

On the campaign trail in 2020, Marlo was the only candidate who had institutional investment experience. He was selected as State Treasurer out of ten candidates and began his first term in July 2021. His role includes managing investments, borrowing money through the capital markets, participating on public boards and committees, and working with legislators, particularly during legislative sessions. Marlo strives to take a creative, problem-solving approach in all of his roles, and he encourages students to do the same. "We've got a fantastic state," he says. "I'm so glad I'm here." **JP**





# FACULTY SCHOLARSHIP



## Combating Healthcare Fraud

Paul Eliason

**F**raud is a serious problem for Medicare, which estimates losing about \$60 billion annually due to fraud, billing errors, and abuse. To combat and deter fraud, the federal government uses two main approaches: litigation through the courts, which occurs after the crime has been committed, and administrative regulations that prevent fraud. In one project with coauthors, I study the effectiveness of these two approaches in curtailing fraudulent billing for ambulance rides. Between 2003 and 2017, dozens of criminal enforcement actions and civil lawsuits were brought against ambulance companies for billing for hundreds

of millions of dollars of fraudulent nonemergency ambulance rides. As a final response to this problem, in 2015 and 2016 the Centers for Medicare and Medicaid services rolled out a new requirement that physicians document a need for these rides before they occur. We find that requiring prior authorization resulted in an immediate and persistent drop in these ambulance rides of 68%, an impact much larger than that from criminal or civil lawsuits. Additionally, we find no evidence that prior authorization restricted rides in a way that affected patients' health or access to care.



## Economics of Drugs in the US Market

Brigham Frandsen, Michael Powell, and Jim Rebitzer

With collaborators Michael Powell (Northwestern University) and Jim Rebitzer (Boston University), I am working on a project that seeks to explain the economics of the US market for prescription drugs. The US market for prescription drugs is mediated by Pharmaceutical Benefit Managers (PBMs), which are poorly understood entities that design and operate prescription drug formularies. Formularies are tiered lists of drugs that determine the generosity of drug coverage for insured individuals. Drug companies pay rebates to PBMs in exchange for favorable placement on the formulary.

Unanswered questions abound in this market: do the rebates PBMs receive from drug companies undermine their incentive to bargain for lower prices on behalf of insurance companies? If so, why do insurance companies employ PBMs as intermediaries? Why are list prices for drugs so astronomical compared to their marginal costs, even if few people, if any, actually pay list prices?

Our insight for answering these questions is that formularies are contests in which drug makers compete for favorable placement. Rebates are the “bids” in this contest. These rebates, although controversial, are critical to the efficient operation of formulary contests. Rather than undermining PBMs’ incentives, the formulary contests are an efficient mechanism for inducing low net prices from drug companies and ensuring low copays for the majority of drugs consumers need. Insurance companies employ PBMs because formularies are more profitable for them than purchasing drugs directly from drug companies.

A side effect of formularies is that they induce drug companies to “race to the top” with their list prices because formularies tend to tilt the contest in favor of higher list price drugs. Understanding these economic forces operating in the prescription drug market is important for market participants and policy makers.



## Effect of Military Service on Lifetime Earnings

Richard Patterson

Before coming to BYU, I worked for West Point and had the opportunity to meet many servicemembers in the United States Army. I got to see firsthand how unique the military experience was for the 1 in 13 Americans who serve. While it appeared that many aspects of military service were likely to be beneficial, my coworkers and I could also see how exposure to violence and other elements of service could worsen servicemember outcomes.

To understand whether voluntary Army service is financially positive or negative for those who enlist, my coauthors and I linked Army applicants between 1990 and 2011 to their federal tax records and used eligibility thresholds in the Armed Forces Qualifying Test (AFQT) in a regression discontinuity design to

estimate the effects of Army enlistment on earnings and related outcomes. Essentially, we compared the outcomes of applicants who were just barely eligible to serve to those who were just barely ineligible. We found that in the 19 years following application, Army service increased average annual earnings by over \$4,000. However, whether service increased long-run earnings varied significantly by race. In the 11 to 19 years following military service, Black servicemembers experienced annual gains of \$5,500 to \$15,000 while White servicemembers did not experience significant changes. By providing Black servicemembers a stable and well-paying Army job and by opening doors to higher-paid post-service employment, the Army significantly closed the Black-White earnings gap in our sample.



## Why Have College Completion Rates Increased?

Jeffrey T. Denning, Eric R. Eide, Kevin J. Mumford, Richard W. Patterson, and student coauthor Merrill Warnick

**W**e document that college completion rates have increased since the 1990s, after declining in the 1970s and 1980s. We find that most of the increase in graduation rates can be explained by grade inflation and that other factors, such as changing student characteristics and institutional resources, play little or no role. This is because GPA strongly predicts graduation, and GPAs have been rising since the 1990s. This finding holds in national survey data and in records from nine large public universities. We also find that at a public liberal arts college, grades increased, holding performance on identical exams fixed.

**Note:** This paper was published in *American Economic Journal: Applied Economics* in July 2022. Our coauthor Kevin Mumford is a BYU Econ grad who is a professor at Purdue University, and Merrill Warnick is a BYU Econ grad who is currently a PhD student in economics at Stanford University. Much of this paper was written while Merrill was a student at BYU.



## The Economics of Bidding Wars

Brennan Platt, Brad Larsen, and Dominic Coey

**I**f you're bidding for an item on eBay, the standard auction models would suggest that the best strategy is to bid exactly what you think the item is worth. eBay only raises the price if needed to outbid someone else, so if you win, it will be at the lowest price possible, and if you lose, you wouldn't have wanted to win anyhow.

However, many purchases are made planning for a specific event or timeline—in my case, I was trying to buy a Lego Millennium Falcon for my son's birthday. This means that how much you are willing to pay will rise as you get closer to the deadline as you get more desperate for the item. Also, most items (like Lego sets) are not one-of-a-kind works of art as in the standard model, but standardized products that you may find in dozens of other auctions or even retail outlets. This alters the optimal strategy, not just in the realm of auctions but in any market where you might hunt for a deal.

After noticing my own desire to increase my bid after each auction I lost, I started modeling these missing features in auction theory. Together with Brad Larsen (BYU alum) and Dominic Coey, we examined data on 3600 new products, sold on eBay over a million times over a year. Most shopping data only lets us see what people paid, not how much they valued it or those who decided against a purchase. In contrast, eBay bids record how much a buyer was willing to pay, regardless of whether they

won or lost. Thus, we followed each user across multiple auctions of the same good, finding that buyers raise their bid by 1.2% after each failed attempt.

Our theory helps explain why a discount market (like auctions) can coexist with a retail market. Buyers hope for lower prices but finding them takes time, while sellers can sell quicker in the discount market but accept a lower markup. These tradeoffs can balance out to sustain both mechanisms for selling. Indeed, any changes to the market can alter that balance, perhaps unexpectedly. For instance, our model predicts that a higher commission charged by eBay would drive sellers from auctions towards posted prices (even though the fee increase applies to both). In fact, eBay more than doubled their commission between 2007 and 2013, causing auctions to drop from 70 to 40% of eBay's revenue.

In short, it is important to know what motivates your buyers. When motivated by deadlines, a buyer's demand is not an immutable constant, but is affected by how likely one can find deals, which itself depends on seller's decisions. What I'm willing to bid depends not just on how cool the Lego set is, but on how soon the birthday is and how many auctions happen before then.

# CLASS STATS 2022

80

Survey  
Respondents

165

Total  
Graduates

The Economics Department sends surveys to all graduating econ students every year. Out of 165 graduates between December 2021 and August 2022, we collected 80 survey responses. Those survey responses are reflected in this compilation of statistics.

## STUDENT EXPERIENCE

### TOP 5 FAVORITE CLASSES BY VOTE

1

Econ 442  
Behavioral Economics

2

Econ 488  
Applied Econometrics

3

Econ 440  
Environmental Economics

4

Econ 461  
Economics of Education

5

Econ 476  
Industrial Organization

### Our graduates' best advice for current econ students...

Actively use the department's resources such as TAs, professors' office hours, and email blasts (for internships and jobs).

Pick something specific you like and get good at that specific skill—being a generalist isn't marketable.

Go to ESA! It will change your life.

Don't give up! Econ is beautiful. Sometimes the mid-level courses are tedious and a bit boring, but the electives make everything worth it!

Don't do econ just for job prospects. Do it because thinking like an economist is a good way to live life and make important decisions.

Take math and stats classes that aren't required. They will help you understand and be more confident in a lot of classes.

Seek first the kingdom.

Econ is what you will make of it. Be interested in many different things and apply it to econ, and you will truly get so much out of the program. For example, I was very interested in machine learning and data science, so I took as many econometrics courses as I could, and they were truly some of the most invigorating classes I have taken at BYU. Those classes and learning I did on my own have prepared me for the internship I am now doing, along with what I will be studying in graduate school.

## GRAD SCHOOL



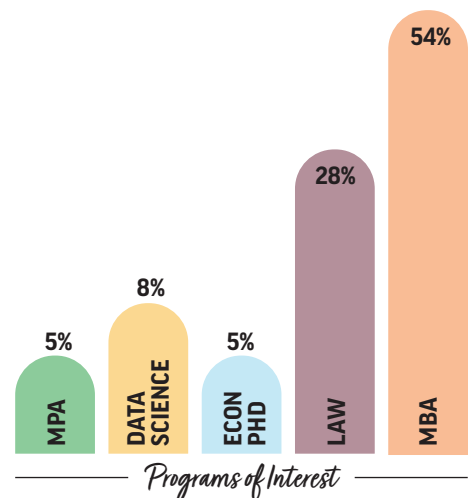
74% of graduates plan to attend grad school at some point



36% of those planning on grad school were accepted to a program beginning fall 2022

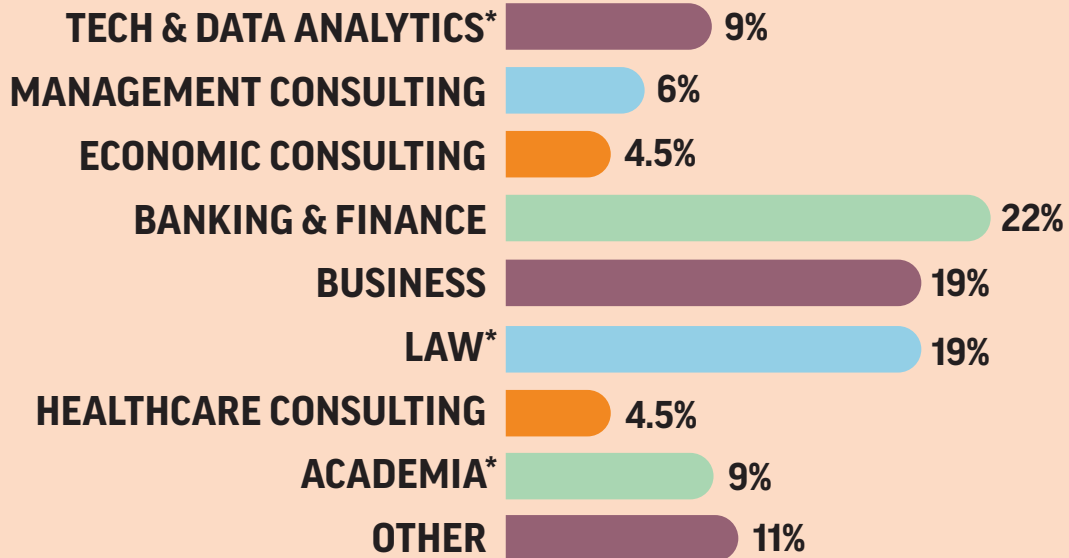
### The Schools Our Grads Are Enrolled In:

- American University
- Brigham Young University
- Brigham Young University Law
- Columbia University
- Georgia Tech
- London School of Economics
- Sciences Po
- Stanford Graduate School of Business
- Texas A&M University
- University of Arizona
- University of Arkansas
- University of Chicago
- University of Idaho
- University of Leeds
- University of Utah
- University of Utah Law School
- University of Washington
- Utah Valley University



# CAREERS

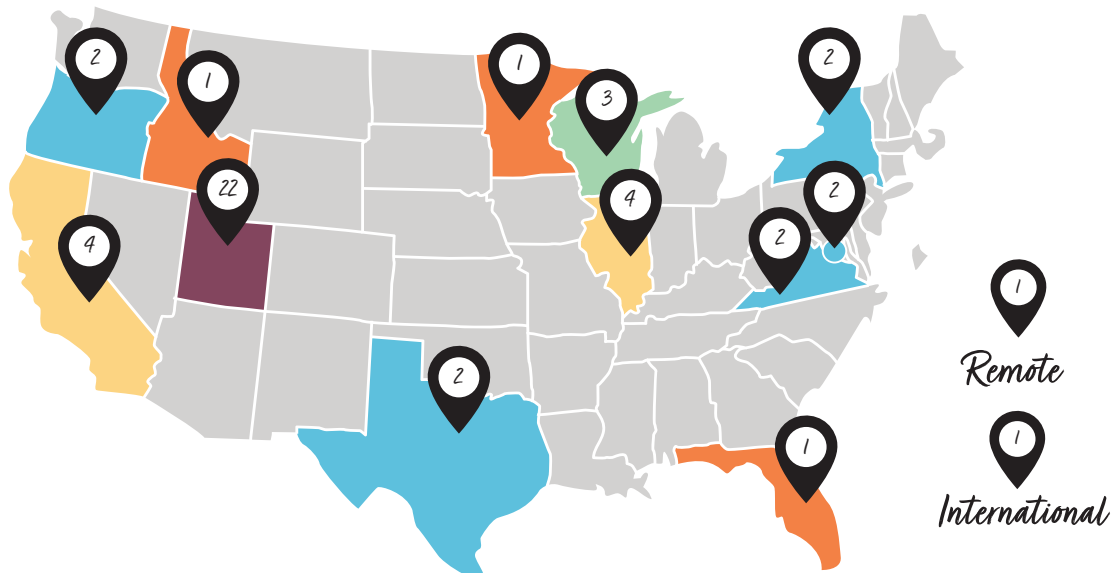
## Industry Distribution of Our Graduates' First Jobs



\*Categories marked with an asterisk include graduate students in that field.

## Companies

- Alter Domus
- Analysis Group
- Ao2
- Baringa Partners
- Bellwether International
- Blue Cross of Idaho
- Boston Consulting Group
- Built
- Cicero Group
- Compass Lexecon
- Connor Consulting
- Crumbl
- DFIG Investments
- doTERRA International LLC
- EnerBankUSA
- Epic Systems
- Fidelity Investments
- Generations Financial Partners
- Goldman Sachs
- Grant Thornton
- Infuse Asset Management
- Mapline
- McKinsey & Company
- McMaster-Carr
- Merit Medical
- Morgan Stanley
- Nexio
- PennyMac
- Piper Sandler
- Point C Health
- Providence Health Plan
- Qualtrics
- Rhone
- Rocky Mountain Turf
- Rural Community Consultants
- Solcius LLC
- SourceHive
- Texas A&M University
- Thompson Lewis Law Firm
- Two Sigma
- University of Chicago
- US Army
- US Government
- Utah Community Action
- Vivint



# STUDENT SPOTLIGHTS



ALEXANDER JOHNSON

**FROM LOS ANGELES**, California, Alexander Johnson used to visit Utah often to see his dad's extended family. One of those trips included a campus tour of BYU, and from that point on, Alex felt that BYU was the right choice for his undergraduate studies.

Narrowing down his major was a harder decision. Alex had several ideas of things he could do and considered studying business, but he eventually realized that he "wanted to study the science of something." He was drawn to econ because of the way it explains decision-making, interactions, and incentives, and the way it answers "the important questions we have in society." He learned that he enjoys "applying math to a very specific context . . . and being able to come to solutions."

Alex also learned that he enjoys working with people and feels that he wouldn't have succeeded in the econ major without the peers who became his close friends. As he looks back on the academically stressful moments of his undergrad, he points

out that those moments "end up, in a way, becoming highlights . . . because even though they are really hard, they are moments where you learn." Some of Alex's other highlights include spending time as a teaching assistant and a research assistant for the Economics Department and working with his professors. "We have incredibly intelligent and incredibly kind people as our professors," he says. "I owe so much to [them]."

While at BYU, Alex double majored in economics and math and double minored in Spanish and Portuguese. He graduated as valedictorian of the Economics Department in spring 2022 and has since started a graduate program in applied mathematics at the University of Washington. Alex's advice for current econ students centers around working with people. He encourages students to join study groups, work with their TAs, and get to know their professors. Above all, he says, "Be willing to learn. . . . It will take work, but that work is definitely worth it in the end."



BECCA BETTINGER

**BECCA BETTINGER CHOSE** to study economics after taking Econ 110 and loving it. Her further study of econ solidified her love of the discipline and her love of BYU. "I love the project-based approach that economics has," she says. She cites the exploratory papers in her econometrics classes as examples. "This hands-on approach has really motivated me to want to do the same in life. . . . Learning how to answer any question or to search out the answers for myself helps me be a more cognizant, educated citizen. From a personal sense, it's taught me how to look at any problem in life with nuance and take responsibility for my learning."

While at BYU, Becca had many learning opportunities outside the classroom. She participated in the Economics Student Association and was president of Women in Economics for a year. She also worked as a research assistant and a teaching assistant and participated in BYU's Social Innovation Projects as an intern. But she considers the highlight of her undergrad to be her interactions with coworkers and peers. "Some of the best friends that I've had at BYU, I made from

study groups," she says. She remembers making it through her most difficult classes by relying on her friends, and she keeps in touch with many of them.

In addition to building key friendships, Becca's study of economics also increased her confidence as a student. She says, "I am capable of a lot. . . . I realized I can do hard things." She double majored in economics and Russian and also completed a minor in communications. Becca is interested in pursuing a career in either research or policy. She started grad school at the London School of Economics in fall 2022.

To current econ students, Becca's advice is "not to give in to impostor syndrome." She expresses that econ majors can sometimes feel pressure to "be really smart" and "perform a certain way." But she points out that you can't compare yourself to anyone else, because everyone's learning process is different. "At the end of the day, you're going to learn what you need to learn, and you're going to get out of it what you need to get out of it," she says. "It might not be what [another] person is learning, but that's okay."





**LILLIAN BARTHOLOMEW MURRI**

**LILLIAN BARTHOLOMEW MURRI** was introduced to the subject of economics earlier than most of our students; she took an econ class in high school and loved it. “I loved the way the class taught me to think about problems systematically,” she says. She discovered that she enjoyed “studying optimization and efficiency” and wanted to apply that knowledge to all areas of her education.

At BYU, Lillian studied both economics and math, specifically the Applied and Computational Math Emphasis (ACME) program. She takes pride in completing the ACME junior core: “It was a very academically intense year, and it felt so good to have completed something like that,” she says. Some of her other undergraduate highlights include attending the yearly Women in Econ luncheon and being on great research teams over the years.

Lillian’s research background includes working in Dr. Price’s Record Linking Lab and, more recently, working with Dr. Stoddard and other professors studying group dynamics. In that role, she was able to apply her skills in Python and Stata and loved how her team encouraged her to push herself

and “explore the data in different ways.” She also completed an internship with the Department of Defense. “That really helped me build my data science toolkit,” she says. “I was able to work on projects at the intersection of econ, math, and data, and it got me excited about the doors pursuing economics . . . has opened for me.”

After graduating from BYU, Lillian moved to Los Angeles to pursue a master’s degree in Data Science. She plans to work in that field and is interested in potentially earning an economics PhD down the road. Ultimately, she hopes to use her career “to do something to help the homeless and housing insecure.” She says, “There are so many potential policy solutions that can help alleviate this issue and I would love to be on the forefront of solving them.”

To current econ students, Lillian says, “Economics is a great base to pivot to any number of fields. I encourage [you] to study something else in addition to economics—it really opens doors and gives you insight into how you can apply the ideas that you are learning.”



**DANIEL STODTMEISTER**

**THOUGH DANIEL STODTMEISTER** wasn’t initially interested in attending BYU, his high school friends in Spanish Fork convinced him to apply. And he’s “certainly happy” he did. Daniel started as a chemical engineering major, but after taking Econ 110 his freshman year, he changed his major to economics and never looked back. He loved the way econ explored “the way you value time or money or the way you think about behavior and why you make certain decisions.” He explains, “I think it’s just a fascinating way of opening up your mind to seeing the world.”

The principles Daniel learned in the econ major also applied well outside of class. During his undergrad, he completed an internship at a private equity firm and worked as a research assistant. He also spent time as a program director for the Kaiizen Foundation, a nonprofit organization that works with underprivileged children and youth in foreign countries. Daniel’s work for the Kaiizen Foundation took him to Mexico multiple times, and he and his wife actually lived there for a few months during the pandemic. While there, they started their own program helping eighteen-year-old orphans. “We were essentially helping them transition to normal life after leaving an orphanage,” Daniel says.

“They’d never had a job or been grocery shopping.” As he taught these teenagers how to be successful, his econ training—specifically the principles of using time wisely and understanding priorities—really came in handy.

Daniel loved building relationships with his professors during his undergrad and encourages other students to do the same. “I’ve met with all of my professors regularly, even after the semester, and they’ve always helped guide me through the decisions I’ve made,” he says. “I’ve received a lot of good advice.” He also recommends getting involved with classmates and forming study groups because “those friendships are certainly highlights.”

After graduating from BYU in the summer, Daniel started as an economic consultant at Cornerstone Research in San Francisco, California. He was drawn to Cornerstone because of its rich academic environment. Down the road, Daniel can see himself going back to school for either an MPA or MBA. He can also see himself working in the nonprofit sphere in some capacity. “I’d love to be more in the international development sphere,” he says. “That’s kind of been my dream my whole life.” **JP**



# A Taste of the Tailgate

by Jenna Palacios



For those who weren't able to make it to the Econ Tailgate this year, here's a quick recap!

The Alumni & Student Tailgate was the Economics Department's first-ever alumni reunion. It took place on September 10th before the BYU vs. Baylor football game. Students, alumni, and faculty gathered at the BYU Conference Center pavilion to eat food, play games, and make connections with friends both old and new.

The department spotlighted emeritus faculty member Larry Wimmer and current students Tommy Morgan and Ashlyn Dunn at the event. We also highlighted the members of our National Advisory Council, where the idea for a tailgate-style reunion originated. We hope you enjoy these photos and highlights from the tailgate, and we thank all of you for your support!



*Dr. Larry Wimmer*

## Emeritus Faculty Spotlight

Dr. Larry Wimmer is one of the foundation stones of the BYU Economics Department. He is perhaps best known by alumni for teaching Econ 110, Principles of Economics. In this capacity, he taught thousands of students, inspiring many to continue their study of economics. The alumni and faculty of the BYU Economics Department are sincerely grateful for Dr. Wimmer's many contributions to all those who were fortunate enough to interact with him.

## Student Spotlights



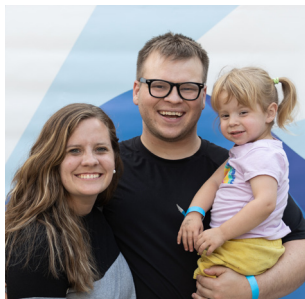
### Ashlyn Dunn

Ashlyn is an exceptional student double majoring in math and economics. She is both a teaching assistant and a research assistant for the Economics Department and excels in both roles. In her spare time, Ashlyn likes to surf and play tennis.



### Tommy Morgan

Tommy is an economics major with minors in Spanish and math. He goes above and beyond as an econ teaching assistant by creating YouTube videos for students with all his "tips and tricks" for understanding the material. Outside school, Tommy enjoys Pokémon, video editing, and paddleboarding with his wife.



### *Photos from the tailgate!*

**Top to bottom:** econ alumna Lisa Turley Smith and family; econ alum Johnny Blood and family; econ alum Alex Muniz and daughter; econ alum and National Advisory Council member Bradford Pack and his wife.



*limited-edition  
t-shirts created for  
purchase at the event*



*Professor Riley Wilson  
and family*



*Professor Joseph Price  
playing cornhole with  
his family.*



**From left to right:** Anna Mudrow, Student Office Specialist in the department; Jenna Palacios, Alumni and Internship Coordinator; Jessica McDowell, former Department Office Manager.



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