

Article

Consumer card spending, flow of spending across the UK: 2019 to 2023

Analysis of consumer card spending trends covering where UK cardholders are spending money. This analysis shows consumer spending habits on a local level, by publishing a dataset showing where consumers originated from for merchants at every postal district across the UK.

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Release date:
25 March 2024

Next release:
To be announced

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1 . Main points

- This article includes indexed data time series on aggregated card spending flows at a postal district level broken down by merchant and cardholder locations; this allows users to explore the relationship between where cardholders live and spend over time.
- Cardholders spent 74% of all face-to-face spend at merchants in the postal area where they live and 37% at merchants in the postal district where they live between January 2019 and September 2023.
- The percentage of spending by residents within their local area has decreased compared with pre-coronavirus, despite evidence on the number of people working from home doubling between October to December 2019 and January to March 2022.
- The highest percentage of face-to-face spend that stayed within the same region between January 2019 and September 2023 occurred in Scotland, at 87%; in comparison London and the East of England had the lowest percentage of spend staying within the region, at 76% and 75%, respectively.

2 . Overview of spending data

The Office for National Statistics (ONS) has entered into an agreement with Visa to receive aggregated and anonymised data on UK card payments. This data source offers new opportunities to understand UK consumer spending through its extensive coverage and novel breakdowns.

This article will explore where UK cardholders spend money face-to-face in comparison with their home postal district, postal area or International Territorial Level (ITL) region. This is the second among a series of analytical articles that provide new and granular insights for users. The first, covering overall consumer spending habits can be found in our article [Regional consumer card spending. UK: 2019 to 2023](#) published November 2023.

The analysis in this article covers credit and debit card spending, which is part of the UK spending landscape but is not exhaustive. Consumers may also use cash, direct debit, faster payments or standing orders. For more information on card usage see Section 9: Data sources and quality, and our [quality and methodology report](#).

3 . Spend within a cardholder’s home postal district or postal area

The card payment data contain different levels of geographic granularity: postal area and postal district.

Postal areas are the largest zones, these are represented by the first one or two letters at the start of a postcode.

Postal districts are a combination of the postal area codes, followed by one or two numbers.

Table 1 shows an example postal structure.

Table 1: Postcode structure

Example	Geographic Unit	Number in UK (Including Crown Dependencies)
PO	Postcode Area	124
PO15	Postcode District	3,118
PO15 5RR	Unit Postcode	Approximately 1.79 million (Live)

Source: Postal geographies from the Office for National Statistics

The merchant acquirer (bank or financial institution that processes card payments for a merchant) is responsible for providing the card network with the correct location of each merchant outlet. The merchant location may be unknown if the merchant acquirer has failed to provide location information or information is incorrect.

The cardholder’s home postal district or postal area is inferred by Visa based on a cardholder’s spending habits. Aggregated and anonymised spending data is provided to the Office for National Statistics (ONS) for each postal area and postal district.

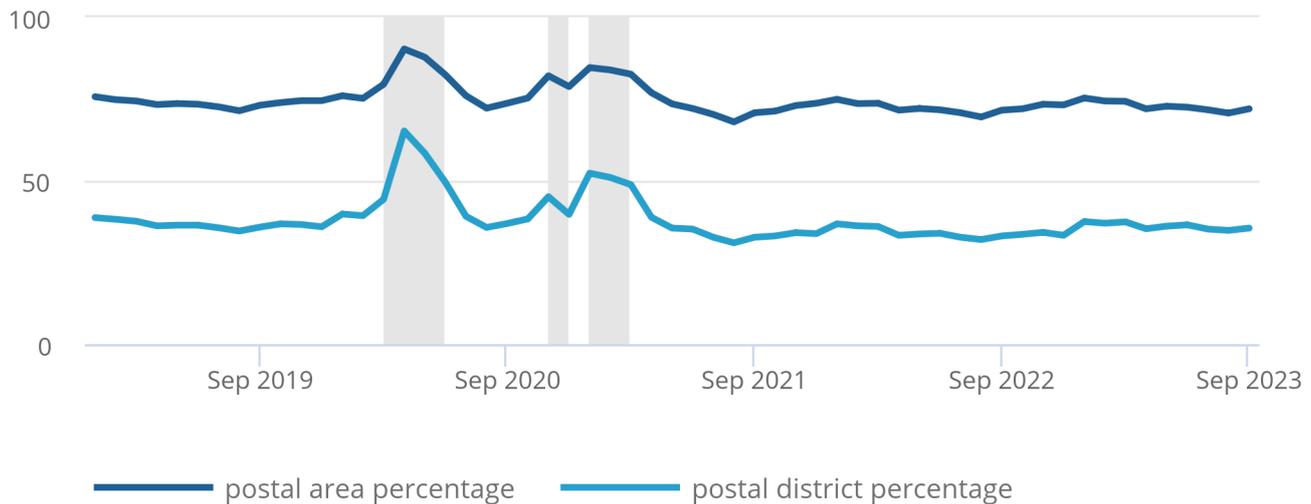
Using cardholder location and merchant location, the percentage of face-to-face spend that is made in the same postal area or postal district as a cardholder’s home can be found. Figure 1 shows the percentage of face-to-face spend that is made within a cardholder’s home postal district or postal area.

Figure 1: Three-quarters of face-to-face spend occurs within a cardholder's home postal area

Average percentage of face-to-face spend made in a cardholder's home location, UK, January 2019 to September 2023

Figure 1: Three-quarters of face-to-face spend occurs within a cardholder's home postal area

Average percentage of face-to-face spend made in a cardholder's home location, UK, January 2019 to September 2023



Source: Aggregated and anonymised data on UK card payments provided by Visa Europe Limited (2023)

Notes:

1. Calculated based on the value of face-to-face spending for UK-issued Visa cards at UK merchants.
2. Spend where either the cardholder or merchant location or both are unknown have been excluded from the total.
3. Highlighted periods of national restrictions are defined in [Section 9: Data sources and quality](#).

Between January 2019 and September 2023, 74% of all face-to-face spend was made in a cardholder's home postal area and 37% in a cardholder's home postal district. This is because postal areas are larger than postal districts, so there is a wider boundary around home location included.

During the coronavirus (COVID-19) pandemic, the percentage of face-to-face spend within the home postal area increased from 73% in April 2019 to 90% in April 2020. Since the end of national restrictions, the percentage of face-to-face spend has remained slightly lower than the pre-coronavirus average. In 2022, an average of 72% of spend was made within a cardholder's home postal area and 34% in the postal district, compared with 74% and 37% in 2019. Our [publication on homeworking in the UK](#) indicates that the number of people working from home doubled between October to December 2019 and January to March 2022. Despite this, the percentage of spend within the local economy has decreased.

The percentage of face-to-face spending in a cardholder's home postal area and postal district changes throughout the calendar year. It is highest in January, begins to decline in summer months, and falls to its lowest in August. This indicates consumers are travelling more in the summer than during the winter. Taking 2022 as an example; average percentage spend in a cardholder's home postal area drops from 75% in January to 70% in August, a fall of 5 percentage points. At a postal district level there is a 5 percentage point fall, from 37% in January to 32% in August.

4 . Postal district spending within merchant category groups

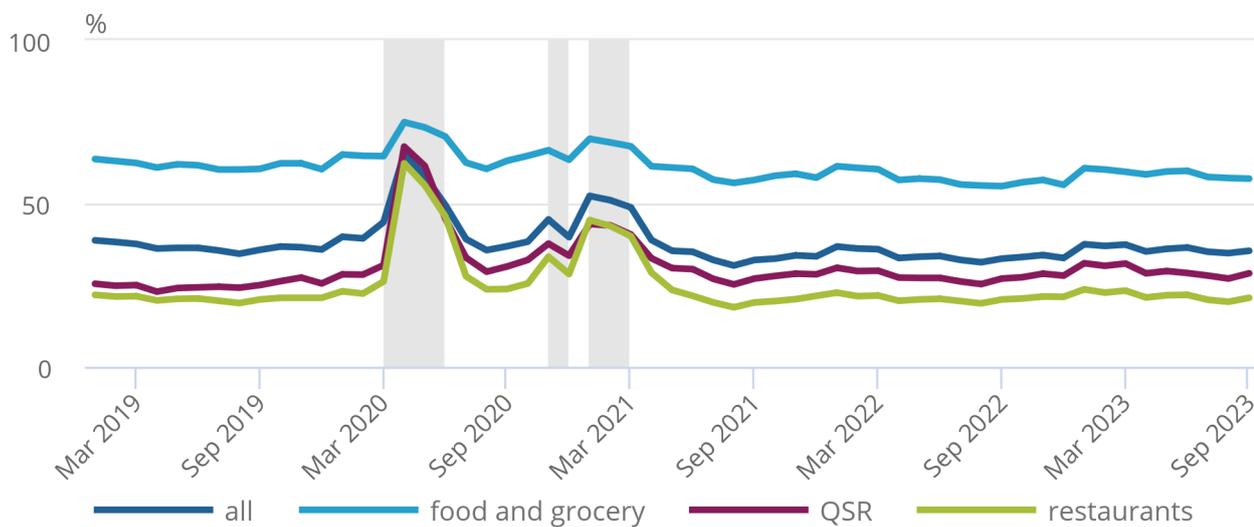
The percentage of face-to-face spend within a cardholder's home postal district varies depending on the type of merchant consumers are spending money with. Figure 2 shows the average percentage of face-to-face spend within a cardholder's home postal district in a range of merchant category groups (MCGs).

Figure 2: Face-to-face spending within a home postal district accounts for around 60% of all food and grocery spending

Average percentage of face-to-face spend made in a cardholder's home district by sector, UK, January 2019 to September 2023

Figure 2: Face-to-face spending within a home postal district accounts for around 60% of all food and grocery spending

Average percentage of face-to-face spend made in a cardholder's home district by sector, UK, January 2019 to September 2023



Source: Aggregated and anonymised data on UK card payments provided by Visa Europe Limited (2023)

Notes:

1. Percentages are calculated based on the value of face-to-face spending for UK-issued Visa cards at UK merchants.
2. Merchant category groups (MCGs) indicates the primary type of trade conducted by a given merchant. More information is given in our Regional consumer card spending trends Quality and Methodology Information (QMI) report.
3. Spend where either the cardholder or merchant location or both are unknown have been excluded from the total.
4. Highlighted periods of national restrictions are defined in [Section 9: Data sources and quality](#).

For all three sectors shown in Figure 2, there was an increase in face-to-face spend within a cardholder's home postal district during periods of national restrictions. The percentage of face-to-face spend in the cardholder's home postal district has decreased post-coronavirus for the food and grocery sector, with a 2 percentage point decrease in average spend in a cardholder's home postal district in 2022 compared with 2019. This drives the overall decrease in face-to-face spend at the home postal district. However, the percentage of face-to-face spend in a cardholder's home postal district for quick service restaurants (QSR) has remained 2 percentage points higher in 2022 compared with 2019.

For all three sectors, similar patterns are seen at different times of the year. The percentage of face-to-face spend in a home region during the summer period falls by a larger percentage for restaurants and QSR than it does for food and groceries.

5 . Region-to-region spending flows

Figure 3 shows the percentage of spend made from the International Territorial Level (ITL) region a cardholder resides in to the ITL region where merchants are based (see our [quality and methodology report](#) for description of ITL regions). Where a transaction occurred face-to-face, the region of the merchant can be seen.

For all regions, a high percentage of spend is made either at online merchants or at merchants based in the same region as a cardholder's home region. Of the spend made face-to-face, 13% was made in an unknown merchant location. See our article on [Regional consumer card spending trends](#) for more information on online and face-to-face spending and regional spending percentages.

Figure 3: A high percentage of total face-to-face spend is seen within regions

Notes

1. Percentages are calculated based on the value of spending for UK-issued Visa cards
2. Unknown merchant location covers face-to-face spending at merchants in the UK where the location information is not available. Online covers UK and international merchants where a card is not present for the transaction. See [Glossary](#) for definitions of online and face to face.
3. No cardholders are assigned a home postal area or postal district of the Channel Islands or Isle of Man.

The highest percentage of spend online between January 2019 and September 2023 was made by cardholders with an unknown location and those living in London. For cardholders located in London, online spend accounted for 47% of spend, whereas online spend only accounted for 36% of all spend for cardholders located in Northern Ireland.

The majority of face-to-face spending takes place at merchants located within the same ITL region as a cardholder's home, as shown by the diagonal pattern in Figure 3.

For cardholders located in Scotland, 39% of spend was made online and 61% was made face-to-face. Between January 2019 and September 2023, Scotland had the highest percentage of face-to-face spend staying within the same region. Of all face-to-face spend made by cardholders living in Scotland, 85% was made at merchants within Scotland, 12% made at merchants in an unknown location and the remaining 3% was made at merchants in other UK regions.

In comparison, London had the lowest percentage of spend staying within the same region. Of face-to-face spend made by cardholders living in London, 69% was made to merchants in London and a further 16% made to merchants in an unknown location. London has the highest percentage of spend made to an unknown location of any region. Of the remaining 14% of spend made outside of London, 6% was made to merchants located in the South East. This is the highest percentage of spend made outside of a cardholder's home region.

The regions close to London have a high percentage of face-to-face spend outside of a cardholder home region. Both the South East and East of England have 5% of their spend made with London merchants. The percentage of spend from the East of England to the South East of England is 3%.

The percentage of face-to-face spend made at merchants within a UK cardholder's home region changes throughout the year. In 2022, the highest percentage of home spend for all regions occurred in January and the lowest percentage of spend made in the summer months. Most regions had the lowest percentage of home spend in August, except Northern Ireland and Scotland. The lowest percentage of home spend occurred in July for these two regions. The percentage of home spend within these months drops by an average of 5 percentage points when compared with January.

6 . Local spending flows

Examining the data at postal district level gives insight into local face-to-face spending flows. In Figure 4, users can select cardholders or merchants, and a postal district and see where cardholders who live in that postal district are spending money, or where cardholders originate from for merchants located in that postal district.

For example, selecting "cardholders in postal district", filtering for NW1 and selecting Q3 2023 (Q is the abbreviation for Quarterly time period) shows the proportion spent in each merchant postal district across the UK for July to September 2023 for cardholders with a home residence in postal district NW1. The values are a proportion of total cardholder spend in the postal district by value at each merchant postal district relative to the total spend by the cardholder postal district in Q1 (January to March) 2019, which added up to 100 in that reference period.

Alternatively, selecting "merchants in postal district", filtering for CW8, and selecting Q3 2023 shows where UK cardholders have originated from for merchants located in CW8 for July to September 2023. The values are proportions of total merchant spend in the postal district by value by each cardholder postal district relative to the total spend by the merchant postal district in Q1 (January to March) 2019, which added up to 100 in that reference period.

Figure 4: Face-to-face spend differs across postal districts

UK, proportion spend at each merchant location. Select to filter by cardholder postal district

Notes

1. Calculated based on the value of face-to-face spending for UK-issued Visa cards at UK merchants.
2. Statistical disclosure controls are applied by Visa before providing the data to the ONS. Spending data will be unavailable for a postal district where this would allow the identification of a person, business, or organisation.
3. Spending data for a postal district will also be unavailable where there are no data for 2019 as the data cannot be appropriately indexed, or where issues in the geographical information have been identified

The following example shows how this can be used to explore spend in two different quarters in 2023. This can help to understand consumer spending behaviour at different times of year. [Figure 4](#) shows the proportion of spend made by cardholders in postal district EH3 at different merchant locations across the UK between January and March 2023 (Q1 2023). While [Figure 4](#) shows the same for July to September 2023 (Q3 2023). In these it can be seen that cardholders in EH3 spent more outside of Scotland in Q1 2023 compared with Q3 2023.

Alternatively, Figure 4 can be used to understand where cardholders come from to spend money in postal district E14, a postal district in central London covering the Canary Wharf business district. This can help users to understand how this has changed over time, including understanding how changing working patterns (for example, homeworking or office attendance) can impact spend in local economies. [Figure 4](#) shows where across the UK cardholders originated from for spend at merchants located in E14 between April to June 2019 (Q2 2019) while [Figure 4](#) shows April to June 2023 (Q2 2023). This indicates there was an increase in cardholders originating from South Wales spending in E14 in Q2 2023 compared with Q2 2019.

7 . Data

A csv download is available for Figure 4 at the [Nomis website](#)

8 . Glossary

Debit and credit card transactions

These cards facilitate the transfer of money for goods and services rendered without the usage of cash. These transactions occur both in-person through contactless and chip and pin, and online through mail order or e-commerce. All card data that the Office for National Statistics (ONS) receives are anonymised and aggregated to protect against disclosure of individuals' consumer data.

Financial payment system

Debit and credit cards are provided by card issuers that enable consumers to make payment transactions. Card issuers are financial institutions responsible for providing a customer with a card. Card schemes, of which Visa is one, are payment networks that provide a range of services. For consumer payments, card schemes provide secure connectivity for merchants to transact with cardholders, either face-to-face or online, and ensure those merchants safely receive their funds from the cardholder's bank.

Online and face-to-face spending

Face-to-face transactions are defined as those where the credit or debit card is present for the transaction. This is where a consumer buys something instore and uses a payment card, including contactless payments. Online transactions are defined as transactions where the payment card is not present. This includes where a purchase is made over the internet, telephone or an app is used to take payment.

Merchant location

Merchant location is gathered from the merchants register. The merchant acquirer (bank or financial institution that processes card payments for a merchant) is responsible for providing the card network with the correct location of each merchant outlet, as set out in the [Visa standards manual \(PDF, 14.74MB\)](#). For in-store transactions with a fixed location, the merchant location will be where the transaction took place. For merchants that do not have a fixed location, the location can either be where the transaction took place or the merchant's principal place of business.

Cardholder location

Cardholder postal sector, district or area is inferred by Visa. Visa analyse cardholder spending patterns, along with merchant location, to form a predictive view of a cardholder's likely home location. This is a predicted data attribute only, so a cardholder's exact home address cannot be determined. Data are aggregated so it is not possible to identify any single individual. The "home postal area" or "home postal district" is defined as the postal area or postal district where the cardholder normally resides. "Home region" is defined as the International Territorial Level (ITL) region (see our [quality and methodology report](#) for details of ITL regions) where the cardholder normally resides.

Merchant category

A merchant category code (MCC) is a four-digit number assigned to describe a merchant's primary business based on annual sales volume measured in local currency. Where a merchant is engaged in more than one type of business the merchant can either use the MCC that reflects the highest annual sales volume or use different MCCs for different lines of business. In addition, some MCCs identify a specific merchant or type of transaction. In the dataset provided by Visa, card spending data are aggregated where a specific MCC would disclose an individual business's activity. A merchant category group (MCG) is assigned to define an industry using a set of MCCs.

9 . Data sources and quality

Card spending data

Analysis in this article is based on aggregated and anonymised data on UK card payments provided by Visa Europe Limited. Visa operate a card scheme that is used by a variety of card issuers, including debit and credit card providers. Visa operates one of the world's largest payment networks, and respecting privacy is crucial. Visa has a Global Privacy Program to ensure proper safeguards are applied to personal information that they collect, use and share. Visa aggregate and anonymise data before sharing to remove information that would allow the Office for National Statistics (ONS) to identify the activity of an individual or business within the dataset.

Card spending covers part of UK spending habits and is not exhaustive. It will not cover cash transactions or direct debit payments. In 2022, 59% of payment transactions in the UK were made using cards, 14% using cash and 10% using direct debit according to [UK Finance's Payment markets summary \(PDF, 826KB\)](#). These figures reflect the number of transactions made and would differ if looking at the value of payments. The value spent on cards is lower as a percentage of these types of transaction because of large value payments such as salaries, mortgages and bills usually being paid via direct debit and faster payments. Overall, UK credit and debit card holders made 2.5 billion purchase transactions in June 2023 totalling £84 billion, as explained in [UK Finance's Card spending update for June 2023 \(PDF, 226KB\)](#).

These data, although not adjusted for inflation, can be used to give an indication of spending habits. The [Regional consumer card spending trends Quality and Methodology Information \(QMI\) report](#) about the Visa data covers the strengths and limitations of the data.

Excluded categories

Spending in some merchant categories is deemed as sensitive by Visa for legal reasons. This spending is excluded from the data published in this article. The following types of spending are excluded:

- betting and gambling
- insurance, money and financial institutions
- alcohol and tobacco, including bars, pubs and liquor stores
- religious and political organisations
- health services
- legal services
- funeral services

National restrictions

The grey shaded area in charts refers to periods where coronavirus (COVID-19) restrictions across the UK were in effect. While guidance varied between the nations and regions of the UK at various times, for practical purposes restrictions are limited to three main periods.

In order, these were:

- first national lockdown in the UK (23 March 2020) to easing of restrictions with non-essential shops reopening in England (15 June 2020)
- second lockdown in England (5 November 2020) to lockdown being replaced with three-tier system in England (2 December 2020)
- third lockdown announced in Scotland and England (4 January 2021) to "stay at home" restrictions ending in England (29 March 2021)

10 . Related links

[Regional consumer card spending, UK: 2019 to 2023](#)

Article | Released 6 November 2023

Analysis of consumer card spending trends covering what UK cardholders are spending money on and how this varies across the UK.

[Economic activity and social change in the UK, real-time indicators](#)

Bulletin | Released weekly

Early data on the UK economy and society. These faster indicators are created using rapid response surveys, novel data sources and experimental methods. These are official statistics in development.

11 . Cite this article

Office for National Statistics (ONS), released 25 March 2024, ONS website, article, [Consumer card spending, flow of spending across the UK: 2019 to 2023](#)