

Guidance on interpreting the Index of Multiple Deprivation

Significant caution is required when making statements about changes in the Index of Multiple Deprivation (IMD) over time. Movements in an area's IMD ranking between years may not align with whether real-world living conditions in the area have improved or worsened in an absolute sense.

The IMD is attractive as an overall summary of deprivation that is 'official' and considers multiple aspects of living conditions, however, its construction is complex and means that it may not answer all the questions that decision makers ask of it.

What the IMD does not show

The limitations on how the IMD (and its domains) can be used result from it being a relative metric providing a snapshot of deprivation at a point in time. This means:

- It does not quantify the absolute level of real-world living conditions in an area. In other words, it does not indicate in real-world terms what a given area has or lacks.
- It is not possible to say how far apart in real-world terms two areas are; in other words, we cannot say that an area ranked 50th is twice as deprived as an area ranked 100th.
- It is not possible to identify specific individuals who are deprived.
- While the IMD ranks areas, it does not imply all individuals within a particular area face the same living conditions: less deprived areas will contain some more deprived individuals and more deprived areas will contain some less deprived individuals.
- It is not designed to be used as a consistent time series. Methodological changes can be the causes of changes over time.
- It does not directly assess affluence or high incomes, areas are ranked from most deprived to least deprived. Areas near the bottom of the rankings should be described as least deprived.
- It is not possible to compare areas in England with areas in the other countries of the UK.

What the IMD shows

Each release of the IMD provides a snapshot of the relative level of deprivation of every small area (Lower Layer Super Output Areas, LSOAs) at a point in time. This means:

- Each small area is ranked against all other small areas in England
- All statements about deprivation are 'relative', i.e. they must be made with reference to the rest of England.
- Rather than referring to an area's rank position, generally the ranking is split into deciles (10 equally sized groups) or quintiles (5 equally sized groups). Statements can then be made about whether an area is among the 20% most deprived areas in England or among the 10% least deprived areas in England etc.
- Small areas can be combined into larger geographies, such as local authority districts, counties and Integrated Care Boards (ICBs).
- Once small areas are aggregated, the larger geographies, e.g. local authorities, can be placed in their own rankings which can be split into deciles or quintiles.
- Using LSOA populations means we can state the number of people (or proportion of a larger geography's population) that live in areas among the 20% most deprived areas in England etc.
- It can be used to target policies at areas where deprivation is particularly concentrated.
- Rankings are also available for the 7 'domains' which assess different aspects of deprivation and two supplementary indices.
- If used precisely, and with suitable caveats, one can compare the rankings between years to assess how deprivation in an area relative to the rest of England (relative deprivation) has changed over time.
- For the Income Deprivation and Employment Deprivation domains, together with the Income Deprivation Affecting Children Index (IDACI) and the Income Deprivation Affecting Older People Index (IDAOPI), the 'score' indicates the percentage of individuals within an area suffering the specified type of deprivation. Hence, the number of individuals in each area suffering these types of deprivation can be calculated.

Structure of the IMD

The IMD is deliberately designed to view deprivation as a broad concept; in 2025 55 indicators feed into the IMD. These indicators are grouped into 7 domains (figures in brackets are the weights applied):

- Income Deprivation (22.5%)
- Employment Deprivation (22.5%)

- Education, Skills, and Training Deprivation (13.5%)
- Health Deprivation and Disability (13.5%)
- Crime (9.3%)
- Barriers to Housing and Services (9.3%)
- Living Environment Deprivation (9.3%)

Weights indicate the relative importance of each domain in determining the overall IMD. The list shows that different domains have different weights, for example, Income Deprivation has almost two and half times more impact on the IMD than Crime. Similarly, we can say that almost half of the IMD is determined by just two domains: Income Deprivation and Employment Deprivation.¹

Each domain has a different a number of indicators feeding into it and the weights applied to each indicator within a domain can vary over time.

Using the IMD for policy targeting

The IMD is an attractive tool for policy targeting as it summarises a large amount of information into a single statistic, as an official statistic it provides consistency, and it is intrinsically designed to identify the most deprived areas. Indeed, the IMD is central to the ‘Core20’ approach.

However, when using the IMD for targeting it is useful to keep the following points in mind:

- If a policy intervention is aimed at individuals, the IMD will not identify the individuals.
- LSOAs vary in size 1:² the IMD effectively identifies where deprivation is particularly concentrated, i.e. it impacts a high proportion of residents. If a policy needs to reach a particular number of individuals, it is important to check that the areas targeted contain a sufficiently large target population.
- If a policy is designed to target a single specific issue, using the IMD may not be appropriate. The IMD is effectively a weighted average of lots of different characteristics of an area, if another indicator more directly assesses the narrow issue being targeted it should be used instead of the IMD.

¹ Each of these two domains are formed from identifying the proportion of residents claiming a variety of means-tested benefits and tax credits, as such they are sensitive to changes in eligibility rules.

² The smallest LSOAs in Norfolk in 2024 contain around 1,000 residents while the largest LSOA in Norfolk contains just under 4,400 residents, in other words the largest LSOA is more than four times the size of the smallest LSOA. The differences can be even larger when looking at specific age groups; for example, in 2024 the smallest LSOA for individuals aged 0-15 contains around 60 people in this age range while the largest contains over 1,100, i.e. the largest LSOA has around 18 times the number of people aged 0-15 as the smallest.

- Just focussing on the most deprived areas could mean that individuals facing challenging living conditions in less deprived areas miss out on help.³
- LSOAs vary in size 2: For Income Deprivation and Employment Deprivation it is possible to show that some LSOAs that are outside the 20% most deprived areas in England actually contain a greater number income (employment) deprived individuals than some LSOAs within the most deprived group.

Using the IMD for policy evaluation

While policy targeting is a sensible and important use of the IMD, using the IMD for policy evaluation faces many difficulties. The essential problems with the IMD are that: (i) it does not measure the absolute level of living conditions, (ii) it lacks a consistent methodology through time, and (iii) it is only calculated every 5 years or so. The points to consider for policy targeting in the section above are also relevant.

As the IMD does not assess the absolute level of living conditions, it could be that a policy meaningfully improves individuals' living conditions, but the area's IMD rank does not move to be less deprived due to:

- The improvement in living conditions not impacting sufficient individuals within a single area to significantly change the value of an indicator for the area;
- The weight of the indicator in the final IMD score (domain score) is too small for the improved living conditions to meaningfully change the area's rank;
- The positive impact of the policy is offset by methodological changes to the construction of the IMD; and/or
- The positive impact of the policy is obscured by the IMD scores improving even more in other parts of England.

Equally, it is possible for the IMD rank position of an area to improve despite a policy failing to have a positive real-world impact, for example, if living conditions in other areas worsen. The specific challenges of comparing rank positions over time are explained fully in the next section.

The challenges of comparisons over time

A natural question to ask is how has the IMD (and its domains) changed between releases? However, answering this question requires considerable caution. The safest approach is to describe the 2019 IMD release and 2025 IMD release as "different" and then to detail the differences. Statements suggesting deprivation has improved or

³ For example, while Broadland and South Norfolk contain no areas among the 20% most deprived for Income Deprivation, they each contain almost 18,800 and 21,000 income deprived individuals respectively.

worsened in an area over time need to be written very precisely; specifically they need to state that the improvement/deterioration is “relative to other areas of England”, where ‘area’ is replaced with the relevant geography being considered (e.g. upper tier local authority or ICB etc.).

Even when suitably phrased, various factors mean a change in the IMD (or domain) rank for an area may not align with how real-world living conditions in an area relative to other areas have evolved over time. A change in an IMD (domain) rank might occur due to:

- Methodological change: between 2019 and 2025 the total number of indicators increased from 39 to 55 and many indicators had significant changes to their definition. The weights applied to individual indicators (but not the domain weight) also changed.
- Changes in other areas: An area’s rank position not only results from conditions within the area, it also depends on the conditions in all other areas of England.
- Changes in the number of geographic units: the meaning of a rank position depends on the total number of entities in a ranking. Over time LSOAs can merge or split depending on population shifts.⁴
- Population shifts between areas: For higher level geographies, e.g. Norfolk, the aggregate score could change due to the proportion of the population in more (less) deprived areas changing over time.
- Environmental factors: for example, between 2019 and 2025 COVID occurred and this might have impacted different areas of England differently.
- Public policy changes: for example, the introduction of Universal Credit has impacted the definition of the Income and Employment Deprivation indicators. Again, this would impact the rankings if a policy change impacted different areas of England differently.

Also, the 2025 release uses data from a variety of years prior to 2025 and different indicators use different (and often multiple) years of data. For example, the population weights used are from 2022. As such, the IMD 2025 reflects the most recent data available in 2025 rather than actual living conditions in 2025.

Assessing absolute deprivation over time

If there is a need to assess absolute deprivation over time, while the IMD and the domain rankings cannot be used, one can look at underlying time series of the individual indicators feeding into the IMD. However, only some of the individual

⁴ For example, the number of lower tier local authorities (e.g. districts) fell from 317 in 2019 to 296 in 2025.

indicators are publicly available⁵ and so it can be necessary to look for similar indicators as substitutes. One could also look at other indicators which are locally relevant, but do not feed into the IMD.

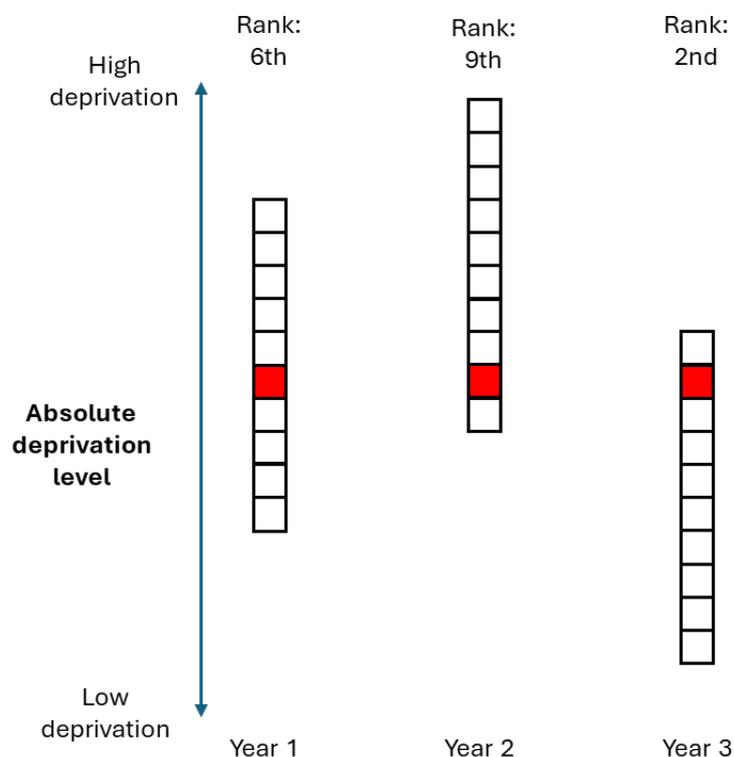
Movements in rank positions

This section provides simplified examples to explain why movements in the rank position of an area do not reliably provide information about changes in the absolute level of living conditions in an area. The core issue is that an area's rank always depends not only on living conditions within an area, but also on the living conditions in all other areas of England.

Illustration 1: Rank positions not reflecting absolute deprivation

Figure 1 illustrates how an area's rank position can change even when there is no change in the absolute deprivation, i.e. real-world living conditions. In Year 1 area X (the red box) is the 6th most deprived area out of 10 areas, whereas in Year 2 it is the 9th most deprived area because other areas have become more deprived in absolute terms. In contrast, in Year 3 area X has become the 2nd most deprived area because other areas have become less deprived in absolute terms.

Figure 1: Diagram illustrating how an area's IMD rank can change when the area's level of absolute living conditions remains constant



⁵ The IMD incorporates administrative data, such as for receipt of different benefits, which cannot be shared publicly at the level of individual LSOAs for confidentiality reasons.

Figure 2 shows that the situation can be even more complex with the rank of area X moving in the opposite direction to how absolute deprivation in area X changes. Comparing Year 1 and Year 2 in Figure 2 one can see that absolute deprivation in area X increases, but its ranking moves to the less deprived position of 7th. This occurs because while absolute deprivation in area X has increased, absolute deprivation in other areas has increased even more. Year 3 illustrates the same point, but in the opposite direction. Between Year 1 and Year 3 absolute deprivation in area X falls, but because absolute deprivation falls even more in some of the other areas, area X's rank shifts from 6th to 4th indicating that area X has become more deprived in relative terms.

Figure 2: Diagram illustrating how an area's IMD rank can move in the opposite direction to the area's level of absolute deprivation

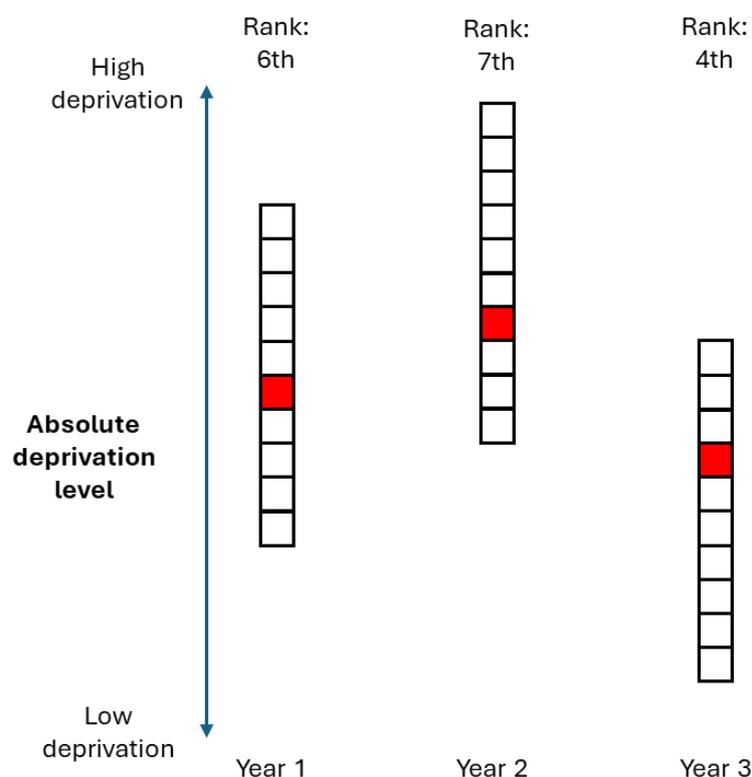


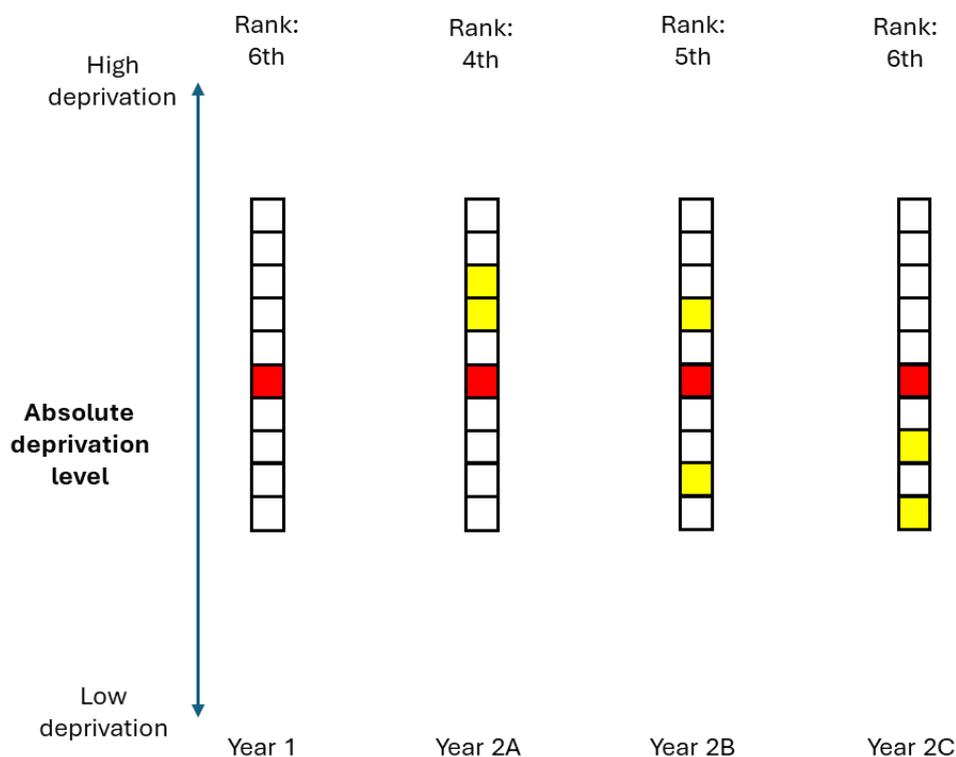
Illustration 2: The impact of a changing number of areas

Figure 3 illustrates how a change in the total number of areas can also lead to a change in the rank position of an area that has a level of absolute deprivation which remains constant. How the rank position of the reference area (area X) changes depends where in the ranking of areas the removed/added areas lie. The example considers the removal of two areas from the ranking with the yellow boxes indicating the areas that are being removed. If both areas being removed were more deprived than area X in Year 1, then their removal will lead to area X's rank shifting to 4th (see Year 2A), i.e. in relative terms area X will appear more deprived. If only one of the areas being removed was more deprived than X in Year 1, then their removal will lead to area X's rank shifting to 5th (Year

2B). However, if both areas were less deprived than area X in Year 1, then their removal will have no impact on area X's rank position.⁶

For cases of additional areas being added to a ranking, the impact is essentially like Figure 3 but in reverse. In other words, adding 2 extra areas to a ranking could: (i) have no impact on area X's rank position, (ii) make area X appear less deprived in relative terms by 1 position, or (iii) make area X appear less deprived in relative terms by 2 positions. The number of possible position changes increases with the number of areas being added/removed to a ranking. As such, if the total number of areas in a ranking changes between years the impact on an area's rank position varies and is difficult to precisely predict.

Figure 3: Diagram illustrating how a reduction in the number of areas can change the rank position of an area



However, there are some rules of thumb regarding the direction (but not size) of 'real' movements when the total number of areas changes. First, if Y areas are removed from a ranking between two IMD releases, then: (i) a movement of an area to be less deprived is real, and (ii) a movement of an area to be more deprived by more than Y positions is also real. Although, we do not know, without further investigation, how large (number of positions in the ranking) the real movement is, i.e. it is unlikely to simply be the difference in the rank positions between two releases. Second, if Z areas are added to a ranking between two IMD releases, then: (i) a movement of an area to be more deprived

⁶ Converting the rank positions to percentiles will not resolve the issue.

position is real, and (ii) a movement of an area to be less deprived by more than Z positions is also real. However, again, we do not know how large the real movement is.