Multiple Deprivation in London, 2004 to 2025

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1. Introduction

This report provides a summary of the 2025 Indices of Deprivation (IoD) for London. It then compares IoD ranks for the 2004, 2007, 2010, 2015, 2019, and 2025 releases. The report includes a classification of deprivation trajectories which summarises deprivation change in each local area. The report is accommpanied by a journal article (Lloyd et al., 2025) which provides full details on the data and methodology, along with results for regions across England.

2. Geographies

The maps and data included in this report provide information on population and housing for areas called Lower Layer Super Output Areas (LSOAs). There are 33,755 LSOAs in England with an average population of 1674 (figures for 2021). The LSOAs which cover London are shown in Figure 1, superimposed on a map of roads and other features (source: OpenStreetMap; https://www.openstreetmap.org/). This map is provided simply for the purpose of demonstrating the detailed geographical granularity of LSOAs. There are 4994 LSOAs in London. It is important to make a distinction in the use of the word 'Census' between 'Census data' and 'Census geography' (that is, LSOAs).
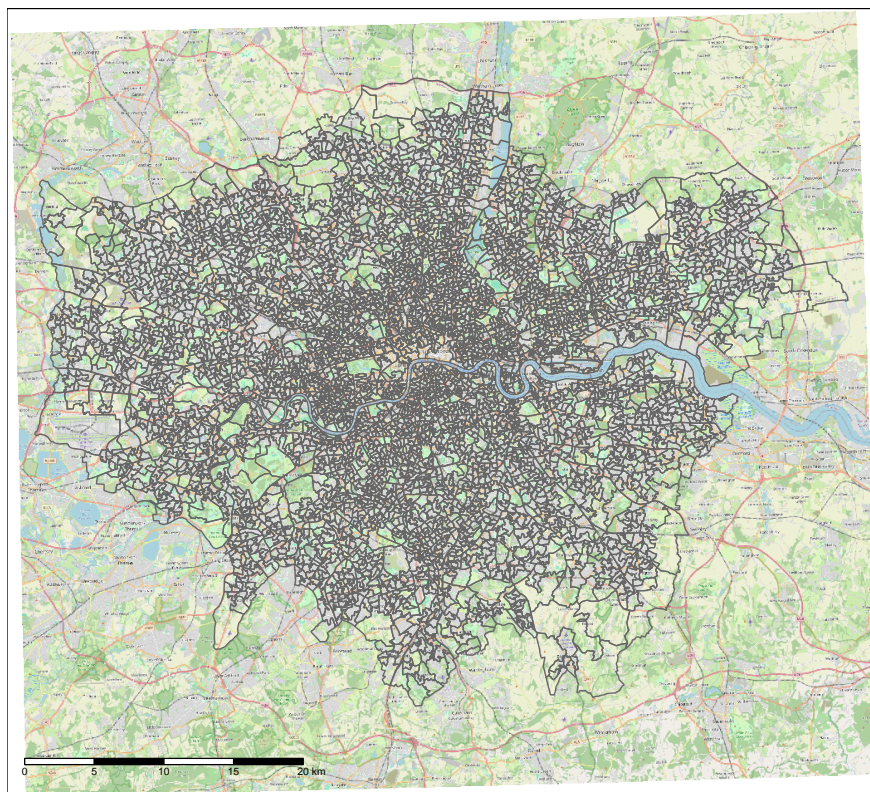

Figure 1: LSOA boundaries.

All of the data used in the profile are constructed for LSOAs as used in the 2021 Census. The IoD releases for 2004 to 2019 were based on different sets of geographical units to 2021 LSOAs. Therefore, a GIS overlay procedure was used to convert these earlier datasets to the 2021 LSOAs.

2. Indices of Deprivation

The IoD comprises seven domains, each based on a set of indicators. These seven domains are combined together into an overall composite Index of Multiple Deprivation (IMD) using explicitly defined domain weights. The weights applied in creating the overall IMD measure for 2025 are as follows (McLennan et al., 2025):

1. Income Deprivation Domain (Inc) 22.5%
2. Employment Deprivation Domain (Emp) 22.5%
3. Health Deprivation and Disability Domain (Hea) 13.5%
4. Education, Skills and Training Deprivation Domain (Edu) 13.5%
5. Barriers to Housing and Services Domain (Bar) 9.3%
6. Crime Domain (Cri) 9.3%
7. Living Environment Deprivation Domain (Liv) 9.3%

In the IoD framework, the terminology 'domain' reflects the basis of the IoD as comprising several distinct facets of deprivation, each of which may be analysed in their own right. The methodology used in construction of the IoDs is detailed by McLennan et al. (2025). The IoD not only allows for assessment of change in the overall IMD, but also each of the seven constituent domains that make up the IoD. A key interest in this report is the combinations of domains and the ways in which they have changed collectively.

The components of each domain are not constant over time. Input indicators change and this means that comparisons of different IoD releases should be undertaken with caution. Noble et al. (2006) detail the conceptual background of indices of multiple deprivation. In this analysis, six IoD releases are used: those for 2004, 2007, 2010, 2015, 2019, and 2025 (Noble at al., 2025; McLennan et al., 2025).

Each of the IoD reports details changes since previous releases. Typically, these include additions of new indicators reflecting new data sources or changing conceptualisations of deprivation. Noble et al. (2025) and McLennan et al (2025) detail these changes in full.

Another issue which must considered with the analysis of changes in the IoDs is that overall IMD score, and most of the IoD domain scores (with the exception of Income and Employment), are relative measures. Thus, an 'increase' in deprivation may reflect an absolute increase in deprivation relative to elsewhere, or it could reflect a slower improvement than elsewhere. Given this, the analyses focus explicitly on relative changes.

3. Indices of Deprivation in 2025

Figure 2 shows the IMD (weighted composite of IoD ranks) scores for 2025. The IMD values are shown as national deciles, where decile 1 is the least deprived 10% and decile 10 is the most deprived 10% (this is contrast to the official IoD reports where decile 1 represents the most deprived 10%).

Table 1 shows the percentages of LSOAs in each decile by IoD domain. The larger the values are under the final row (decile 10), the more LSOAs are in the most deprived 10% by the IMD or by an individual IoD domain.

Table 1: IoD domain score by national decile, 2025.

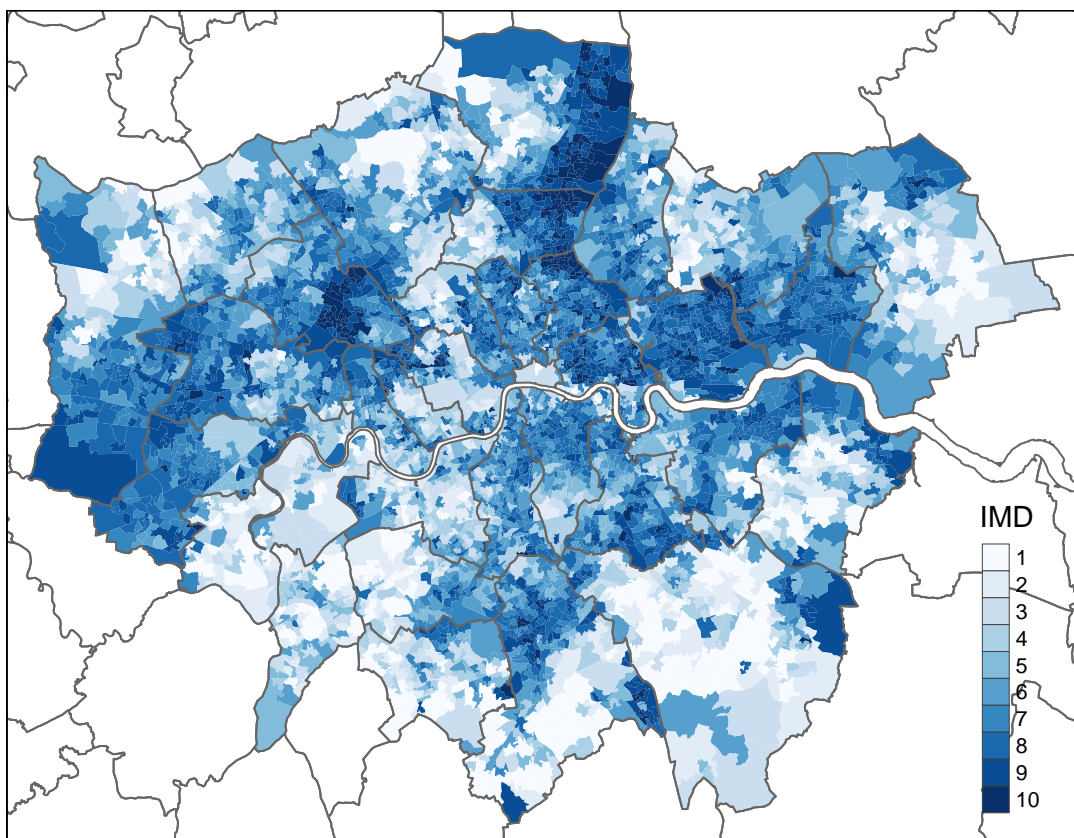| Decile	IMD	Inc	Emp	Edu	Hea	Cri	Bar	Liv
1	6.4	6.5	9.9	15.2	13.7	4.5	6.2	0.2
2	7.1	5.2	7.2	12.0	11.9	5.4	5.3	1.1
3	7.7	5.8	7.4	11.1	10.1	8.2	5.3	2.0
4	8.6	6.9	8.1	11.8	11.2	10.1	6.0	4.3
5	9.4	8.1	10.8	11.3	11.8	11.7	7.7	6.8
6	11.5	10.1	13.5	11.7	13.1	15.7	8.8	11.0
7	14.3	13.5	15.3	12.9	12.4	15.4	11.3	16.4
8	17.0	16.7	15.1	9.0	10.6	14.5	14.0	21.4
9	13.9	16.8	10.0	4.6	4.5	10.4	16.3	22.8
10	4.0	10.3	2.7	0.5	1.0	4.1	19.1	14.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Figure 2: Index of multiple deprivation national decile, 2025.

Table 2 lists the ten LSOAs in London with the highest IMD 2025 scores, with scaled ranks listed for the IMD 2025 and each of the seven domains. A scaled rank close to 1 indicates a highly deprived area while a value close to zero indicates an area with low deprivation. As one example, a value of 0.99 or greater corresponds to an area in the most deprived 1%. The table shows that, as would be expected, those LSOAs with very high deprivation ranks tend to be highly deprived on all, or most, domains.

Table 2: LSOAs with highest IMD 2025 score: ten highest scaled ranks. Values are ranked top to bottom

Rank	lsoa21nm	IMD25	Inc25	Emp25	Hea25	Edu25	Bar25	Cri25	Liv25
1	Brent 021B	0.993	1.000	0.992	0.924	0.904	0.976	0.913	0.665
2	Croydon 015D	0.992	0.999	0.988	0.982	0.863	0.900	0.814	0.849
3	Lewisham 020B	0.987	0.978	0.986	0.936	0.585	0.948	0.973	0.979
4	Haringey 002A	0.983	0.993	0.973	0.906	0.886	0.980	0.881	0.777
5	Brent 031G	0.983	0.998	0.955	0.674	0.805	0.983	0.954	0.972
6	Brent 025B	0.979	0.993	0.938	0.778	0.885	0.992	0.917	0.907
7	Brent 031B	0.976	0.988	0.943	0.763	0.750	0.992	0.985	0.896
8	Enfield 027D	0.975	0.993	0.962	0.766	0.935	0.966	0.838	0.810
9	Haringey 037B	0.974	0.996	0.935	0.825	0.866	0.983	0.916	0.778
10	Enfield 030D	0.974	0.991	0.953	0.850	0.879	0.940	0.977	0.610

Understanding the multiple ways in communities are deprived is crucial for designing effective interventions. Classification approaches allow us to assess which areas are alike with respect to multiple forms of deprivation. The IoD 2025 domains are classified to show which LSOAs have, on average, particular combinations of deprivation levels by each of the seven domains. The data are ranked and k-medians classification is used (with the R library flexclust; see Leisch, 2006; R Core Team, 2021). The number of clusters (nine, in this case) was selected following assessment of diagnostics including the shadow function in the flexclust package. The nine classes are labelled as follows:

- A: High Income, Employment, Barriers, higher others.
- B: Low all, moderate Barriers and Living Environment.
- C: Moderate all, lower Living Environment.
- D: High all, moderate Barriers and Living Environment.
- E: Moderate all, low Barriers.
- F: Moderate all, higher Barriers and Living Environment.
- G: Low to moderate all, high Barriers, higher Living Environment.
- H: Moderate all, low Barriers.
- I: Moderate all, low Living Environment.

Table 3 shows the median average scaled ranks by IoD 2025 class for England as a whole. These values were used to determine the class labels provided above. Figure 3 shows the 2025 IoD clusters which can be interpreted with reference to the class labels.

Table 3: Median scaled ranks by IoD 2025 class.

classIMD25	Inc	Emp	Hea	Edu	Bar	Cri	Liv
A	0.848	0.801	0.751	0.771	0.827	0.781	0.757
B	0.084	0.090	0.110	0.097	0.270	0.130	0.257
C	0.617	0.631	0.613	0.682	0.530	0.556	0.267
D	0.905	0.925	0.921	0.917	0.459	0.900	0.417
E	0.672	0.718	0.763	0.680	0.200	0.749	0.704
F	0.545	0.513	0.435	0.491	0.792	0.502	0.743
G	0.207	0.195	0.153	0.229	0.875	0.183	0.780
H	0.353	0.370	0.431	0.302	0.176	0.456	0.600
I	0.314	0.311	0.310	0.383	0.562	0.257	0.157

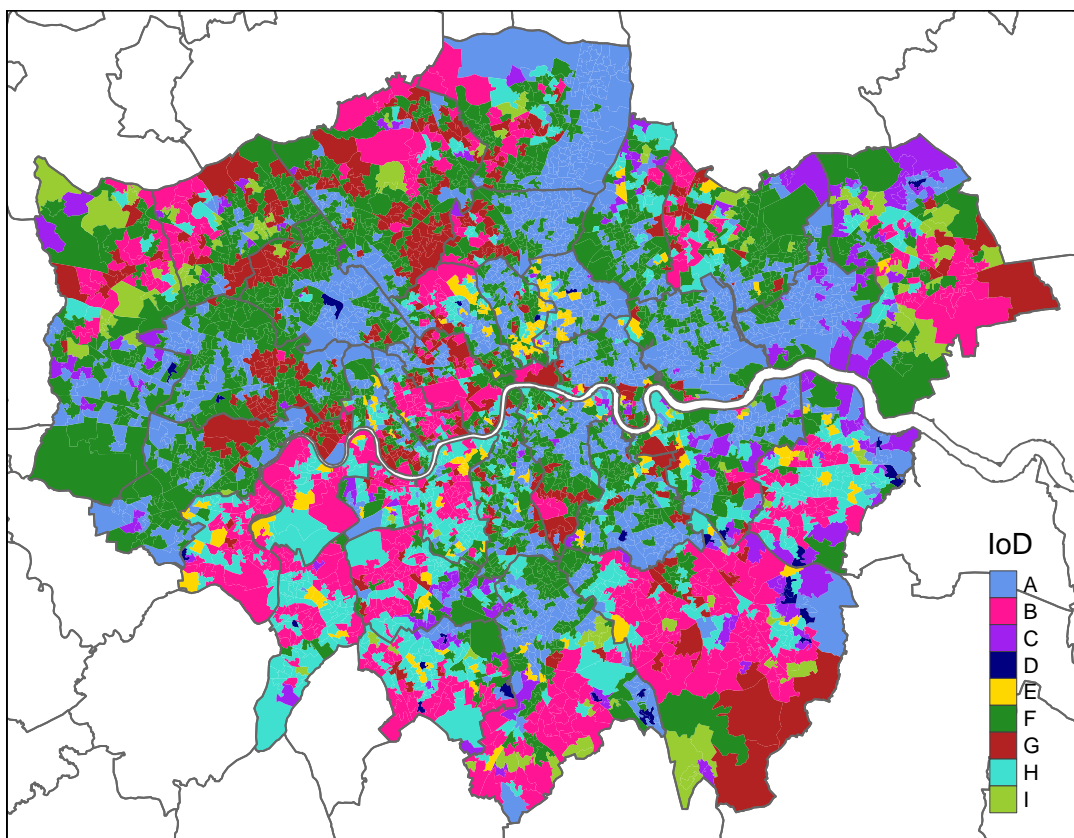Figure 3: IoD 2025 clusters.

4. Change in IoDs, 2004-2025

The focus now moves on to changes in the IoDs. Table 4 shows the percentages of IMD and IoD domain scores in the top decile (most deprived 10%) by release year. As an example, in 2004 10.3% of LSOAs were in the top 10% most deprived by the IMD. The table provides a summary of changes in the share of the most deprived areas across London.

Table 4: Percentages of IMD and IoD domain scores in top 10 percent by release year.

Year	IMD	Inc	Emp	Edu	Hea	Cri	Bar	Liv
2004	10.3	15.8	4.5	1.2	4.2	16.8	29.8	15.4
2007	10.4	17.2	5.5	0.7	4.7	15.7	30.0	20.2
2010	7.8	15.7	3.7	0.6	3.9	13.7	29.3	19.4
2015	5.4	8.9	2.7	0.3	1.3	21.5	23.9	15.1
2019	2.1	5.9	1.8	0.2	0.4	8.2	29.0	9.6
2025	4.0	10.3	2.7	0.5	1.0	4.1	19.1	14.0

While the top decile (most deprived 10%), and sometimes the most deprived quintile (top 20% most deprived), are used to determine areas with high deprivation, Lloyd et al. (2025) argue that intense deprivation - defined as the 1% most deprived of areas - should provide an additional focus. This is because it is these areas in which challenges are greatest and where deprivation is most persistent. Table 5 shows the percentages of IMD and IoD domain scores in the top 1% by release year. As an example, in 2004 0.1% of LSOAs were in the top 1% most deprived by the IMD. The table provides a summary of changes in the share of intensely deprived areas across London.

Table 5: Percentages of IMD and IoD domain scores in top 1 percent by release year.

Year	IMD	Inc	Emp	Edu	Hea	Cri	Bar	Liv
2004	0.1	0.6	0.0	0	0	2.3	1.6	0.5
2007	0.0	1.3	0.1	0	0	1.8	2.5	0.6
2010	0.0	0.9	0.0	0	0	0.7	1.9	0.7
2015	0.0	0.0	0.0	0	0	1.6	1.4	1.4
2019	0.0	0.1	0.0	0	0	0.2	3.5	0.5
2025	0.0	0.8	0.1	0	0	0.1	1.2	0.4

LSOAs which are persistently ranked as deprived can be assessed by computing the highest minimum IMD scaled ranks for 2004 to 2025 inclusive. Table 6) shows this information for the ten LSOAs in London with the highest minimum scaled rank. This information should form a central part of area-based interventions given that the degree of persistence of deprivation directly reflects the likely success of interventions and the ways in which they should be shaped. The areas highlighted in the table should be a key focus for interventions as they contain the communities in London who are most in need of support.

Table 6: Ten LSOAs with highest minimum (min) IMD scaled ranks. Values are ranked top to bottom

Rank	lsoa21nm	IMD04	IMD07	IMD10	IMD15	IMD19	IMD25	Min
1	Haringey 037A	0.986	0.983	0.971	0.956	0.940	0.948	0.940
2	Brent 024D	0.943	0.962	0.960	0.953	0.939	0.941	0.939
3	Haringey 002C	0.954	0.937	0.935	0.964	0.957	0.955	0.935
4	Croydon 036C	0.964	0.971	0.976	0.958	0.932	0.972	0.932
5	Newham 033C	0.950	0.963	0.980	0.963	0.923	0.947	0.923
6	Haringey 013D	0.947	0.950	0.960	0.961	0.919	0.947	0.919
7	Haringey 005B	0.966	0.939	0.940	0.927	0.919	0.934	0.919
8	Haringey 037B	0.977	0.959	0.973	0.949	0.917	0.974	0.917
9	Enfield 006C	0.924	0.945	0.955	0.916	0.928	0.927	0.916

Rank	lsoa21nm	IMD04	IMD07	IMD10	IMD15	IMD19	IMD25	Min
10	Hackney 019E	0.944	0.959	0.966	0.936	0.915	0.917	0.915

Following the classifications of IoD 2025 domain ranks, a classification of deprivation trajectories was constructed to help better understand deprivation changes over the long term. Clusters of trajectories were computed for the IoD ranks for each of the seven domains and for each IoD release (2004, 2007, 2010, 2015, 2019, 2025). The clusters were generated using a variant of *k*-medians classification adapted for longitudinal (time series) data. The method was implemented using the kml3d package (Genolini et al., 2015).

The main focus in this study is in how highly deprived areas have changed and information on such changes is masked by including all LSOAs. In other words, there is not a useful differentiation between the classes representing higher deprivation levels. For this reason, the longitudinal classification was undertaken only for LSOAs in the top two deciles - in this case for one or more of the IoD releases. Five classes were derived following comparison of partitions. The five classes are described as follows:

- A: Persistently highest deprivation, decreasing.
- B: High deprivation, increasing.
- C: Higher deprivation, markedly decreasing.
- D: Higher deprivation, increasing.
- E: Moderate high deprivation, increasing.

Figure 4 is a plot of the median average scaled ranks by IoD trajectory classes derived using only those LSOAs which were in the top two deciles for at least one of the IoD releases. This differentiates the experiences of areas with higher deprivation levels. As examples, class A includes areas with very high deprivation levels, but which is declining slightly over time, while class B areas tend to start with slightly lower deprivation levels, but with an increase over time.

The IoD trajectory classes are mapped in Figure 5. The map uses the same colours per class as in Figure 4. Empty spaces indicate LSOAs where the ranked IMD is outside of the top 20% for all releases.

5. Conclusions and recommendations

This paper makes four distinct contributions:

1. It provides a summary of the main spatial trends by domain in the 2025 English IoDs within London, revealing important features of the post Covid-19 landscape of England
2. Using an area classification, the ways in which neighbourhoods are deprived by the seven domains are assessed - emphasizing the value of the multiple deprivation framework and presenting a new tool for analysts and policymakers.
3. Geographical trends in the intensity of deprivation are assessed and it is argued that the most intensely deprived areas (e.g., the top 1%) should provide a particular focus for interventions.
4. It highlights temporal trends in intensity of deprivation, highlighting those areas which have been persistently highly deprived as measured by all IoD releases from 2004 to 2025 inclusive.
5. The deprivation trajectory classification shows how deprivation has changed in neighbourhoods across London, indicating, for example, those areas which have seen consistent increases in relative deprivation and those where there has been a decrease in relative deprivation.

The report tackles three common limitations of academic studies and policy reports and interventions: a focus on the composite IMD, use of deciles to determine areas of high deprivation, and the use of the IMD for a single time point alone. The resource associated with this paper can be used by analysts to describe deprivation in their areas and to understand how it has changed. We argue that these kinds of data should be used alongside the 2025 IoD to assess need in local areas and to help shape bespoke interventions aimed at reducing spatial inequalities. The data presented in the paper, along with supporting information, are freely available for download from the 'Trajectories of Deprivation in the UK' project website[1].

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[1] https://www.qub.ac.uk/research-centres/GIS/Research/Deprivation/
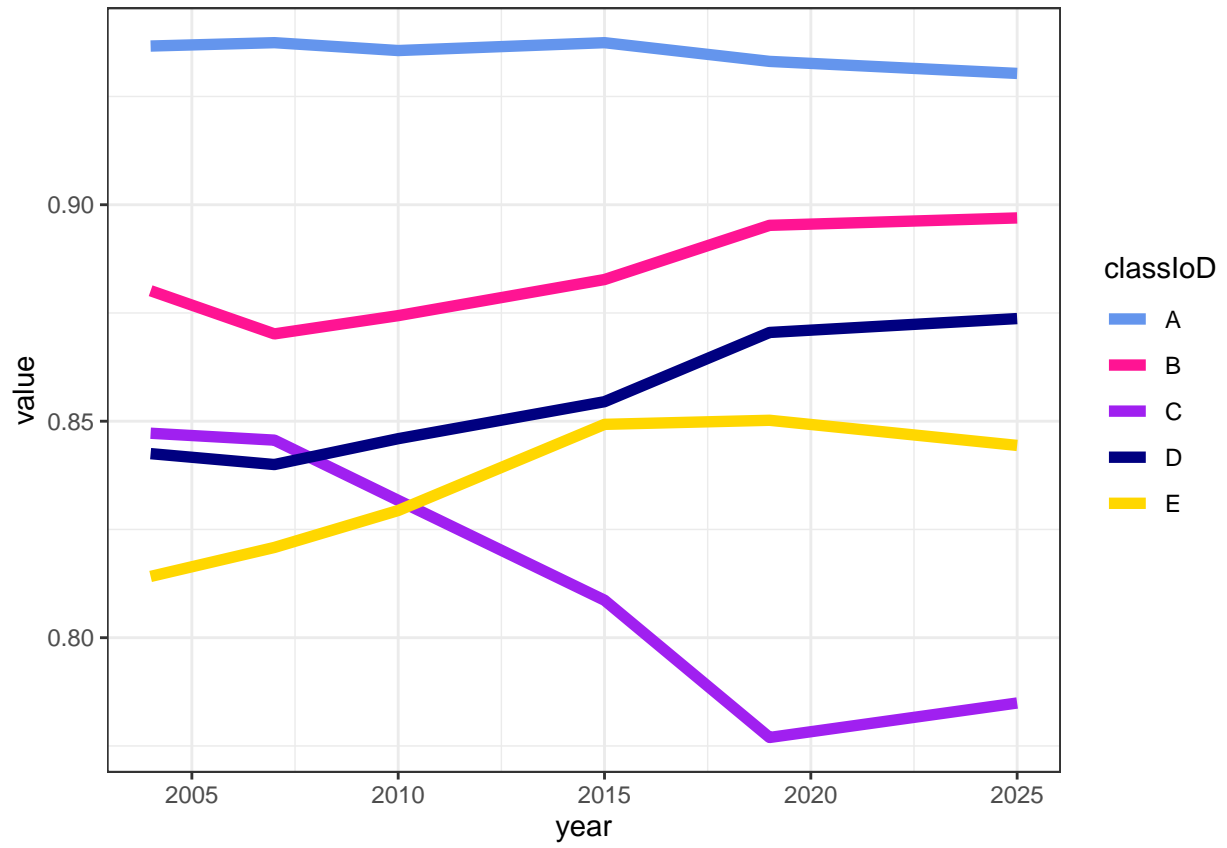
Figure 4: Median IoD ranks by trajectory class for IoDs in top two deciles for any release

Figure 5: IoD trajectory clusters for IoDs in top two deciles for any release.

Acknowledgments

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More information

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Please see the project website for more details.

For more on the IoD see: English indices of deprivation 2025 website