

Chapter 7 Index Numbers

Equivalence of Laspeyres and a weighted index:

$$\text{Laspeyres index} = \frac{\sum P_n Q_0}{\sum P_0 Q_0} \times 100$$

Let the weights, w , equal the amount spent on items in the base year, eg. $W = P_0 Q_0$

$$\text{Laspeyres index} = \frac{\sum P_n Q_0}{\sum w} \times 100$$

If we note that $Q_0 = w/P_0$, then

$$\text{Laspeyres index} = \frac{\sum w P_n / P_0}{\sum w} \times 100$$