Broken Britain Index - Technical Appendix - December 2023

This appendix sets out the methodology and data sources employed in creating the Broken Britain Index.

Objective

The Broken Britain Index was designed to identify the areas most severely affected by the simultaneous decline of multiple public and essential services.

Indicators used in the index

HEALTHCARE EMERGENCY			
Percentage of consultant led referral to treatment time - 18 weeks or less	September 2023	NHS Trust	https://www.england.nhs.uk/statistics/statistical-work-areas/rtt-waiting-times/rtt-data-2023-24/
Percentage of attendance to admission, transfer or discharge in A&E in 4 hours or less	October 2023	NHS Trust	https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/ae-attendances-and-emergency-admissions-2023-24/
Percentage waiting less than 18 weeks from referral to consultant-led cancer treatment	September 2023	NHS Trust	https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/
Average ambulance waiting times for category 2 calls	September 2023	NHS Ambulance Trust	https://www.england.nhs.uk/statistics/statistical-work-areas/ambulance-quality-indicators/ambulance-quality-indicators-data-2023-24/
Percentage of GP appointments delivered on the same day as booked	August 2023	NHS ICB	https://digital.nhs.uk/data-and-information/publications/statistical/appointments-in-general-practice/august-2023
Percentage of adult patients seen in the previous 24 months by a dentist as of 30 June 2023	2022/23	Lower tier local authority	https://digital.nhs.uk/data-and-information/publications/statistical/nhs-dental-statistics/2022-23-annual-report
Maternity services CQC rating	Most recent	NHS Trust	https://www.cqc.org.uk/publications/major-report/state-care/2022-2023/quality-of-care
THE FORGOTTEN GENERATION			
Rate of secondary teachers leaving the state	2020	Lower tier local	https://www.nfer.ac.uk/key-topics-expertise/school-workforce/explore-by-geography

funded sector (attrition)		authority	/
Percentage of secondary pupils who are persistently absence	Autumn and Spring 2022/23	Upper tier local authority	https://explore-education-statistics.service.gov.uk/find-statistics/pupil-absence-in-schools-in-england
Average Attainment 8 score	2022/23	Upper tier local authority	https://explore-education-statistics.service.gov.uk/find-statistics/key-stage-4-performance-revised
Average waiting time in days for children who receive a second contact with mental health services	2021/22	NHS CCG	https://www.childrenscommissioner.gov.uk/resource/29751/
CRUMBLING COMMUNITIES			
Percentage decrease in total live local bus registration between 2019/20 and 2021/22	2021/22	Traffic area	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1091942/220718_TCGB_Annual_Report.pdf
Percentage of B and C classified roads where maintenance should be considered	2021/22	Upper tier local authority	https://www.gov.uk/government/statistical-data-sets/road-condition-statistics-data-tables-rdc#condition-of-local-authority-managed-roads-rdc01
Percentage persistent vacancy rate	2023	Region	https://www.powertochange.org.uk/wp-content/uploads/2023/05/Power-To-Change-Community-powered-high-streets-how-community-businesses-will-build-town-centres-fit-for-the-future.pdf via The Local Data Company
Percentage of adults experiencing food insecurity	2021	Lower tier local authority	The University of Sheffield: Adult food insecurity at Local Authority scale https://shefuni.maps.arcgis.com/apps/instant/interactivelegend/index.html?appid=8be0cd9e18904c258afd3c959d6fc4d7
Percentage of total recorded crime (excluding fraud and computer misuse) resulting in a charge or summons	April 2022 - March 2023	Police Force	https://www.gov.uk/government/statistics/crime-outcomes-in-england-and-wales-2022-to-2023/crime-outcomes-in-england-and-wales-2022-to-2023
Rate of shoplifting offences per 1,000 population	Year ending June 2023	Police force	https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/policeforceareadatatables
Crime Severity Score	April 2022	Police	https://www.ons.gov.uk/peoplepopulation

	- March 2023	Force	andcommunity/crimeandjustice/datasets/crimeseverityscoreexperimentalstatistics

Standardisation and ranking

To ensure comparability across indicators, we standardised each indicator using the min-max method, which scales each indicator to a common range between 0 and 1, before combining them into a composite index.

This method normalises the data distribution better than just ranking as the scaling reduces the impact of outliers whilst preserving information allowing for a more nuanced view of the distribution.

Lower tier local authorities

We collected our data based on lower tier local authorities in England.

We did not include data for the City of London or the Isles of Scilly due to data constraints due to the size of these local authorities.

For some of the NHS data we used *NHS Acute (Hospital) Trust Catchment Populations* to understand the main hospital trust that served each local authority as hospital providers do not have defined boundaries for access to their services. The source data is available here from official 2022 data from the Office for Health Improvement and Disparities.

Combining different indicators

We chose to assign equal weights to each indicator, considering that the inclusion of more health and education indicators adequately emphasised these areas.

To validate the robustness of our index, we created multiple versions with varying weightings for each indicator. The results demonstrated no significant impact on the final rankings or the trends identified within the index.