

Comparing the perceptions and socioeconomic impacts of wind farms over time: a case study of



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Thank you: Mayor, Mike Brown; Lisa Young; and WDN

Weatherford, Oklahoma

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Introduction

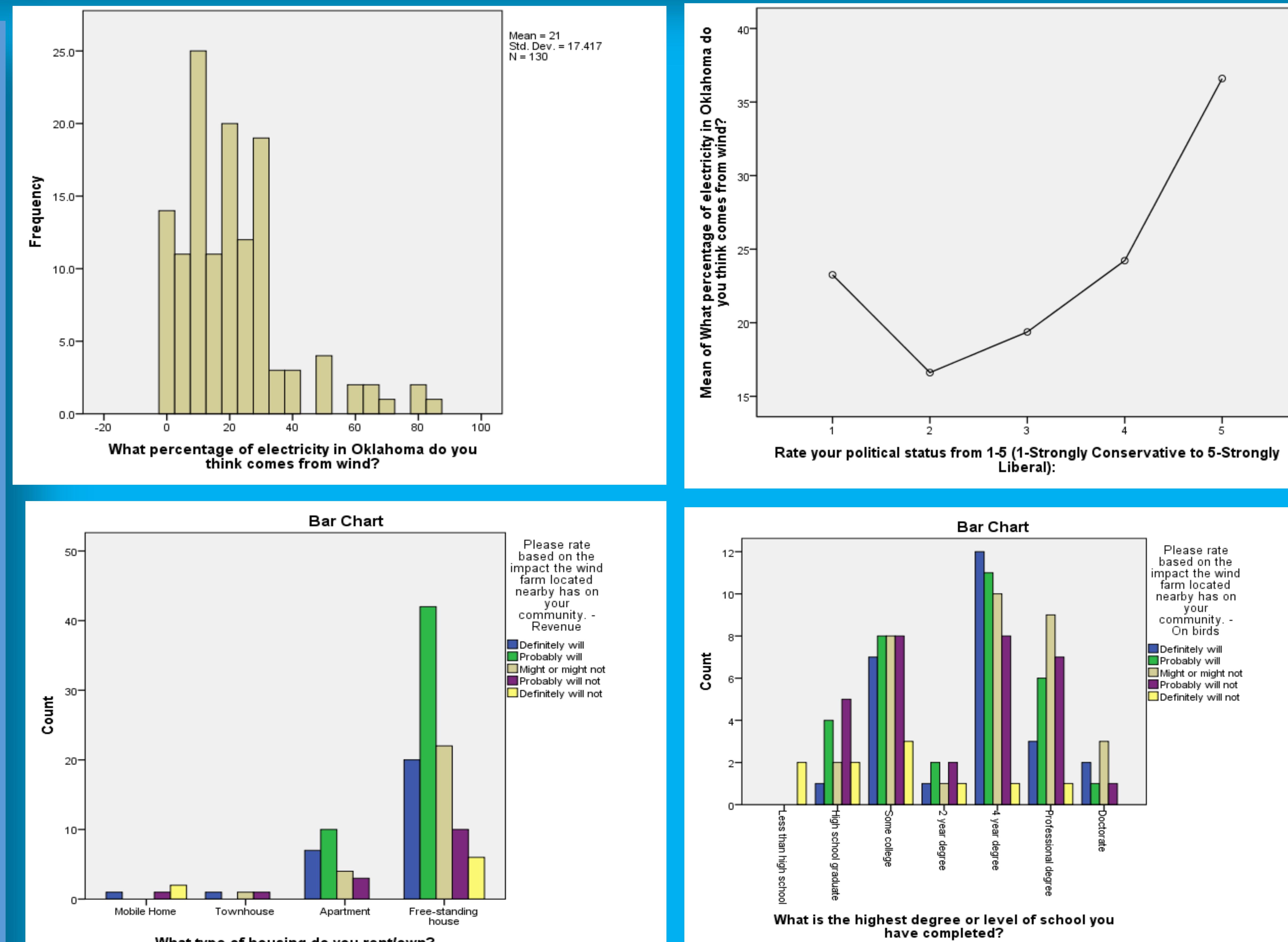
- Wind energy has become one of the leading producers in renewable energy. Research suggests fossil fuels are known to have harmful impacts on the environment, and some think wind energy could potentially be harmful as well. This provides an opportunity to gauge the public's knowledge of wind energy, along with the socioeconomic impacts.
- One of the most commonly critiqued themes known as NIMBY which stands for "not in my back yard" can be attributed to the public's mindset on support or opposition (Krohn and Damborg, 1999).
- It may provide some sort of explanation for why people make decisions to oppose based on perceived personal costs of wind farms exceeding potential benefits to their society. But the main point to consider is that NIMBY doesn't explain why people who oppose view impacts of the wind farms as too costly or why the costs exceed the benefits (Bidwell, 2013).
- Results from Swofford and Slattery's (2010) study suggest attitudes are mostly based off of environmental issues as well as the economic benefits.
- The conclusions will expectantly explain the perceptions people have today on the Weatherford wind farm and show any differences between the Greene and Giesken case study and this study.



Source: TravelOK.com

Methods

- This project will use a mixed-methods approach that will consist of three parts: a survey, three personal interviews, and economic modeling. Using this approach, it will look to investigate how the presence of a large wind farm nearby affects the public's attitude in the city of Weatherford, Oklahoma.
- Survey:** 18 questions ranging from demographics, knowledge, and ratings
- Interviews:** semi-structured interviews, asking each individual 10 questions
- JEDI Model:** Economic Analysis



Results

- Interviews:** After I had interviewed each individual and transcribed them, I came up with three themes I felt summarized each of their responses. Themes include:
 - Energy that's useful and efficient:**
 - Mayor, Mike Brown:** "Well I think it's good I think its just you got to have multiple sources. I think about western Oklahoma within windmills you know here for the last 100 years. So people understand the concept they understand how it works. One thing about Weatherford if you have ever been here, the wind blows here about every day."
 - Public Service Company, Mike Hickson:** "I think the positives which several are, is one it's a clean source of energy. Two it's a pretty consistent source of energy, meaning we've got an abundant supply of wind and it's windy a good portion of the year. Also, it's one of the least expensive forms of energy that we can provide."
 - Great source of revenue/\$ opportunities:**
 - Mike Brown:** "Yeah, you know I think back when they did ours most of the land owners they received \$4,000 a year per turbine."
 - Mike Hickson:** "With wind energy there is no charge, no extra fuel charge, so the wind is I don't want to use the term free, but there is no charge for the wind, an additional charge ya know. Right, which is why it is one of the most economical forms of electricity that we can provide."
 - Dana Ratcliff:** "This next era energy are the people that have these around us and they do pay the city \$25,000 dollars each year, we have a contract with them. And that has allowed us to do some capital projects with that money and part of that money goes to 4-H like \$500 and \$500 goes to FFA, and \$1000 dollars goes to the Chamber for their dues. And we get to keep the rest of it and use on whatever we want to."
 - Tourism:**
 - Mike Brown:** "We have a little museum we have a couple museums here in town. One of the museums does wind turbine tours you know so if people want to come they take them out there you know they got a video to show them explaining how they work."
 - Dana Ratcliff:** "And then probably tourists stop because of it. Because they want to see the blade and we don't ever advertise that blade or market that blade or anything. I think it's because it's on route 66 and they see it and want to stop."

Conclusions

- Generally speaking this study found that the public showed they have little knowledge about wind energy. However the survey results did present several relationships that help provide insight on the public's attitude towards wind energy.
- The general vibe seemed to be more positive than negative. In comparison, the Green and Giesken (2013) study agrees suggesting there is no doubt Weatherford has been positively impacted from wind farm development to present day.
- I found that the economic impacts have changed slightly since the wind farm had been developed suggesting there is still some benefit on the city of Weatherford.
- If I could go back and do things a little differently I would have revised the questions on my survey to eliminate some issues. As far as the interviews, it would've been nice to be able to go interview them in person per recording purposes and to be able to gauge their emotions a little better.
- I believe further research should be encouraged as the development for more wind farms in Oklahoma is on the rise. I also believe there is still just so much to learn about wind energy and I think this provides a great stepping stone into numerous research opportunities going forward.

References

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