

Hate in the Time of COVID-19: Racial Crimes against East Asians

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Motivation

From the Black Death to the more recent Spanish flu or Ebola, pandemics have brought forth not only disease but also violence and animus toward minorities ('racial animus').

COVID-19 also brought about an increase in victimisation of ethnic-Chinese population in western countries (Gray & Hansen, 2021; Dipoppa et al., 2021; Deng & Hwang, 2021; Bartoš et al., 2021).



Why do we care?

- It's outright xenophobia and racism
- Negative effects on mental and physical health of victims and targeted communities (Chen et al., 2021; Wu et al., 2021)
- Hate crimes carry a high social costs and reduce assimilation of minority communities (Gould and Klor, 2016; Deole, 2019)
- Understanding mechanisms important for policy and prevention

Literature: Triggers of Hate Crime and Prejudice

- 1** Hate crime and revealed prejudice increases after political shocks.
 - Rise in revealed prejudice following Trump's election.
(Edwards & Rushin, 2018; Giani & Méon, 2019; Bursztyn et al., 2020)
 - Hate crimes increase following Islamic terrorist attacks such as 7/7, 9/11 and the Manchester bombing in 2017.
(Swahn et al., 2003; Deloughery et al., 2012; Hanes & Machin, 2014; Ivandić et al., 2019)
 - Brexit and hate crime.
(Carr et al., 2020; Devine, 2021)
- 2** Hate crime and discrimination in times of crisis such as COVID-19.
(Gray & Hansen, 2021; Dipoppa et al., 2021; Deng & Hwang, 2021; Bartoš et al., 2021; Zussman, 2022)
- 3** Role of (social) media in spurring hate crimes.
(Müller & Schwarz, 2020; Ivandić et al., 2019)

This Paper

- Provides a rigorous time-series analysis of hate crimes against racial minorities during the outbreak of the COVID-19 pandemic in England and Wales
- COVID-19 as a “trigger event”
- Methods: ES DD, RDiT DD, panel data FEs
 - ‘Treated’: HC against East Asians, Asians, Blacks and Europeans
 - ‘Control’: Other HC biases (homophobic, transphobic, disability)
- Contributions to the literature on COVID-19 and hate crime:
 - High-frequency hate crime data for England and Wales
 - Allow investigation of the temporal effects and various mechanisms: (self-)incapacitation, protectionism, retaliation
 - The role of policy interventions and government signals
 - The role of social media

Preview of the Results

- Racial hate crime against East Asians increased by 70-100%, beginning in early February and persisted until November 2020.
- Hate crimes against East Asians increased with the increase of COVID-19 cases in mainland China, as well as the discussion of a UK lockdown increased on Twitter.
- Increase in East Asian hate crimes is primarily driven by London.
- Racial hate crimes against other groups did not increase until the end of the first national lockdown in June 2020 and remained elevated until autumn 2020.
- Results are not due to the substitution effects between different HC biases, or changes in victim reporting and police recording.
- External validity: Comparable results using US data.

COVID-19 in the UK: Brief Timeline

- January 31, 2020 ⇒ First reported cases in the UK
Early response criticised for being reserved and slow
- March 11, 2020 ⇒ WHO declared novel coronavirus outbreak a global pandemic
- March 20, 2020 ⇒ Schools closed with 2-days notice
- March 23, 2020 ⇒ **National lockdown ordered with no notice**
- May-June, 2020 ⇒ Restrictions lifted (not international travel), shops reopening
- After Summer 2020 ⇒ Policies dictated by devolved nations
Restrictions on social gatherings, blanket pub 10pm closures...
- November 9, 2020 ⇒ **Four-week lockdown ordered in England**
- December 8, 2020 ⇒ Vaccine programme begins
- January 4, 2021 ⇒ New lockdown ordered in England
- March 20, 2021 ⇒ Half of UK adults have had one dose
- July 19, 2021 ⇒ Legal restrictions end in England

Hate Crime Definition

‘Any criminal offence which is perceived, by the victim or any other person, to be motivated by hostility or prejudice towards someone based on a personal characteristic’ (College of Policing, 2014).

Five legally protected characteristics:

- Race or ethnicity, Religion or beliefs, Sexual orientation, Disability and Transgender identity.
- “Race” includes any group defined by “race, colour, nationality or ethnic or national origin, including countries within the UK, and Gypsy or Irish Travellers”.

Types of hate crime:

- Physical assault, verbal abuse, and incitement to hatred (in words, pictures, videos, music, and website information).
- Reported and recorded by the police (based on victim’s perception).

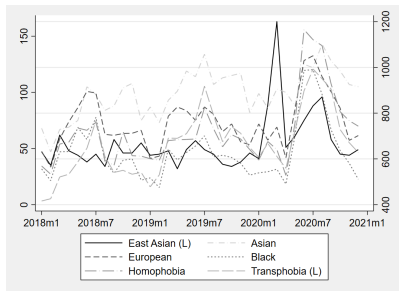
Data Description: FOI Dataset

- Obtained via Freedom of Information (FOI) request sent to the 45 Police Force Areas (PFA) of the UK (Clifton-Sprigg et al., 2020)
- Requested hate crimes containing date, hate bias(es), location, offence group and ethnicity of the victim at daily frequencies
- Complete data received from 10 PFA's in England and Wales
 - Weekly data of hate crime incidents count by bias and ethnic group in the period January 2018-December 2020
 - Not correlated with area observables
 - Complete monthly level data available for 23 police forces
 - Monthly counts of hate crime available for 32 police forces
- Method: ES DD
 - 'Treated': HC against East Asians, Asians, Blacks and Europeans
 - 'Control': Other HC biases (homophobic, transphobic, disability)¹

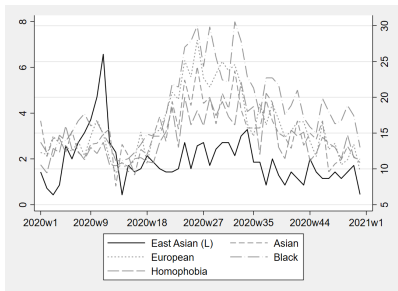
¹Religious hate crimes are excluded due to the ambiguity of whether they are treated by the pandemic.

Time Series Plots of Hate Crime

Hate crime data aggregated over 10 reporting PFA, collected using FOI requests



(a) Monthly hate crime counts



(b) Weekly hate crime counts

Summary statistics

Empirical Strategy: ES DD

Test the temporal effects of the pandemic and the parallel trends assumption:

$$y_{at} = \sum_{t=-4}^{12} \alpha_t(I_t) + \sum_{t=-4}^{12} \beta_t(R_a \times I_t) + \psi_t + \theta_a + \varepsilon_{at}$$

- y_{at} is the log-transformed number of recorded hate crimes against group a (East Asians, Asians, Black people, white Europeans, homosexuals, transgender, disability) in week t .
- ES horizon includes 4 pre-treatment time periods and 12 post-treatment periods.
- Baseline October and November 2019 (general elections in December 2019).
- R_a is a treatment dummy variable (= 1 for 'Treated HC' and = 0 for 'Control HC').
- ψ_t and θ_a control for fixed month-of-year and crime effects, respectively.
- ε_{at} are standard errors clustered at the hate crime-year level.

Control Group Selection

Other hate crime biases as the control group: account for changes in incentives to commit hate crimes and recording practices that are not specific to racial hate crime.

- Hate crimes tend to move together over time except when a specific group of people is hit by a shock event.
- Other hate crimes only affected through incapacitation caused by lockdowns
- Account for general changes in the reporting or recording standards of hate crimes by the police forces.
- Racial hate crime against other ethnicities not appropriate as a control group – may also be targeted; potential substitution effects.

Parallel Trends Assumption and Interpretation

- In the absence of the pandemic, racial hate crimes would follow the same trend as the control hate crimes.
 - We formally test this in the ES setting.
 - Use `didregress` in Stata 17 tests.
- ES DD estimates the effect relative to expected hate crime at the time (in the absence of COVID-19).
- α : expected change in all hate crimes due to *(self-)incapacitation*.
- β : expected changes in racial hate crimes that are unexplained by changes in mobility (or joint COVID-19 effect of other mechanisms, protectionism and retaliation, on racial hate crimes.)
- Total impact of pandemic: sum of the coefficients by time period.

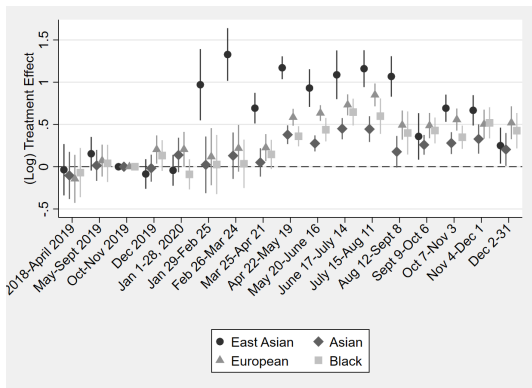
Main Results

Table: Difference-in-difference estimates of COVID-19 on racial hate crimes

	(1) East Asian	(2) Asian	(3) European	(4) Black
Treatment Effect	0.919*** [0.001]	0.193* [0.076]	0.281** [0.030]	0.111 [0.224]
Parallel Trends F-stat	0.00 [0.971]	0.39 [0.578]	0.63 [0.485]	0.01 [0.929]
N	624	624	624	624
Groups	4	4	4	4

- Hate crimes against East Asians rose by 91.9%, against Asians by 19.3%, and against Europeans by 28% percent.
- No significant increase in hate crimes against Black people in 2020.
- For each ethnic group we fail to reject the null hypothesis that the parallel trends assumption holds (`didregress` in Stata 17).

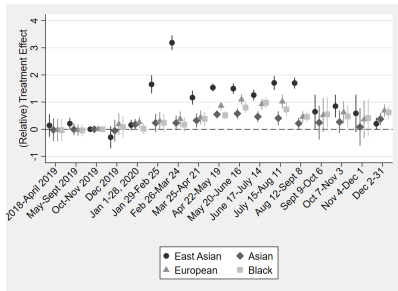
Main Results



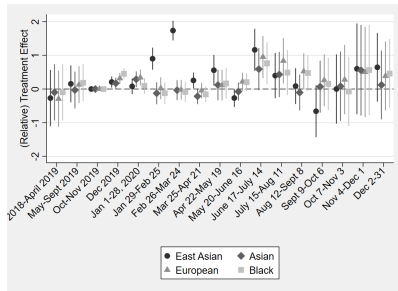
- No violation of the parallel trends assumption in the pre-treatment period.
- Persistent increase in HC against East Asians of 2-3 cases per day throughout pandemic.
- Early effect due to *protectionism*, later due to *retaliation*.
- Post-lockdown, significant increase in HC against other ethnicities (5-9 cases per day).

Robustness checks

Heterogenous Effects: London vs. Other Areas



(a) MPS (London)



(b) Other areas

- Larger effects found in London
- Large urban area with large minority population (one third of all Chinese population); lower search costs of potential victims; negative effects of strict lockdowns in cities.
- Effect in non-London areas is only significant around the first national lockdown.
- Perceived benefit of *protectionism* would be greater (i.e. preventing another lockdown or initial spread of the virus).

Robustness and Validity Checks

- Use daily average **crime count** for calendar week instead of logs.
- Use **monthly data** from 23 rather than 10 police forces.
- Check that the HC data for 10 police forces aren't correlated with area observables (Clifton-Sprigg et al., 2020).
- Verify baseline results at comparable (monthly) frequency for 10, 23 and 32 police forces.
- **No substitution** to other biases, ethnicities.
- **Online-offline hate** are substitution for each other.
- No changes in **victim reporting**.
- No changes in **police reporting** practices.
- External validity: Comparable results using US data.

Mechanisms

How to test/isolate mechanisms?

- 1 Look at changes in the control group (other hate crimes)
 - Should only be affected by mobility changes
- 2 Panel model estimating the differential effect of measures for the pandemic on racial hate crime by group (2020 data only)
 - Effect on control group isolates changes in mobility
 - Interaction effect captures other mechanisms (retaliation, protectionism, etc.)
- 3 RDIT at major announcements or policy changes
 - Information or mobility shocks

We rely on public data on policies and cases, unique Twitter data, and comparisons across ethnic groups where the incentives would differ.

Other Data: Twitter, OxCGRT

- Covid cases – local, national, and foreign
- Self-collected Twitter data on Covid, scapegoating and sinophobic language

Table: Description of Twitter keywords

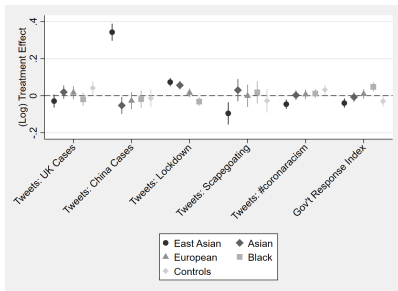
Topic	Keywords used in search	Mechanism(s)
Sinophobia	"chink" or "yellowman" or "chinky" or "chinazi"	Substitution
Scapegoating	"chinavirus" or "kungflu" or "yellow fever" or "Wuhan virus" or "chinaliedpeopledied" or "fuckchina" or "CCPvirus"	Retaliation
UK Covid	"covid" or "coronavirus" + "cases" or "infections" + locations	Protectionism/Retaliation
China Covid	"covid" or "coronavirus" + "cases" or "infections" + "China"	Protectionism/Retaliation
UK Lockdown	"covid" or "coronavirus" + locations	Retaliation
Corona Racism	"#coronaracism"	Reporting
Employment	"unemployment" + locations	Retaliation
Recession	"recession" + locations	Retaliation

- [OxCGRT publicly available data set](#) on COVID-19 policies from the University of Oxford (international and internal mobility, stay-at-home orders, school closings, telework orders, economic, healthcare and vaccination policies)

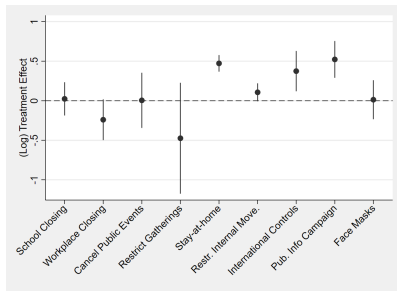
Mechanisms: Role of Social Media and Govt. Policies

$$y_{at} = \alpha_m mech_{m,t} + \beta_m (R_a \times mech_{m,t}) + \psi_t + \theta_a + \varepsilon_{at}$$

where y_{at} is the log-transformed hate crimes, $mech_{m,t}$ is the measure for mechanism m at time t and ψ_t and θ_a are fixed time and group effects, respectively. The α_m coefficients would capture correlations between mechanisms and all hate crimes and would remove the effect of the mechanisms (tweets, policies, etc.), while the β_m coefficients capture the differential effect on each of the four ethnic groups (R_a).



(a) Tweets



(b) Policies

Concluding Remarks

- Racial hate crime against East Asians increased by 70-100%, beginning in early February and persisted until November 2020.
- Hate crime increased as COVID-19 cases in China increased and following announcements from the government signalling that China or Chinese individuals posed a public health risk to the UK. This indicates that *protectionism* played an important role in the observed hate crime spike.
- The hate crime shock was also positively correlated with the salience of the national lockdown and government policies restricting certain freedoms. This suggests that *retaliation* for lockdown and other economic hardships also contributed to the rise in HC.
- The effect was driven largely by changes in London.
- The effects for East Asians appear relatively small (2-3 cases per day). However, given 10 times lower frequency of hate crimes against East Asians (“model minorities”), a similar shock in levels would equate to a ten-fold greater relative increase.

Thank you for your attention!

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Potential Mechanisms at Work

- (Self-)incapacitation (–)

In response to the pandemic, the government significantly restricted individual movements through lockdowns and stay-at-home orders. Incapacitation can also include self-incapacitation, where individuals chose to reduce their mobility due to their perceptions of the public health risk. This *reduced interactions* between offenders and victims.

- Protectionism (+)

As cases rose in China (and other places), hate crimes against ethnic groups of these origins may have increased if individuals felt compelled to “protect” UK society (natives) from the virus.

- Retaliation (+)

The pandemic resulted in deaths and economic hardship for many as well as restrictions on individual rights and movement. This has likely angered individuals. Given the initial focus on China as the origin of the virus, this anger may have translated into scapegoating of China, Chinese or ethnically-Chinese individuals for the pandemic.

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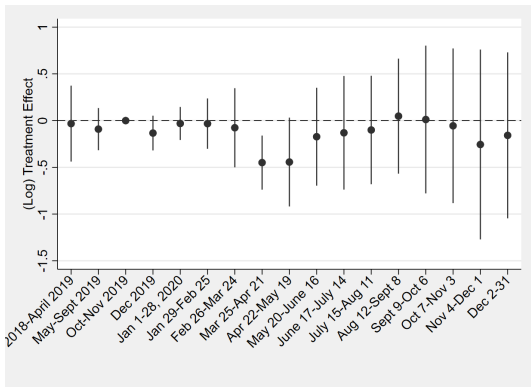
Hate Crime: Graffiti Illustration

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Table: Summary Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
<i>Hate Crime</i>					
Racial: East Asians	156	1.42	0.81	0.43	6.57
Racial: Asians	156	14.6	2.78	7.57	24.3
Racial: Europeans	156	14.4	3.50	7.38	28.0
Racial: Black people	156	16.3	3.76	10.0	30.6
Homophobic	156	13.0	3.15	6.14	22.1
Transphobic	156	1.72	0.672	0.286	4.14
Disability	156	4.79	1.24	2.29	8.57
<i>New COVID-19 Cases</i>					
UK	156	2205	6365	0	42083
China	156	79	465	0	4259
East Asia	156	344	825	0	4616
Asia	156	11441	24388	0	97429
Europe	156	21494	58359	0	275265
Africa	156	2500	5158	0	23858
<i>Tweets</i>					
COVID-19 in UK	156	117	214	0	1086
COVID-19 in China	156	211	425	0	2136
Scapegoating	156	186	454	1.43	3777
UK unemployment	156	82	41	32	228
UK recession	156	86	151	14	1814
#coronaracism	156	1.90	4.72	0	33
Sinophobia	156	21.6	33.8	2.57	220
<i>Policy Measures</i>					
Gov't Response Index	156	18.3	29.5	0	75.6
School Closing	156	0.497	0.928	0	3
Workplace Closing	156	0.606	1.038	0	3
Cancel Public Events	156	0.524	0.879	0	2
Restrict Gatherings	156	1.033	1.750	0	4
Stay-at-home Order	156	0.270	0.584	0	2
Restrict Movement	156	0.400	0.746	0	2
Restrict Int'l Travel	156	0.188	0.390	0	1
Income Support	156	0.523	0.880	0	2
Public Info Campaign	156	0.620	0.920	0	2
Face Coverings	156	0.481	0.996	0	3

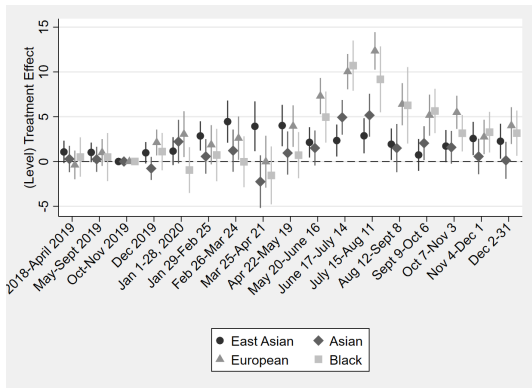
Mobility: ES Estimates of Covid-19 on Other HC



- Look at the temporal effect of the pandemic from our baseline ES for the control group: disability, homophobic, and transphobic hate crimes.
- Control HC decreased by 25% during the national lockdown before steadily returning to normal levels until the second national lockdown in November 2020.

Robustness Checks

Event study estimates of Covid-19 on racial hate crime by ethnic group, crime count

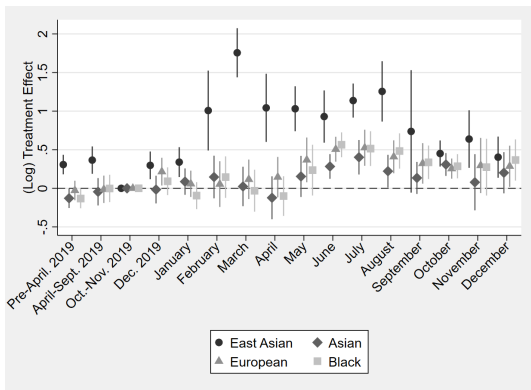


- No substitution effect – there is no corresponding decrease in non-East Asian hate crimes.
- Small effect? Hate crimes against East Asians have 10 times lower frequency.

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Robustness Checks

Event study estimates of Covid-19 on racial hate crime by ethnic group, monthly data

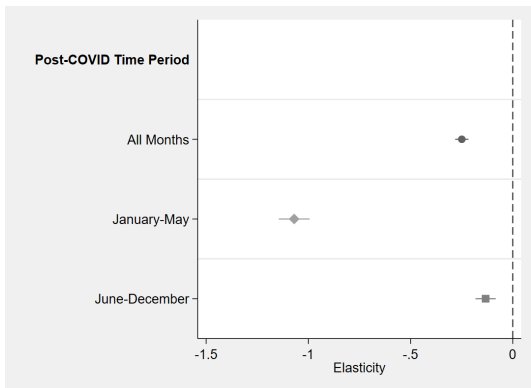


- Violation of parallel trends assumption? Monthly data contain fewer observations, trends and seasonality are imprecisely estimated.

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Robustness Checks

Online-offline hate elasticity

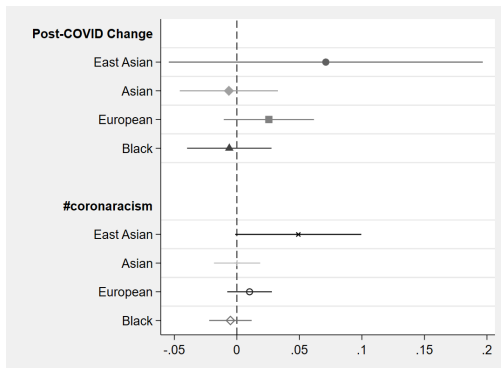


- Elasticity between online and offline hate is particularly high in the beginning of the pandemic when incapacitation would be greatest.

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Robustness Checks

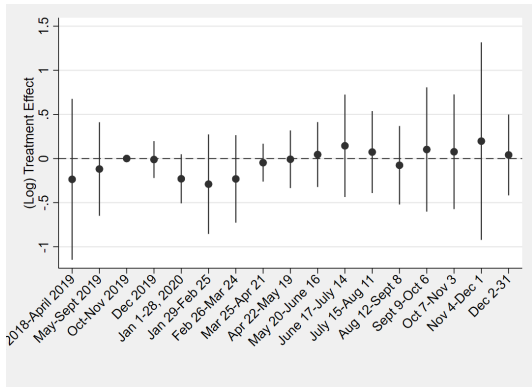
Victim self-reporting of race in London (MPS data)



- Police officer-evaluated and self-reported victim ethnicity.
- East Asians and other ethnicities were not significantly more likely to report their ethnicity to the MPS police, but positive correlation with #coronairacism tweets.
- At most, 10pp of the estimated effect due to changes in victim reporting.
- Note: Crime victimisation survey not available for the UK in 2020.

Robustness Checks

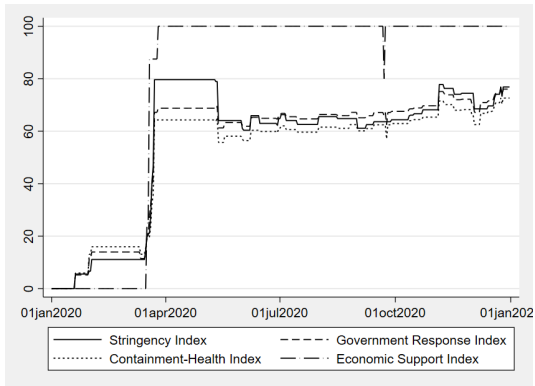
Estimates of changes in police effort (better recording; quicker solving)



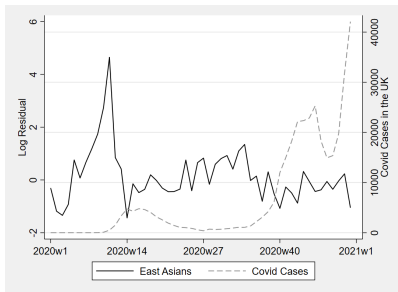
- Replicate baseline results on hate crime cases where ethnicity of victim is missing.
- Hate crimes against victims of an unknown ethnicity did not significantly change during the pandemic \Rightarrow no substitution from unknown racial crime to hate crime against East Asians.

Other Data

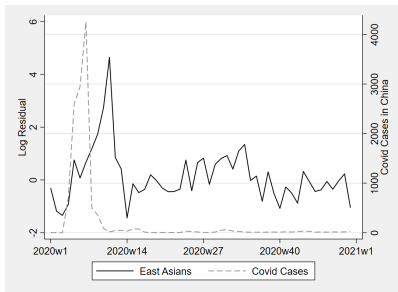
Times series plots of policy indices

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Descriptive plots of potential mechanisms, Part 1



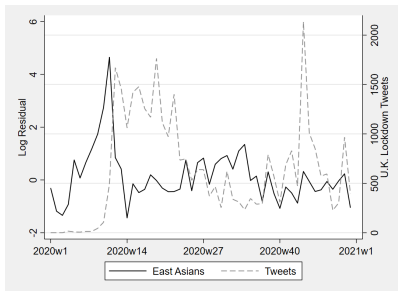
(a) UK COVID-19 cases



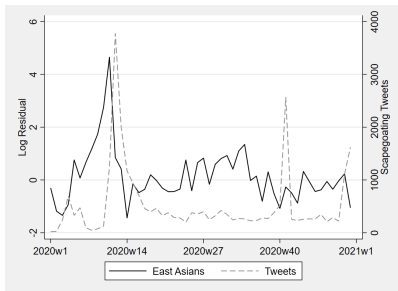
(b) China COVID-19 cases

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Descriptive plots of potential mechanisms, Part 2



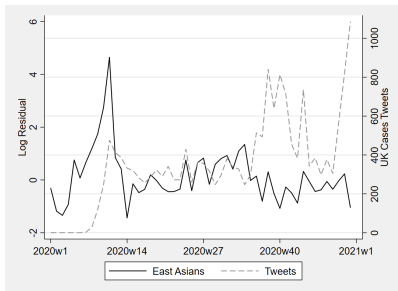
(c) Lockdown tweets



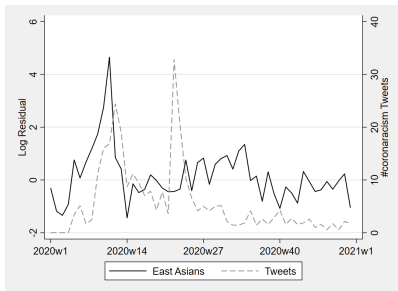
(d) Scapegoating tweets

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Descriptive plots of potential mechanisms, Part 3



(e) UK COVID-19 cases tweets



(f) #coronaracism tweets

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Regression Discontinuity in Time-DD (RDiT-DD)

- Check for immediate (short-run) hate crime shocks occurring during the pandemic.
- Treat major policy changes or governmental announcements as **information shocks** regarding either the severity of the pandemic or the perceived risk of foreigners.
- Use daily data and an augmented local regression discontinuity in time (RDiT) difference-in-differences (DD), testing for discontinuities occurring at different points in time.

Regression Discontinuity in Time-DD (RDIT-DD)

Augmented local regression discontinuity:

- 1 Remove long-term components using full dataset by taking the residuals from a fixed effects panel estimation including a time trend, day-of-week and month fixed effects (seasonality), and area fixed effects.
- 2 Run a local regression discontinuity using 30 days on each side of the cutoff date, controlling for other hate crime biases.
- 3 Data contains 36 months (2018-2020; 1096 days) and four COVID-19-related discontinuities.

Four discontinuities:

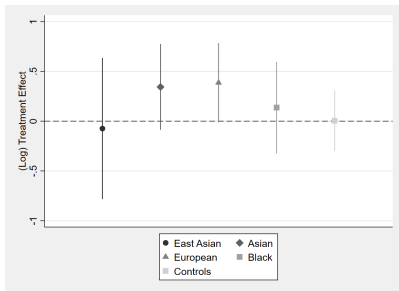
- 1 WHO announcement: January 1, 2020
- 2 First UK cases, flight bans to China: January 28, 2020
- 3 National lockdown: March 23, 2020
- 4 International travel restrictions: June 8, 2020

Regression Discontinuity in Time-DD (RDIT-DD)

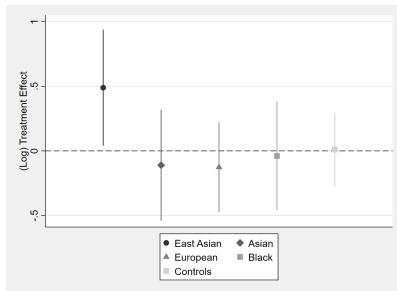
$$y_{at} = \alpha_0 + \alpha_1 run_t + \alpha_2 Discont_t \times run_t + \alpha_3 Discont_t + \beta Discont_t \times R_a + \varepsilon_{at},$$

- y_{at} is the residual log-transformed number of recorded hate crimes against ethnic group a (East Asians, Asians, Europeans, and Black people) in day t .
- The running variable is the day of observation.
- β : **coefficient of interest**; captures the difference in the discontinuity between the ethnic group and the control hate crimes due to the interaction between the discontinuity dummy and R_a , an indicator variable for racial hate crime.
- α_2 : captures a change in the time trend at the discontinuity, resulting in a kink RD design.
- In order to give greater emphasis on days close to the cutoff, we use triangular kernel weights.

Regression Discontinuity in Time-DD (RDiT-DD)



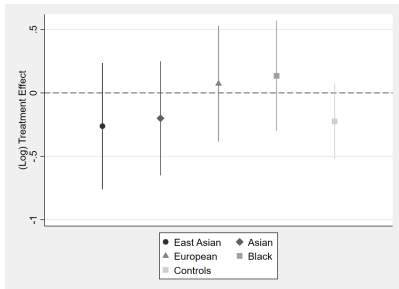
(a) WHO announcement



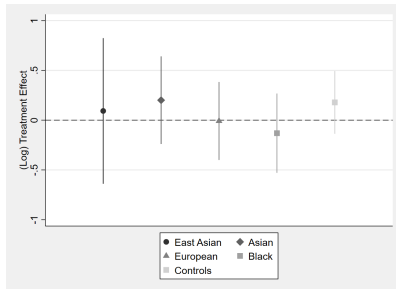
(b) Travel restrictions and first cases

- No effect on HC by the WHO announcement.
- HC against East Asians increase by 50% after the first travel restrictions announcements.

Regression Discontinuity in Time-DD (RDiT-DD)



(c) National lockdown



(d) International travel restrictions

- A decrease in HC against East Asians by nearly 25% in comparison to the period just preceding lockdown. Negative coefficient for the control group significant at 10%.
- No significant discontinuities when international travel was restricted.

ES vs. RDIT-DD

- The differences between the ES and RDD results can be explained by the difference in the comparison period. In the event study approach we are evaluating changes in hate crime compared to a period pre-COVID (controlling for a variety of seasonality and fixed effects).
- In the RDD comparisons are made relative to the 30 days immediately before the announcement or policy change.
- A negative discontinuity does not mean that hate crime is lower than expected but rather that hate crime has decreased significantly at the cut-off (and could still be higher than expected in the absence of the pandemic).

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