

# Discussion of 'Temperature, Adaptation, and Local Industry Concentration'

Paper by Ponticelli, Xu, Zeume

Ivo Welch

May, 2024

# Introduction

- ▶ Great Paper
- ▶ I am shooting for an easy discussion
  - ▶ (even you can stay awake!)

# Part I: The World Will Soon Be Warmer

- ▶ The world will get warmer
- ▶ PXZ starts with some (not great) description
  - ▶ RCP 8.5 (CO<sub>2</sub>) would give us 5 times as many hot days
  - ▶ RCP is about CO<sub>2</sub> emissions. 8.5 can no longer happen
    - ▶ in case you are curious, described in my SSRN paper on SSPs
  - ▶ similar or worse warming could easily happen
    - ▶ (no one really knows where, ok)
  - ▶ thankfully PXZ part is brief and only motivational

## Part II: Existing Plants 1980s-2010s

- ▶ Paper probably does most of details well
  - ▶ panel regressions are hard!
- ▶ Existing plants have higher energy costs
- ▶ Existing plants have higher productivity rel to 18C, but not always to 21-24C
  - ▶ PS: vacationing when hot and cold could imply ...?

## Part III: Census Regions 1980s-2010s

- ▶ Paper probably does most of details well
  - ▶ panel regressions are hard
- ▶ Plant Entry: (maybe) shift from smaller to larger plants

## Part IV: No Part 4

- ▶ I will spare you my many detailed questions and suggestions to authors
  - ▶ not sure why discussants bore audiences with this
  - ▶ no one ever remembers this
  - ▶ paper has a dozen figures and tables, with perhaps 1,000 numbers! Mercy!

# Likes

- ▶ Paper is honest about its nonfindings.
  - ▶ eg, no employment effects (in text, not abstract)

# Why Not Much? (I)

- ▶ Average US temperature is about 12.5°C.
  - ▶ (NYC is about 13-14°C. +2°C is DC. +5°C is ATL.)
  - ▶ (IPCC expects +2°C and fears +5°C.)
- ▶ 1980-2010: about +0.5°C increase (PXZ)
- ▶ 1980-2025: about +1°C increase



## Why Not Much? (II)

- ▶ US (at  $12.5^{\circ}\text{C}$ ) heats more than it cools
  - ▶ PXZ: cooler than  $18^{\circ}\text{C}$ : requires heating,
  - ▶ PXZ: warmer than  $18^{\circ}\text{C}$ : requires cooling.
  - ▶ when it's  $-6^{\circ}\text{C}$ , an extra  $+3^{\circ}\text{C}$  warming would be a good thing.

# Over the Envelope, PXZ 1980-2010

## ▶ Cooling

- ▶ In the most extreme regions, +1 day of cooling
- ▶ Energy is about 10% of cost of production on average
- ▶ Cost increase: about  $1/300 * 10\% \sim 0.003\%$

## ▶ Heating

- ▶ in the most extreme regions, -2 days of cooling
- ▶ heating a little cheaper per energy unit (no longer soon)

- ▶ Net: probably zero in USA, now and in the future.
  - ▶ over generations, so what if e-intensives move north?
  - ▶ actually, populations have been doing the opposite!
  - ▶ solar summer electricity will become dirt cheap 2050
  
- ▶ (Differential between large and small firms?)

# Conclusion

- ▶ USA is just not where we expect to see large economic costs of climate change
  - ▶ We are cool and rich!
  - ▶ (And so we haven't seen much, either, from modest changes)
- ▶ For harm, think India and West Africa.

# What is wrong with us?

- ▶ New York Times, Last Sunday, Headline: ‘New Territory’ for Americans: Deadly Heat in the Workplace: Deaths are rising sharply, and the Biden administration is trying to respond. Its plan faces big hurdles.
  - ▶ Liberal Mixing of Truth and Distortions
- ▶ Academia?
  - ▶ We publish findings, not non-findings
  - ▶ This is even more the case with climate change
  - ▶ Want to publish? *Play this game!*

# Dislikes

- ▶ Abstract focuses on (few) findings
  - ▶ It's a “game” forced on authors
  - ▶ Terrible institutional arrangements in economics