1. **Title:**

Social Distancing and Social Cost: Regional Heterogeneity and Optimal Policy Responses to Secondary COVID-19 Outbreaks

2. **Authors:**

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3. **Abstract:**

The post-peak pandemic period will involve renewed localized outbreaks of COVID-19 across the US. Renewed outbreaks would require the enactment of containment policies to stop an exponential increase of infections. This paper studies the economic and public health impacts of locally enforced policies versus regionally enforced policies in the US, to establish the optimal level at which policy should be decided. We conduct two types of analyses: first, comparing individual county- and city-level containment policies to state-wide policies; and second, comparing individual state-level polices to a single federal containment policy.

In the US, COVID-19 containment policies enforcing social-distancing measures have been enacted independently by mayors, county officials, state governors, and the federal government. Policies are often determined locally (city, county, and state), based on the observed local spread of the virus. Local policies vary by date of enforcement, but also by the specific measures they enact: from the closure of schools and universities, to the shutdown of nonvital businesses, to shelter-in-place orders.

We document several sources of local heterogeneity that determine optimal policy. First, localities will differ in underlying health risk due due to prior infection rates, baseline rates of social contact, and health system capacity. Second, the economic costs of containment policies may vary based on the mix of economic activity and the size of local surplus. Using the epidemiological SIR model, calibrated to COVID-19 infection parameters, we generate estimates of optimal local policy, and compare the welfare implications of setting policy based on more aggregate social preferences or information.

4. **Data Description:**

a. Census data on US counties economic and epidemiologic characteristics.

b. Epidemiological data on the dynamics of COVID-19 spread.

5. **JEL codes for the project:** I18, H7, C32

6. **Keywords:** COVID-19, SIR model, social distancing, containment policies