Table 4. Variance Decomposition of HP-filtered Output, Labor, and Investment
(Means and Root Mean Square Errors)

	What Fraction of Variance of HP-filtered Series is Due to ε_z?			What Fraction of Variance of HP-filtered Series is Due to ε_l?			What Fraction of Variance of HP-filtered Series is Due to ε_x?		
	Output	Labor	Investment	Output	Labor	Investment	Output	Labor	Investment
True	33	2.1	11	47	67	30	23	33	62
Restricted SS									
Tight constraints	32	1.9	10	47	67	30	24	34	62
	(3.0)	(0.7)	(2.2)	(8.2)	(12)	(10)	(8.6)	(12)	(12)
Modest constraints	31	1.6	10	50	70	35	21	30	58
	(4.8)	(1.0)	(2.9)	(12)	(15)	(16)	(11)	(15)	(16)
Loose constraints	33	2.6	11	48	67	35	22	32	56
	(8.5)	(3.3)	(6.0)	(19)	(23)	(24)	(14)	(21)	(22)
Unrestricted SS	29	14	18	42	50	34	31	37	50
	(2.2)	(26)	(25)	(29)	(37)	(30)	(27)	(31)	(34)
VARMA	32	28	25	–	–	–	–	–	–
	(28)	(37)	(29)						

NOTES: For each model, parameters are estimated by the method of maximum likelihood. This is done for 1000 datasets of length 200 periods. The estimated parameters are used to compute the variance decompositions reported in the table. Totals do not necessarily sum to 100 percent because a two-sided filter is applied to the time series. 'SS' indicates state space model and 'VARMA' indicates vector autoregressive moving average model of order (1,1). For the 'Tight constraints' case of the restricted state space model, only ψ, σ, and the stochastic processes of the exogenous shocks are estimated. For the 'Modest constraints,' all parameters are estimated but the parameters are constrained to be economically plausible. For the 'Loose constraints' case, the only restriction imposed is that an equilibrium can be computed. The numbers in parentheses are the root mean square errors.