

The Index of Significant Unmet Demand (ISUD) was developed in the early 1990's and is based on the following formula. The SF element was introduced in 2003 and the LDF element was introduced in 2006 to reflect the increased emphasis on latent demand in DfT Guidance.

$$\text{ISUD} = \text{APD} \times \text{PF} \times \text{GID} \times \text{SSP} \times \text{SF} \times \text{LDF}$$

Where:

APD = Average Passenger Delay calculated across the entire week in minutes.

PF = Peaking Factor. If passenger demand is highly peaked at night the factor takes the value of 0.5. If it is not peaked the value is 1. Following case law this provides dispensation for the effects of peaked demand on the ability of the Trade to meet that demand. To identify high peaking we are generally looking for demand at night (at weekends) to be substantially higher than demand at other times.

GID = General Incidence of Delay. This is measured as the proportion of passengers who travel in hours where the delay exceeds one minute.

SSP = Steady State Performance. The corollary of providing dispensation during the peaks in demand is that it is necessary to focus on performance during "normal" hours. This is measured by the proportion of hours during weekday daytimes when the market exhibits excess demand conditions (i.e. passenger queues form at ranks).

SF = Seasonality Factor. Due to the nature of these surveys it is not possible to collect information throughout an entire year to assess the effects of seasonality. Experience has suggested that hackney demand does exhibit a degree of seasonality and this is allowed for by the inclusion of a seasonality factor. The factor is set at a level to ensure that a marginal decision either way obtained in an "untypical" month will be reversed. This factor takes a value of 1 for surveys conducted in September to November and March to June, i.e. "typical" months. It takes a value of 1.2 for surveys conducted in January and February and the longer school holidays, where low demand the absence of contract work will bias the results in favour of the hackney trade, and a value of 0.8 for surveys conducted in December during the pre Christmas rush of activity. Generally, surveys in these atypical months, and in school holidays, should be avoided.

LDF = Latent Demand Factor. This is derived from the public attitude survey results and provides a measure of the proportion of the public who have given up trying to obtain a hackney carriage at either a rank or by flag down during the previous three months. It is measured as 1+ proportion giving up waiting. The inclusion of this factor is a tactical response to the latest DfT guidance.

The product of these six measures provides an index value. The index is exponential and values above the 80 mark have been found to indicate significant unmet demand.

This benchmark was defined by applying the factor to the 25 or so studies that had been conducted at the point it was developed. These earlier studies had used the same principles but in a less structured manner. The highest ISUD value for a study where a conclusion of no significant unmet demand had been found was 72. The threshold was therefore set at 80.