

Analyzing Environmental Spending Trends: A Comparison Across Political Party Preference and Awareness

Intro to Data Analytics

DATA220L-112

EcoTrackers



Marist College

School of Computer Science and Mathematics

Submitted To:

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Analyzing Environmental Spending Trends: A Comparison Across Political Party Preference and Awareness

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Project Report of Analyzing Environmental Spending Trends: A Comparison Across Political Party Preference and Awareness

Team Name

EcoTrackers

Team Members

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|-----------------------|--|
| 1. Tristan Wistuba | Tristan.Wistuba1@marist.edu (Team Head) |
| 2. Victoria Iuzzolino | Victoria.Iuzzolino1@marist.edu (Team Member) |
| 3. Emily Liguori | Emily.Liguori1@marist.edu (Team Member) |
| 4. Megan McGowan | Megan.Mcgowan1@marist.edu (Team Member) |
| 5. Carina Pascucci | Carina.Pascucci1@marist.edu (Team Member) |

Description of Team Members

1. Tristan Wistuba

Applied mathematics and accounting major. Member of the men's Crew team. I have wanted to learn more about the data world to round out my experiences and continue to find new challenges. I wanted to work with my current team members due to their willingness to learn and attack interesting challenges as well as learning to work within a group with varying levels of intensity regarding deadlines and challenging problems. I also became the team head because I made the GitHub repository in advance. I am excited to work with my group.

2. Victoria Iuzzolino

I am a psychology major and a biology minor. I hold various leadership positions in Marist clubs and organizations and am involved in campus research, focusing on genes' impact on ER lipid homeostasis. I did not know my current team members beforehand, but wanted to work with them because I saw an opportunity to collaborate with individuals who bring diverse perspectives, knowledge, and skills! Since Tristan created the GitHub repository, he was chosen as the team head.

3. Emily Liguori

I am an Environmental Science major with a minor in Economics. I am the Marist Student Government Association Vice President of Sustainability, the Vice President of Marist Outing Club, and am a member of the Marist Sustainability Action Planning Committee. I conduct independent research and am a team captain of the Marist Women's Rowing Team. I wanted to work with my teammates because they are driven, hardworking, and kind.

4. Megan McGowan

I am an Environmental Science major with a minor in Mathematics. I am a member of the women's rowing team, the National Society of Leadership and Success, and the Ladies Empowering Athletics Program. I chose to work with my current team because we are all dedicated individuals who can contribute with different experiences and backgrounds.

5. Carina Pascucci

I am a biology and environmental science double major with minors in political science and global studies. I am a coxswain on the women's rowing team and a member of the honors program. I've spent the past two semesters conducting independent environmentally focused research so a topic involving environmental spending is interesting to me. I chose to work with my team because we share similar interests and share a desire to succeed in the class.

Project Objective and Research Question

Project Objective

The project objective is to analyze environmental spending data and examine how it correlates with political party affiliation. This includes identifying trends and patterns in data provided by the General Social Survey (GSS) as well as exploring differences in spending across political parties to gain a better understanding of this potential relationship. Specifically, we will incorporate variables such as voting behavior in the 2020 U.S. presidential election (PRES20), frequency of newspaper readings (NEWS), opinions on government spending for parks and recreation (NATPARK), and views on spending for alternative energy sources (NATENERGY).

Research Question

Does political party affiliation influence environmental spending priorities and preferences and what role do voting behavior, consumption of news, opinions on spending for parks and recreational services, and views on spending for alternative energy sources play in shaping these spending prerogatives?

Details:

1. Subset of GSS Data:

- Political party affiliation
- Environmental spending

2. Task to Investigate:

- Exploring whether there is a relationship between political party preference/political awareness and environmental spending

3. Four Related Variables:

- PRES20 1.000 Did you vote for Joe Biden or Donald Trump?
- NEWS 1.000 How often do you read the newspaper--every day, a few times a week, once a week, less than once a week, or never?
- NATPARK 1.000 (... are we spending too much, too little, or the right amount on Parks and recreation
- NATENRGY 1.000 (... are we spending too much, too little, or about the right amount on) Developing alternative energy sources

Review the Related Work

Samples

1. Pacca, L., Curzi, D., Rausser, G., & Olper, A. (2021). The Role of Party Affiliation, Lobbying, and Electoral Incentives in Decentralized US State Support of the Environment. *Journal of the Association of Environmental and Resource Economists*, 8(3), 617–653. <https://doi.org/10.1086/711583>

Positives: States with abundant oil or high-polluting sectors tend to contribute more economically. Governors receiving higher contributions are associated with lower expenditures on environmental conservation efforts. Lobbying, specifically polluting lobbies may play a factor in a governor's decision-making. When polluting lobbies are stronger, environmentalists may become more active through the persuasion of politicians and the voting public. Results suggest that environmental expenditures increase by about 10% under Democratic governors compared to Republican ones (Pacca et al., 2021).

Negatives: This article focuses on governors, which may limit variability due to a lack of data from other political systems and government organizations (Pacca et al., 2021).

2. Cruz, S. M. (2017). The relationships of political ideology and party affiliation with environmental concern: A meta-analysis. *Journal of Environmental Psychology*, 53, 81–91. <https://doi.org/10.1016/j.jenvp.2017.06.010>
- 3.

Positives: Political party affiliation is demonstrated to have had a statistically significant positive relationship with environmental concerns. Political ideology has an even stronger relationship (Cruz, 2017).

Negatives: Studies were conducted in different periods so different political movements, shifts, or environmental concerns could have changed, which may cause differences, a lack of trends/patterns, or unreliability in data (Cruz, 2017).

4. McCright, A. M., Xiao, C., & Dunlap, R. E. (2014). Political polarization on support for government spending on environmental protection in the USA, 1974–2012. *Social Science Research*, 48, 251–260. <https://doi.org/10.1016/j.ssresearch.2014.06.008>

Positives: Provides history into the issue of polarization between the two parties and how they view environmental spending. Laying a strong basis for what each party believes in and what they want to spend money on (McCright et al., 2014).

Negatives: Provides important background information on the topic and why and how each political party goes through their thought process on economic spending however it only references our governmental system from pre-2012 so it would be before the Paris Agreement which had a massive change on our governmental views with regards to economic spending (McCright et al., 2014).

The Merits of Your Project

Based on the previous step, this project provides different advantages since it builds upon previously existing research. These advantages include:

1. A comprehensive understanding of political party affiliation and political influence on environmental spending
2. Additional factors, such as lobbying, may influence environmental spending
3. Extends beyond a presidential or governor's role, including policymakers, legislators, and additional levels of government
4. Tracking of historical trends and patterns in environmental spending
5. Help to shape public policy and increase advocacy

An end user should report this project because it will provide data-driven results of political party affiliations on environmental spending. This project will address limitations to previous studies, such as the Pacca et al. (2021) study, which focuses solely on a governor's role in environmental spending. Additionally, this project can inform legislators, advocacy groups, etc. on different environmental efforts and initiatives, further help citizens to have a better understanding of environmental spending and concerns on a political scale, and increase public awareness and decision-making.

GitHub Repository Address

Github link: [Data-220-112-Analyzing-environmental-spending-trends-Ecotrackers](https://github.com/Data-220-112-Analyzing-environmental-spending-trends-Ecotrackers)

References

- Cruz, S. M. (2017). The relationships of political ideology and party affiliation with environmental concern: A meta-analysis. *Journal of Environmental Psychology*, 53, 81–91. <https://doi.org/10.1016/j.jenvp.2017.06.010>
- Pacca, L., Curzi, D., Rausser, G., & Olper, A. (2021). The role of party affiliation, lobbying, and electoral incentives in decentralized US state support of the environment. *Journal of the Association of Environmental and Resource Economists*, 8(3), 617–653. <https://doi.org/10.1086/711583>
- McCright, A. M., Xiao, C., & Dunlap, R. E. (2014). Political polarization on support for government spending on environmental protection in the USA, 1974–2012. *Social Science Research*, 48, 251–260. <https://doi.org/10.1016/j.ssresearch.2014.06.008>