

Economics 314
Daily Question #18

Spring 2013
April 3

Romer's equation (6.47) defines an index of the prices of our continuum of distinct goods as

$P = \left(\int_{i=0}^1 P_i^{1-\eta} di \right)^{\frac{1}{1-\eta}}$. In what sense is this a price index? How is it similar and how is it different from the price indexes that the government collects, such as the CPI or GDP deflator? Show that it has the properties that: (a) if all prices P_i are the same, then $P = P_i$, and (b) if all prices P_i were to double, then P would double as well.