

and with the income tax by:

$$\left(\frac{\Delta P}{P}\right)_{d,n} = \left(\frac{\lambda}{1+s}\right)^{n+1} \left(\frac{\lambda r}{1+s}\right) \quad (7)$$

It is evident that $\left(\frac{\Delta P}{P}\right)_{i,n} > \left(\frac{\Delta P}{P}\right)_{d,n}$, that is to say consumption taxes bring about a higher rate of inflation than income taxes in the short run. As n approaches infinity, the rate of inflation approaches zero in both cases and the equilibrium price level (P_∞) in terms of the price level of period $n = -1$ can be derived from (6) and (7). With the consumption tax we have:

$$P_{i,\infty} = P_{i,-1} \prod_{n=0}^{\infty} \left[1 + \left(\frac{\lambda}{1+s}\right)^{n+1} \left(\frac{\lambda r}{(1-t_i)(1+s)} + \frac{t_i}{1-t_i}\right) \right] \quad (8)$$

and with the income tax:

$$P_{d,\infty} = P_{d,-1} \prod_{n=0}^{\infty} \left[1 + \left(\frac{\lambda}{1+s}\right)^{n+1} \left(\frac{\lambda r}{1+s}\right) \right] \quad (9)$$

Thus P-W's conclusion is that, when the comparison is made in terms of an equal deflationary impact, consumption taxes are more inflationary than income taxes in the short run and lead to a higher price level in the long run.

Our restatement of the model concerns equation (3) which will be respecified to incorporate the direct tax variable. The income tax enters the wage equation in two ways. Given a tax rate t_d and a percentage price increase $\frac{P_n - P_{n-1}}{P_{n-1}}$ workers will try to compensate for the amount $\frac{P_n - P_{n-1}}{P_{n-1}} W_{n-1} (1 - t_{d,n-1})$ through an increase in money wage ΔW_n that will itself be taxed at the rate $t_{d,n}$. Therefore we have:

$$\Delta W_n (1 - t_{d,n}) = \left(\frac{\Delta P}{P}\right)_n W_{n-1} (1 - t_{d,n-1})$$