Discussion of "Understanding the Great Recession" by Christiano, Eichenbaum, and Trabant

Robert E. Hall
Hoover Institution and Department of Economics
Stanford University
National Bureau of Economic Research

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Growth of the New Keynesian Tower

$\boxed{\text{Calvo pricing}}$

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Dixit-Stiglitz

Calvo pricing

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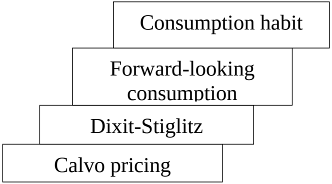
Forward-looking consumption

Dixit-Stiglitz

Calvo pricing

Growth of the New Keynesian Tower



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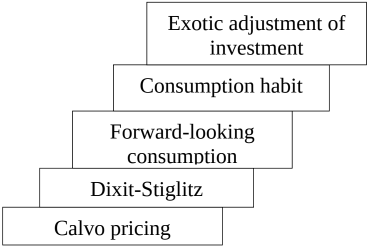

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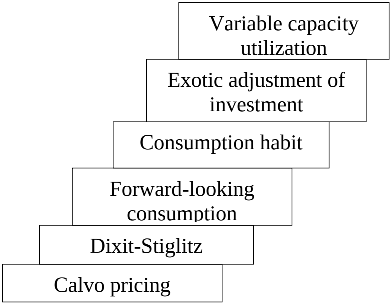

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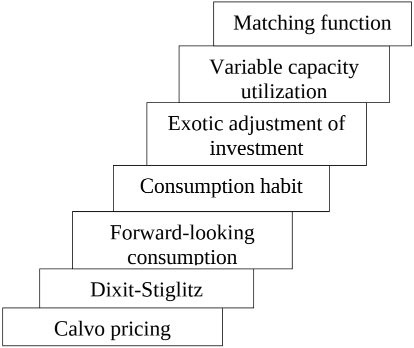

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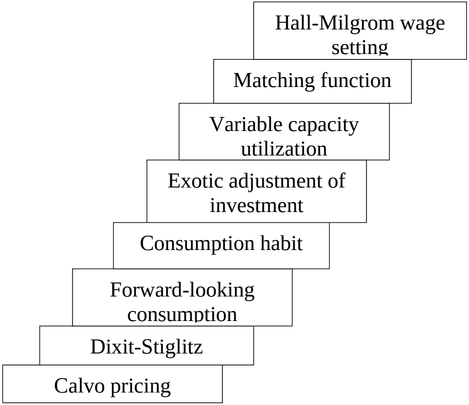

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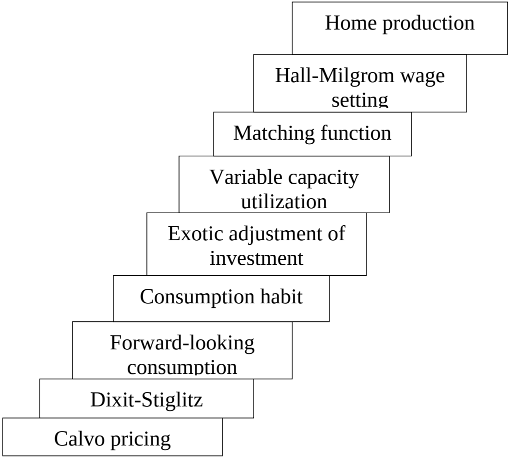

Frisch analysis of a single worker's labor supply

$$U(c, h) = \log c - v(h)$$

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ψ is the Frisch elasticity of labor supply

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$$Lv'(h) = Lw\lambda \Rightarrow \text{ hours same as individual}$$

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Participation

$$L \in (0, 1) \text{ and } \lambda w h^* - \gamma = v(h^*)$$

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Homogeneous households

Exogenous participation: $\lambda w h^* - \gamma > v(h^*)$

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Heterogeneous household members (Galí)

γ distributed as $G(\gamma)$ within the household

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Members with $\gamma < w\lambda w^* - v(h^*) = \gamma^*(w\lambda)$ are in the labor force: $L = 1$

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Otherwise, $L = 0$

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Aggregate labor supply

$$L(w\lambda) = G(\gamma^*(\lambda w))$$

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Envelope condition: $d\gamma^*/d(w\lambda) = h^* > 0$, so $L' > 0$

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Household makes its chosen workers work maximal hours:
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But lack of variation in hours per worker is wildly inaccurate—cyclical movements in hours per week account for almost half of total variation in labor input

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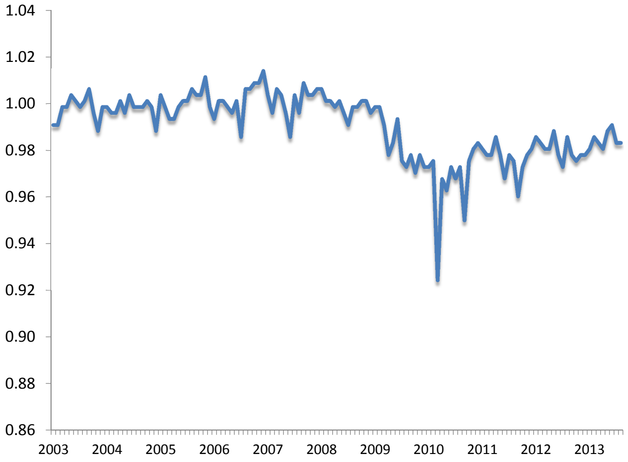
Index of weekly hours of work



Cyclical variations in participation

λ: Good times mean higher consumption and lower marginal utility

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Recessions resulting from declines in productivity may depress participation

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Households allocate L of their members to employment but only ϕL hold jobs; the remainder are unemployed. Unemployed have $v = 0$.

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Now

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First-order conditions are the same as for $\phi = 1$, but output and employment will be lower, so $w\lambda$ is higher and participation is higher if there is an exogenous decrease in ϕ.

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$$\frac{d(w\lambda)}{dx} = \frac{z' F_N \lambda + z F_{N,N} \phi' L + z F_N \lambda'}{1 - z F_{N,N} \phi' L'}$$

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Three effects: (1) *direct productivity effect*, procyclical, (2) *labor-demand effect*, countercyclical, and (3) *well-being effect*, countercyclical

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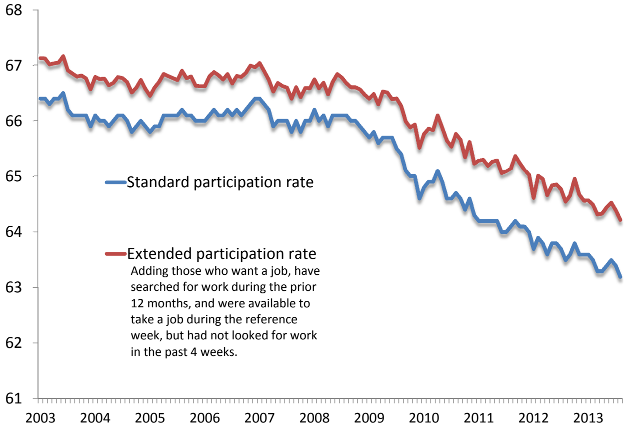
Heterogeneity explains procyclical participation

Comparative advantage in job market	*Economic condition*	*Working*	*Intense job search*	*Sporadic job search*	*Working or searching*	*Reported partici-pation rate*
Strong	Boom	0.90	0.04	0.00	0.94	0.94
	Slump	0.88	0.08	0.00	0.96	0.96
Moderate	Boom	0.40	0.00	0.04	0.44	0.40
	Slump	0.34	0.00	0.12	0.46	0.34
Average	Boom	0.65	0.02	0.02	0.69	0.67
	Slump	0.61	0.04	0.06	0.71	0.65

Data


68
67
66
65
64
63
62
61
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Standard participation rate
Extended participation rate
Adding those who want a job, have searched for work during the prior 12 months, and were available to take a job during the reference week, but had not looked for work in the past 4 weeks.