Natural Disaster Losses and ACA Marketplace Enrollment at the County Level

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ABSTRACT

Natural disasters disrupt employment and income, increasing the risk of losing employer-sponsored health insurance. The Affordable Care Act (ACA) Marketplace provides an alternative source of coverage during economic instability. This study examined whether disaster-related financial losses were associated with increased Marketplace enrollment in the following year. County-level disaster loss data from FEMA were merged with ACA enrollment data from CMS. Disaster losses were initially associated with increased enrollment; however, after controlling for unemployment, disaster losses were no longer significant, while unemployment remained strongly predictive. These findings suggest employment disruption—not disaster damage alone—is the primary driver of increased Marketplace enrollment following disasters.

BACKGROUND

Natural disasters disrupt employment, income, and access to healthcare, increasing insurance vulnerability. The ACA Marketplace serves as a safety net for individuals who lose employer-sponsored coverage. While disasters are known to have economic consequences, less is known about their effect on health insurance enrollment.

RESEARCH QUESTION & HYPOTHESIS

Are higher disaster-related losses associated with increased ACA Marketplace enrollment in the following year?

H1: Counties experiencing greater disaster losses will have increased Marketplace enrollment due to economic and health-related disruptions.

DATA

- FEMA county-level disaster loss data
- CMS county-level ACA Marketplace enrollment
- County unemployment rates

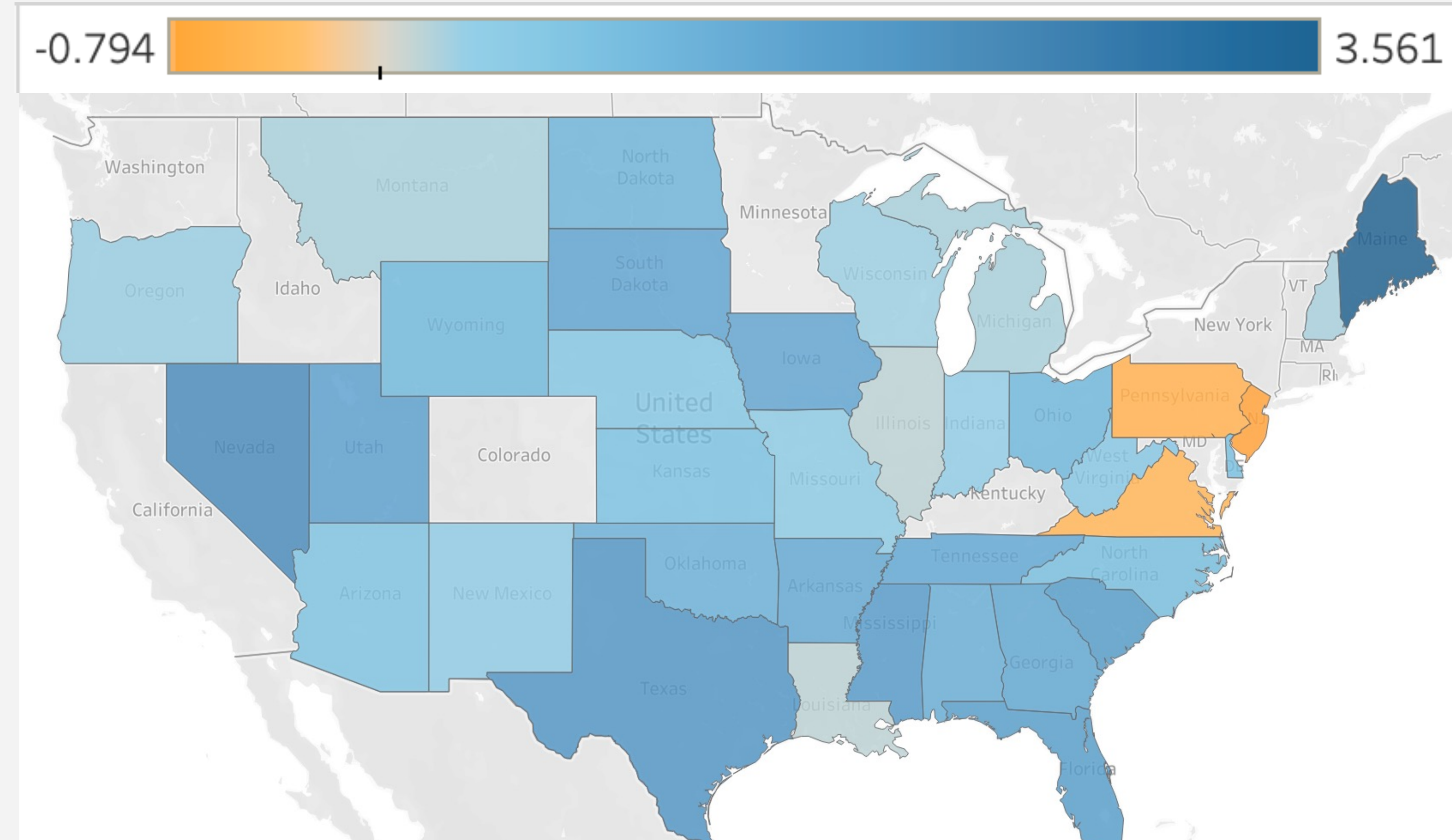

Figure 2.1: % change in ACA enrollment by state in 2015

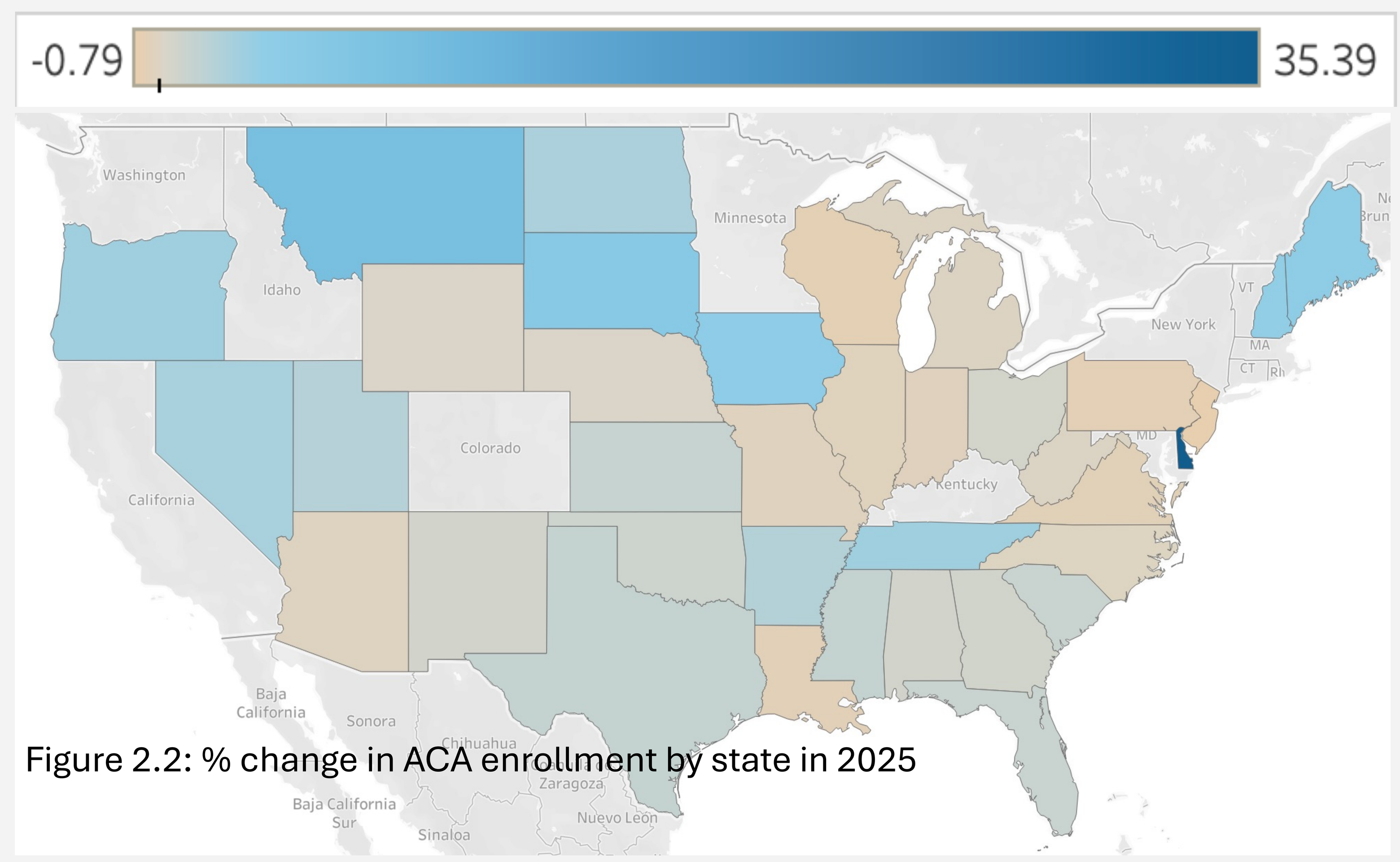

Figure 2.2: % change in ACA enrollment by state in 2025

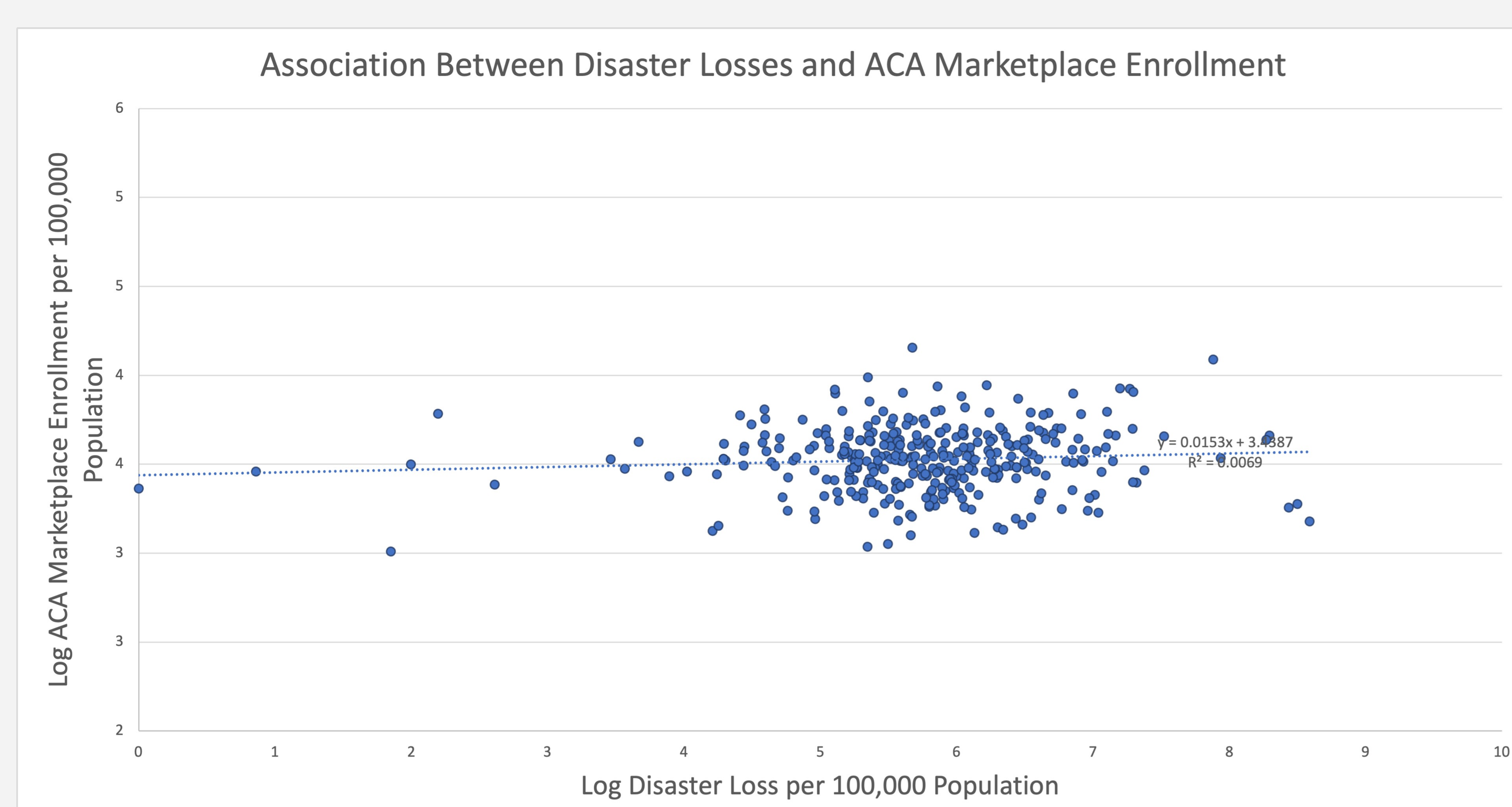

Figure 1. Relationship between disaster losses and ACA Marketplace enrollment per capita, United States, 2015–2023.
Each point represents a state-year observation. Log-transformed values are shown. Disaster losses explain very little variation in enrollment (R^2 = 0.0069), indicating disaster severity alone is not a strong predictor of Marketplace enrollment.

METHODOLOGY

- Merged county-level disaster, enrollment, and economic data
- Measured disaster losses and subsequent-year enrollment changes
- Conducted regression analysis in Stata
- Controlled for unemployment and county-level differences

KEY FINDINGS

- Disaster losses were initially associated with increased Marketplace enrollment
- After controlling for unemployment, disaster losses were no longer significant
- Unemployment was the strongest predictor of increased enrollment
- Suggests employment disruption is the primary mechanism linking disasters and insurance enrollment

IMPLICATIONS

The ACA Marketplace plays an important safety net role following disaster-related employment disruption. Policies targeting individuals experiencing job loss after disasters may help maintain insurance coverage.

LIMITATIONS

- County-level analysis cannot capture individual behavior
- Results may be influenced by unmeasured policy and socioeconomic factors
- Study focuses on short-term enrollment changes

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