

## A spatio-temporal investigation into the effect of general health on consumer financial vulnerability, through the indicator of County Court Judgements (CCJs)

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### Background and motivation

Since the 2008 and 2016 Global Financial Crisis, a greater proportion of households have struggled with the twofold issue of decreasing annual incomes and increasing living costs. This greater financial strain generates an increasing prevalence indebtedness and financial vulnerability across England and Wales, thus likelihood of household lending and an inability to afford repayments. Trends in financial vulnerability vary spatio-temporally due to differing socio-demographic influences. Academia suggests these include employment, education, and tenure. With focus on general health, this project aims to inform policy makers of spatio-temporal locales where specific socio-economic variables influence financial vulnerability most, thus where implementation of health improving policy will tackle a twofold issue.

### Methodology and data

The datasets used were Registry Trust aggregated CCJ data and 2011 Census data from the Office for National Statistics (general health, tenure, approximated social grade, and employment status). All data was at regional, local authority and clinical commissioning group level. The scale was England and Wales. The allocation of the additional socio-economic variables were selected due to their association with consumer financial vulnerability in prior literature. The methodological approach firstly applied simple descriptive statistics, followed by percent-change analysis of CCJ data at short-term (2016-2017), mid-term (2016-2018) and long-term (2016-2019) temporal markers, to assess financial stability after the 2016 Financial Crisis. To assess general health/additional socio-economic variables and consumer financial vulnerability, OLS (global) and GWR (local) regressions were modelled at three temporal timeframes (2011, 2015 and 2019). The GWR coefficients and their statistical significance were visualised through choropleth maps. All statistical and visual outputs were programmed using R, Excel and QGIS.

### Key findings

Initial descriptive statistics of CCJ rate found CCJ cases to increase most dramatically after 2012 (2001-2019 analysis), particularly CCJ's of £251-£500 from London, the North West and South East. Judgements in Wales and the North East remain limited, attributed to their reduced population size and reliance on global trade, thus susceptibility to global volatility. The relationship between financial vulnerability and general health supports academic

literature when using CCJ rate as an indicator of instability. All health only GWR models and additional socio-economic GWR models showed the north: south divide of financial vulnerability to be decreasing, attributed to a rise in internal migration of students and professionals. Interestingly, when including the additional socio-economic variables to OLS and GWR models at LA level, the global coefficients for 'bad health' become negative, indicating other socio-economic indicators have a greater influence on financial vulnerability, i.e. employment. Nevertheless, GWR coefficients showed the strongest relationship between financial vulnerability and bad health to be in Manchester, Birmingham, and London across all three timeframes (2011, 2015 and 2019) (Figure 1). This spatio-temporal regularity should be highlighted to policy makers who can implement a strategy to improve financial stability through the medium of improving general health. Alternatively, as the relationship between bad health and financial stability decreases in the North of England in 2019 (Figure 1), policy makers should shift their focus to an alternative medium with larger influence i.e. employment.

### Value of research

There is currently no research using CCJ data as an indicator of financial vulnerability, thus, although many conclusions support prior academic research, a new avenue for exploration has been formed. Furthermore, existing literature that reviews general health is predominantly internationally based, thus limiting health related literature that focuses on England and Wales specifically, and proving reasoning for the importance of this project. Therefore, this project forms the basis for further investigation into additional socio-economic variables and consumer financial vulnerability, possibly reducing the scale to LSOA level to increase the locality of information to policy makers.

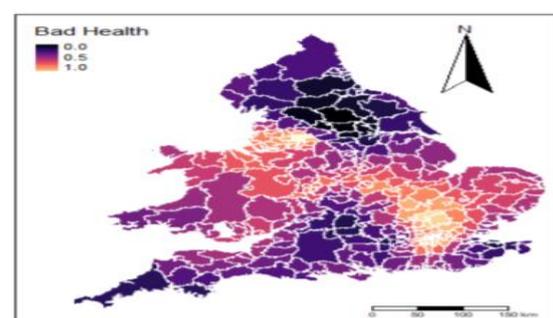


Figure 1: GWR coefficients (2019). Dependant variable = CCJ rate

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