Table 3. Standard Deviations and Correlations of HP-filtered Output, Labor, and Investment (Means and 95% Bounds over 1000 Estimates)

	Standard Deviations of HP-filtered Series			Autocorrelations of HP-filtered Series			Cross-correlations of HP-filtered Series		
	Output	Labor	Investment	Output	Labor	Investment	Output and Labor	Output and Investment	Labor and Investment
True	1.9	2.4	6.9	.70	.69	.69	.89	.91	.92
Restricted SS Tight constraints	$ \begin{array}{c} 1.9 \\ [1.7, 2.1] \end{array} $	2.4 [2.1,2.6]	$6.8 \\ [6.1, 7.5]$.69 [.68,.70]	.68 [.66,.69]	.68 [.66,.69]	.89 [.86,.91]	.91 [.88,.93]	.92 [.90,.94]
Modest constraints	$ \begin{array}{c} 1.9 \\ [1.7, 2.1] \end{array} $	2.4 [2.1,2.6]	$6.8 \\ [6.1, 7.5]$.69 [.67,.70]	.68 [.65,.69]	.68 [.65,.69]	.89 [.86,.91]	.91 [.88,.93]	.92 [.90,.94]
Loose constraints	$ \begin{array}{c} 1.9 \\ [1.7, 2.1] \end{array} $	2.4 [2.1,2.6]	$6.8 \\ [6.1, 7.5]$.69 [.67,.71]	.68 [.65,.70]	.68 [.64,.69]	.89 [.86,.91]	.91 [.88,.93]	.92 [.90,.94]
Unrestricted SS	$ \begin{array}{c} 1.9 \\ [1.6, 2.1] \end{array} $	2.3 [2.0,2.6]	$6.7 \\ [5.9, 7.6]$.68 [.61,.74]	.67 [.61,.72]	.67 [.60,.72]	.89 [.85,.92]	.91 [.87,.93]	.92 [.88,.94]
VARMA	$ \begin{array}{c} 1.9 \\ [1.6, 2.2] \end{array} $	2.4 [2.0,2.7]	$6.9 \\ [5.9, 7.9]$.70 [.62,.76]	.69 [.59,.74]	.69 [.61,.75]	.89 [.85,.92]	.91 [.87,.94]	.92 [.89,.95]

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 second moments reported in the table. '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 square brackets indicate the range of estimates after eliminating the bottom 2.5% and the top 2.5%.