

- ▶ proportion new entrants starting in service sector increases with cohort. From 0.63 over 1968-74 to 0.76 over 1996-2000.
- ▶ persistence in sectoral choice.
81 % of males, 75% females stay in the same sector.
- ▶ women entrants or reentrants in labor force choose service sector more than men.

Production Function Parameter Estimates

$$p_t^j Y_t^j = p_t^j \zeta_t^j \left\{ \alpha_{1t}^j (S_t^{jP})^{\sigma_j} + \alpha_{2t}^j (S_t^{jB})^{\sigma_j} \right. \\ \left. + (1 - \alpha_{1t}^j - \alpha_{2t}^j) \left[\lambda_t^j (S_t^{jW})^{\omega_j} + (1 - \lambda_t^j) (K_t^j)^{\omega_j} \right]^{(\sigma_j/\omega_j)} \right\}^{1/\sigma_j}$$

	Services	Goods
σ	0.251 (0.0055)	0.182 (0.0035)
ν	-0.016 (0.0136)	0.118 (0.0112)

Elasticity: $\frac{1}{1-\sigma}$, $\frac{1}{1-\nu}$

	Service	Goods
Capital-WC	0.98	1.13
(Capital,WC)-(PC,BC)	1.34	1.22

- ▶ Capital is more complementary to skilled labor than non-skilled.
- ▶ Skill-biased technology growth. Both α_{1t} and α_{2t} decreasing over time for services, and α_{2t} decreasing over time for goods. $(1 - \alpha_{1t} - \alpha_{2t}) \lambda_t$ increasing over time for both services and goods.

Budget Constraint

- ▶ Cost of attending college: \$ 18,664
- ▶ Cost of attending graduate school: \$ 30,004
- ▶ Men: Mobility cost from goods sector to service sector: \$ 9,655
- ▶ Men: Mobility cost from service sector to goods sector: \$ 9,305
- ▶ Men: Within sector occupational change: \$ 3,000 to \$ 7,000
- ▶ Fixed cost of entering employment: \$ 10,688 to \$15,528

Model Fit

Actual and Predicted service sector shares and relative hourly wage.

	capital		employment		hwly wage	
	Act.	Pred	Act.	Pred	Act.	Pred
1968-74	80.8	79.9	61.3	62.2	0.968	0.841
1975-79	79.7	78.6	65.0	64.6	0.959	0.867
1980-84	78.7	78.7	67.7	66.6	0.945	0.899
1985-89	81.0	80.9	69.9	70.0	0.971	0.919
1990-94	82.2	82.6	72.8	72.8	1.00	0.945
1995-00	82.8	83.1	73.8	73.9	1.02	0.945

- ▶ The model fits the service sector share of capital and employment well.
- ▶ The model underestimates the relative wage of service sector.

Service-Goods growth rate, 1968-2000

	actual	predicted
Capital	0.65	0.83
All Occupations		
Employment	2.23	2.13
Hourly wage	0.23	0.51
White Collar		
Employment	1.69	1.86
Hourly wage	0.19	0.17
Pink Collar		
Employment	2.20	-0.14
Hourly wage	-0.10	-0.09
Blue Collar		
Employment	1.95	1.63
Hourly wage	0.08	0.11

The model fails to fit pink collar employment increase.
Other than that, the model fits the data well.

Employment share

	data		model	
	1968-74	1996-2000	1968-74	1996-2000
18-24	0.628	0.764	0.657	0.743

Change

	Data	Model
18-24	13.6	8.6
25-31	14.4	8.9
32-38	12.4	12.1
39-45	11.6	15.5
46-52	13.9	12.7
53-59	12.3	12.9
60-	10.4	6.9

State Dependence, Transition to Service

	males		females	
	data	model	data	model
Service(t-1)	0.85	0.93	0.94	0.96
Goods(t-1)	0.19	0.13	0.22	0.20
No work (t-1)	0.58	0.57	0.83	0.76

Policy Experiment: Mobility Cost

Prohibitively high mobility cost:

- ▶ Output in both sectors fall to about 70 %. The fall is more in goods sector. Employment and capital fall as well.
- ▶ Employment falls because of lower returns to work. One cannot exploit the idiosyncratic shock in the other sector.
- ▶ More workers enter in the growing service industry than the data. Employment share of the service sector increases.

Zero mobility cost

- ▶ zero mobility cost: Output in both sectors are twice as high.
- ▶ high mobility cost: prevents people from changing sectors/occupations with i.i.d. earning and utility shocks.
- ▶ Goods sector employment rate slightly higher than the service sector.

Sector Specificity

Reducing or increasing sector specificity of work experience does not change the service sector shares.

The Growth of Service Sector

Growth Accounting: Change the four exogenous factors
baseline: exogenous factors at 1960 level.

experiment: change each factor following the data.

- ▶ Supply side: changes in cohort size, change in fertility: do not affect the service sector shares much.

- ▶ Demand side:

technological change: 1968-84 increased the service sectors shares in output, capital and employment. Decreased the shares afterwards.

Changes in relative product price and capital price: 1968-84 reduced the service sector shares, and then increased the shares.

Combined effect: increase in service sector shares.