



BANK OF ENGLAND

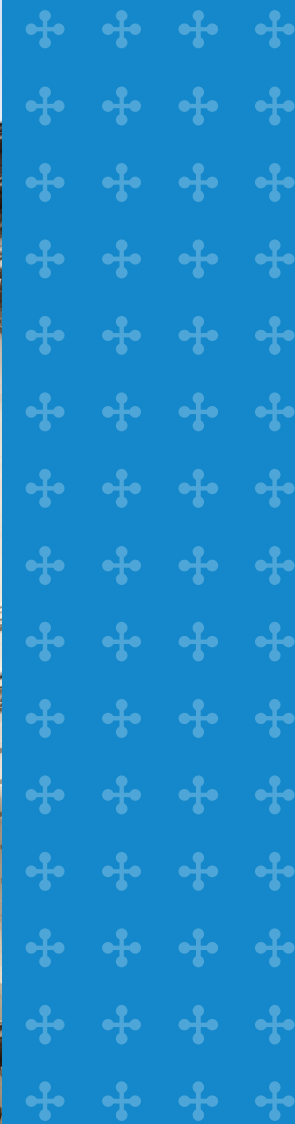
NBP Summer Workshop 2021

Impacts of the Covid-19 crisis: Evidence from 2 million UK SMEs

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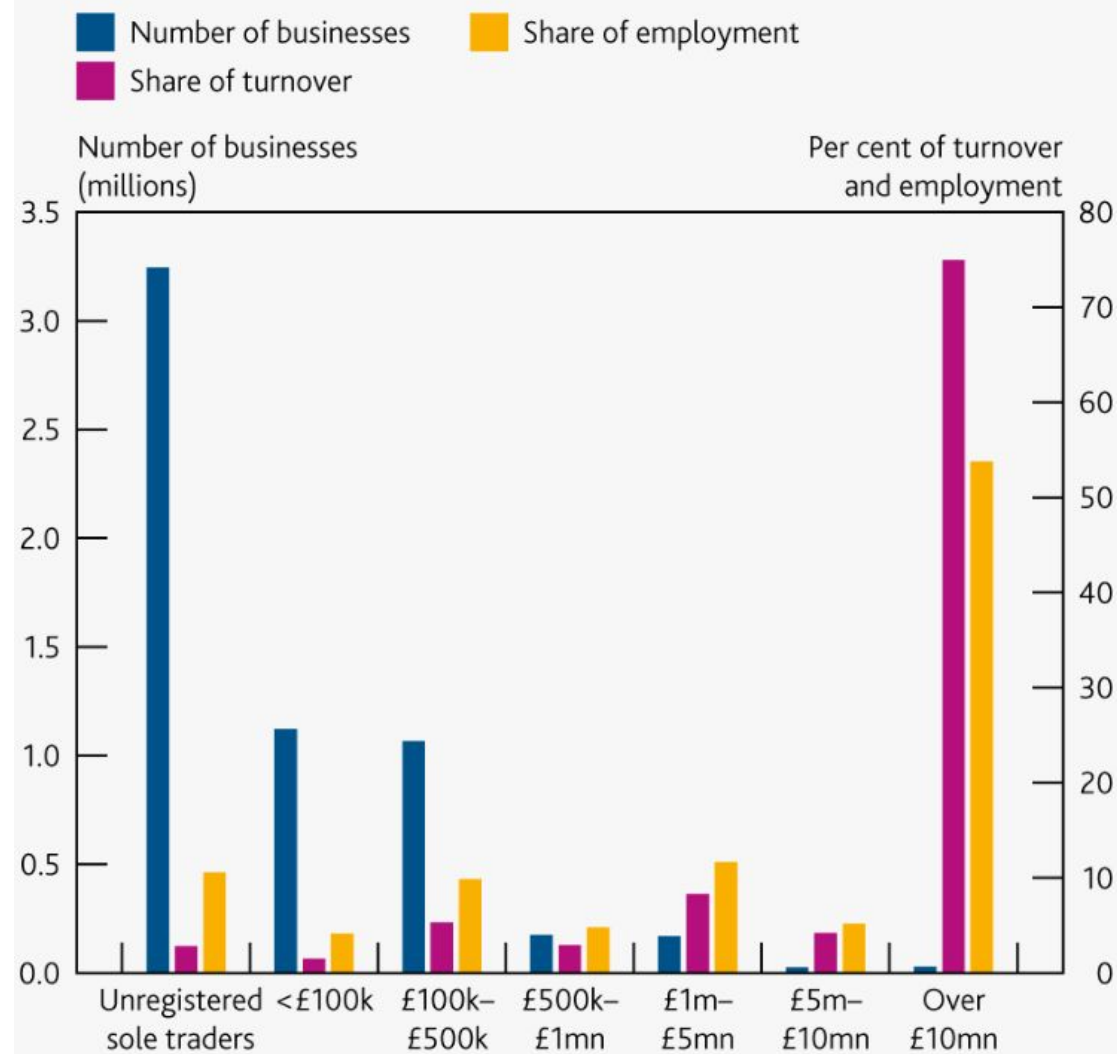
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Why SMEs?

Chart A Smaller businesses make up a quarter of UK turnover and almost half of UK employment

Firms' contribution to employment and turnover^{(a)(b)(c)}



Sources: Department for Business, Energy and Industrial Strategy (BEIS), ONS and Bank calculations.

Source: [BoE Financial Stability Report August 2020](#)

What is known about the impact of Covid on firms?

- Negative sales (loss of 29%)

[Bloom et al. \(2021\)](#)

[survey of US businesses]

- Heterogeneous impact

[Chetty et al. \(2021\)](#)

[collection of high-frequency sources]

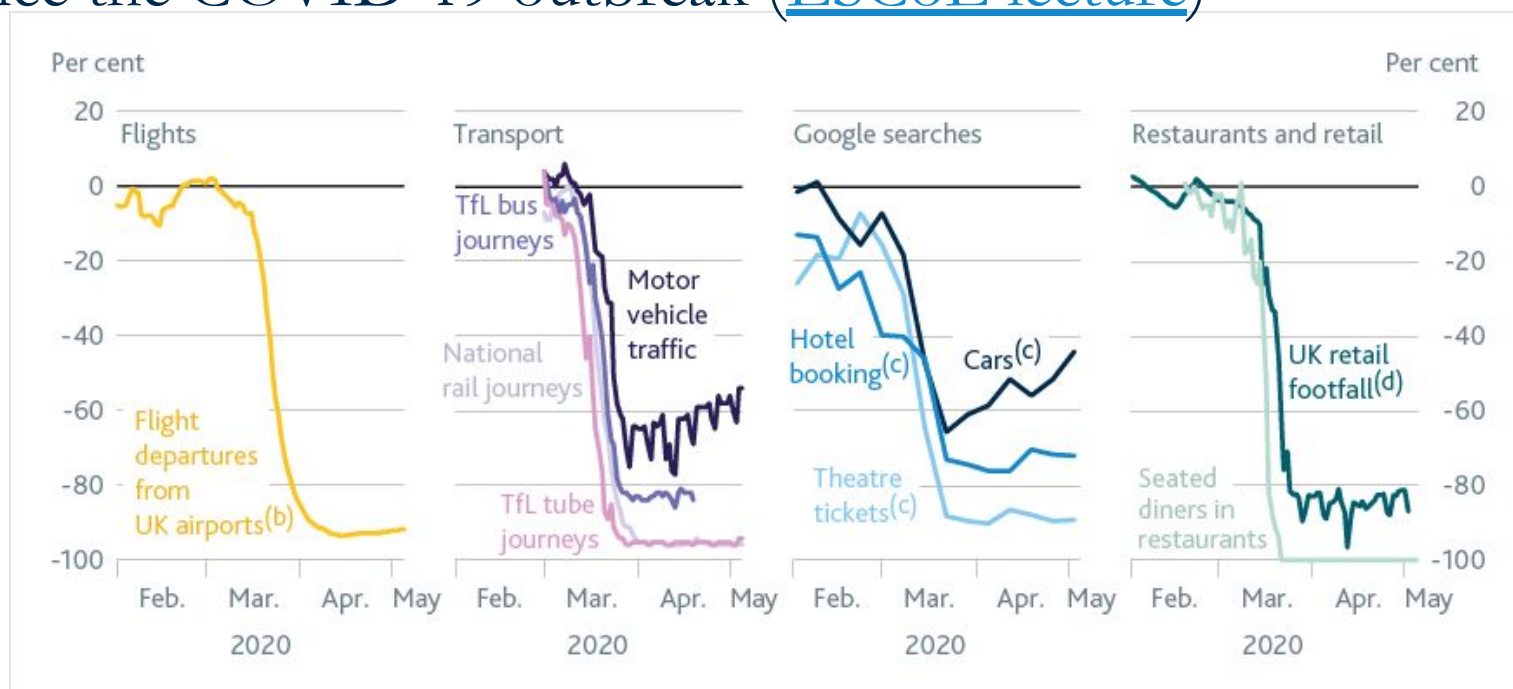
- BICS ([ONS](#))



Source: [Decision Maker Panel](#)

Covid-19 and the need for new data

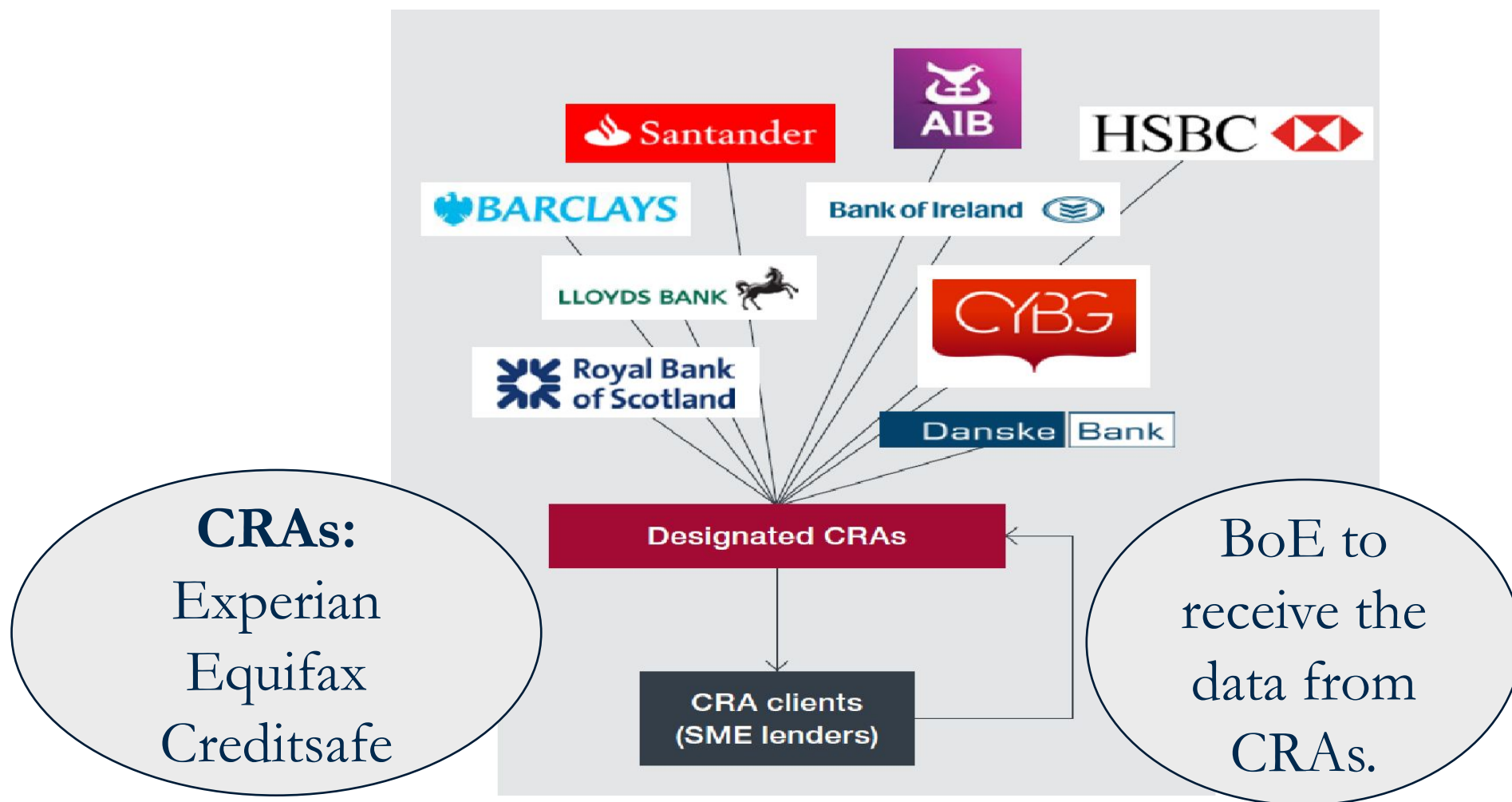
- Central banks are increasingly using big data ([Doerr et al., 2020](#))
- BoE monitoring the economy using novel data sources ([Bank Overground](#))
- Necessity is the mother of invention: the Bank's use of “faster indicators” of economic activity since the COVID-19 outbreak ([ESCoE lecture](#))



CCDS and the SME Regulation Act

- The Small Business Enterprise & Employment Act 2015 introduced the Commercial Credit Data Sharing Scheme.
- CCDS: 9 banks to share data on SME customers to three designated Credit Reference Agencies.
- CRAs must share this data equally with finance providers.
- This will increase competition in the SME lending market.
- Under the SME Act, the Bank of England has the statutory right to obtain the data.

CCDS Flow Chart



The Experian SME Data

- We have monthly data going back to January 2017.
- Data covers: 9 banks and 3m companies (2m limited + 1m other legal forms)
- SMEs = businesses that have a turnover $< \pounds 25\text{m}$.
- Data is at an account level and covers various categories like current accounts, unsecured loans, mortgages, credit cards etc.
- We observe monthly transactions in each of these accounts.
- **Additional benefit:** Using Companies House identifiers we are able to merge with firm-level variables (from other sources) that makes the data amenable to answer a wide array of questions.

There are around 6 million SMEs, of which 4 million are sole traders or partnerships, which leaves 2 million companies

5.9m UK SMEs



3.5m sole proprietors

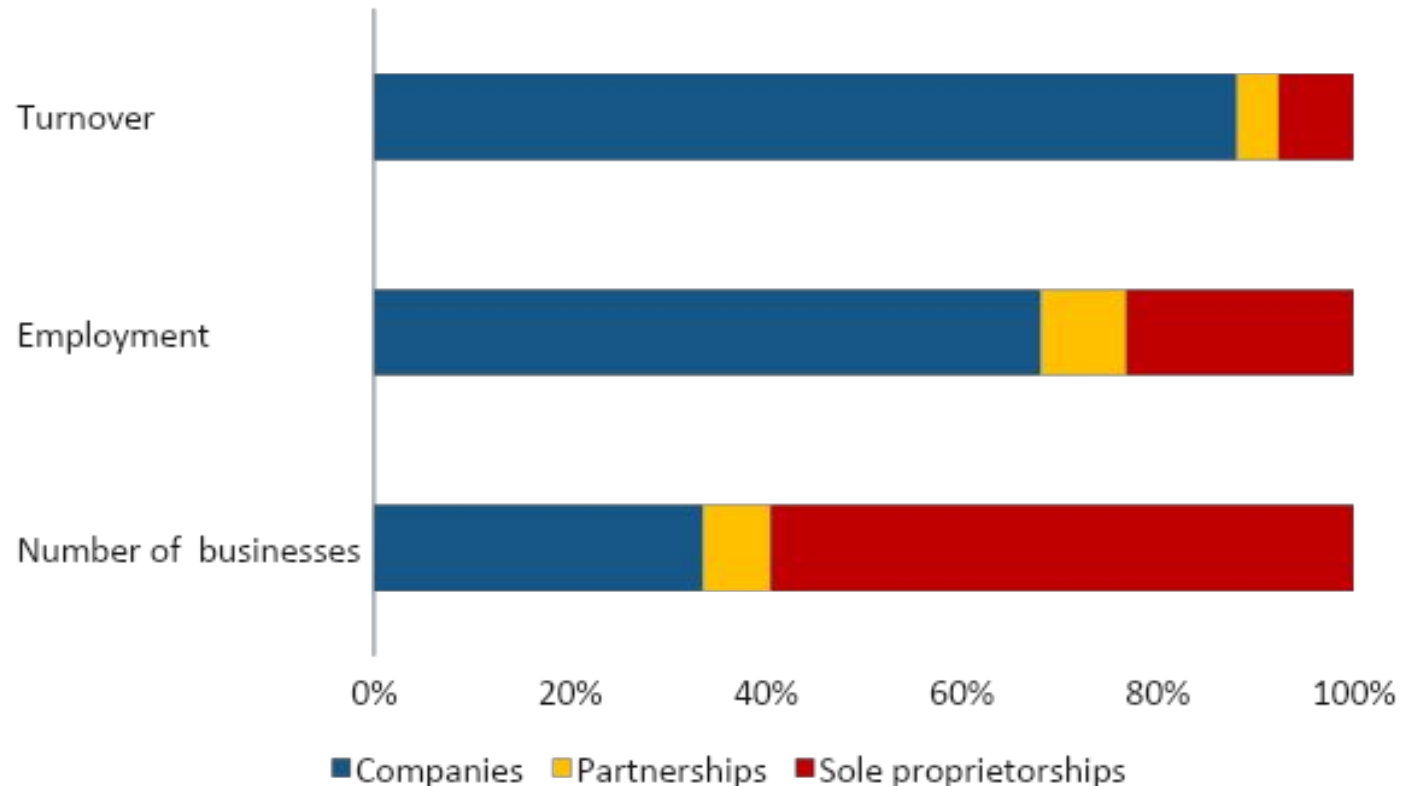


0.4m ordinary partnerships



2.0m active companies

Companies account for two-thirds of SME employment and nearly 90% of SME turnover



Coverage of the Experian data

| | Business Population Estimates | | | Experian | | |
|--------------------------------|-------------------------------|-------------|-------|----------|-------------|-------|
| | Limited | Non-limited | Total | Limited | Non-limited | Total |
| Number of businesses (million) | 2.0 | 4.0 | 6.0 | 1.98 | 0.960 | 2.94 |
| Turnover (£ trillion) | 1.7 | 0.5 | 2.2 | 0.78 | 0.084 | 0.864 |

Note: The SME definition differs between the two datasets. The Experian turnover measure includes VAT and may erroneously include some financing transactions.

| | UK Finance | | Experian | | |
|---------------------------|------------------|-------|----------|-------------|-------|
| | Current accounts | Total | Limited | Non-limited | Total |
| Cash balances (£ billion) | 117 | 200 | 70 | 8 | 78 |

Note: The SME definition differs between the two datasets.

Turnover growth

- We use a turnover growth variable based on [Davis et al. \(1996\)](#) - called *DHS growth* in the literature

$$turnovergrowth_{i,t} = \frac{turnover_{i,t} - turnover_{i,t-12}}{\frac{1}{2}(turnover_{i,t} + turnover_{i,t-12})}$$

Historical turnover growth by month

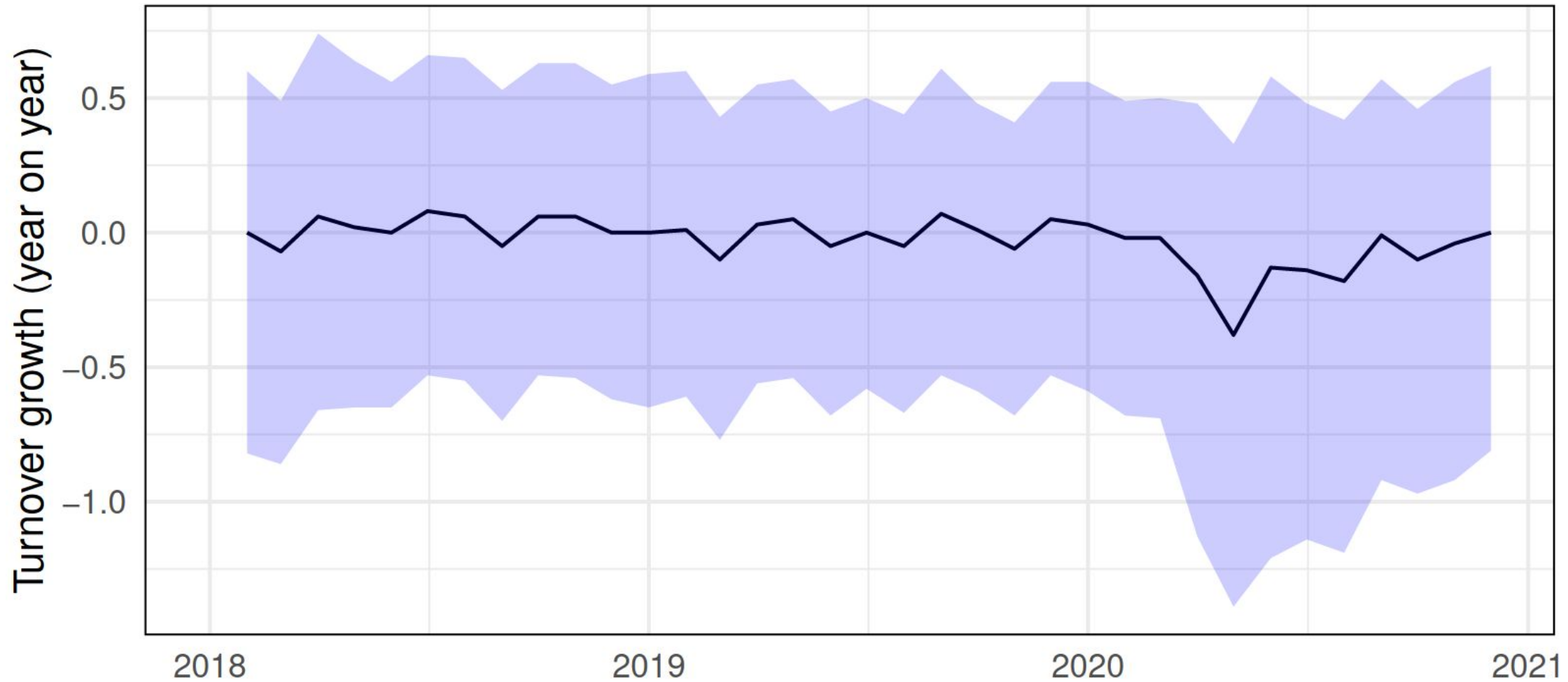
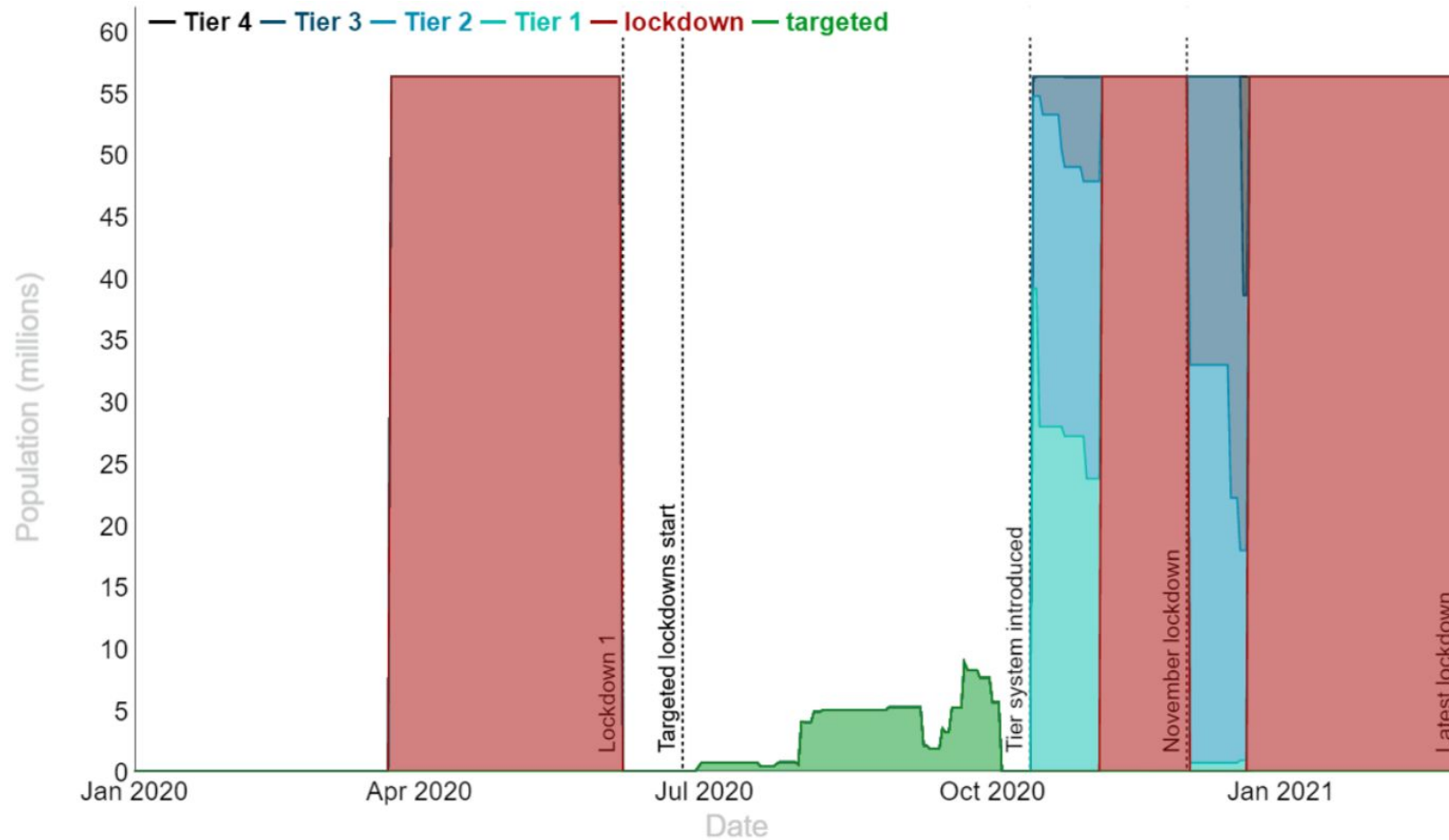


Chart shows the median (the line) and the interquartile range (the shaded area). DHS growth rates (see text for explanation). Values of -2 indicate firms going to zero turnover or leaving the sample.

Impact of the lockdowns



Impact of the lockdowns

$$turnovergrowth_{i,t} = \beta lockdown_{i,t} + v_i + \epsilon_{i,t}$$

| | Turnover growth | |
|----------------------------------|-----------------------|----------------------|
| | (1) | (2) |
| Post-March 2020 | −0.332*** (0.0004) | |
| National lockdown 1 (Q2 2020) | | −0.358*** (0.001) |
| National lockdown 2 (Q4 2020) | | −0.291*** (0.001) |
| Local lockdowns | | −0.316*** (0.003) |
| Tier 1 | | −0.310*** (0.001) |
| Tier 2 | | −0.315*** (0.001) |
| Tier 3 | | −0.292*** (0.002) |
| Post-March 2020, no restrictions | | −0.320*** (0.001) |
| Firm fixed effects | Yes | Yes |
| Observations | 43,442,410 | 37,714,382 |

*p<0.1; **p<0.05; ***p<0.01

Sectoral heterogeneity

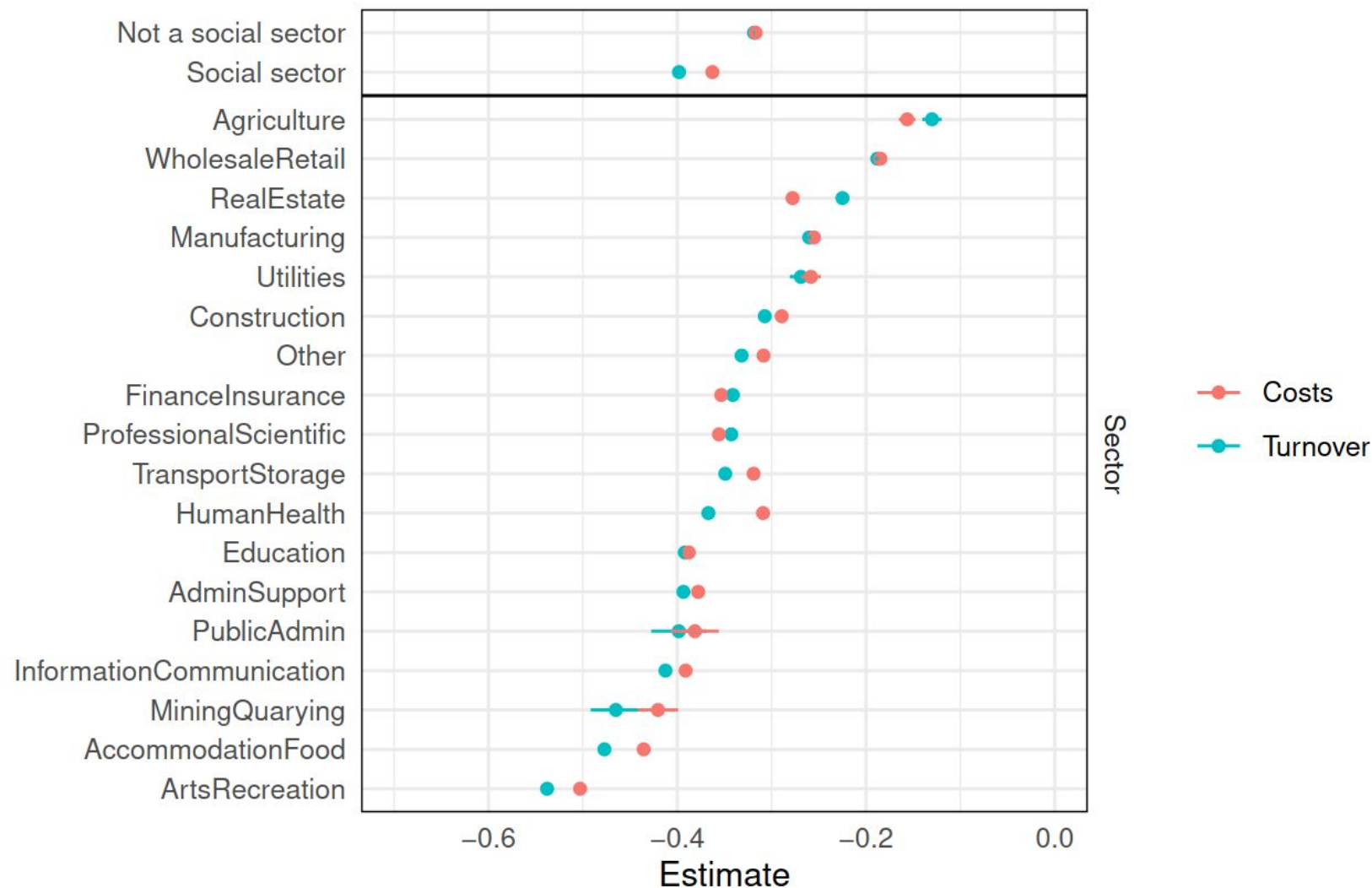


Chart shows the estimated coefficients on sector dummies interacted with 'post-March' dummy in a regression as in equation (2), with different dependent variables. Lines show 99% confidence intervals (standard errors are typically very small).

Geographical heterogeneity

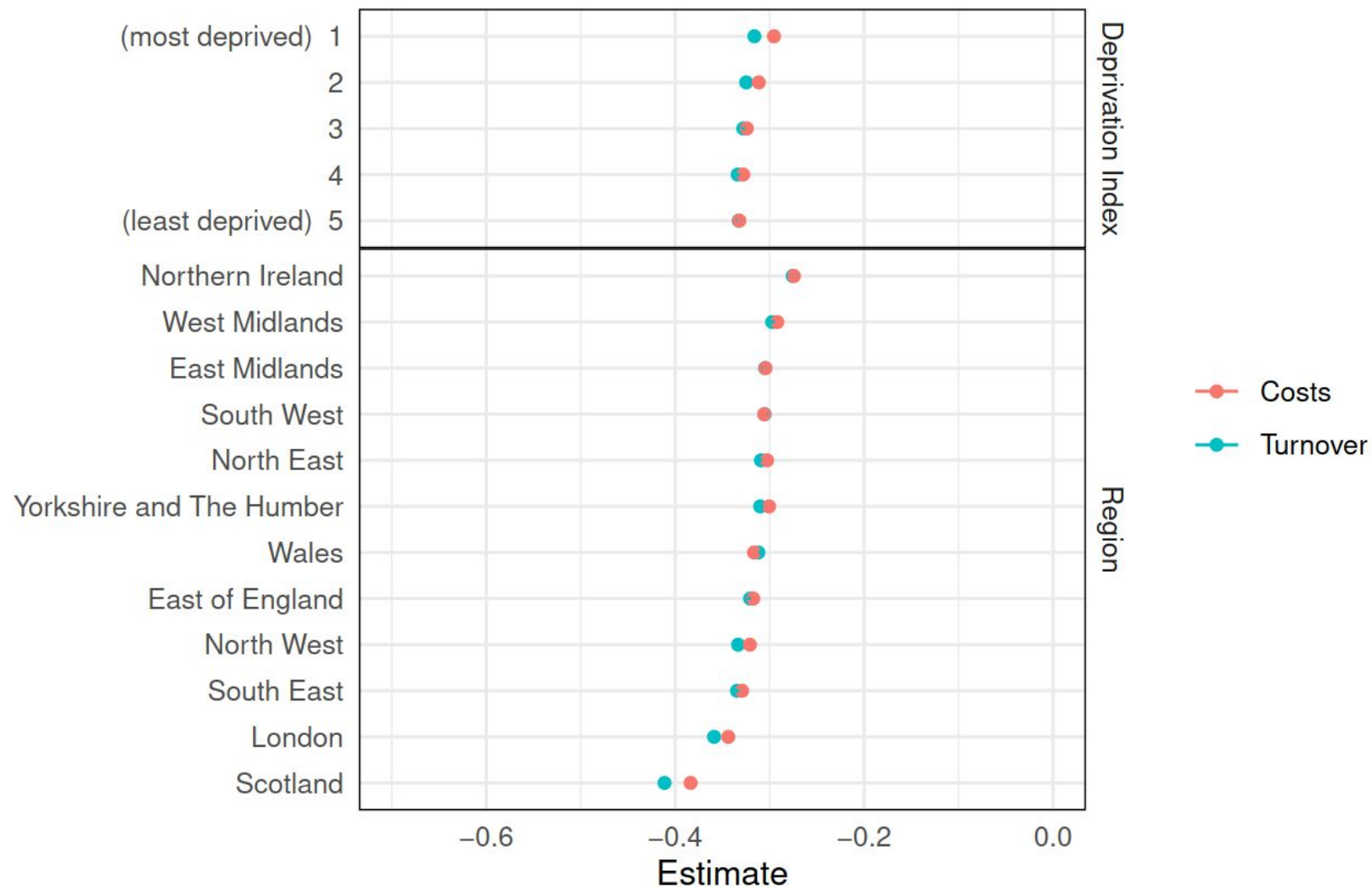
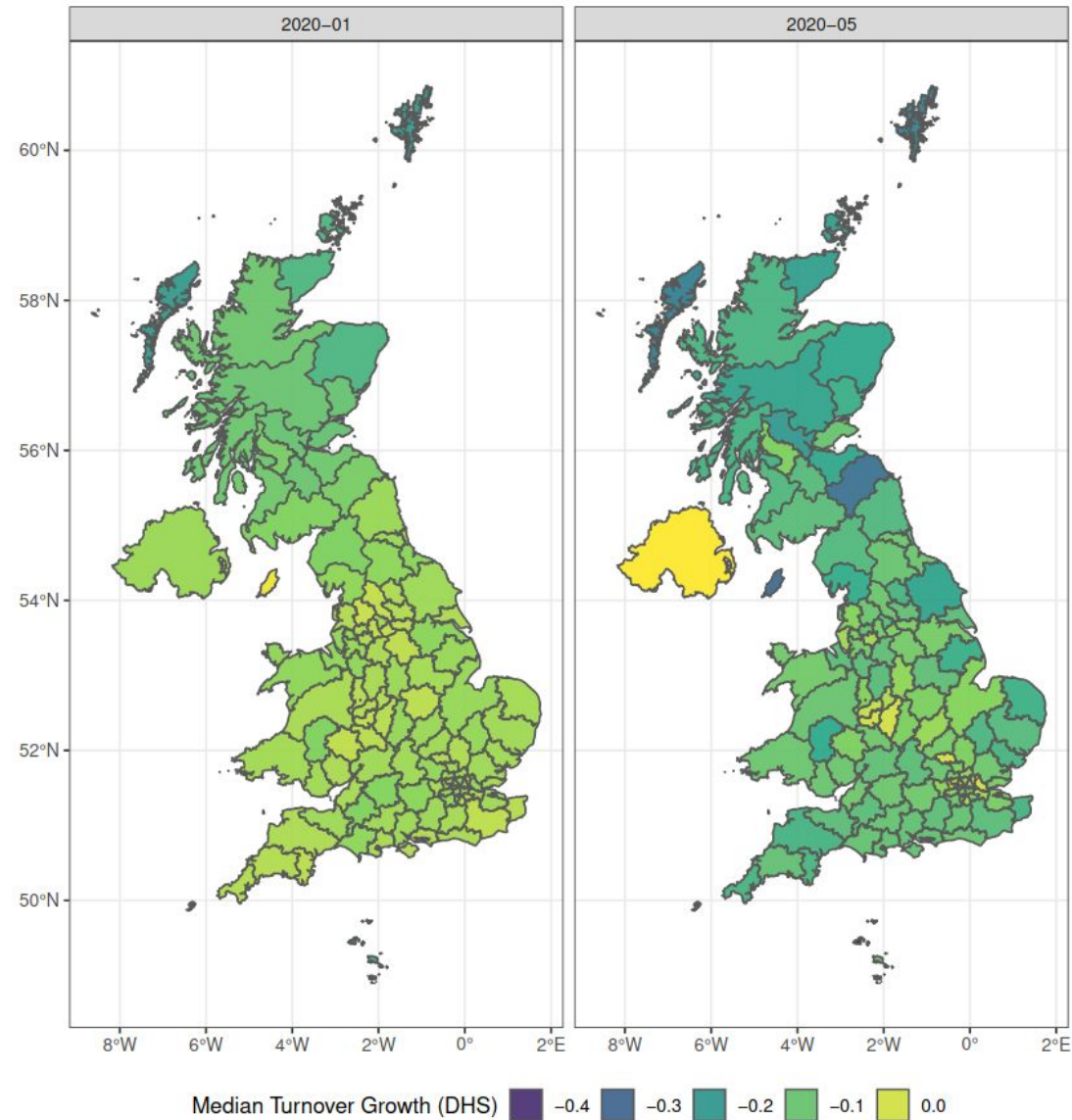


Chart shows the estimated coefficients on region dummies interacted with 'post-March' dummy in a regression as in equation (2), with different dependent variables. Lines show 99% confidence intervals (standard errors are typically very small).

Geographical heterogeneity

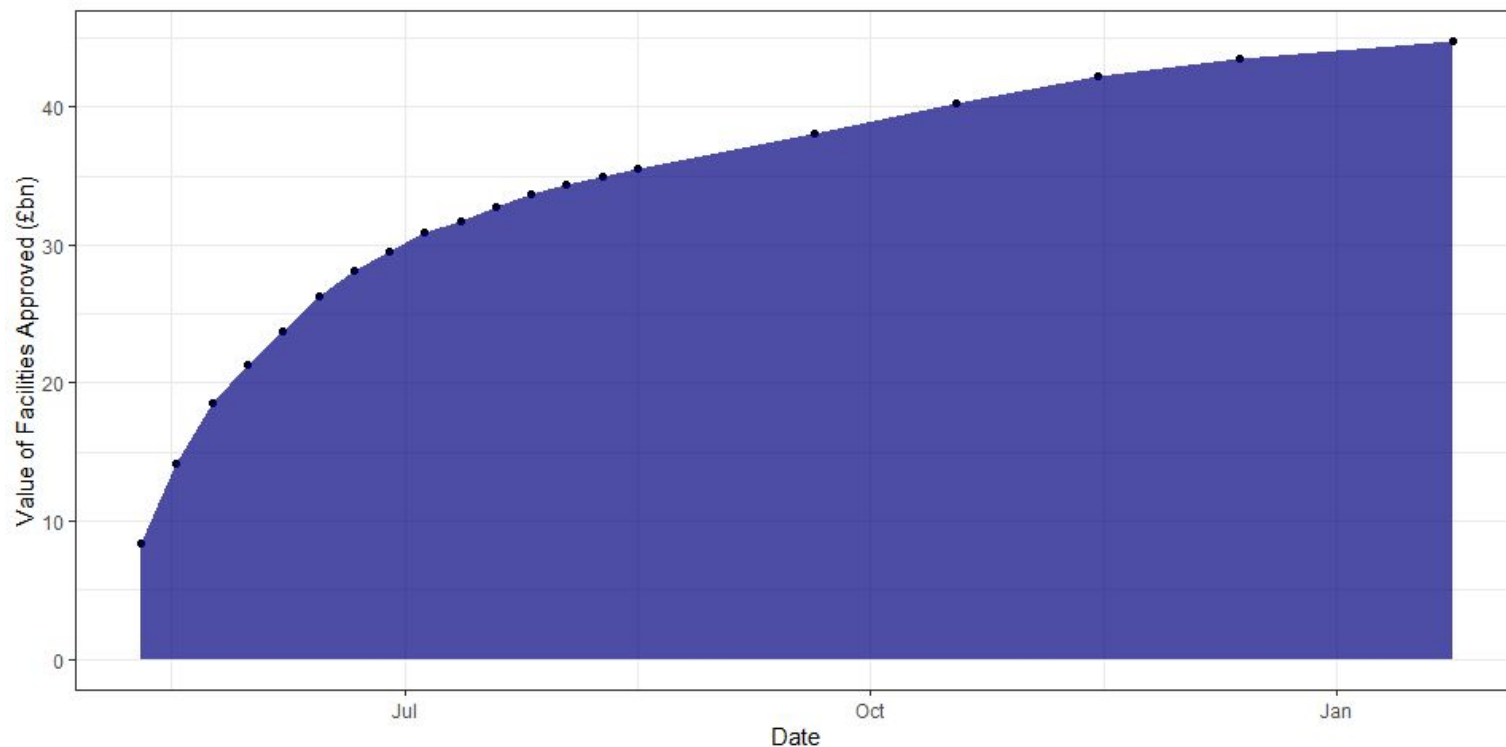


UK government support schemes

- Coronavirus Job Retention Scheme (**CJRS**) - compensation to cover the labour costs (furlough)
- Coronavirus Business Interruption Loan Scheme (**CBILS**)
- Bounce Back Loan Scheme (**BBLS**)

Bounce Back Loan Scheme (BBLs)

- The scheme helped small and medium-sized businesses to borrow between £2,000 and up to 25% of their turnover. The maximum loan available was **£50,000**.
- The government guaranteed 100% of the loan and there were no fees or interest to pay for the first 12 months. After 12 months the interest rate will be 2.5% a year.



Probability of taking a BBLs loan

$$P(\text{TookOutBBLsloan}) = \Phi[\alpha + \beta_1(\text{turnovergrowthin2020}_i) + \beta_2(\text{sizebracket}_i) + \beta_3(\text{region}_i) + \beta_4(\text{sector}_i) + \beta_5(\text{agequintile}_i) + \epsilon_i]$$

Term



Chart shows the marginal effects of independent variables (colours).
Lines show 99% confidence intervals (standard errors are typically very small).
Base categories are: Age quintile 1; Firm Size £0–£0.1m; London; Real Estate; Turnover Growth 2020 decile 01.

Conclusions

- Sharp drop (30%) in SME turnover growth
- Significant heterogeneity in the impact of Covid on SME turnover
- Businesses in sectors exposed to social distancing are most likely to have used the BBLS

References

- [Bank of England Staff Working Paper No. 924](#)
- [Financial Stability Report August 2020](#)



Thank you

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