

Location Quotients

Location Quotients (LQ) are ways of measuring how concentrated a geographical phenomenon is in one place compared to a larger area. It is expressed as a ratio of the smaller location to the larger one or a single calculated figure.

Location Quotients are commonly used in economic geography to demonstrate relative concentrations of different **industries** in different locations. However, Location Quotients can also be used to express **age** and **ethnicity** demographic data, **occupation** sector spread and **geological** sample data.

Quoting a Location Quotient figure on its own is relatively meaningless. If you examine how Location Quotients change over time or how they vary between comparable cities or regions, more geographical meaning can be found.

Worked example:

A geographer is interested in how different ethnic groups are spread out over London. From the 2011 census, they find the following data for two neighbouring London boroughs as well as corresponding data for the whole of London :

	Number of Asian or Asian British people	Total number of people
Brent	105,986	311,215
Kensington and Chelsea	15,861	158,649
Whole of London	1,511,546	8,173,941

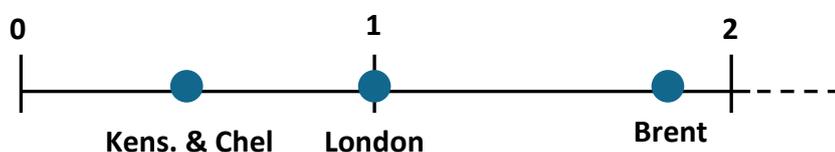
$$LQ = \frac{\left(\frac{\text{Number of Asian / Asian British people locally}}{\text{Total number of people in that location}} \right)}{\left(\frac{\text{Number of Asian / Asian British people regionally}}{\text{Total number of people in the region}} \right)}$$

$$LQ \text{ Brent} = \frac{\left(\frac{105,986}{311,215} \right)}{\left(\frac{1,511,546}{8,173,941} \right)}$$

$$LQ \text{ Brent} = \frac{0.341}{0.185}$$

$$LQ \text{ Brent} = 1.84$$

One way of presenting Location Quotient data would be to place the values on a scale line. The largest comparable region (in this case, London) occupies the benchmark '1' position.



Therefore Brent can be seen to have a far greater concentration of Asian / Asian British people than London as a whole, while Kensington and Chelsea shows a far lesser concentration