Agenda

* Introduce Wei and Diego
* Explain old project to Diego, so he knows what we are doing
* Go over data and figures I sent, just to get a sense of what the data looks like.
* Explain new proposal to the group. Get feedback, change as needed.
* See if Diego is interested in joining once he has heard the proposal
* See who has time – time is of the essence, so for this to work we would need to put this project higher in the queue
* Make an actionable to-do list for each group member:
  + General tasks
    - Come up with specific word sets
    - Lit review/background
    - Get feedback on how to write, where to send, etc
      * This might be most important for media consumption than high level journals. Discuss with Mikko and Emilio, Harvard public health people (David, Jocelyn, Mahesh), media people at MPIDR, other senior people about strategy.
  + Sophie and Wei specific
    - Get code running generally/without specific words
    - Get code running with our exact keyword set
  + Josh and/or Diego specific – discuss during meeting.

Proposal:

Background/Intro/Motivation

* lots of people online and in the news wondering about a baby boom from all the people staying home.
* However, limited evidence this actually occurs.
  + Many studies purporting to show an effect of blackouts, stay home orders, etc have been debunked.
  + Most evidence that does exist is in the developing world, where access to contraception is lower.
  + This is consistent with the hypothesized channel of these events on fertility being through unexpected children.
  + This implies there is limited reason this would occur unless there are changes in unexpected fertility, which is less likely if there are high contraceptive prevalence rates like in the developed world.
  + In addition, planned fertility falls with economic uncertainty, and recessions. Inasmuch as there is a large, sharp recession associated with Covid-19, this implies there should be a (potentially temporary) reduction in fertility rates.
  + These two effects together imply the most likely outcome of the Covid-19 crisis is a sharp fall in fertility, most likely temporary.

Research Questions

1. Can Google searches predict fertility?
2. What will the direction and magnitude of the effect of Covid-19 on fertility be?

Methods:

* + Use data on relevant keywords to predict fertility based on data from the past (2004-2018), controlling for seasonality (since seasonality is a confounder) [[1]](#footnote-1)
    - Fert=alpha + beta\*Z + gamma\*X + season-region FE +epsilon

Where Z is a vector of relevant keywords, X is general, uninteresting controls.

* + Then predict 2019 (or different) fertility as an out of sample check
    - Fert\_2019= alpha + betahat\*Z\_2019 + gamma\*X\_2019 + season-region FE\_hat +epsilon
  + Then predict effect of covid, where we attribute the effect of covid to the effect by month (march and april relative to what would have been predicted).
    - Fert\_2020= alpha + betahat\*Z\_2020 + gamma\*X\_2020 + season-region FE\_hat +epsilon
  + Could use variation in cases by state, political leaning, information on lockdown timing to do it instead of month.
  + Perhaps could decompose fall in fertility to expected (from expected keyword set) and unexpected (from unexpected set)

Relevant keywords

* Pregnancy in general (pregnant)
* Unexpected pregnancies
  + Immediate
    - Emergency contraception (Plan b)
    - STI
  + After 2 weeks-2 months
    - Abortion
* Expected pregnancies (how to get pregnant, unemployment benefits)

1. Note: Seasonality may be a channel – which means maybe don’t want to control for it. Can do with and without. I think it is important for the covid-specific stuff (question 2), but less so for the overall prediction (question 1). [↑](#footnote-ref-1)