

# Guns, Germs, and Murders

Firearms Increased Homicides after the COVID-19 Pandemic

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(Stanford University)

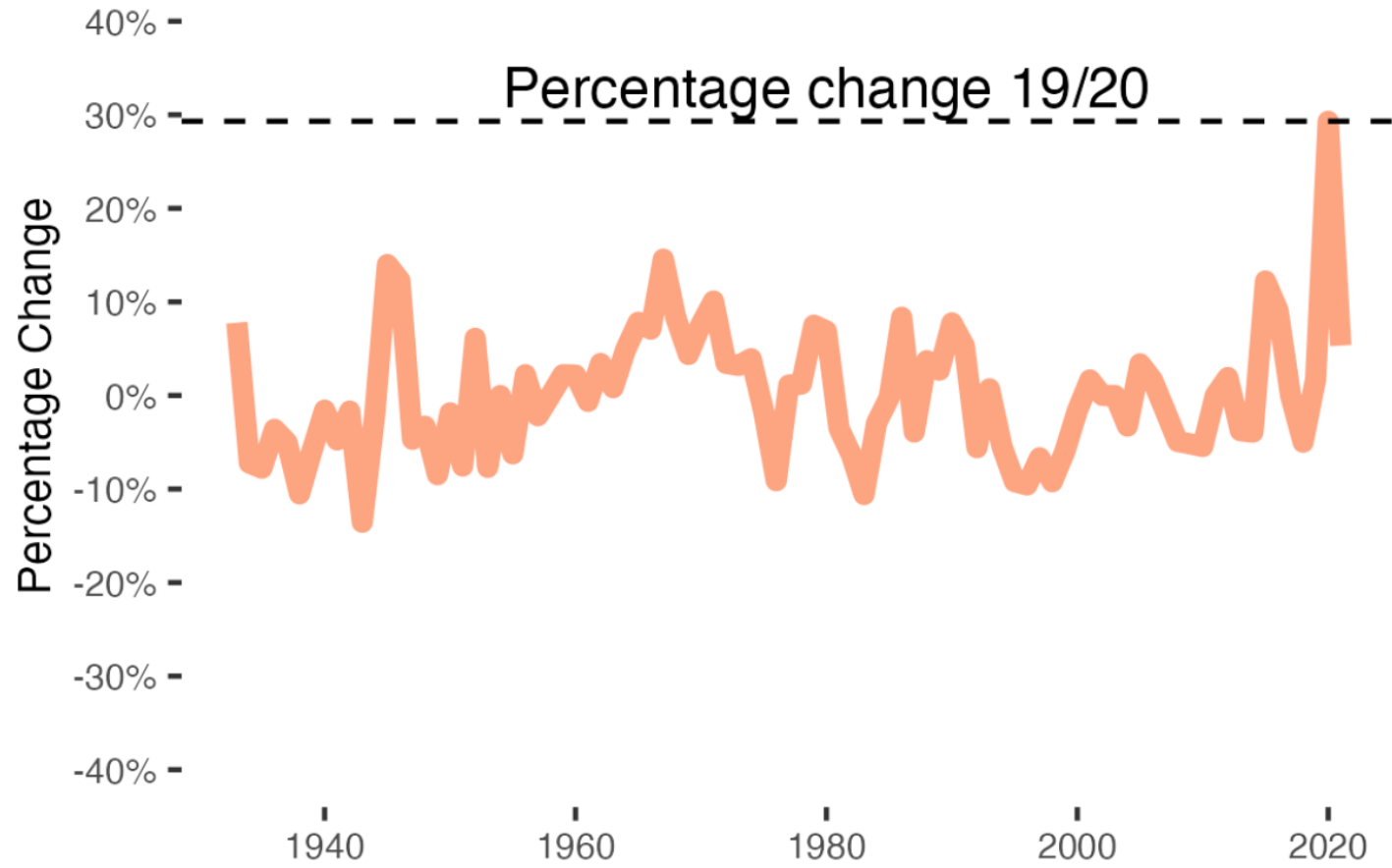
Paolo Pinotti

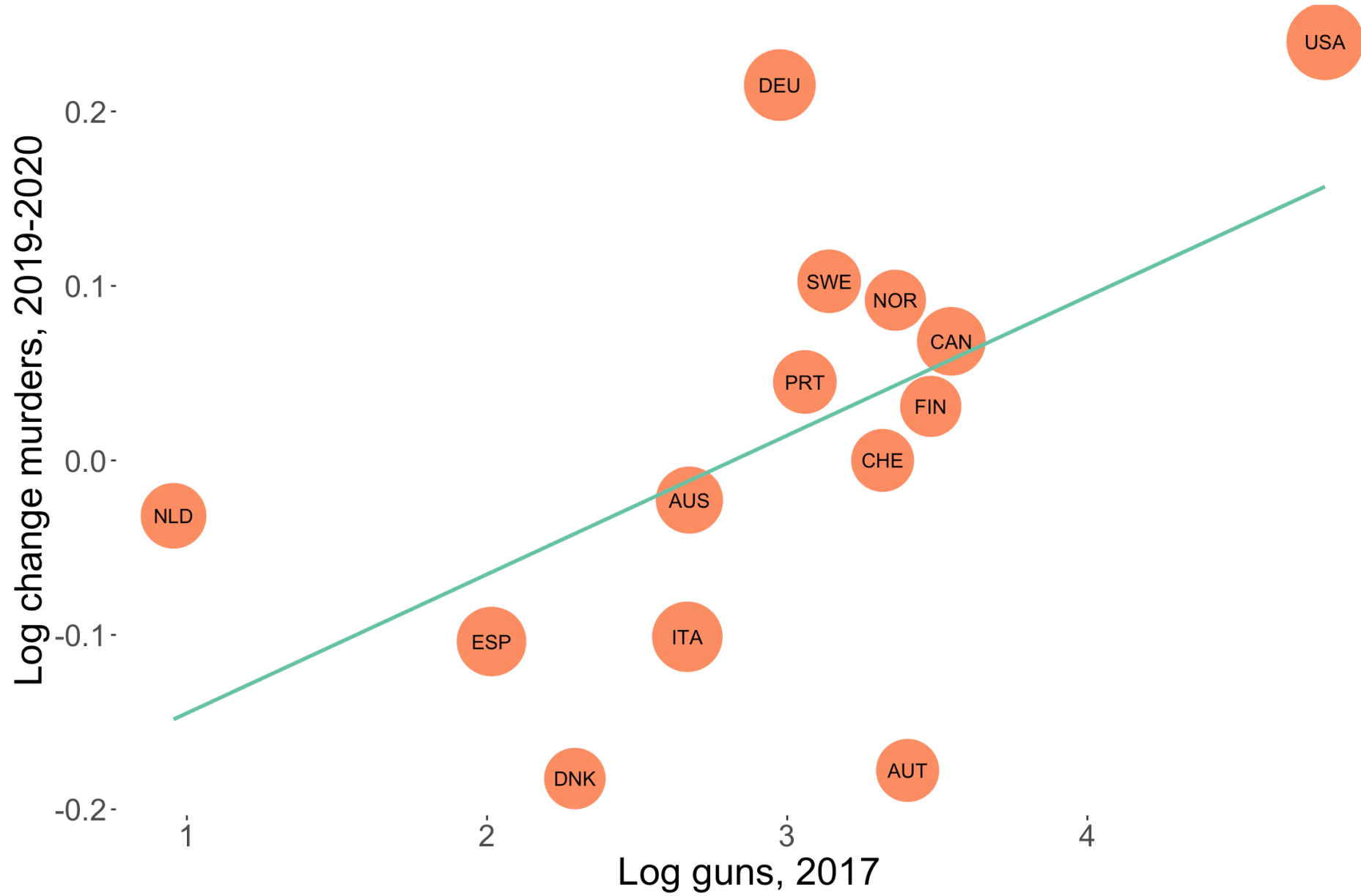
(Bocconi University)

Diego Zambiasi

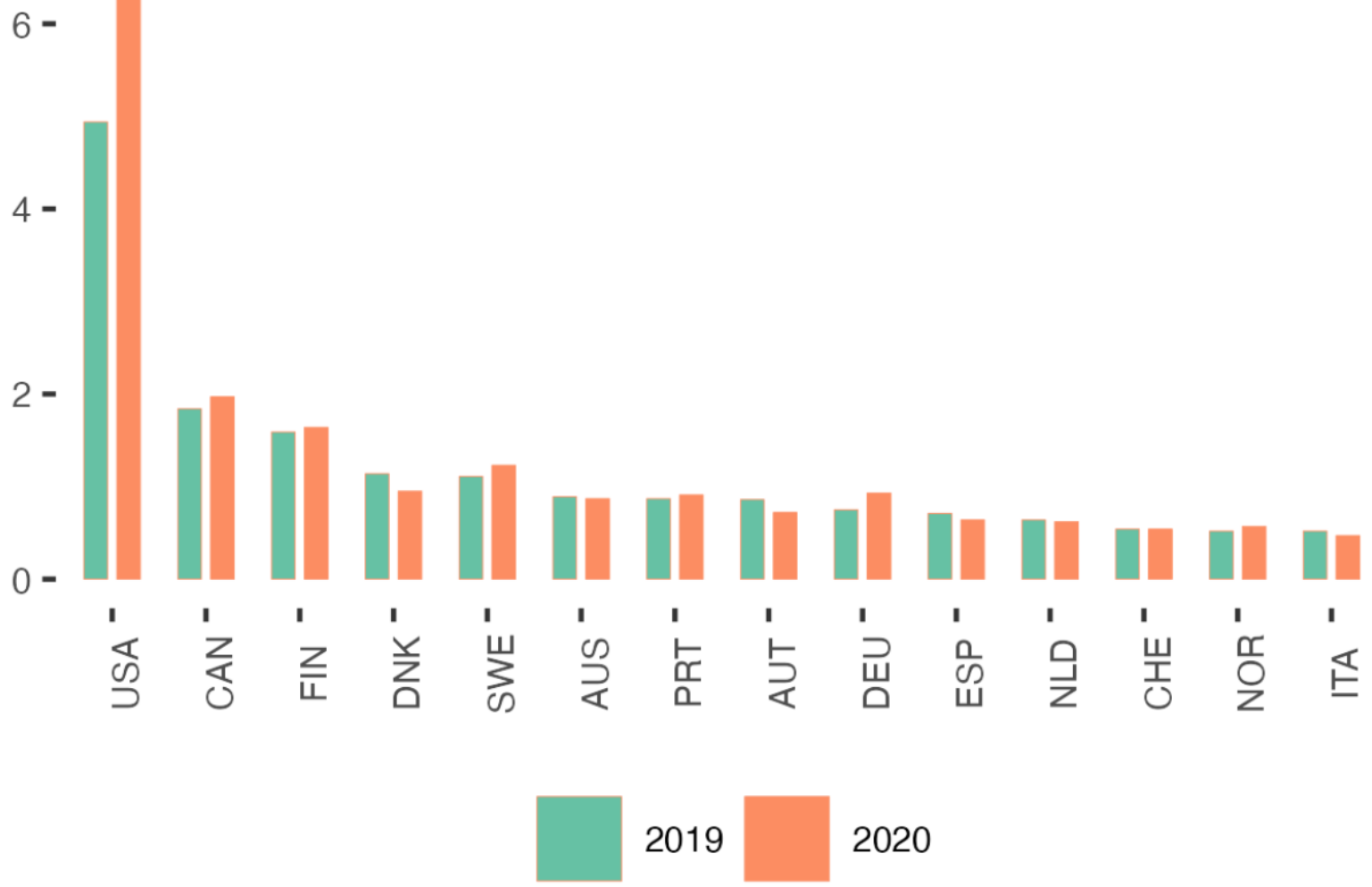
(Newcastle University)

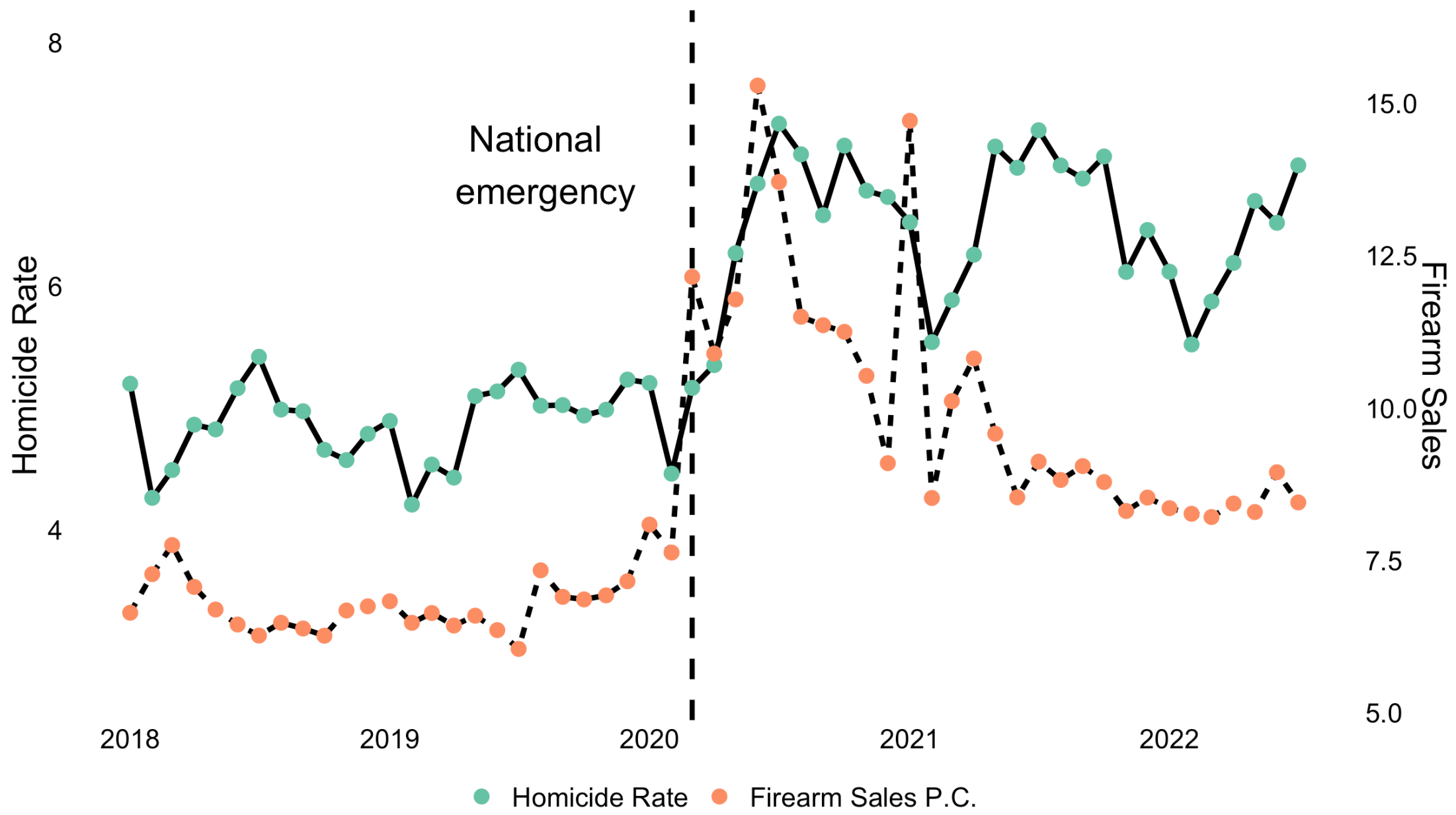
# Historical Homicide Rate Year Percentage Change





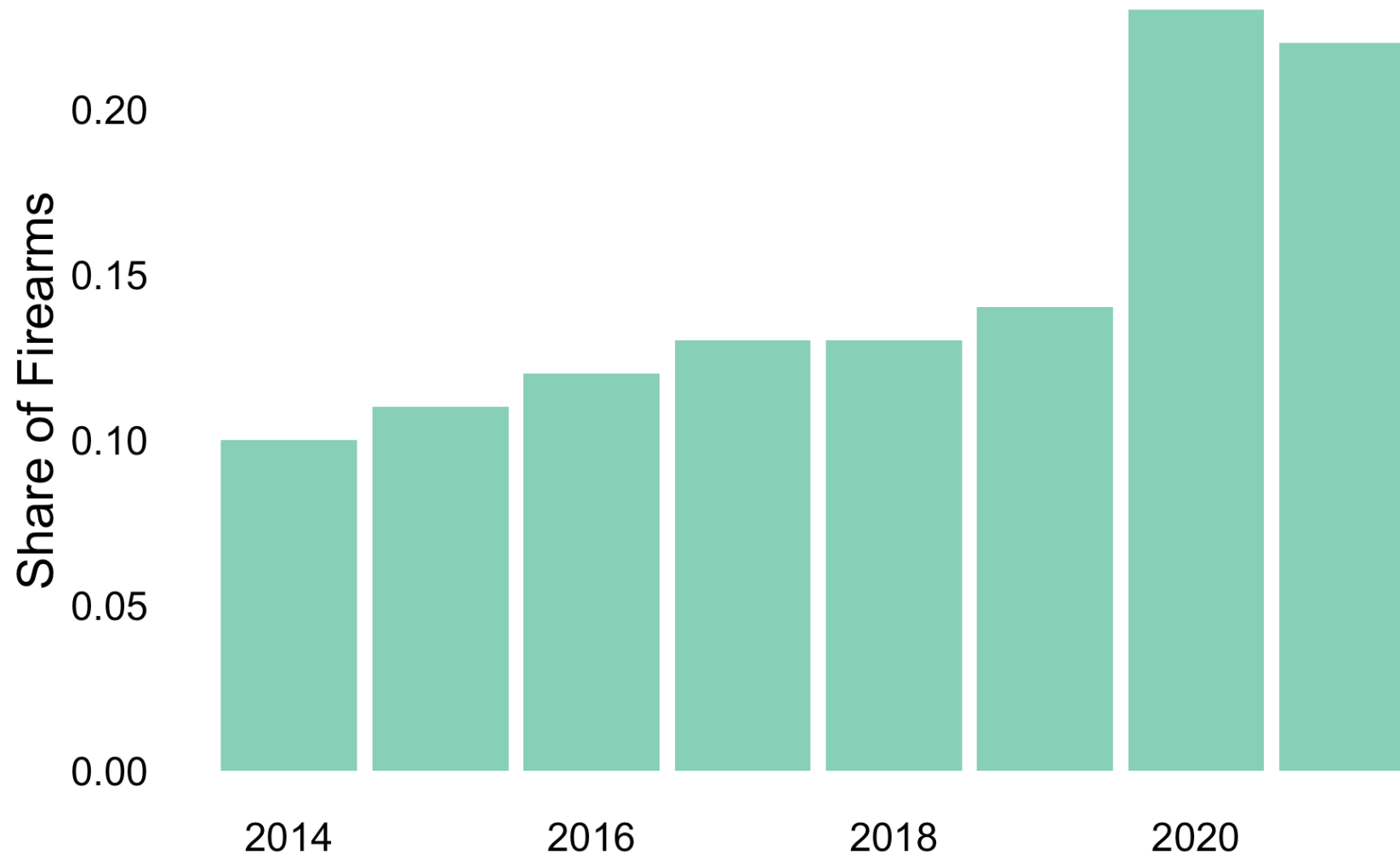
# Homicide Rate (Selected Countries)





Were guns purchased in 2020 “deadlier”?

# Share of firearms found on crime scenes that were bought less than 7 months before the crime took place



# Did firearm purchases increase homicides?

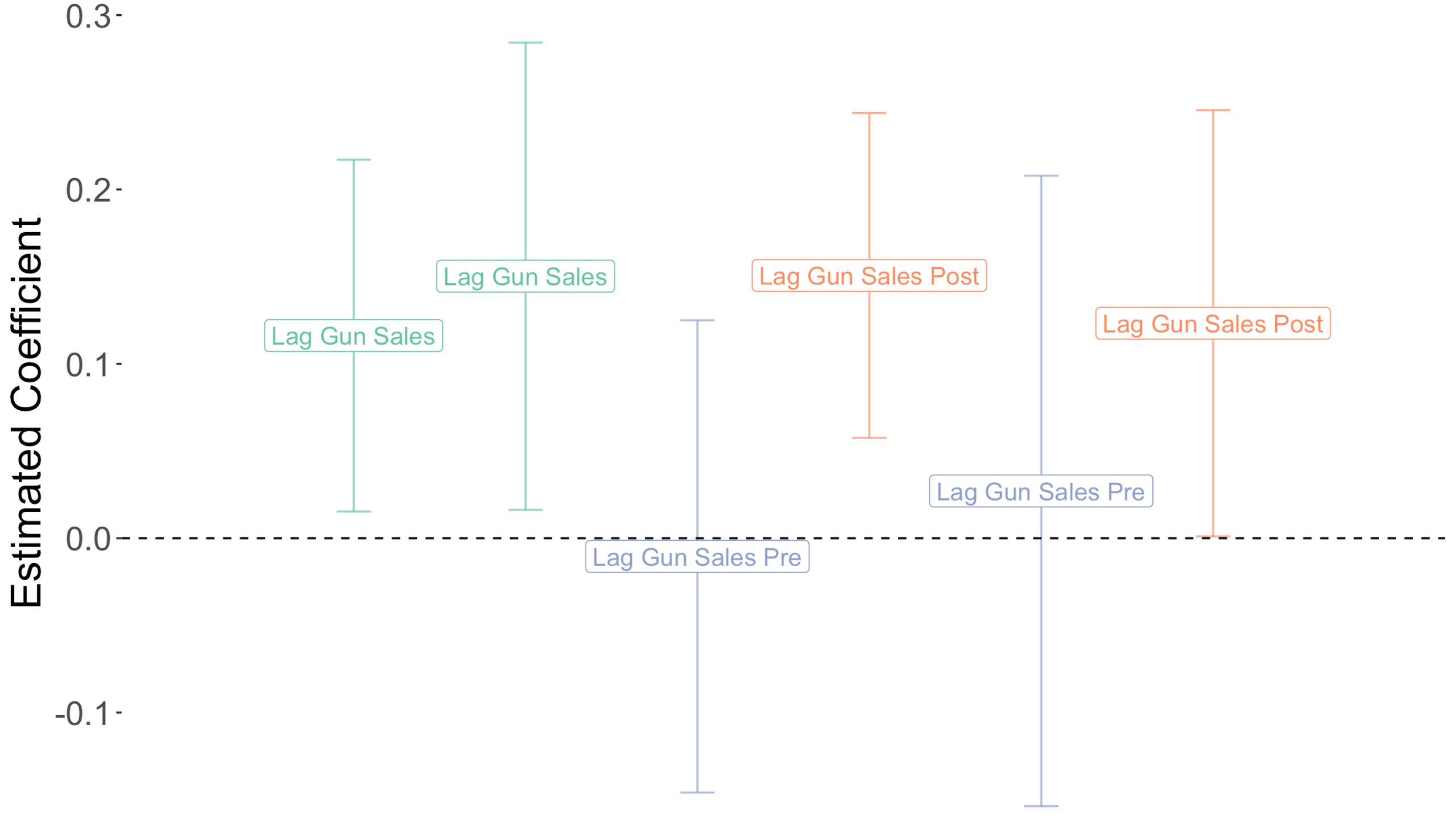
## Dynamic Panel Setting

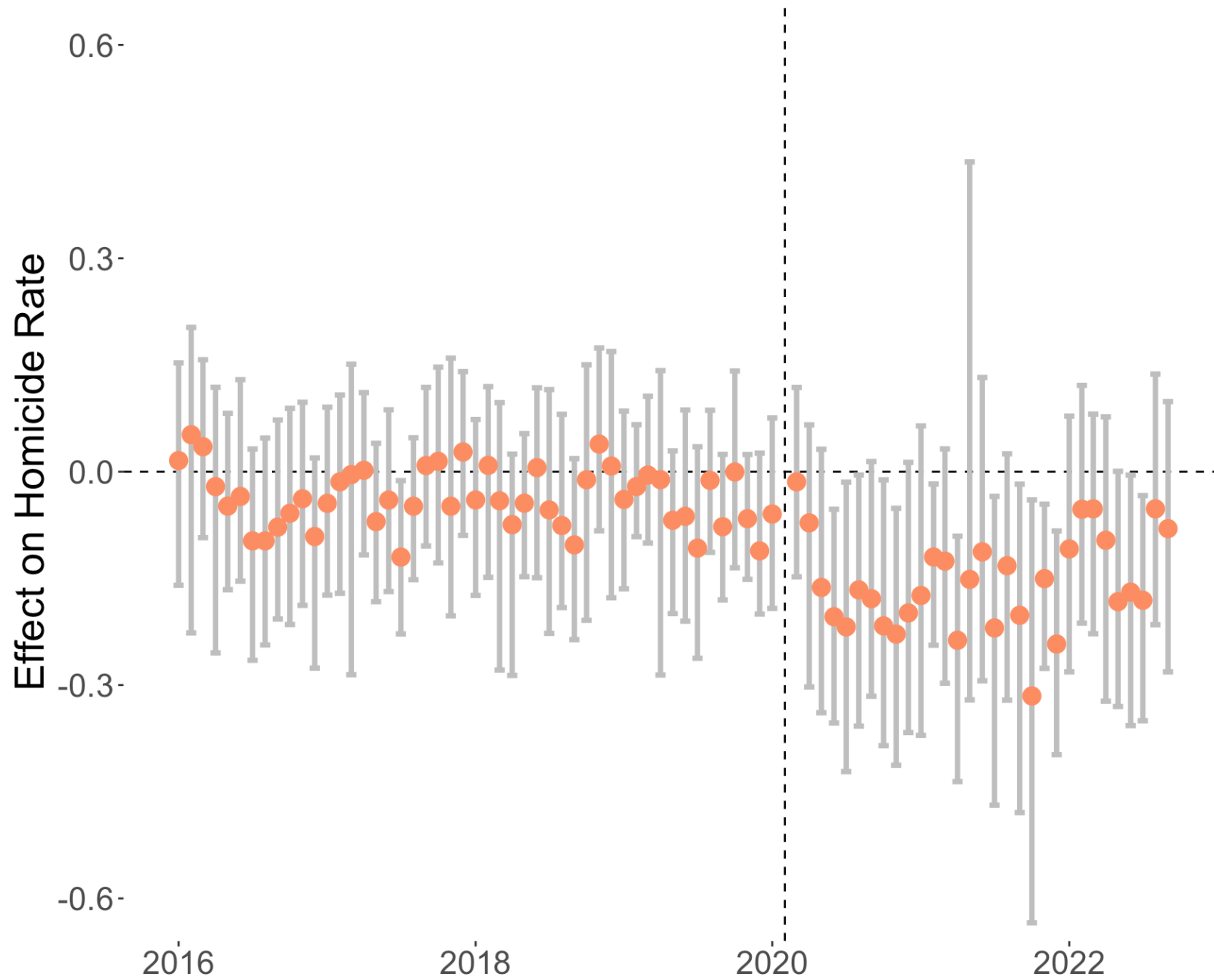
$$\text{Homicide Rate}_{st} = \pi \text{Gun Sales}_{st-1} + \gamma \text{Homicide Rate}_{st-1} + \text{State}_s + \text{Month}_t + \text{Year}_t + \mathbf{X}_{st} + \epsilon_{st},$$

## Difference in Differences

$$\text{Homicide Rate}_{st} = \sum_{t=\text{JAN 2016}}^{t=\text{SEP 2022}} \phi_t \text{Strict Bundle}_s + \text{State}_s + \text{Month}_t \times \text{Year}_t + \mathbf{X}_{st} + \epsilon_{st},$$







DD coefficient:  
- 1.69 (0.402)

# Conclusions

## **2020 Pandemic Impact**

Amidst the COVID-19 pandemic, our research reveals that more guns cause more murders.

## **Implications for Policy**

States with effective gun control policies experienced lower firearm sales and fewer homicides.

Tighter firearm regulations can mitigate the exacerbation of tensions during crises like global pandemics.

Is the murder of George Floyd  
Driving our estimates?

