

2022-2023 ANNUAL REPORT

SHEILA AND ROBERT CHALLEY INSTITUTE FOR GLOBAL INNOVATION AND GROWTH

AT NORTH DAKOTA STATE UNIVERSITY

TABLE OF CONTENTS

- 3. From the Director
- 4. About Us
- 6. Impact
- 8. Distinguished Speakers Series
- 9. Workshop
- 10. Events and Programs
- 12. Student Research
- 13. Outreach
- 16. Research
- 20. Looking Ahead
- 22. Our Team

GREETINGS FROM THE DIRECTOR

Our nation and our world continue to face a number of important challenges, including concerns about inflation, labor-force and supply-chain issues, global security, and artificial intelligence. There is an emerging belief that the U.S. needs to turn inward and abandon global supply chains, increased efforts to censor and marginalize opinions that people disagree with, and decreased faith in free markets and capitalism.

The Challey Institute's focus on opportunity and flourishing is as important as ever. We continue to pursue research and programming to foster an understanding of innovation, trade, institutions, and human potential among students, the general public, and policy makers, while illuminating the values that lead to a free and prosperous society.

As I reflect on the Challey Institute's fourth year, I'm proud of our success. Over the last year, we expanded our events and had our largest in-person attendance ever, launched a new undergraduate certificate, introduced a new graduate program, and performed significant research in a wide variety of areas. Some of the important issues we explored included cybersecurity concerns with electric vehicles, the impact of offshoring on local productivity and investment, the important role of social capital in disaster recovery, impacts of trade barriers and container shipping disruptions on agriculture, effects of local taxes on innovation and entrepreneurship, and tolerance of different points of view on campus.

As impactful as the Institute was last year, I'm even more excited about the year ahead. We're continuing to offer meaningful and expanded programs to students, tackle important questions surrounding opportunity and flourishing, and offer an outstanding lineup of events for students, faculty, and the community (see pages 20 & 21). Our team continues to grow and add to our mission. We had two important new hires this past year, with Sandro Steinbach providing expertise in international trade (page 22) and Allison Fulton spearheading a new communications strategy to further amplify our work. Finally, our newly added research specialist roles will add to the work already being done by our existing scholars, with a focus on state, regional, and national policy issues.

I want to personally thank you for making our work possible. Our generous donors are making an important difference in the world. We are grateful for this, and we look forward to continuing to further our vision of economic opportunity and flourishing for all.

In Gratitude,

Menard Family Director,

John D. Bitzan

Sheila and Robert Challey Institute for Global Innovation and Growth

ABOUT US

The Sheila and Robert Challey Institute for Global Innovation and Growth was launched at North Dakota State University in 2019. The Institute is named in honor of Sheila and Robert Challey (NDSU '67), who provided the leadership gift to establish the Institute. The Institute received the largest collection of philanthropic support focused solely on faculty and student scholarship in NDSU's history. This transformative gift established an interdisciplinary institute dedicated to student programming, research, and outreach. The Institute serves as an umbrella organization for a broad network of centers and programs committed to economic opportunity and flourishing at NDSU. We partner with the Center for the Study of Public Choice and Private Enterprise, an affiliate of the Challey Institute housed in NDSU's Department of Agribusiness and Applied Economics, to achieve our shared mission.

OUR INSPIRATION



The Institute was inspired by the legacy of NDSU alumnus Mancur Olson. Raised on a farm near Buxton, ND, Olson studied at Oxford and Harvard, where he earned his Ph.D. in economics in 1963.

As a researcher and teacher, he became recognized as an influential thought leader and pioneer in the study of public choice and new institutions. We strive to continue his legacy by inspiring the next generation of NDSU students and embodying his multidisciplinary approach to pursuing ideas of consequence.

"TO SAY A SITUATION IS
'LOST' OR HOPELESS
IS IN ONE SENSE
EQUIVALENT TO SAYING
IT IS PERFECT,
FOR IN BOTH CASES
EFFORTS AT
IMPROVEMENT CAN
BRING NO POSITIVE
RESULTS."

Mancur Olson, The Logic of Collective Action: Public Goods and the Theory of Groups

OUR VISION

We envision a world where economic opportunity and flourishing are available to all.



We enhance students' understanding of the foundations of economic opportunity and flourishing.



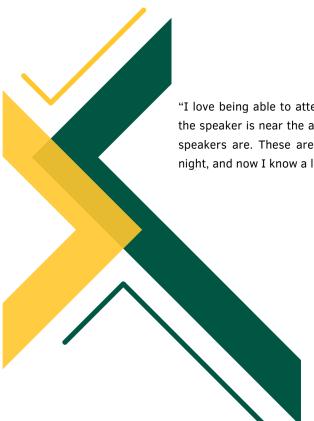
We engage in peer-reviewed research to tackle important questions and enable the discovery of new solutions.



We extend knowledge to policymakers and the public through presentations, media, and community events.

OUR MISSION

We aim to advance understanding in the areas of innovation, trade, institutions, and human potential to identify policies and solutions for the betterment of society.



IMPACT

"I love being able to attend these events even though my major is not business. I enjoy that the speaker is near the audience and easy to see and hear. I love how inspiring each of these speakers are. These are my favorite events. I did not know much about Africa before last night, and now I know a lot more about what is happening in the world."

NDSU STUDENT

"During my research experience with Dr. Hean, I was able to develop a comprehensive understanding of academic research and its significance. I learned how academic articles are written, how to conduct data analysis, and how to adapt research findings to different audiences whether that be an op-ed or a classroom presentation. Additionally, I was able to recognize the importance of communication and collaboration in the research process to improve the quality of our research. Overall, my research experience with Dr. Hean has been immensely valuable and I am confident that the skills I have learned will be applicable in my future career."

NDSU STUDENT RESEARCHER

"Conversations can be productive even when people disagree. We had many conversations in class that remained respectful but very productive. I think learning how to foster those conversations is a very important life skill people now a days but this class has taught me different ways to do it."

HUMAN PROGRESS & FLOURISHING STUDENT

"As a faculty member in the College of Ag, I really appreciate this lecture series and especially this speaker. The speaker addressed a real-life problem that applies to everyone at the university regardless of discipline-- namely, why good ideas don't always scale. I will continue to attend this lecture series and will recommend it to others."

NDSU FACULTY, MENARD EVENT ATTENDEE

"This class has definitely changed my overall view on the world as a whole. I had never taken a class like this one, but I am really glad that I decided to. Before taking this class, all you see on social media and the news is how our world is getting worse in various aspects. This is very far from the truth, there has been unbelievable progress in areas such as GDP per capita, poverty, pollution, disease, etc. I think it's truly amazing we as a species have come this far, and I'm definitely going to share the book I have received from this course."

HUMAN PROGRESS & FLOURISHING STUDENT

"My position would not exist without philanthropy. Knowing that this position wouldn't exist without philanthropy gives me an increased sense of responsibility. I feel responsible to the donors to maximize the return on the investment that they made. I remain thankful for this philanthropy and motivated to be the best version of myself."

NDSU FACULTY



"What an inspiring speaker and a truly important message! This was an extremely eye opening experience... completely mind-blowing and totally unexpected. High impact!"

COMMUNITY MEMBER

"It's an excellent example of how an educational institution, especially a land grant one, should be serving our community. It provided intelligent, thoughtful content that makes people think."

COMMUNITY MEMBER

"Fundamentally changed the way I think about finance and how the world works. An excellent way to learn more about topics you are unfamiliar with."

MANCUR OLSON SCHOLAR



2

8

Σ) Z

ш

54 CLASSES WITH 1,463 STUDENTS TAUGHT

148 SCHOLARSHIPS WITH \$129,000+ AWARDED

RESEARCH

46 ACADEMIC PUBLICATIONS AND 50 PRESENTATIONS

COMMUNITY

23 EVENTS WITH 2,524 ATTENDEES

1226 SOCIAL MEDIA FOLLOWERS WITH 1.3K HOURS OF VIDEO VIEWS

MEDIA

31 OP-EDS & ARTICLES AND 18 BLOG POSTS

MENARD FAMILY DISTINGUISHED SPEAKER SERIES

The Menard Family Distinguished Speaker Series invites world thought leaders to share their ideas with the NDSU community. We hosted seven distinguished speakers for wide ranging discussions open to campus and community members.

Watch at ndsu.edu/challeyinstitute/events/archives



SAM PELTZMAN

Dr. Peltzman engaged in a wide-ranging conversation with Menard Family Director, Dr. John Bitzan. They discussed his insights on the economics of regulation, including the model he worked on with George Stigler that countered the traditional notion of regulation to correct market failure; his famous insight into how regulation often induces changes in behavior that counter the intended effects of regulation; the legacy of Mancur Olson and the influence of Olson on Peltzman's work; his experience on the President's Council of Economic Advisors; his relationship with Nobel Prize winners and his candidacy for a Nobel Prize;





MARK MILLS

Mark Mills gave a presentation titled "Technology and the Future: The '20s Will (Yet) Roar," based on his new book. He highlighted advances in machines, materials, and information, and their implications for future prosperity and flourishing. He also noted the importance of a free society in enabling these advances to lead to prosperity and reasons he is optimistic about the future.





MAGATTE WADE

Magatte Wade gave a presentation entitled: "The Heart of the Cheetah: Entrepreneurship and Prosperity in Africa." She gave an inspirational account of her own story, her background growing up in Senegal, her inspiration for becoming an entrepreneur, and the many barriers she encountered in trying to operate a business where there is a lack of economic freedom. Her talk gave concrete examples of what economic freedom means, why it is so important, and why we need to defend and promote it.





GLENN LOURY

Brown University Distinguished Economist, Glenn Loury, engaged in a virtual conversation with Menard Family Director John Bitzan. They discussed Glenn Loury's compelling personal story, his insights on race and inequality, the importance of free inquiry and viewpoint diversity, and Glenn's personal reflections and advice.





JOHN LIST

John List, Distinguished Economist from the University of Chicago, presented insights from his new book "The Voltage Effect: How to Make Good Ideas Great and Great Ideas Scale." This was followed by a discussion with Menard Family Director, John Bitzan, about the insights John List has gained from his work in experimental economics.





GABRIELLA SANTOS

As part of Financial Markets Day, we hosted a virtual presentation from Gabriela Santos, Global Market Strategist on the J.P. Morgan Asset Management Global Market Insights Strategy Team. She discussed U.S. macroeconomic policy, risks to the U.S. economy, her outlook on China, and other insights on investing and markets. This was followed by a discussion with Challey Institute Faculty Fellow and Finance Professor, Fariz Huseynov, regarding the state of financial markets.





VERNON SMITH

In a conversation with Menard Family Director, John Bitzan, Nobel Prize Winning Economist, Vernon Smith, discussed Adam Smith's Theory of Society, its continued relevance for living in a free society today, and its role in shaping our Constitution. In addition, they talked about Vernon's new project to make Adam Smith's work more accessible, Vernon's experience in unveiling the Adam Smith statue in Scotland, and his advice for students.



HUMAN PROGRESS & FLOURISHING WORKSHOP



SARAH LOW

University of Illinois at Urbana-Champaign: "Entrepreneurship & Regional Economic Development"



> 81 attendees



THOMAS KRUMEL

North Dakota State University: "Contextualizing the COVID-19 Rural Labor Market"



89 attendees



NOAH DORMADY

The Ohio State University: "Business and Economic Resilience in Disasters"



> 61 attendees



ALFREDO ROA-HENRIQUEZ

North Dakota State University: "The Role of the Resource Sharing Resilience Tactic in the Context of Disasters and COVID-19"



61 attendees



CHRISTOPHER BLATTMAN

The University of Chicago: "Why We Fight"



>>> 90 attendees



ELIZABETH CARLSON

North Dakota State University: "Addressing African Politics and Poverty from the Inside"



68 attendees



IAN ROWE

American Enterprise Institute:
"Agency, Not Equity – A Path to
Achieve Excellence for All Versus
Universal Mediocrity"



> 73 attendees



GENA GORLIN

The University of Texas at Austin: "Building the Builders: Starting with Ourselves – building innovative and entrepreneurial traits"



62 attendees



SIRI TERJESEN

Florida Atlantic University:
"Cronyism vs. Capitalism and the
Importance of Understanding the
Difference"



> 60 attendees



AHMAD AL ASADY

North Dakota State University: "Corruption, Entrepreneurship, and Growth"



>>> 63 attendees



ZAHID ANWAR &

JEREMY STRAUB

North Dakota State University:
"Policy Considerations in
Cybersecurity"



>>> 51 attendees



MEERA SRIDHAR

University of North Carolina at Charlotte: "The Impact of Cyberattacks and Vulnerabilities on Our Daily Lives"



52 attendees

COMMUNITY EVENTS



CONSTITUTION DAY

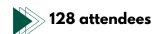
On September 16, we held a Constitution Day event in the NDSU Memorial Union. The event featured a one-hour presentation by North Dakota Supreme Court Justice Jerod E. Tufte. In the event, Justice Tufte talked about the importance of the Constitution, its protections, and its relevance today.





CHATGPT EVERYWHERE

We teamed up with Dakota Digital Academy to present an all-day event on AI language models such as ChatGPT and Google Bard. The event featured speakers such as Mark Mills (Senior Fellow at the Manhattan Institute) and Shawn Riley (CEO American Operations of Bitzero, and former CIO for the State of North Dakota). Topics included the impact of AI language models on society, the workforce, education, law, policy and other areas



NOBEL AT NOON

This event featured four NDSU faculty members giving short presentations on the discoveries that led to Nobel Prizes being awarded in 2022, and their significance.

Featured panelists included:

- Dr. Julia Bowsher, Professor and Chair of Biological Sciences; discussed the Nobel Prize in Medicine awarded to Svante Paäbo "for his discoveries concerning the genomes of extinct hominins and human evolution."
- Dr. Gregory Cook, Professor and Chair of Department of Chemistry and Biochemistry; discussed the Nobel Prize
 in Chemistry awarded jointly to Carolyn Bertozzi, Morten Meldal, and K. Barry Sharpless "for the development of
 click chemistry and bioorthogonal chemistry."
- Dr. James Dean, Assistant Professor of Economics; discussed the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel awarded jointly to Ben Bernanke, Douglas Diamond, and Philip Dybvig "for research on banks and financial crises."
- Dr. Andrei Kryjevski, Associate Professor of Physics; discussed the Nobel Prize in Physics awarded jointly to Alain Aspect, John F. Clauser, and Anton Zeilinger "for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science."





ETIQUETTE DINNER

In April, Candace Smith hosted an etiquette dinner at the Delta Hotel. In collaboration with the College of Business, Business Connections program, guests learned how to make a fantastic impression as professionals at dinner and networking events.



STUDENT RESEARCH

Ruhaimatu Abudu, Doctoral student (graduated) worked with Dr. Alfredo Roa-Henriquez with the project, "Supporting business preparation for future shocks: International cases to understand how recovery programs can facilitate adaptation."

Omar Alkhateeb, MS student in agribusiness and applied economics, working with Veeshan Rayamajhee on "Sustainable Management of Al-Ahsa Irrigation System."

Branson Boggia, Doctoral student in Computer Science with an emphasis on AI and Machine Learning at Kent State University, assisting Dr. Ahmad Al Asady in researching how AI based neural networks can act as external enablers for entrepreneurship.

Issac Dubovoy, Graduate student (graduated) worked with Dr. James Caton to model technology as a function of economic freedom using a Bayesian network in a project titled, "Endogenous Economic Freedom."

Shakya Ghosh, PhD Student in Applied Economics, working with Veeshan Rayamajhee on "Terrorist Events and Social Behavior."

Proma Sen Gupta, Graduate student (graduated) worked with Dr. James Caton to model the implementation and effects of monetary policy in a project title, "Mapping the Federal Reserve's Reaction Function with Directed Acyclic Graphs."

Hayden Hogenson, accelerated MS student studying economics, assisted Dr. Kerianne Lawson the project, "A Tale of Two Dakotas: Institutional Determinants of Economic Development."

Abiodun Idowu, Doctoral student working with Dr. James Caton to build a network model of local economic dynamics at the county level.

Parker Jabas, pursuing an MBA degree, assisted Dr. Oudom Hean with, "The Effects of Taxes on Local Economies" project.

Zachary Johnson, Graduate student working with Dr. James Caton to build an agent based economy (think video game economy) using python in a project titled, "Market Algorithm as Genetic Algorithm."

Munkaila Lambongang, MS student in agribusiness and applied economics, advised by Dr. Kerianne Lawson and successfully defended MS thesis in July 2023, co-authored two papers with Dr. Lawson, "Criminal Activity During Electricity Blackouts: Evidence from Load Shedding in Cape Town, South Africa" and "Large-scale Protests and Net Migration."

Zia Muhammad, Doctoral student in computer science, assisted Dr. Zahid Anwar with the project, "Privacy and Security Concerns in Electric Vehicles."

STUDENT PROGRAMS

MANCUR OLSON READING GROUPS

The Mancur Olson Scholars program, named after North Dakota native and NDSU alum Mancur Olson, is an interdisciplinary learning and scholarship program. This program brings together diverse students to study and discuss readings related to a central topic. The program is open to undergraduate students of any major, and scholars are selected through a competitive application process. Upon completing the program, each participant receives a scholarship.

Recent Topics:

- Fall 2022 Financial Revolutions: From Commodity Money to Cryptofinance (11 scholars)
 Fall 2022 Conscious Capitalism: An Oxymoron or Not? (14 scholars)

- Spring 2023 How We Got Rich (9 scholars) Spring 2023 The Economics of Sports (8 scholars)



42 participants

MANCUR OLSON GRADUATE FELLOWS READING GROUP

This discussion group surveys the big topics of public choice theory, including collective action, constitutions, voting, rent-seeking, bureaucratic decision-making, and political exchange. Participants grapple with the great problem that societies need governments to address social problems; but governments predictably fail to solve these problems while creating new ones. This group is about understanding why, how, and what can be done about it.







OUTREACH

Consistent with NDSU's land-grant mission, we strive to make our research accessible in the public arena to enable a more informed citizenry and better policy debates. Our scholars spread ideas and address emerging issues through presentations, media engagements, and public writing.

OP-EDS, BLOGS AND ARTICLES

Partisan AI Is a Significant Problem Without An Easy Solution
By Jeremy Straub | Published by Washington Examiner on June 30,
2023

Driving Innovation in Safety for Deep-Sea Exploration
By Ahmad Al Asady | Published by DC Journal on June 27, 2023

Requiring Parental Permission for Children's AI Use is Shortsighted and Harms Education

By Jeremy Straub | Published by The Hill on June 27, 2023

Southern Economic Impacts of Premium-to-Liability Ratio Limits in U.S. Crop Insurance

By Sandro Steinbach, David Bullock & Sunghun Lim | Published by Southern Ag Today on June 22, 2023

Recent Attacks on Recreational Marijuana Legalization Are All Smoke

By Raymond March | Published by Independent Institute on June 22, 2023

Letter: AI Regulation Could Stifle Life-Saving Medical Advancements By Jeremy Straub and Dominic Rosch-Grace | Published by InForum on June 14, 2023

Artificial Intelligence May Change Labor Market But Doesn't Need to Cause Long-Term Harm

By Jeremy Straub and Dominic Rosch-Grace | Published by Fox News on June 15, 2023

NDSU Research Examines the Global Grain and Oilseed Market Implications of the Russia-Ukraine War

By Sandro Steinbach | Published by NDSU Extension on June 9, 2023

Algorithmic Disgorgement is Bad for Science and Society By Jeremy Straub | Published by Lawfare on June 9, 2023

The Growing Cyber Threats of Generative AI: Who's Accountable? By Zahid Anwar and Zia Muhammad | Published by Dark Reading on June 8, 2023

OPINION LETTERS

Letter: In Nor is limited to p

Jackson writes, "Charter sc and do not charge tuition w district. Charter schools car organization and curriculur charter schools run more et



following is the introduction from the new ited volume, *Pandemics & Liberty*.

single biggest threat to man's continued dominu anet is the virus." ~ John Lederberg, Nobel Laur



Deregulation Remains Our B Hope to Combat Alzheimer's Disease

Raymond J. Harch • Friday, February 17, 203

I January, the Food and Drug Administration <u>approved</u> the drug <u>Leqembi</u> to treat Al ase. Leqembi is pathbreaking in two ways. First, while the vast majority of Aizhein only help slow the progress of the disease, Leqembi can stop and reverse cognitiv 'DA news release states, "This treatment option is the latest therapy to tarrest and

To improve railrังลัน safe methods

By John Bitzan | May 18, 2023 06:00 AM

🛩 in f 🖾 🖶





Invest in the futu student-manage

Student-managed investment for effective way to give students resexperience and develop their poskills. But they need careful plants are faculty, Ahmad Al









Driving Innova
Safety for Deel
Exploration

Posted to <u>Technology</u> Jur

How Brands in the Spotlight Can Navigate Boycotts

By Ahmad Al Asady and Chris Groening | Published by The Hill on
June 8, 2023

We Need a Better Solution to Problems Like TikTok

By Jeremy Straub | Published by DC Journal on June 7, 2023

The Education Fallout of COVID-19 in North Dakota and Beyond By Oudom Hean and Parker Jabas | Published by The Bismarck Tribune on June 6, 2023

To Improve Railroad Safety, Set Standards Not Methods

By John Bitzan | Published by Washington Examiner on May 18, 2023

Invest in the Future with Student-Managed Funds

By Ahmad Al Asady | Published by Times Higher Education on May
12, 2023

Can AI Write 'Ted Lasso'? Writers Strike May Open Door to ChatGPT-written Scripts

By Jeremy Straub | Published by USA Today on May 10, 2023

Schumer's AI Regulations Would Stifle Innovation and Dampen Free Expression

By Jeremy Straub | Published by The Hill on May 5, 2023

AI Regulation is an Issue of State's Rights, National Criticality
By Jeremy Straub | Published by Inforum on May 1, 2023

Are Insulin Prices About to Drop? The Devil is in the Details

By Raymond March | Published by Independent Institute on April 28,
2023

FDA's Rare Positive Move

By Raymond March | Published by Independent Institute on April 4, 2023

Insulin Price Caps: A Solution or a Recipe for Rationing?

By Raymond March | Published by Independent Institute on March 31, 2023

Brazil May Export 5 Million Tonnes of Corn to China in 2023
By Sandro Steinbach | Published by Czapp on March 22, 2023

Why is it Taking the U.S. So Long to Switch to Chip-and-PIN Credit Cards?

By Zahid Anwar | Published by WalletHub, March 2023

When is a Drug Safe and Effective Enough?

By Paymond March | Published by Independent In

By Raymond March | Published by Independent Institute on March 3, 2023

The FDA is Too Little Too Late in Tinkering with COVID-19 Booster Schedules

By Raymond March | Published by Independent Institute on February 23, 2023

Deregulation Remains Our Best Hope to Combat Alzheimer's Disease By Raymond March | Published by Independent Institute on February 17, 2023

The Unintended Consequences of New Regulation on Advanced Impaired Driving Technology

By Zahid Anwar and Zia Muhammad | Published by Scholars Strategy Network on February 4, 2023

Capitalism and Socialism: Toward a Common Understanding By John Bitzan | Published by Profectus on October 27, 2022

An Economics Lesson on Tax Reform

By Jeremy Jackson | Published by The Forum of Fargo-Moorhead on October 10, 2022

Pandemics and Liberty: An Introduction

By Raymond March and Ryan Yonk | Published by the American Institute for Economic Research on October 5, 2022

Overlooked Security Challenges in Electric-Vehicle Charging Infrastructure

By Asad Waqar Malik and Zahid Anwar | Published by Dakota Digital Review on September 20, 2022

Trouble in the Metaverse—Whatever That Is

By Jeremy Straub | Published by Dakota Digital Review on September 20, 2022

We Need a Common Understanding of What 'Capitalism' Means By John Bitzan and Clay Routledge | Published by Real Clear Policy on September 12, 2022

The Psychology of Progress

By Clay Routledge (interview) | Published by Discourse Magazine on July 8, 2022

Patriotism is a Crucial Ingredient for Progress. Here's Why. By Clay Routledge | Published by Fortune on July 4, 2022





s the graduation season begins,
academic accomplishments and
However, for many in the state, the pan
education. From transitioning to onlin
the pandemic, students have faced unp



re Insulin Prices About to op? The Devil is in the stails



By Dominic Rosch-Grace , Jeremy Straub OPINION

Published June 15, 2023 2:00am EDT





View our latest outreach publications at ndsu.edu/challeyinstitute/outreach/media/

ACADEMIC PUBLICATIONS & JOURNAL ARTICLES

Covering a wide range of topics, our scholars and fellows collectively produced 46 publications this past year.

Ahmad Hasan, **Zahid Anwar**, et al. (2022). Forensic Analysis of Blackhole Attack in Wireless Sensor Networks/Internet of Things. Applied Sciences, 12(22), 11442. https://www.mdpi.com/2076-3417/12/22/11442

Asad Waquar Malik and **Zahid Anwar** (2022). Do Charging Stations Benefit from Cryptojacking? A Novel Framework for Its Financial Impact Analysis on Electric Vehicles. Energies, 15(16), 5773. https://doi.org/10.3390/en15165773

Zillah Adahman, Asad Waqar Malik, and **Zahid Anwar** (2022). An Analysis of Zero-Trust Architecture and Its Cost-Effectiveness for Organizational Security. Computers & Security, 122. https://doi.org/10.1016/j.cose.2022.102911

Asad Waqar Malik, **Zahid Anwar**, and Anis U. Rahman (2022). A Novel Framework for Studying the Business Impact of Ransomware on Connected Vehicles. IEEE Internet of Things Journal. https://doi.org/10.1109/JIOT.2022.3209687

Mehreen Ahmed, Rafia Mumtaz, **Zahid Anwar**, Arslan Shaukat, Omar Arif, and Faisal Shafait (2022). A Multi-Step Approach for Optically Active and Inactive Water Quality Parameter Estimation Using Deep Learning and Remote Sensing. Water, 14(13), 2112. https://doi.org/10.3390/w14132112

Shariatnasab Mahshad, Farhad Shirani, and **Zahid Anwar** (2022). Privacy Limits in Power-Law Biparitite Networks Under Active Fingerprinting Attacks. IEEE International Symposium on Information Theory. https://doi.org/10.1109/ISIT50566.2022.9834378

Zia Muhammad; **Zahid Anwar**; Bilal Saleem, "A cybersecurity risk assessment of electric vehicle mobile applications: findings and recommendations", In the 3rd International Conference on Artificial Intelligence (ICAI) 2023. https://doi.org/10.1109/ICAI58407.2023.10136682

Mehreen Ahmed, Rafia Mumtaz, **Zahid Anwar**. An Enhanced Water Quality Index for Water Quality Monitoring Using Remote Sensing and Machine Learning. Applied Sciences. 2022; 12(24):12787. https://doi.org/10.3390/app122412787

Zia Muhammad, Zahid Anwar, Bilal Saleem, Jahanzeb Shahid. Emerging Cybersecurity and Privacy Threats to Electric Vehicles and Their Impact on Human and Environmental Sustainability. Energies. 2023; 16(3):1113. https://doi.org/10.3390/en16031113

Sara Quamar, **Zahid Anwar**, Mehreen Afzal. A Systematic Threat Analysis and Defense Strategies for the Metaverse and Extended Reality Systems. Computers and Security. Vol 128, 2023, 103127, ISSN 0167-4048. https://doi.org/10.1016/j.cose.2023.103127

Raihan Ur Rasool, Hafiz Farooq Ahmad, Wajid Rafique, Adnan Qayyum, Junaid Qadir, **Zahid Anwar**. Quantum Computing for Healthcare: A Review. Future Internet. 2023; 15(3):94. https://doi.org/10.3390/fi15030094

Junaid Sajid, Kadhim Hayawi, Asad Waqar Malik, **Zahid Anwar**, Zouheir Trabelsi. A Fog Computing Framework for Intrusion Detection of Energy-Based Attacks on UAV-Assisted Smart Farming. Applied Sciences. 2023; 13(6):3857. https://doi.org/10.3390/app13063857

Hafiz Farooq Ahmad, Wajid Rafique, Raihan Ur Rasool, Abdulaziz Alhumam, **Zahid Anwar**, and Junaid Qadir. Leveraging 6G, Extended Reality, and IoT Big Data Analytics for Healthcare: A Review. Computer Science Review. Vol 48 May 2023, 100558. https://doi.org/10.1016/j.cosrev.2023.100558

Zia Muhammad, **Zahid Anwar**, Abdul Rehman Javed, Bilal Saleem, Sidra Abbas, and Thippa Reddy Gadekallu. (2023). "Smartphone Security and Privacy: A Survey on APTs, Sensor-Based Attacks, Side-Channel Attacks, Google Play Attacks, and Defenses." Technologies. 11, no. 3:76. https://doi.org/10.3390/technologies11030076

Oudom Hean (2022). The Effects of Technological Progress in Innovative Regions on the Labor Markets of Lagging Regions: A Theoretical Perspective. Economies, 10(8), 197. https://doi.org/10.3390/economies10080197

Seunghun Chung and **Oudom Hean** (2022). The Effects of Shale Oil and Gas Endowments on Regional Labor Markets. International Journal of Energy Economics and Policy, 12(5), 425-431. https://doi.org/10.32479/ijeep.13320

Kodjo Barnor, **James Caton**, **Dragan Miljkovic**. (2023). The Role of Funding on Research and Science: The Impact of Glyphosate Herbicides on Health and the Environment. Journal of Policy Modeling. 45 (1) 103-120. https://doi.org/10.1016/j.jpolmod.2023.01.001

James Caton. Crisis and Credit Allocation: The Effect of Ideology on Monetary Policy During the Great Depression and the Great Recession. The Independent Review. 27 (4) Spring 2023. https://www.independent.org/publications/tir/article.asp?id=1816

James Caton and Cameron Harwick. (2022). "Cryptocurrency, Decentralized Finance, and the Evolution of Money: A Transactions Costs Approach." Journal of New Finance 2 (4). https://dx.doi.org/10.2139/ssrn.3891593

Nattanicha Chairassamee, and **Oudom Hean**. Effects of the COVID-19 Pandemic on the Labour Market in Thailand. Journal of Southeast Asian Economies, vol. 39, no. 3, 2022, pp. 330–41. JSTOR, https://www.jstor.org/stable/27193073

Oudom Hean, Nattanicha Chairassamee & Mark D Partridge. Migration, Education, Technological Change and Growing Urban Inequality. Annals of Regional Science (2023). https://doi.org/10.1007/s00168-023-01207-4

Oudom Hean. The Economics of Child Marriage. African Journal of Economic Review, 11 (1) 1-10. (2023). https://www.ajol.info/index.php/ajer/article/view/239441



Nattanicha Chairassamee & **Oudom Hean**. Financing and Enrollments in Public Universities. Applied Economics. (2023). https://doi.org/10.1080/00036846.2023.2173362

Nattanicha Chairassamee & **Oudom Hean**. The Ripple Effects of Offshoring in the United States: Boosting Local Productivity and Capital Investment. PLOS One. (2023). https://doi.org/10.1371/journal.pone.0284490

Oudom Hean and Nattanicha Chairassamee. Distance Learning During COVID-19 School Closures, International Journal of Social Economics, Vol. ahead-of-print No. ahead-of-print. (2023). https://doi.org/10.1108/IJSE-05-2022-0306

OudomHeanandNattanichaChairassamee.TheEffectsoftheCOVID-19PandemiconU.S.Entrepreneurship.LettersinSpatialandResourceScience16,1(2023).https://doi.org/10.1007/s12076-023-00327-x

Thomas Krumel and Corey Goodrich (2022). Meatpacking Working Conditions and the Spread of COVID-19. Applied Economics. https://www.tandfonline.com/doi/full/10.1080/00036846.2022.2117776

Thomas Krumel, Corey Goodrich, Rui Sun, and Nathan Fiala (2022). Linking Employment and Death: Measuring the Structural Disparity in COVID-19 Deaths for Non-telework Essential Workers. The B.E. Journal of Economic Analysis & Policy, 22(4). https://www.degruyter.com/document/doi/10.1515/bejeap-2021-0332/html

Aaron J. Staples and **Thomas Krumel**. The Paycheck Protection Program and Small Business Performance: Evidence from Craft Breweries. Small Business Economics (Dec. 2022). https://doi.org/10.1007/s11187-022-00717-3

Kerianne Lawson (2022). Electricity Outages and Residential Fires: Evidence from Cape Town, South Africa. South African Journal of Economics. https://doi.org/10.1111/saje.12329

Kerianne Lawson (2022). Currency Iconography and Entrepreneurship. Journal of Global Entrepreneurship Research. https://doi.org/10.1007/s40497-022-00326-0

James Muriuki, Darren Hudson, Syed Fuad, **Raymond March**, and Donald Lacombe. Spillover Effect of Violent Conflicts on Food Insecurity in Sub-Saharan Africa. Food Policy. 115 (2023). 102417 https://doi.org/10.1016/j.foodpol.2023.102417

Raymond J. March, **Veeshan Rayamajhee**, and Glenn L. Furton (2022). Cloudy with a Chance of Munchies: Assessing the Impact of Recreational Marijuana Legalization on Obesity. Health Economics. https://doi.org/10.1002/hec.4598

M-Adnan Shahid, **Veeshan Rayamajhee**, and Alok Bohara (2022). Does Social Capital Help in Post-Disaster Recovery? Evidence from the Gorkha Earthquake of Nepal. International Journal of Disaster Risk Reduction, 82. https://doi.org/10.1016/j.ijdrr.2022.103359

Wenmei Guo, Veeshan Rayamajhee, and Alok K. Bohara (2022). Impacts of Climate Change on Food Utilization in Nepal. Review of Development Economics. https://doi.org/10.1111/rode.12953

Ilia Murtazashvili, Veeshan Rayamajhee, Keith Taylor. The Tragedy of the Nurdles: Governing Global Externalities. Sustainability. (2023). 15(9):7031. https://doi.org/10.3390/su15097031

Jennifer F. Helgeson and Alfredo Roa-Henriquez (2022). A Theoretical Framework for Supply Chain Resilience Planning in Supply Chain Risk Mitigation. International Series in Operations Research and Management Science, 332. Springer, Cham. https://doi.org/10.1007/978-3-031-09183-4 8

Stephanie Chang, Charlotte Brown, John Handmer, Jennifer Helgeson, Yoshio Kajitani, Adriana Keating, Ilan Noy, Maria Watson, Sahar Derakhshan, Juri Kim, and Alfredo Roa-Henriquez (2022). Business Recovery from Disasters: Lessons from Natural Hazards and the COVID-19 Pandemic. International Journal of Disaster Risk Reduction, 80.

https://www.sciencedirect.com/science/article/pii/S2212420922004101

Matthew Spradlin and Jeremy Straub (2022). Evaluation of the Factors That Impact the Perception of Online Content Trustworthiness by Income, Political Affiliation and Online Usage Time. Future Internet, 14(11), 320. https://doi.org/10.3390/fi14110320

Matthew Spradling and Jeremy Straub (2022). Analysis of the Impact of Age, Education and Gender on Individuals' Perception of Label Efficacy for Online Content. Information, 13(11), 516. https://doi.org/10.3390/info13110516

Soojung Ahn, Dongin Kim, and Sandro Steinbach. The Impact of the Russian Invasion of Ukraine on Grain and Oilseed Trade. Agribusiness, (2023). 39 (1) 291-299. https://doi.org/10.1002/agr.21794

Soojung Ahn and Sandro Steinbach. Agri-Food Trade Resilience Among Food-Deficit Countries During the COVID-19 Pandemic. International Food and Agribusiness Management Review. (2023). 1-12 https://doi.org/10.22434/IFAMR2022.0093

Sandro Steinbach. "The Russia-Ukraine War and Global Trade Reallocations," Economics Letters. (2023). 226: 111075. https://doi.org/10.1016/j.econlet.2023.111075

Sandro Steinbach and Xiting Zhuang. The Impact of Maritime Shipping Disruptions on US Tree Nut Exports and Inventories. Agribusiness. (2023). https://doi.org/10.1002/agr.21809

Soojung Ahn and Sandro Steinbach. "The Impact of COVID-19 Trade Measures on Agricultural and Food Trade," Applied Economic Perspectives and Policy. (2023). 45(2):911 - 927 https://doi.org/10.1002/aepp.13286

Colin. A Carter, Sandro Steinbach and Xiting Zhuang. "Supply Chain Disruptions and Containerized Agricultural Exports from California Ports," Applied Economic Perspectives and Policy. (2023). 45(2): 1051 - 1071. https://doi.org/10.1002/aepp.13311



WORKSHOP SCHEDULE

The Human Progress and Flourishing Workshop invites renowned scholars to present research and engage in discussion with the NDSU Community. This interdisciplinary series focuses on solutions and policies that contribute to opportunity, innovation, and individual and societal flourishing.

Find workshop events at ndsu.edu/challeyinstitute/events/workshop

FALL 2023

HEALTHCARE

September I

Raymond March, Ph.D. | North Dakota State University

September 22

Alicia Plemmons, Ph.D. | West Virginia University

ECONOMIC OPPORTUNITY FOR NATIVE AMERICANS

October 6

Thomas Stratmann, Ph.D. | George Mason University

October 20

Lorraine Davis | Native American Development Center

THE FIGHT FOR FREEDOM

November 3

Eric Kohn | Acton Institute Frances Hui | First Hong Kong activist to receive political asylum in the U.S.

November 17

Robert Anthony Peters | Actor, Director, and Writer

SPRING 2024

ECONOMIC FREEDOM THROUGHOUT THE WORLD

February 2

Kerianne Lawson, Ph.D. | North Dakota State University

February 16

Antonio Saravia, Ph.D. | Mercer University

VIEWPOINT DIVERSITY AND CIVIL DISCOURSE

March 22

John Bitzan, Ph.D. | North Dakota State University

April 5

Ben Klutsey, Ph.D. | George Mason University

INTERNATIONAL TRADE- WHY TRADE ISSUES MATTER

April 19

Sandro Steinbach, Ph.D. | North Dakota State University

May 3

TBA | TBD



MENARD FAMILY DISTINGUISHED SPEAKER SERIES



The Menard Family Distinguished Speaker Series hosts world thought leaders to share their ideas with the NDSU community on big questions that explore ways to improve the human condition and create economic opportunity. The Distinguished Speaker Series is made possible thanks to a generous gift by the Menard family.

SEPTEMBER 14, 2023 (CONSTITUTION DAY EVENT)

David Bobb, President of the Bill of Rights Institute

October 17, 2023

Robert Lawson and Benjamin Powell, authors of the book, "Socialism Sucks: Two Economists Drink Their Way Through the Unfree World"

November 14, 2023

Ian Rowe, Senior Fellow at the American Enterprise Institute

February 28, 2024

Tami Reller, former CEO of Duly Health and Care, former Microsoft Executive VP of Marketing, and former CFO of Microsoft Windows

March 20, 2024

Douglas Irwin, John French Professor of Economics at Dartmouth College

April II, 2024 (Financial Markets Day Keynote)

Henry Mallari D'Auria, Ariel Investments Chief Investment Officer of Emerging Markets

Find Menard Family Distinguished Speaker Series events at ndsu.edu/challeyinstitute/events/distinguished_speakers/

OUR TEAM



JOHN BITZAN, PH.D

Menard Family Director of the Challey Institute
john.bitzan@ndsu.edu





Associate Professor of Cybersecurity



AHMAD AL ASADY, PH.D.
Assistant Professor of
Management



Assistant Professor of Political



JAMES CATON, PH.D.

Assistant Professor of Economics



Assistant Professor of Finance



PCPE Director/Professor of Economics



Assistant Professor of Economics



Assistant Professor of Economics



RAYMOND MARCH, PH.D.

Assistant Professor of Economics



VEESTIAN NATIALISATEE, THE

Assistant Professor of Economics



ALFREDO ROA-HENRIQUEZ, PH.D.

Assistant Professor of Economics



SANDRO STEINBACH, PH.D.

Ag Policy & Trade Studies Director Assistant Professor of Economics

Challey Staff



Communications Coordinator



TAYT RINEHART

Business Coordinator

Research



DONGWOOK (JIMMY) KIM, PH.D.

Postdoctoral Researcher

Faculty Fellows



DAVID HONG, PH.D.

Professor of Accounting



FARIZ HUSEYNOV, PH.D.

Professor of Finance



CHAU LE, PH.D.

Assistant Professor of Civil, Construction, and Environmental Engineering



STEFANIE MEYER, PH.D

Director of Academic Programs & Assistant Professor of Practice in Public Health



DRAGAN MILJKOVIC, PH.D.

Professor of Agribusiness and Applied Economics



ANDREA SMITH, J.D.

Senior Lecturer of Business Law



JEREMY STRAUB, PH.D.

Associate Professor of Computer Science



RACHEL THOMPSON, PH.D

Assistant Professor of Accounting

NDSU CHALLEY INSTITUTE FOR GLOBAL INNOVATION AND GROWTH









ndsu.edu/challeyinstitute

NDSU PUBLIC CHOICE PRIVATE ENTERPRISE









ndsu.edu/centers/pcpe