A discussion on: "Extreme Wildfires, Distant Air Pollution, and Household Financial Health" and "The Opioid Epidemic and Consumer Credit Supply: Evidence from Credit Cards"

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Overview of the papers

- Two interesting papers documenting the credit market effects of understudied health shocks (fires and the opioid epidemic)

- Methodologically, these papers showcase the value (and difficulty) of bringing together information on these health shocks with multiple administrative records on the financial behavior of households

- The papers provide a very detailed description of the behavior of households in the credit market in the aftermath of these shocks

# Extreme Wildfires, Distant Air Pollution, and Household Financial Health

- Very nice paper!
- Impressive integration of many data sources
- Highlights both the direct effect of extreme fires on the credit market and their indirect effect through worsening air quality
- The indirect effect is important because, while smaller than the direct effect, it affects far more people
- Extreme Fire affecting more than 1,000 structures or (3% of all fires)
- Most of the evidence comes from the 2018 *Camp Fire* in California

Direct effects of extreme fires (continued)

- From the CCP and CoreLogic: Increased out-migration, lower house prices

- From the CCP: Increases in delinquencies: mortgage, credit cards, personal loan

- From the Y14: credit card repayment in excess of spending

- These "results appear puzzling at face value," but the authors argue that increased delinquencies are concentrated among renters, while homeowners experience a decline in balances perhaps driven by insurance payouts

- My previous work on the effects of Hurricane Harvey (del Valle et al. JFQA, 2024) finds a very similar pattern of results on the Y14

- Could these results be alternatively explained by worst-off households observed in the CCP falling into delinquency while better-off households observed in Y14 successfully taking advantage of low-cost credit offers, insurance payouts, and SBA loans available to them?

Under the hood

- Identification reminds me of Gallagher et al. JAERE 2022

- What is driving these boundaries
  - Meteorological conditions
  - Geography – infrastructure
  - Self-protection investments
  - Fire suppression (CALFIRE)

- The paper could be even more persuasive by convincing the reader that these groups are comparable before the fire
- This a good setting for a spatial RD
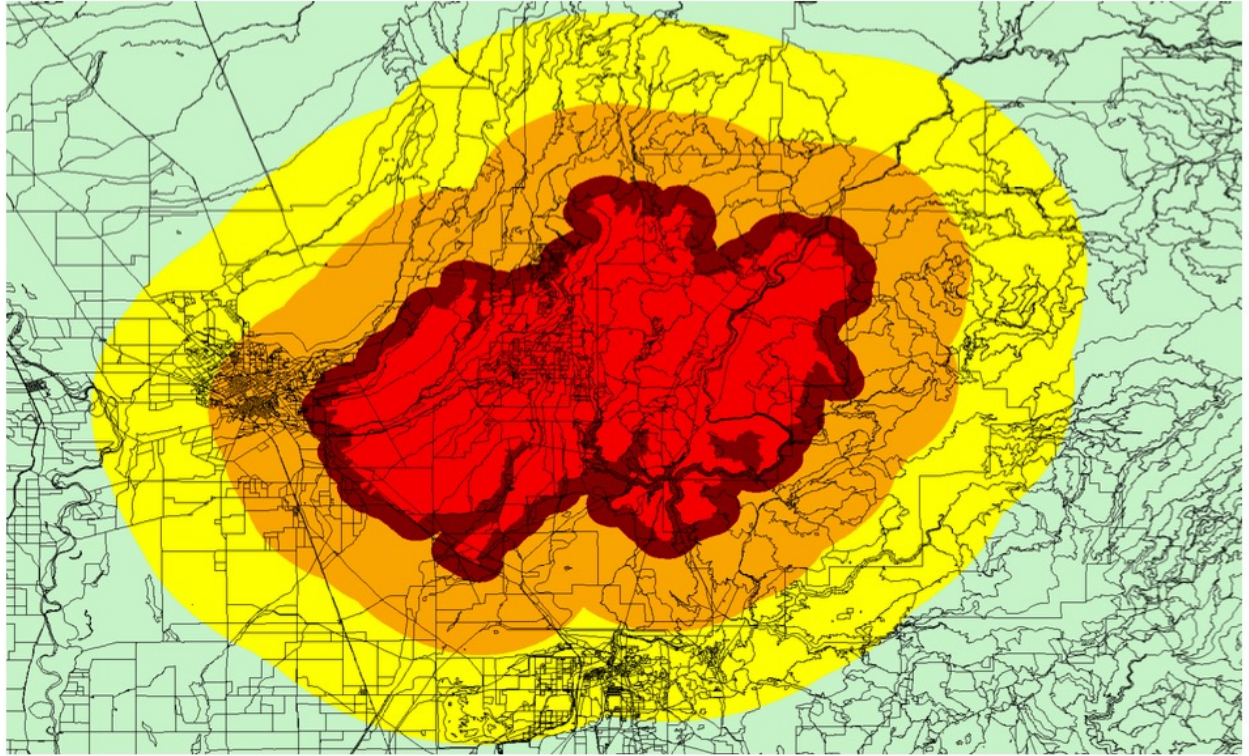
Under the hood (continued)

- SUTVA violations are also a concern. Controls may also be directly affected by the fire (e.g., the work in the treated area)

- The results and methods conflict at some level with each other. Migration is shown to be important, but the financial health results come from a sample of those who remain
  - Could the result be driven by sample selection?
  - Fortunately, there is no need for bounding arguments. The Y14 and CCP track those that move

Indirect effects of extreme fires

- Smoke from fires leads to excess air pollution
- Effects of excess air pollution attributable to fires
  - Worst financial outcomes. Increased spending, reduced repayment, increased balances, increased delinquency
- Increase health expenditure channel
  - Evidence from Google trends on health concerns
  - Evidence from emergency rooms
- Income channel
  - No evidence presented (seems worth exploring)
- Back of the envelope suggests large cost for New Yorkers from Canadian fires

Under the hood (continued)

- The results come from comparisons between households exposed to air pollution levels in the top quartile and those in the bottom quartile before and after the Camp Fire
  - Why throw away all this information? I would be even more convinced by a clear dose-response finding. Perfect application for the methods of Callaway et al. (NBER 2024)
- Why limit the analysis to between 5 to 30 miles from the fire? The motivation in the intro was that New York could be affected by smoke from Canadian fires 2,000 miles away
- I'm concerned with bad controls (current credit score and limit)
- The back of the envelope needs some clarification. Reduced exposure should depend not only on the duration of exposure but also on the distance from the fire and the meteorological conditions. I'm not ready to buy that Canadian fires led to billions in additional credit card debt

Under the hood (continued)

- Spatial dependence is a problem in this setting. Conley errors may provide a way forward

- Do we know how fires are affecting credit conditions? Effect on prices, terms, etc. The Y14 contains all this information

- Do we know how fires are affecting the supply of credit? The Mintel data could be useful (as I have learned from the next paper)

- Readability could be improved
  - Order of tables and description in manuscript
  - Enough decimals on tables to read the results
  - First stage IV results missing

The Opioid Epidemic and Consumer Credit Supply: Evidence from Credit Cards

A very nice and *comprehensive* paper on an understudied phenomenon

- This paper is many papers in one
  - The effect of the opioid epidemic on:
    - credit supply extensive and intensive margin (as measured from credit card mail offers)
    - credit supply for subgroups (minorities, low-income, younger consumers)
    - consumer credit performance
    - banks' consumer loan portfolio
    - consumer spending
  - The Effects of 6 opioid policies on prescriptions, deaths, and credit supply

- This paper uses several empirical strategies (IV, Fixed effects, PSM) and information from many sources (Mintel, Y14, regulatory call reports data…). Again, impressive integration of data sources

Overview

- Carefully done, clever instrument (s), many robustness checks

- The key idea is that the opioid epidemic leads to losses in income and income volatility, so we expect banks to curtail credit in response. Since banks have a hard time teasing out opioid abusers, they use market-level measures of the opioid crisis in their credit models. This response from banks could create negative social externalities

- I don't think the theory section on opioid abuse and loan repayment choices is needed to motivate the analysis.

- I would like to know if the regulatory framework allows banks to use this information for risk rating. Do banks use this type of information in practice?

- Confidential CDC data on death rates seems difficult to use for risk rating. Would excess mortality not be a simpler and more comprehensive market-level measure of the crisis?

Some questions and clarifications

- In any case, I'm almost ready to buy the paper's main results, that is:
    1. banks contracted credit *supply* to consumers in counties heavily exposed to opioid abuse.
    2. This contraction is concentrated among minorities, low-income consumers, and younger individuals.
- But…, is credit supply really being measured? Are the credit mail offers binding? It would be nice to see what is happening to originations. This can be done with the Y14
- How do we distinguish banks doing risk management from low-risk types migrating away from counties heavily affected by the opioid epidemic? This can also be done with the Y14

Some questions and clarifications (continued)

- Expanding on the previous point, there are 3,143 counties in the US, but only 4,000 households were surveyed in the credit mailing dataset (Mintel). It is challenging to work with such a dataset. In particular
  - I'm concerned about sample selection driving the results. Is the response rate to Mintel related to the opioid epidemic?
  - It would be helpful for readers, especially in the sub-group analysis, to know the number of observations available for estimation
  - At the county level, I would expect this dataset to produce a very unbalanced panel. It would be worth discussing how this feature of the data affects the analysis of the effectiveness of opioid policies

Some questions and clarifications (continued)

- Very clever IV. I buy the results, but It would be helpful to be explicit about the assumption required to recover the LATE and to characterize the compliers

- The IV is convincing. Why include controls at all? the controls vary between datasets and specifications, making it hard for readers to keep track of what is in the model

- Many of the controls could be considered outcomes of opioid abuse. I'm concerned about bad controls

- The results on higher rates of non-performing loans (section on bank consumer loan portfolio performance) are important, but it is not clear to me why the proportion of bank branches in the county is a good measure of exposure. Would we not expect banks without a physical presence in a county to compete for customers through other means, such as through mailed offers?

Some questions and clarifications (continued)

- To interpret the county consumption results, it would be helpful to know, on average, what fraction of overall consumption corresponds to spending on credit cards

- To put everything together, it would be nice to have a back-of-the-envelope estimate of the overall contraction in credit supply

- Other more technical stuff
  - PSM increases imbalance. If you want to reduce modeled dependence, I would encourage the authors to use coarsened matching instead
  - I'm also concerned with inference. The Standard errors are described as multiway by marketing-camping level and year-month, but are these dimensions not nested? Why not cluster at the county level?

- There is great readability improvement between the November and February versions