On the other hand full compensation for income tax increases requires (5):

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

In taking the two together we obtain the percentage increase in money wage necessary to maintain the same real take home pay in the presence of price or direct tax increases, namely:

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

Introducing the unemployment variable, allowing for partial compensation and for a one-period lag (for sake of comparison with P – W), the wage equation becomes:

$$\left(\frac{\Delta W}{W}\right)_n = f(U) + \lambda\,\frac{1 - t_{d,n-2}}{1 - t_{d,n-1}}\left(\frac{\Delta P}{P}\right)_{n-1} + \gamma\,\frac{t_{d,n-1} - t_{d,n-2}}{1 - t_{d,n-1}} \qquad (10)$$

with $0 < \lambda \leq 1$ and $0 < \gamma < 1$.

Our version of the model comprises equations (1) (2) (10) (4). Expanding (10) we obtain:

$$W_n = \left(1 + f(U) - \lambda\,\frac{1 - t_{d,n-2}}{1 - t_{d,n-1}} + \lambda\,\frac{1 - t_{d,n-2}}{1 - t_{d,n-1}}\,\frac{P_{n-1}}{P_{n-2}} + \gamma\,\frac{t_{d,n-1} - t_{d,n-2}}{1 - t_{d,n-1}}\right) W_{n-1} \qquad (11)$$

The effective tax rate increases automatically over time if the income tax is progressive: in this case the rate of inflation does not necessarily possess an equilibrium value. We will not pursue this case but consider instead the inflationary impact of a discretionary variation in the average rate of a proportional income tax.

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(5) We must have $W_n(1 - t_{d,n}) = W_{n-1}(1 - t_{d,n-1})$ i.e. $\frac{W_n}{W_{n-1}} = \frac{1 - t_{d,n-1}}{1 - t_{d,n}}$. The fully compensatory percentage increase is therefore:
$W_n - W_{n-1}/W_{n-1} = (1 - t_{d,n-1}) - (1 - t_{d,n}) / (1 - t_{d,n}) = t_{d,n} - t_{d,n-1}/1 - t_{d,n}$