that p^*, the (log) foreign-currency price level, is constant and normalized to zero. Domestic output y given by

$$(23) \qquad y_t = \alpha (e_t - w_t) - u_t,$$

where w is the money wage and u is a mean-zero, serially independent shock dependent on foreign interest rates, private and government demand shifts, and so on. Workers and firms agree to set period t wages w_t on date t-1 so as to maintain a constant real wage,

$$(24) \qquad w_t = E_{t-1}(e_t),$$

where $E_{t-1}(\cdot)$ is a conditional expectation based on date t-1 information. This information does not include u_t, and the wage is not indexed to the value of u_t that occurs.

While period t wages cannot adjust to period t demand shocks, the government can respond to them through changes in the contemporaneous exchange rate[1]. This assumption gives stabilization policy a role. Assume temporarily, as in the last model, that the exchange rate can be freely managed and that the government's objective is to minimize the loss function

$$(25) \qquad \pounds_t = \sum_{s=t}^{\infty} \beta^{s-t} \ell_s = \sum_{s=t}^{\infty} \beta^{s-t} [\theta (e_s - e_{s-1}) + (y_s - y^*)^2],$$

where β, $0 < \beta < 1$, is the government's discount factor. (Later a fixed cost of realignment will be introduced.) The loss function (25) penalizes deviations of inflation rates from a target of zero. It also penalizes deviations of output from a target y^*. The target y^* could be 0, which happens to be the rational-expectations equilibrium output level when u is at its mean value of zero. I will assume, however, that the government targets a strictly positive y^*. Such targeting could reflect, for example, entrenched distortions in the labor market that lead to equilibrium output below the efficient level[2].

The government's flow loss for period t can be expressed as

$$(26) \qquad \ell_t = \frac{\theta}{2} (e_t - e_{t-1})^2 + \frac{1}{2} [\alpha (e_t - w_t) - u_t - y^*]^2.$$

with the help of (23). Under a regime with credible precommitment, the government would choose the path of the exchange rate once and for all in some initial period; this choice, in turn, would tie down expectations and the path of nominal wages. As in section 2.1, however, the model assumes that such precommitments aren't possible. Instead, the government chooses the home currency's exchange rate e_t each period to minimize ℓ_t given the nominal wages agreed in period $t - 1$. (There is no intertemporal dimension to the government's exchange-rate decision, which does not affect the policy problem to be faced in later periods[3].)

Minimization of (26) over e_t (for given w_t) requires that

$$\frac{\partial \ell_t}{\partial e_t} = \theta (e_t - e_{t-1}) + \alpha [\alpha (e_t - w_t) - u_t - y^*] = 0.$$

Define λ to be $\alpha^2/(\theta + \alpha^2)$. Then the above derivative condition gives the government's reaction function:

$$(27) \qquad e_t - e_{t-1} = \lambda (u_t/\alpha) + \lambda (w_t - e_{t-1}) + \lambda (y^*/\alpha).$$

According to (27), the government uses the exchange rate partially to offset shocks u_t to output. Since wages were set in period $t - 1$, however, the government also finds it optimal after the fact to attempt a "surprise" depreciation whenever wage inflation risks eroding competitiveness. Similarly, the government will attempt to drive output above its "natural" level by devaluing. Only as $\theta \to \infty$, so that

(1) I assume capital mobility and perfect asset substitution, so realignment is the only form monetary policy can take.

(2) Serial dependence in the employment shock u_t works like predictable time variation in y^*.

(3) This property would not hold if current government behavior influenced market expectations of its future behavior, as in the trigger-strategy equilibria analyzed by De Kock and Grilli (1993). Here, instead, market expectations are assumed to be history-independent.