Investigating the Relationship Between Social and Sustainable Bonds and Homelessness

CS & Business Admin, Joshua Spisak
Mentored by Brian Gibbons

College of Business | College of Engineering

Oregon State University

Understanding Homelessness

o Homelessness: Complex issue worldwide, lacking adequate housing

o Factors: Affordability, poverty, unemployment, mental health, substance abuse, family breakdown

o Challenges: Limited access to healthcare, education, employment

o Addressing homelessness: Collaborative approach involving government, nonprofits, communities

Exploring Social and Sustainable Bonds

Social Bonds

o Funds projects with positive social outcomes (e.g., affordable housing, community development)

Sustainable Bonds

o Finance environmentally sustainable projects (e.g., climate change, sustainable infrastructure)

Exploring Social and Sustainable Bonds

o Issued by governments, corporations, and entities aligning investments with social and environmental goals.

o Growing trend in responsible finance, promoting positive change through impact investing.

o Aim to address societal challenges, including homelessness, through measurable social and environmental benefits.

Why this Project?

o As the founder of a nonprofit dedicated to fighting homelessness, I wanted to see what we were already doing and if it was helping
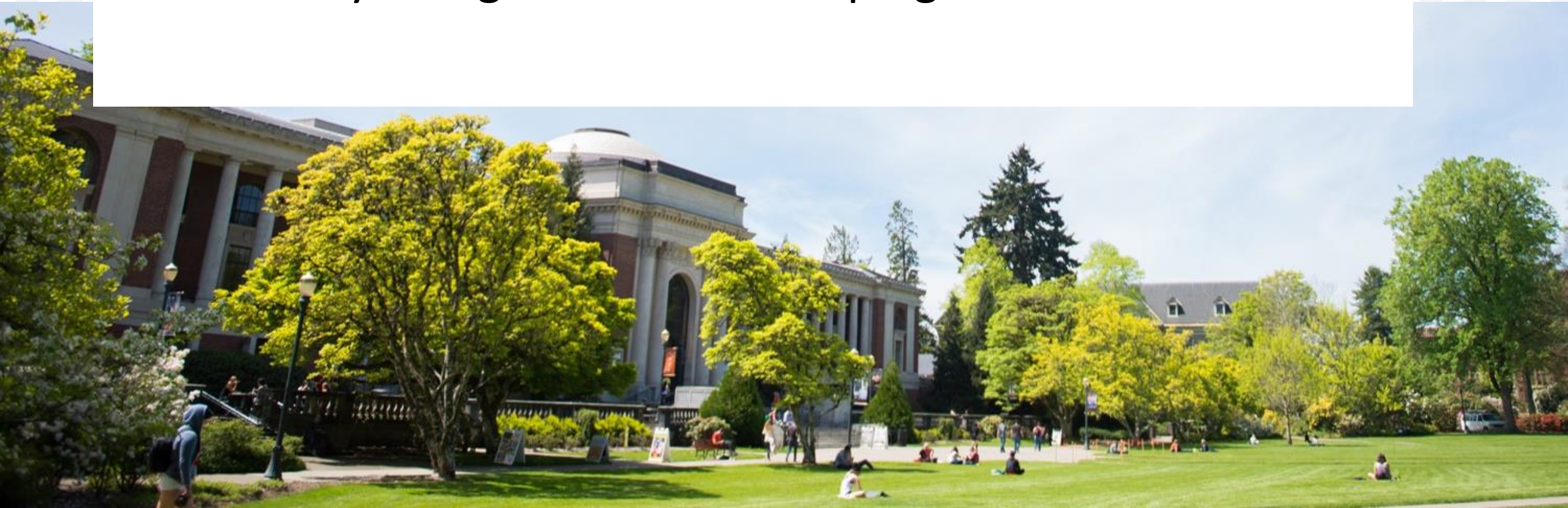
Data Collection

Bond Data

- 270,000+ bond issuances
  - State
  - Year
  - Total Offering Amount
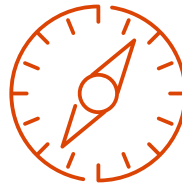 - Social, Sustainable, or neither

Homeless Data

- Housing and Urban Development (HUD) point-in-time (PIT) count

Population Data

- All 50 states from US Census Bureau

Analysis: Statistical Regressions in Python

Homeless Data as Independent Variable *Dependent Variables have a 1 year lag

Sustainable Bonds

- Homelessness per capita vs. sustainable bond issuance per capita
- 1.282e-05 coefficient
- 0.060 p-value

- % change in homelessness vs. sustainable bond issuance per capita
- 0.0012 coefficient
- 0.232 p-value `Insignificant`

Social Bonds

- Homelessness per capita vs. social bond issuance per capita
- -2.202e-07 coefficient
- 0.965 p-value `Insignificant`

- % change in homelessness vs. social bond issuance per capita
- 0.0018 coefficient
- 0.012 p-value

Bond Data as Independent Variable
*Dependent Variables have a 1 year lag

Sustainable Bonds

o Sustainable bond issuance per capita vs. homelessness per capita

o 3610.4110 coefficient

o 0.084 p-value

o Sustainable bond issuance per capita vs. % change in homelessness

o -14.5239 coefficient

o 0.716 p-value **Insignificant**

Social Bonds

o Social bond issuance per capita vs. homelessness per capita

o -4801.5817 coefficient

o 0.486 p-value **Insignificant**

o Social bond issuance per capita vs. % change in homelessness

o -125.5505 coefficient

o 0.350 p-value **Insignificant**

Conclusion

There is significant evidence that a relationship exists between the past year's homelessness per capita and sustainable bond issuance.

There is evidence of a relationship between the past year's social issuance per capita and the percent change in homelessness.

Future Research

Does the issuance of social and sustainable bonds have a significant impact on reducing homelessness rates?

Are there specific characteristics or factors associated with social and sustainable bond issuances that lead to a stronger correlation with homelessness rates?

References

Bureau, U. C. (2021, November 4). *State population totals and components of change: 2010-2019*. Census.gov. https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-total.html

Bureau, U. C. (2023, June 13). *State population totals and components of change: 2020-2022*. Census.gov. https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html

Urban Development, H. and. (2023, February). *Pit and HIC data since 2007 - HUD Exchange*. PIT and HIC Data Since 2007. https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/

THANK YOU

Especially for the support and
guidance of my mentor, Brian Gibbons!

Oregon State
University