North East Covid-19
Economic Response Group

Google COVID-19 Community Mobility Reports to 18th October

Visits to retail and recreation locations

on behalf of business:

on behalf of regional universities:

Key points

Google mobility data can provide indications of the local impact of changes to restrictions and of policies such as Eat Out to Help Out on the number of visits to retail and recreation locations.

The recent introduction of tier 3 restrictions to the Liverpool City region resulted in a decrease in the number of visits to these locations from 69% to 61% of the early 2020 average.

Early indications are that the recent introduction of tier 3 restrictions in Lancashire has resulted in a decrease from 80% to 69% of the early 2020 average.

In the North East LEP area, the introduction of tier 2 restrictions on 18th September resulted in a decrease of these visit types from 81% to 73% of the early 2020 average.

At around the same time the introduction of tier 2 restrictions in the Liverpool City region resulted in a decrease from 80% to 74% of the early 2020 average.

In both cases, the initial impacts of the introduction of these restrictions were followed by a further (shallower) decrease in the number of visits.

About the data

Google provide mobility reports in PDF format for each UK local authority (and for many locations around the world) together with raw daily data going back to mid-February. These statistics show how the number of visits to different types of places compare to an early 2020 baseline. The intention of the data is "to help remediate the impact of COVID-19".

Google obtains data from users who have opted into location history for their account, so the data represents a sample of their users but may not reflect the exact behaviour of the wider population.

The data records visits to six types of location. Here, we focus on visits to retail and recreation locations. These include restaurants, cafés, shopping centres, theme parks, museums, libraries and cinemas. They exclude supermarkets and pharmacies which are within a separate category.

Data is compared with the average (median) for the same day during the first six weeks of 2020, with the result presented as a positive or negative index, depending on whether the latest data was higher or lower than this median. A score of -20 for a Tuesday, for example, would indicate that the number of visits was 20% below the median for Tuesdays in January and early February.

Recent patterns in the North East data

Figure 1 shows rolling seven-day averages of the index for the North East LEP area from mid-July to the latest release (up to 18 October). The North East currently has tier 2 restrictions and is compared with the Liverpool City Region (tier 3) and the West of England (tier 1). The latter includes Bristol and three surrounding local authority areas.

Seven-day rolling averages are used to show long term patterns in the data by removing a lot of volatility. Their disadvantage is that the impact of a single day peak is diluted.

The chart shows that the Eat Out to Help Out scheme in August increased the number of visits to retail and recreation locations in all three areas, but the impact appeared greater in the North East and Liverpool city region than in the West of England. By the end of August, the North East and Liverpool city region both had levels of visits to these locations that were less than 15% below the early 2020 averages. In mid-July, levels had been more than 30% lower.

The North East and Liverpool city region were both placed under new restrictions in mid-September and the latter has recently been placed in tier 3, increasing restrictions. The chart highlights the impact of the September restrictions on visits was similar in the North East and Liverpool. The impact of tier 3 restrictions in Liverpool mean that levels of visits to retail and recreation locations in the city region are below those in mid-July. In the North East, the level of visits is currently slightly higher than in mid-July. With no additional restrictions, the West of England total is similar to that at the end of August.

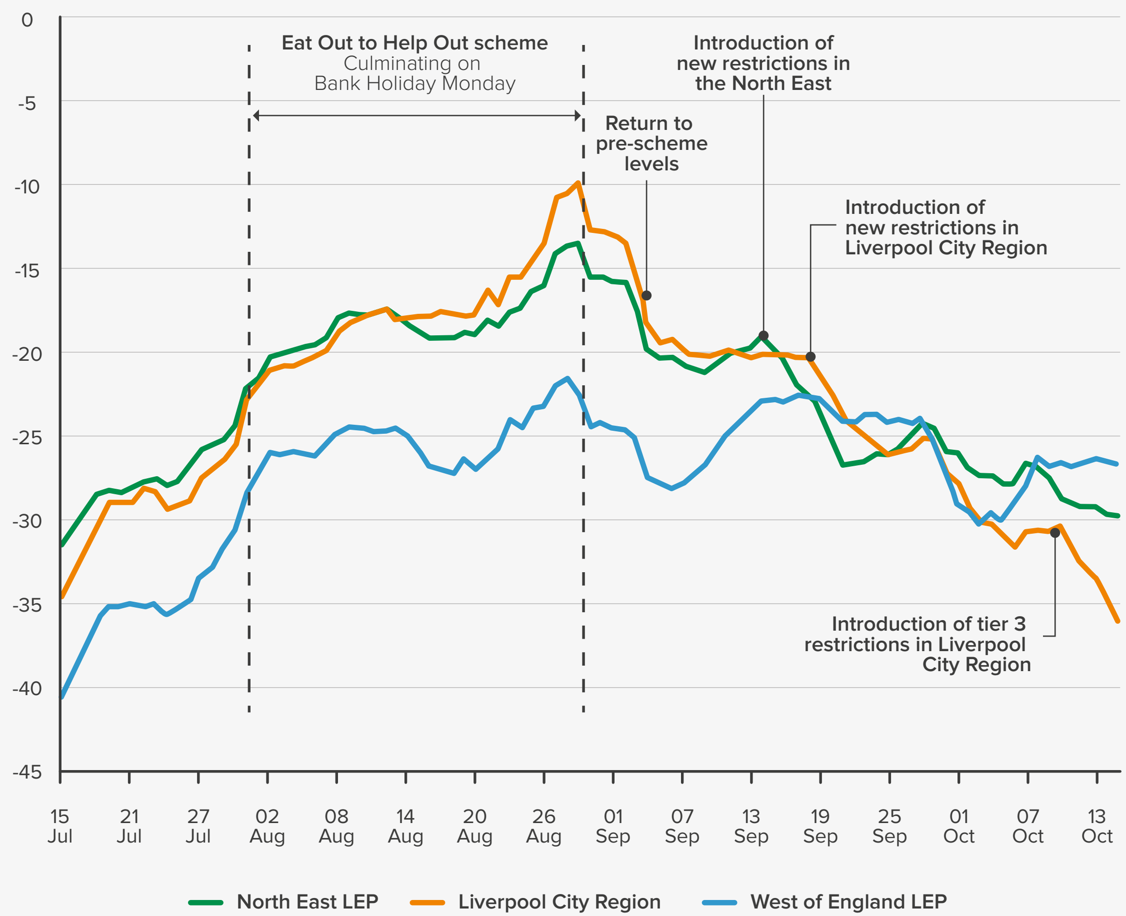

Figure 1: Google mobility data: visits to retail and recreation locations, selected geographies rolling seven-day averages, mid-July to mid-October

Source: COVID-19 Community Mobility Reports (https://www.google.com/covid19/mobility/)

Notes: Data for these three areas is based on weighted combinations of data for their local authorities.
The date referred to in the chart is the mid-point of the seven-day period.
The index compares the latest number of visits with the average (median) in the first six weeks of 2020.

The impact of September restrictions

On 18 September, the North East became subject to new restrictions. Figure 2 shows an indication of the impact of this. For the North East LEP area as a whole and the seven local authorities, it shows seven-day averages of the index before and after the introduction of the restrictions. The data is expressed as a percentage of the early 2020 averages, rather than the percentage difference shown in figure 1.

The effect of the restrictions was that the number of visits to retail and recreation locations in the North East dropped from 81% to 73% of the early 2020 average. The percentage point decrease was highest in Northumberland but this was also the area where visits were nearest their early 2020 average.

On 22 October, similar restrictions came into force in the Liverpool City region. Figure 3 shows the impact of restrictions was similar to the change in the North East, with the Liverpool city region index decreasing from 80% to 74% of the early 2020 average.

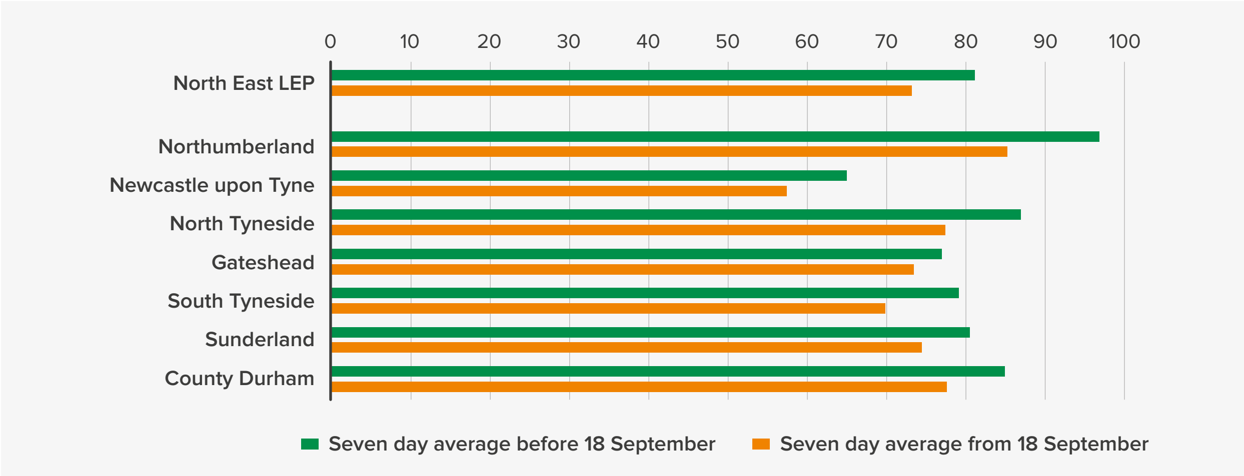

Figure 2: Google mobility data: visits to retail and recreation locations, North East LEP area seven-day averages, before and after 18 September

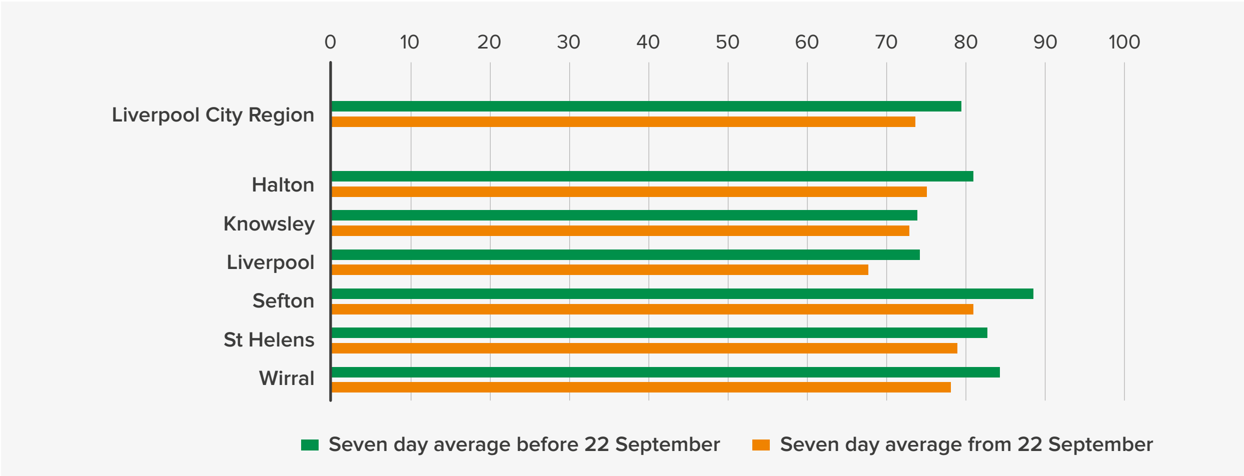

Figure 3: Google mobility data: visits to retail and recreation locations, Liverpool city region area seven-day averages, before and after 22 September

Source: COVID-19 Community Mobility Reports (https://www.google.com/covid19/mobility/)

Notes: Data for these three areas is based on weighted combinations of data for their local authorities
The index compares the latest number of visits with the average (median) in the first six weeks of 2020.

Tier 3 restrictions

On 14 October, the Liverpool City region became subject to tier 3 restrictions. The latest Google mobility reports cover the period up to and including 18 October, so it is possible to compare the five days from the date of the new restrictions with the five days before.

This is shown in figure 4 and highlights that the number of visits to retail and recreation locations in the city region decreased from 69% to 61% of the early 2020 average. Given the impact of changes in September were similar in the Liverpool city region and North East, it is likely that any introduction of tier 3 restrictions in the North East would result in a decrease of around eight percentage points as well.

The Lancashire LEP area became subject to tier 3 restrictions on 17 October and, although there are only two days of data available from this date, it appears that there has been a slightly larger percentage point decrease in the number of visits to these locations in Lancashire, when compared to Liverpool, as figure 5 highlights.

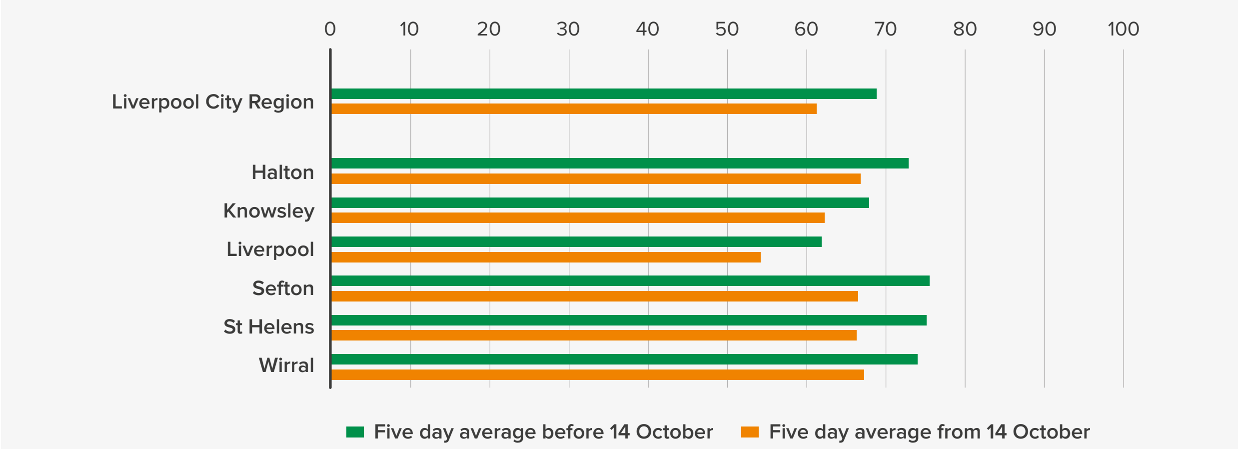

Figure 4: Google mobility data: visits to retail and recreation locations, Liverpool city region area five-day averages, before and after 14 October

Figure 5: Google mobility data: visits to retail and recreation locations, Lancashire LEP area two-day averages, before and after 17 October

Source: COVID-19 Community Mobility Reports (https://www.google.com/covid19/mobility/)

Notes: Data for these three areas is based on weighted combinations of data for their local authorities
The index compares the latest number of visits with the average (median) in the first six weeks of 2020.