

COALS Interdisciplinary Inquiry-Based Learning Community

2007-2008

Texas A&M University

Department of Agricultural Economics

“Evaluating the Possible Impacts of State Legislation on
Water Treatment Technology Adoption”

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Summary of Activities

My research this past year has required travel to several places to study and deliver presentations. I recently completed a thesis for the Texas A&M University Undergraduate Research Scholars Program titled “An Investigation of Unintended Consequences of Legislation.” To complete this research, online and library research began in August 2007 and continued with meetings with water, law, and policy experts through August 2008.

On October 5, 2007, I met with Texas water lawyer Glenn Jarvis in McAllen, Texas. This meeting helped to clarify water laws and Amendment 60 of Texas Senate Bill 3. During the same trip, a meeting was also conducted with San Juan Irrigation District Manager Sonny Hinojosa. This meeting helped to clarify the relationship between Valley irrigation districts and local municipalities and the passage of Floor Amendment 60. Additional meetings were held in March 2008 with a state legislative policy expert to further clarify the passage and meaning of the amendment. On April 13, 2008, the Executive Director of the Texas Legislative Council, Milton Rister, delivered a presentation on “How a Bill Becomes a Law in the Texas Legislature”. This provided for further understanding and appreciation of the legislative process¹. These meetings contributed significantly to the success of my research.

I presented a poster entitled "Water Market Distortions Created by Legislation" at the Texas AgriLife Research and Extension Conference on January 7th and 8th in College Station, Texas. At the conference, my poster caught the attention of Texas Representative Dan Gattis, who invited me to present my research findings to members of the Texas Legislature.

¹ This subsequently led to an additional meeting and tour with Mr. Rister at the Texas Legislative Council in Austin on August 19, 2008.

Through the Undergraduate Research Scholars Program, I presented a poster at Student Research Week at Texas A&M University on March 24th through March 28th. My poster was titled “Choices Among Potable Water Technologies and the Potential Effects of Institutional Forces”. I won first place in my taxonomy, a session award, and an Environmental Health and Safety award.

On March 28th, I presented a paper entitled “Investigating Potential Legislation Impact on Technology Adoption” at the Federal Reserve Bank in Dallas, Texas. I was one of over 40 students from throughout the United States to present at this event. The Economics Scholars Program was founded to allow undergraduate students to present their research in economics. It also provided me with the opportunity to increase my knowledge on numerous economic issues.

On April 28th through May 1st, I participated in Posters on the Hill in Washington D.C. The program is prestigious, as I was one of 60 chosen out of 450 nation-wide applicants to participate. The purpose of the program is to give students the opportunity to present their research to members of Congress. It helps to ensure continued funding for undergraduate research projects. While in D.C., I met with several Congressmen and Congressional Staffers. This included Representative Henry Cuellar, who represents my hometown as well as part of the Rio Grande Valley of Texas, for which my research pertained. I also met with Representative Ralph Hall, who is from the Dallas area. Another meeting was held with Senator John Cornyn’s staffers and Representative Chet Edward’s staffers. I am honored to have been able to meet with these people and inform them of my research and current water issues. I hope that this has increased awareness of issues in the Texas Lower Rio Grande Valley and that steps will be taken

to resolve these issues. I presented my poster, entitled “Unintended Consequences of Legislation on the Adoption of Water Treatment Technology”, at the poster session on April 30.

Congressmen, staffers, and University professors attended the poster presentations. This session gave me another chance to present my research and learn about other undergraduate research projects throughout the country. Posters on the Hill was originally created for only science research. I was one of six posters that was accepted as a humanities subject this year.

The Universities Council on Water Resources Annual Conference was held July 22nd through July 24th in Durham, North Carolina. At the conference, I presented a poster and a paper that were both entitled “Rio Grande Valley Water Markets and Legislative Influences”. This conference provided me with the opportunity to present my research findings to professors, industry professionals, and other students in the water field. I was honored to be the only undergraduate student at the conference to give a presentation with more than 100 faculty and graduate students from several disciplines participating in the conference. The presentations by other participants were interesting and increased my knowledge on a wide variety of water-related issues.

I competed in the student paper competition at the American Agricultural Economics Association (AAEA) annual meeting that was held in Orlando, Florida on July 27th through July 29th. I was ranked first in the oral presentation segment of the competition and received second place overall with my paper entitled “Unintended Consequences of Water Legislation”. More than 50 undergraduate students from agricultural economics departments across the U.S. and Canada participated in the Student Section of the AAEA meeting.

I am currently developing a Texas Water Resources Institute (TWRI) Bulletin regarding my research this past year that will be available to stakeholders within my research project and the general public.

Learning Outcomes

The objectives of my research project, which was to identify the impacts of legislative decisions on the Valley potable water market and illustrate any economic distortions that might have been created as a result of these decisions, were successfully completed. The entire research project tremendously increased my research and writing proficiency by my fulfilling the responsibilities of conducting a long-term project and completing an undergraduate thesis. These skills are vital to my success as a future law student and subsequent career as a lawyer. This research project also gave me the opportunity to apply numerous economic, quantitative, and financial concepts that I have learned previously in undergraduate courses. This increased my ability to evaluate markets and policies, while increasing my critical-thinking abilities.

An important concept that I learned through this experience is that it is just as important to be able to communicate and share research with others as it is to conduct the research. The numerous posters and papers that I presented throughout the year increased my oral communication skills and allowed me to share my research findings with others.

Number of Students Impacted

This research project impacted more than 100 students. This includes students in the Department of Agricultural Economics, at Texas A&M University, and at other institutions. In the

department, I work in a research group that consists of five other (mostly graduate) students. Our individual research impacts each member of the group as well as our two faculty advisors and often AgriLife Research and Extension faculty and support staff who are engaged in water resource research and extension activity. This has allowed me to increase my ability to work with others on numerous projects. The department has also showcased my work to other undergraduate students and encouraged them to participate in similar research projects.

Through poster and paper presentations, my project has impacted other students at Texas A&M and across the world. I was able to present and share my research findings at Student Research Week and with the Undergraduate Research Scholars Program at A&M. At the Economics Scholars Program, Posters on the Hill, Universities Council on Water Resources Annual Conference, and the American Agricultural Economics Association annual meeting, I presented my research to students from across the United States, Canada, and the world. I genuinely believe that my research created a positive learning experience and sparked the interest of these students.

Budget Expenditures

My expenses for activities during this undergraduate research project have totaled in excess of \$3,000. Refer to the attached Exhibit 1 for additional details.

Presentations and Publications

A listing of the several presentations and publications associated with my undergraduate research activities are included in Exhibit 2.

Exhibit 1. Budget Expenditures for Shauna Yow, September 2007-August 2008.

Research

Travel to the Valley on October 4th-5th, 2008 to conduct interviews with a legal and water expert and irrigation district manager

Expenses included:

- Rental of car
- Cost of hotel room
- Cost of food

Supplies

Expenses included:

- Printer cartridges for research papers and posters
- Pens, paper, misc.
- Software for graphics design

Presentation of Research

Participated in a poster competition at the Texas AgriLife Extension Conference on January 7-8 in College Station, Texas

Expenses included:

- Cost of poster printing

Participated in a poster competition at Student Research week on March 24-March 28 in College Station, Texas

Expenses included:

- Cost of poster printing

Participated in a presentation on my research at the Economics Scholars Program Conference on March 27-28 in Dallas at the Federal Reserve Bank

Expenses included:

- Rental of car and purchase of gas
- Cost of hotel room
- Cost of food

Participated in Posters on the Hill in Washington, D.C. on April 28-May 1 and met with members of Congress to discuss my research project

Expenses included:

- Purchase of plane ticket
- Cost of hotel room
- Cost of food
- Cost of poster printing

Participated in a poster and paper presentation at the Universities Council on Water Resources Annual Conference on July 21-24 in Durham, North Carolina

Expenses included:

- Purchase of plane ticket
- Cost of hotel room
- Cost of food
- Cost of poster printing

Exhibit 1, Continued.

Participated in a paper competition to present my research at the American Agricultural Economics Association Annual Conference on July 26-30 in Orlando, Florida

Expenses included:

- Purchase of plane ticket
- Cost of hotel room
- Cost of food

Exhibit 2. List of Presentations and Publications for Shauna Yow, September 2007-August 2008.

Posters

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu. "Water Market Distortions Created by Legislation." Texas AgriLife Conference. January 7-8, 2008. College Station, TX.

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu. "Choices Among Potable Water Technologies and the Potential Effects of Institutional Forces." Student Research Week. March 24-28, 2008. College Station, TX. (Session winner, 1st place taxonomy, and Environmental Health and Safety Award)

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu "Unintended Consequences of Legislation on The Adoption of Water Treatment Technology." Posters on the Hill. April 28-May 1, 2008. Washington, D.C.

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu. "Unintended Consequences of Legislation on The Adoption of Water Treatment Technology." AgriLife Presentation to Representative Chet Edwards. July 2, 2008. College Station, TX.

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu. "Rio Grande Valley Water Markets and Legislative Influences." Universities Council on Water Resources. July 22-24, 2008. Durham, NC.

Papers and Presentations

Yow, Shauna R., "Investigating Potential Legislation Impact on Technology Adoption." Federal Reserve Bank Economics Scholars Program. March 28, 2008. Dallas, TX.

Yow, Shauna R., "Water Market Distortions Created by Legislation." Undergraduate Research Scholars Thesis. April 2008. College Station, TX.

Yow, Shauna R., M. Edward Rister, Ronald D. Lacewell, Allen W. Sturdivant, Callie S. Rogers, and Frederick O. Boadu. "Rio Grande Valley Water Markets and Legislative Influences." Universities Council on Water Resources. July 22-24, 2008. Durham, NC.

Yow, Shauna R., "Unintended Consequences of Legislation on Technology Adoption." American Agricultural Economics Association. Undergraduate Student Paper Competition. July 2008. Orlando, FL.