

# Labor Markets and Business Cycles

Additional slides

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## Rigid wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	0.688	11.207	0.962	0.267	0.144	0.559	0.509	0.691
$\tilde{y}$	1	0.844	0.514	0.720	0.559	-0.530	-0.75	0.794	0.982
$\tilde{c}$	—	1	0.068	0.980	0.083	-0.210	-0.278	0.393	0.751
$\theta$	—	—	1	-0.104	0.856	-0.943	-0.837	0.703	0.596
$\tilde{k}$	—	—	—	1	-0.088	-0.069	-0.082	0.205	0.603
Correlations $n$	—	—	—	—	1	-0.663	-0.898	0.690	0.606
$wn/y$	—	—	—	—	—	1	0.690	-0.612	-0.590
$c/y$	—	—	—	—	—	—	1	-0.938	-0.833
$\hat{\tau}$	—	—	—	—	—	—	—	1	0.893
$s$	—	—	—	—	—	—	—	—	1

Table 4.1: Model with capital and rigid wages ( $r = 0.95$ ), deterministic trend. Co-movements of variables in an infinite sample.

## Flexible wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	0.717	4.391	0.990	0.109	0.012	0.515	0.614	0.729
$\tilde{y}$	1	0.871	0.714	0.748	0.713	-0.886	-0.729	0.728	0.971
$\tilde{c}$	—	1	0.279	0.978	0.293	-0.563	-0.299	0.298	0.729
$\theta$	—	—	1	0.070	0.966	-0.938	-0.999	1.000	0.860
$\tilde{k}$	—	—	—	1	0.092	-0.379	-0.091	0.090	0.569
Correlations $n$	—	—	—	—	1.000	-0.877	-0.976	0.962	0.844
$wn/y$	—	—	—	—	—	1	0.938	-0.947	-0.967
$c/y$	—	—	—	—	—	—	1	-0.998	-0.870
$\hat{\tau}$	—	—	—	—	—	—	—	1	0.870
$s$	—	—	—	—	—	—	—	—	1

Table 3.3: Model with capital, deterministic trend. Co-movements of variables in an infinite sample.

# Business cycle statistics: annual growth rates

## Rigid wage model

	$\hat{y}$	$\hat{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	0.250	21.884	0.265	0.513	0.300	0.807	0.551	0.717
$\hat{y}$	1	0.804	0.805	0.162	0.888	-0.653	-0.982	0.915	0.982
$\hat{c}$	—	1	0.452	0.704	0.497	-0.366	-0.676	0.790	0.816
$\theta$	—	—	1	-0.252	0.803	-0.96	-0.853	0.750	0.820
$\tilde{k}$	—	—	—	1	-0.157	0.261	0.025	0.164	0.164
Correlations $n$	—	—	—	—	1	-0.607	-0.941	0.670	0.806
$wn/y$	—	—	—	—	—	1	0.692	-0.671	-0.708
$c/y$	—	—	—	—	—	—	1	-0.881	-0.955
$\hat{\tau}$	—	—	—	—	—	—	—	1	0.972
$s$	—	—	—	—	—	—	—	—	1

Table 4.2: Model with capital and rigid wages ( $r = 0.95$ ), deterministic trend. Co-movements of annual growth rates in an infinite sample.

## Flexible wage model

	$\hat{y}$	$\hat{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	0.303	6.552	0.300	0.158	0.019	0.756	0.921	0.900
$\hat{y}$	1	0.858	0.973	0.192	0.912	-0.931	-0.979	0.971	0.994
$\hat{c}$	—	1	0.722	0.668	0.712	-0.706	-0.734	0.720	0.804
$\theta$	—	—	1	-0.033	0.889	-0.968	-0.997	1.000	0.992
$\tilde{k}$	—	—	—	1	0.067	0.019	0.014	-0.034	0.094
Correlations $n$	—	—	—	—	1	-0.751	-0.920	0.876	0.897
$wn/y$	—	—	—	—	—	1	0.948	-0.975	-0.961
$c/y$	—	—	—	—	—	—	1	-0.995	-0.992
$\hat{\tau}$	—	—	—	—	—	—	—	1	0.991
$s$	—	—	—	—	—	—	—	—	1

Table 3.4: Model with capital, deterministic trend. Co-movements of annual growth rates in an infinite sample.

## Rigid wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	1.727	83.803	2.944	1.998	0.867	1.787	1.238	0.565
$\tilde{y}$	1	0.228	0.497	0.186	0.645	-0.535	-0.339	-0.827	0.097
$\tilde{c}$	—	1	-0.403	0.988	-0.569	0.295	0.839	-0.437	0.073
$\theta$	—	—	1	-0.523	0.853	-0.993	-0.668	-0.619	0.702
$\tilde{k}$	—	—	—	1	-0.625	0.423	0.851	-0.329	-0.076
Correlations	$n$	—	—	—	1	-0.810	-0.911	-0.449	0.229
	$wn/y$	—	—	—	—	1	0.584	0.697	-0.750
	$c/y$	—	—	—	—	—	1	0.040	0.016
	$\hat{\tau}$	—	—	—	—	—	—	1	-0.591
	$s$	—	—	—	—	—	—	—	1

Table 4.4: Model with capital and rigid wages ( $r = 0.95$ ), stochastic trend. Co-movements of variables in an infinite sample.

## Flexible wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	2.092	9.636	3.478	0.240	0.128	1.102	1.298	0.534
$\tilde{y}$	1	0.995	-0.997	1.000	-0.999	0.013	0.981	-0.971	-0.067
$\tilde{c}$	—	1	-0.983	0.995	-0.996	0.115	0.996	-0.990	0.036
$\theta$	—	—	1	-0.996	0.994	0.068	-0.962	0.948	0.147
$\tilde{k}$	—	—	—	1	-0.999	0.018	0.982	-0.972	-0.062
Correlations	$n$	—	—	—	1	-0.034	-0.984	0.975	0.046
	$wn/y$	—	—	—	—	1	0.207	-0.253	0.997
	$c/y$	—	—	—	—	—	1	-0.999	0.128
	$\hat{\tau}$	—	—	—	—	—	—	1	-0.175
	$s$	—	—	—	—	—	—	—	1

Table 3.5: Model with capital, stochastic trend. Co-movements of variables in an infinite sample.

# Business cycle statistics: annual growth rates

## Rigid wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	0.790	88.160	1.273	2.071	0.942	1.559	1.210	0.667
$\tilde{y}$	1	-0.510	0.743	-0.654	0.969	-0.707	-0.900	-0.748	0.108
$\tilde{c}$	—	1	-0.191	0.922	-0.628	0.133	0.834	0.002	0.445
$\theta$	—	—	1	-0.541	0.807	-0.998	-0.573	-0.965	0.717
$\tilde{k}$	—	—	—	1	-0.803	0.493	0.887	0.347	0.066
Correlations $n$	—	—	—	—	1	-0.770	-0.940	-0.751	0.169
$wn/y$	—	—	—	—	—	1	0.521	0.970	-0.756
$c/y$	—	—	—	—	—	—	1	0.481	0.156
$\hat{\tau}$	—	—	—	—	—	—	—	1	-0.736
$s$	—	—	—	—	—	—	—	—	1

Table 4.5: Model with capital and rigid wages ( $r = 0.95$ ), stochastic trend. Co-movements of annual growth rates in an infinite sample.

## Flexible wage model

	$\tilde{y}$	$\tilde{c}$	$\theta$	$\tilde{k}$	$n$	$wn/y$	$c/y$	$\hat{\tau}$	$s$
Relative s.d.	1	2.243	9.577	3.465	0.235	0.394	1.319	1.668	1.638
$\tilde{y}$	1	0.956	-0.969	1.000	-0.988	0.120	0.867	-0.819	0.093
$\tilde{c}$	—	1	-0.854	0.961	-0.968	0.405	0.975	-0.951	0.380
$\theta$	—	—	1	-0.965	0.942	0.130	-0.718	0.651	0.157
$\tilde{k}$	—	—	—	1	-0.992	0.136	0.876	-0.828	0.109
Correlations $n$	—	—	—	—	1	-0.189	-0.897	0.851	-0.163
$wn/y$	—	—	—	—	—	1	0.597	-0.668	1.000
$c/y$	—	—	—	—	—	—	1	-0.996	0.575
$\hat{\tau}$	—	—	—	—	—	—	—	1	-0.647
$s$	—	—	—	—	—	—	—	—	1

Table 3.6: Model with capital, stochastic trend. Co-movements of annual growth rates in an infinite sample.