



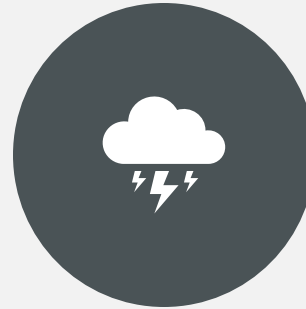
THE LABOR MARKET IMPACTS OF THE 2020 CZU LIGHTNING COMPLEX FIRE ON INDIGENOUS PEOPLES IN NORTHERN CALIFORNIA

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INTRODUCTION



WE ARE GOING TO STUDY HOW **WILDFIRE DISASTERS IMPACT EMPLOYMENT, INCOME, AND LABOR MOBILITY**, WITH A FOCUS ON **INDIGENOUS PEOPLES** IN COASTAL AND INLAND CALIFORNIA.



OUR CASE IS THE **CZU LIGHTNING COMPLEX FIRE**, WHICH BEGAN IN AUGUST 2020 AND BURNED OVER 86,000 ACRES ACROSS SANTA CRUZ AND SAN MATEO COUNTIES, AFFECTING MULTIPLE TRIBAL LANDS AND CULTURALLY SIGNIFICANT AREAS.


BACKGROUND & RESEARCH QUESTIONS

Context:

- 1,490 buildings destroyed
- 77,000 people evacuated.

Research Questions:

- How did the CZU Lightning Complex Fire affect **labor outcomes** for Indigenous residents in affected counties?
- Were impacts different across **racial groups**, especially in terms of income loss and unemployment?
- What sectors were most affected, and how did **recovery vary** between groups?



WHY IT MATTERS & PRIOR WORK

- Climate disasters disproportionately impact low-income and marginalized populations, yet few studies analyze labor impacts on Indigenous people.
- Understanding these effects can guide targeted recovery programs and resilience planning.

Prior work

- Sheldon & Zhan (2022): Low-income households migrate less post-disaster.
- Gallagher et al. (2022): Disaster aid increases job retention and business survival.
- Coulombe & Rao (2023), BLS (2023): Wildfires affect employment growth; impacts vary by sector and geography.
- Borgschulte et al. (2022): Wildfire smoke reduces earnings; Black and older workers hit hardest.

No studies examine labor outcomes for Indigenous communities post-wildfire.

DATA AND METHODOLOGY

Data Sources:

- **ACS Public Use Microdata (PUMS)** employment, income, race.

Methodology:

- **Difference-in-Differences (DiD)** model:

- $$Y_{it} = \alpha + \beta_1 Post_t + \beta_2 Treated_i + \delta(Post_t \times Treated_i) + X'_{it}\gamma + \epsilon_{it}$$

CONCERNS, CONTRIBUTIONS, AND NEXT STEPS

Concerns:

- Finding control groups to prevent spillover for DiD model
- Low sample size of indigenous individuals in data

Contributions:

- Understanding the effect of natural disasters on labor outcomes for the Indigenous
- Guide policy for intervention to improve labor outcomes of different racial groups

Next Steps:

- Formally design the DiD model and validate its assumptions

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