February 4th, 2024

Dear Reviewing Committee,

I wish to apply for Spelman-NBER mentoring program to develop proposals for submission to NSF. Currently, I am a professor of economics at University of North Carolina at Pembroke, a Native American serving university.

My research interests include microeconomic theory, financial economics, financial literacy, behavioral economics, and experimental economics. I am passionate about conducting research relevant to Native Americans and empower local communities. In the last four year, I have led multiple grant projects that are research and community service combined including a NIH funded COVID-19 grant project; and a financial literacy grant project to understand the factors that contribute to low financial literacy levels among Native Americans.

I have a vision to build an Economic Education Center that is tailored to this Native American community. To achieve that vision, I have been doing the groundwork in the areas of community collaboration and financial literacy research on local Native American communities. I have connected with Lumbee Tribe of NC and two local schools, who expressed great interests in the work and services that will be generated by the center. Their willingness to contribute and collaborate affirmed my belief of the value and the impacts this center will bring to our Native American communities. Regarding the research, I have been working on several financial literacy and economic education papers with several colleagues (please see my C.V. for a list of working papers in this area). This program will be essential for me to continue this journey and bring this vision to fruition.

The Dean of School of Business, Dr. Mohamed Djerdjouri, supports this application and will send a letter of support separately. His contact information is mohamed.djerdjouri@uncp.edu and 9107754728.

Thank you for your time! Feel free to contact me if you have any questions.

Shi, Xinyan

Xinyan Shi
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Title: Improving Economic Equity and Resilience through a Native American Economic Education Center (NAEEC)

Principal Investigator: Xinyan Shi, PhD Economics

Keywords: Economic education, economic disparity, economic equity, economic/financial literacy, K-12 education, Native American

Background: According to census data, there are close to 27% of Native Americans living in poverty which is higher than the average rate of 15% for the rest of the country. National Financial Capability Studies show that Native Americans are 1.41 times more likely to have difficulty making ends meet, and 2.5 times more apt to have subprime credit (Urban Institute, Feb. 25, 2021). Research also finds that Native American respondents have the lowest scores on financial literacy assessments and the least confidence in economic and financial decision making (Stoddard, 2019).

Despite of the urgent need to address the economic disparity among this population, there is very few economic education centers that design and offer culture sensitive economic education programs for Native Americans and study the impact of various economic education policies/programs on Native American communities. The issue is partially due to lack of access to Native American population and inadequate Indigenous representation of data in the system. In this project, we will build an Economic Education Center in Robeson County, NC. North Carolina (NC) has the largest Native American population east of the Mississippi River and has the sixth largest Native American population in the nation with more than half living in rural underserved areas in Southeastern North Carolina. Located in the southeastern part of North Carolina, Robeson County has an Indigenous population of 38.4%, and has a high poverty rate, Social Vulnerability Index, unemployment rate, mortality rate, compared with its neighboring counties and the state average. This project is built on the core value of the university where a commitment to serve the community needs and promote economic development is essential.

The mission of the center is to promote prosperity and empowers educators in Native American (NA) communities through economic education, research, and outreach activities.

Objective 1 - Education: The center will develop and deliver culture sensitive economic education programs for k-12 educators, students, and Native American communities to help them become economically literate and financially resilient. The center initiatives include collaborative curriculum development, K-12 educator summer workshop, youth economic education camp. These initiatives will prepare K-12 teachers to teach economics and personal finance lessons and provide ready-to-use lesson plans at their grade levels. Other initiative ideas are such as inviting local bank professionals to visit elementary classes to educate young people on the importance of saving and money management, youth summer camps where presentations and economics games are introduced. The programs will embody the heritage and the culture of Native people from the design to the implementation of education programs.

Objective 2 - Research: The center will conduct the research on economic equity, economic education policies and interventions, and measure the efficacy of our programs. The research findings will be shared with the community through annual Economic Education Symposium where there will be a keynote speaker, presentations on economic education contents and round table discussions on innovative ideas and methods to be implemented in the classroom.

Another mission of the center is to build a collaborative infrastructure to collect economic and financial data of Native Americans in the area, with a long-term goal of an economic dashboard

that is publicly available for anyone who wants to conduct research in areas such as economic disparity, financial wellbeing, economic policy, education, etc. The dashboard will serve as the first step toward building a Native American data repository to address the lack of available Native American specific data and inadequate Indigenous representation of economic/financial literacy related data in the system. Moreover, the center will help connect the scholars from different disciplines, cultivate interdisciplinary research on Indigenous communities, honor the Indigenous culture through the research.

Objective 3 Outreach: The center connects diverse community stakeholders to promote resilience and equity and helps build a sustainable local economy among NA community. Collaborative partnerships are critical in order to build genuine rapport with Indigenous Peoples and build culturally sensitive education programs. Collaborative partners will include, but are not limited to: UNCP Department of Education, Thomas Entrepreneurship Hub, local banks, The Lumbee Tribe of North Carolina (LTNC), a state recognized tribal organization servicing four counties: Robeson, Scotland, Hoke, and Cumberland; American Indian Mothers, Inc., a 501(c)(3) not-for-profit organization serving the education, health, social service, and agriculture and cultural needs of Native Americans and minorities residing in North Carolina; and North Carolina Council on Economic Education (NCCEE).

Impact: The research generated by the project would not only shed light on the efficacy of economic education programs in NC but would also provide valuable insights on the differential impact of economic education policies between Native Americans and other races in North Carolina. Successful implementation of this Native American Economic Education Center is expected to have a long-term impact on the lives of citizens and the overall economy of North Carolina state. Moreover, it will serve as a model where other Native American communities and tribal nations can follow and replicate nationwide.

Reference

Stoddard, C. (2019). Education and Financial Well-Being for Native Americans. *Research Brief.*

CURRICULUM VITAE

Dr. Xinyan Shi
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Educations

University of North Carolina at Chapel Hill: Ph.D. in Economics

- Kent State University: M.A. in Economics
- Tianjin University of Finance and Economics, China: B.A. in Economics

Professional Experiences

- University of North Carolina at Pembroke (July 1st 2023-): Chair, Department of Economics, Marketing, Entrepreneurship and Analytics
- University of North Carolina at Pembroke (Jan. 1st 2023 – June 31st): Interim Chair, Department of Economics and Decision Science
- University of North Carolina at Pembroke (May 2021 –): Professor of Economics
- University of North Carolina at Pembroke (2014 -2021): Associate Professor of Economics
- University of North Carolina at Pembroke (2008 – 2014): Assistant Professor of Economics
- Central Michigan University (2007 - 2008): Visiting Assistant Professor of Economics
- Tianjin Development and Planning Commission, Tianjin, China (July 1999 -May 2000): Project Manager
- Tianjin Yinzhu Import & Export Inc., Tianjin, China (August 1998 - June 1999): Preparing importing and exporting documents, quoting, negotiations.

Research Interests

Public economics, microeconomic theory, game theory, experimental economics, financial economics, behavioral economics

Academic Journal Publications

- Gao, G., & **Shi, X.** (2024). Beliefs, observability and donation revision in charitable giving: evidence from an online experiment. *Behavioural Public Policy*, 1-18.

- **Shi, X.**, Mehng, S., Locklear, A. K., Kang, Z., Locklear, T., Locklear, M. B., ... & Kumar, D. (2023). COVID-19 Perceptions Among North Carolina Native Americans: Using a Qualitative Approach. *North Carolina Medical Journal*, *85*(1).

- **Shi, X.**, & Gan, L. (2023). Equilibrium in Competitive Insurance Markets with Medical Tourism. *Studies in Microeconomics*, *11*(2), 246-269.

- **Shi, X.** and Gao, G. (2021) "Brief Mindfulness Meditation and Individual Contribution to Public Goods" *Economics Bulletin*, vol. 41(3), pp. 1303-1312, 2021.

- Collier, W., and **Shi, X**. "Mindfulness, Meditation and Belief in Free Will/Determinism" by *Psychological Report*, 123(5), 2020.

- Collier, W., and **Shi, X.**, "Relationship between Belief in Determinism/Free Will and Mindfulness", *Journal of Organizational Psychology*, 17(3), 2017, 85-92.

- **Shi; X.** and Riley, S., "Mortgage Choice, House Price Externalities and Default Rate", *Journal of Housing Economics*, 26, 2014, pp. 139-150.

- **Shi, X.** and Maysami, R., "Time-inconsistent Preferences and Reference Dependence", *Briefing Notes in Economics*, 89, 2013.

- Bahhouth, V., Shi, X. and Gan, L., "Firm Characteristics and Stock Returns during 2008 Financial Crash", *Journal of Social Sciences Research*, 2, 2013, pp. 109- 122.

- **Shi, X.,** "Information Disclosure and Vaccination Externalities," *International Journal of Economic Theory*, 9(3), 2013, pp. 229 - 243.

- **Shi, X.,** "Common-Value Auctions with Asymmetrically Informed Bidders and Reserve Price", *International Journal of Economic Theory*, 9(2), 2013, pp. 161-175.

- Bahhouth, V., Maysami, R. and **Shi, X.**, "An Empirical Study of the Financial Characteristics of Firms Showing Positive Price Movements During Declining Markets", *International Journal of Business and Economics Perspectives*, 7(1), 2012, pp. 82 - 92.

- **Shi, X.**, "Momentum and Incentive Intensities", *International Journal of Management Theory and Practices*, 7(1), 47-64, 2006.

Other Publications

- Zhang, X., **Shi, X.**, & Thompson, P. (2022, September). Unsupervised Learning Based Rule Generating System with Temporal Features Extractions Tuned for Tinnitus Retraining Therapy. In *International Symposium on Methodologies for Intelligent Systems* (pp. 438-445). Cham: Springer International Publishing.

- **Shi, X.** and Ariel Isolde, 'Peace Offering', Transformative Power of Art Journal, volume 1, 161-164, Summer 2022

- Locklear, T., Strickland, P., Pilkington, W. F., Hoffler, U., Billings, V., Zhang, T., ..**Shi, X.**,… & Kumar, D. (2021). COVID-19 testing and barriers to vaccine hesitancy in the Lumbee Tribe of North Carolina. *North Carolina Medical Journal*, *82*(6), 406-407.

- Mehng, S. A., **Shi, X.**, & Livengood, B. What motivates an academic coach in an online accelerated course? Using a qualitative approach. In *2021 North American Management Society Conference Proceedings* (p. 146).

Research Grants Awarded

- Improving Financial Literacy among Native American Communities using an Economic Education Program ($62,000), awarded by NC Collaboratory, Principal Investigator, Dec. 1st 2022 – Nov. 31, 2023.

- Building Resilience and Vital Equity (BRAVE) - Increasing COVID-19 Testing in American Indians ($1.8Million), awarded by National Institutes of Health, Principal Investigator, Nov. 13th, 2020 – July 31st, 2022.

- What motivates an academic coach in an online accelerated course? Using a qualitative approach ($10,000), awarded by Instructional Connections, Principal Investigator, Sep. 1st 2020 – August 31st 2021.

- Culture Comparison in Charity Giving ($5000) awarded by UNCP Office of Sponsored Research and Program, Principal Investigator, May 2020 – Oct. 2020.

- "Development of an Economical and Efficient Biodiesel Production Process" ($750,000), funded by U.S. Department of Energy, Co-Investigator, August 2011 - April, 2014.

Research Grants submitted

- Understanding Native Americans by Identifying Trends using Educative Dashboard (UNITED): Community-level COVID-19 Dashboard implementation and impacts in Robeson County, North Carolina ($2,500,000). Grant Agency: National Institute of Health, Principal Investigator, submitted on Nov. 8th, 2021.

Teaching Grants

- Mindfulness, altruism, and personality through the public good game, awarded by UNCP Teaching and Learning Center for teaching excellence ($2500), Principal Investigator, Fall 2019.

- UNC General Administration RFP Grant for distance-delivered professional skills courses ($10,146) with Drs. Richard Barnes and Rebecca Gonzalez, Principal Investigator, March 2015 - June 2015.

Honors and Awards

- Being nominated for Board of Governor Award for Excellence in Teaching, Fall, 2022.

- Being nominated and recipient of Graduate Faculty Mentor Award, Spring 2020.

- Being nominated for UNCP Outstanding Teaching Award, Spring 2016.

- Being nominated for UNCP Adolph Dial Award for Community Service, Spring 2015.

- The recipient of Service - Learning fellowship for 2012 - 2013

- Best Paper Awarded by 2012 International Academy of Business and Public Administration Disciplines (IABPAD)

- Best Student Paper awarded by 2006 Southwest Decision Science Institute

Peer Reviewed Presentations (selected)

- Shi, X., Noman, A., and Li Simonson, I., 'Financial Wellbeing & Financial Capability of Native Americans in Robeson County', NC, Academy of Economics and Finance Conference, Charleson, South Carolina, Feb. 7th – 10th, 2024.

- Ishuan, Li and Shi, X.,, 'A Pilot Course for Improving Financial Literacy in College Students', 2023 Allie Social Science Association meeting, New Orleans, Louisiana, Jan. 5-8, 2023.

- Zhang, X., Kang, Z., Gao, G., and Shi, X, ' Predicting COVID-19 Vaccination Intention: Using A Machine Learning Approach', 2023 Amercian Economic Association Meeting, Jan. 5th - Jan 8th, 2023.

- Shi, X., SiAhn Mehng and Hongwei Song 'Mindfulness and Motivation: A study of Academic Coach in an Online Course Using Self-Determination Theory', 2022 Southeast Institutes for Operations Research and the Management Science, Mytle Beach, SC, Oct. 6-7, 2022

- Simonson, I. L., and Shi, X., 'A Pilot Course for Improving Financial Literacy in College Students', 2022 Annual Conference on Financial Education (virtual), April 25-27.

- Gao, G., Shi, X., Travis Myers, Elena Chen, 'A Field Experiment on Racial Discrimination in the Rental Housing Market of Hawaii', American Economic Association meeting (virtual), January 6-8, 2022.

- Shi, X., Kang, Zhixin, Gao, Guanlin, 'Knowledge, Belief, and Behavior among Native Americans in COVID-19', Southern Economic Association Annual Meeting, November 20-22, 2021, Houston, TX

- Shi, X., and Gao, Guanlin, "Culture Comparison In Charity Giving", 2021 ASSA Annual Meeting, Jan. 3rd - Jan. 5th.

- Shi, X., "A Public Goods Experiment with Demonstration and Mindfulness", Southern Economic Association Annual Meeting, Fort Lauderdale, FL, Nov. 23rd – Nov. 25th, 2019.

- Shi, X., "Mindfulness and Public Good Game", Canadian International Conference on Humanities and Social Sciences, Toronto, Canada, May 19 - May 20, 2018.

- Doyle, J. and Xinyan Shi, "Antecedents of Enjoyment, Approach Intentions, and Helpful Feedback: Website Design and Aspects of Consumer Psychology", Annual Meetings of Southern Management Association, St. Pete Beach, Florida, Oct. 24 - Oct. 28, 2017.

- Shi, X., "Voluntary Contribution to a Public Good and Mindfulness", Annual Meetings of Midwest Economic Association, Cincinnati, OH, March 31 - April 2nd, 2017.

- Collier, W., Shi, X., "Relationship between Belief in Determinism/Free Will and Mindfulness", AIB Southeast 2016, Tampa, FL, Nov. 10-14, 2016.

- Shi, X., "Epidemic Outbreak and Information Disclosure", Midwest Economic Association Annual meetings, Minneapolis, MN, March 27-29, 2015.

- Collier, W., Shi, X., "Examining Mindfulness, Emotion and Belief in Determinism", Southeastern Psychological Association Annual Meeting, March 18 - 21, 2015, Hilton Head, SC.

- Shi, X., "Strategic Interaction between Insurance Company and Consumer in Medical Tourism", Annual Meetings of Southern Economic Association, Atlanta, GA, Nov. 21 - Nov. 24th, 2014.

- Shi, X., "Securitization, House Price Externalities and Default Rate", Annual Meetings of Midwest Economic Association, Evanston, IL, March 21 - March 23, 2014.

- Bahhouth, V., Shi, X., and Gan, L., "Examining the Negative Price Movements in Healthcare Industry during 2008 Financial Crisis", Annual Meetings of Midwest Economic Association, Columbus, OH, March 22 -March 24, 2013.

- Shi, X., and Riley, S., "Adjustable and Fixed Rate Mortgages under Lending Externalities and Asymmetric Information", Annual Meetings of Midwest Economic Association, Evanston, IL, March 30-April 1, 2012.

- Bahhouth, V., Maysami, R. and Shi, X., "An Empirical Study of the Financial Characteristics of Firms Showing Positive Price Movements During Declining Markets", 2012 International Academy of Business and Public Administration Disciplines (IABPAD), Orlando, FL., Jan. 2 - 5, 2012.

- Bahhouth, V., Maysami, R. and Shi, X., "Examining the Features of Resilient Firms", 2011 Annual Meeting of the Southeastern Institute for Operations Research and the Management Sciences (SE InfORMS), Mytle Beach, SC., Oct. 6 -7, 2011.

- Shi, X., and Riley, S., "Regulatory Mechanisms for Pooled-Risk Lending in the Private Mortgage Market "Annual Meetings of Midwest Economic Association, St. Louis, MO., March 17 - 20, 2011.

- Shi, X., "The Value of Commitment m Common-Value Auctions with Asymmetrically Informed Bidders", Annual Meetings of Eastern Economic Association, New York, Feb. 25 -27, 2011.

- Shi, X., "Reserve Prices in Common Value Auctions with Asymmetrically Informed Bidders", Annual Meetings of Midwest Economic Association, Evanston, IL, March 19-21, 2010.

- Shi, X., "Dynamic Auctions with Asymmetric Information and an Application to Outer Continental Shelf (OCS) Auctions", Annual Meetings of Western Economic Association International, Vancouver, Canada, June 29-July 2, 2009.

- Shi, Y., "Momentum and Incentive Intensities", 37th Southwest Decision Science Institute Conference, Oklahoma City, Ok, March 1-4, 2006.

- Shi, Y., "Epidemic Outbreak and Information Disclosure", 2nd International Conference for Social Science, Orlando, FL, Decemeber, 2005.

News Articles

- 'Student Project Lends a Hand to SJP's Outreach Effort', *The Pilot*, March 3rd, 2015

- 'College Class Offers Help to Area Businesses, Nonprofits', *The Pilot*, July 29th,

2014

Professional Activities

- Associate Editor, *The American Economist*, an official publication of Omicron Delta Epsilon, The International Honor Society in Economics, ongoing
- Reviewer for *Economics Bulletin, The American Economist, Journal of Knowledge Economy, Games, Technological and Economic Development of Economy, International Journal of Economic Theory.*
- External Peer Reviewer for Hongwei Song's tenure and promotion, Bellarmine University
- Invited speaker by Tianjin University of Finance and Economics and Tianjin University of Commerce, Summer 2015.
- Invited speaker by Nankai University and Tianjin University of Finance and Economics, Summer 2014.

University Committee Services

- Served on University Adhoc budget committee, Spring 2019 – Spring 2020.
- Serve on PURC council, Fall 2013-Spring 2015 and Fall 2019 – present
- Served on Honors College Dean Search Committee, Fall 2019 - Spring 2020
- Served on Student Success Steering Committee, Spring 2019
- Serve on Graduate School Award Committee, Fall 2016 - present
- Chaired the SACL- Student Affairs and Campus Life Committee, Fall 2017 - ongoing
- Served on the Executive Committee of Senate, Fall 2017 - Spring 2018
- Chaired University Promotion and Tenure committee, Fall 2016 - Spring 2017
- Served on Faculty Senate, Fall 2015 – Spring 2018
- Served on Faculty and Institution Affairs Committee, Fall 2015 - ongoing
- Served on Promotion and Tenure Committee, Fall 2015 - ongoing
- Served on Search Committee for position in IVF, Fall 2015.
- Served on Chancellor Search Committee, Fall 2014- Spring 2015.
- Served on Carnegie Re-Classification Application Task Force, Spring 2014.
- Served on Curriculum Committee, Fall 2012 to Spring 2014.
- Served on Service Learning Committee, Fall 2012 to Spring 2013.
- Served on General Education Subcommittee, Fall 2010 to Spring 2012

School of Business Committee Services (selected)

- ODE advisor and organized ODE speaker event
- Serve on School of Business Dishonest Task Force
- Serve on School of Business Faculty Evaluation Task Force
- Serve on PEC for Dr. Cliff Mensah
- Serve on PEC for Dr. SiAhn Mehng
- Serve on MBA committee in School of Business
- Serve on Online Task Force in School of Business

- Serve on School of Business Engagement Committee
- Serve on SOB impact task force

Community Services

- Serve as a board member on American Indian Mothers, Inc., ongoing
- Serve as a board member for a nonprofit organization called 'Sand Dollar Fund' in Southern Pines area, ongoing.
- Served as a board member and treasure for 'Sandhill Land Trust', Spring 2017-Jan. 2018.
- Serving on Education Committee for Carolina Philharmonic, Fall 2015 – Spring 2016.
- Serving as a member on Board of Adjustment for Village of Whispering Pines, 2015 -2018.
- Serving as treasurer for Mindfulness Community of Pines, Jan. 2014 - Jan. 2015.
- Serving as an alternate member on Board of Adjustment for Village of Whispering Pines, 2013 - 2014.