

SECULAR STAGNATION

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MESSAGE

Essential to distinguish between supply stagnation (US) and demand stagnation (Euro area and Japan)

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THE US CASE

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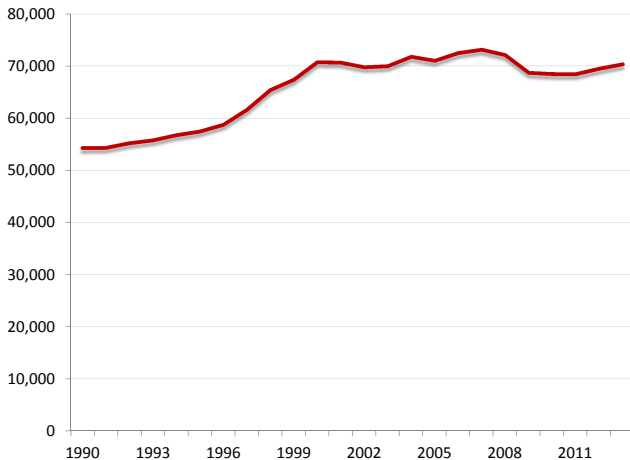
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Appropriate to use the term stagnation for earnings per household and to examine the sources of that stagnation

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AVERAGE REAL EARNINGS PER HOUSEHOLD, 2009 DOLLARS



SOURCES OF SUPPLY STAGNATION

Declining labor share

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Collapse of labor-force participation

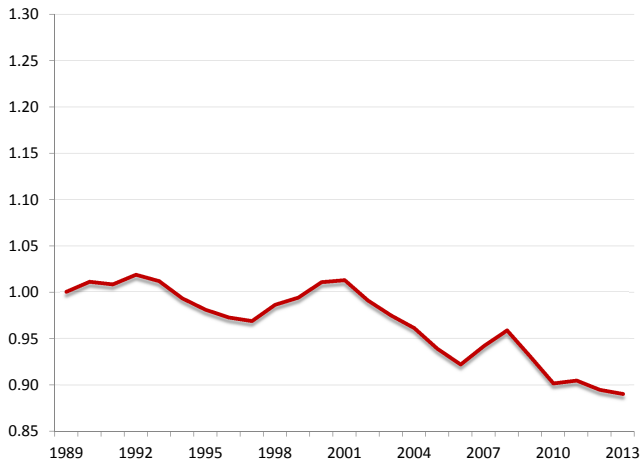
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DECOMPOSITION OF REAL EARNINGS PER HOUSEHOLD

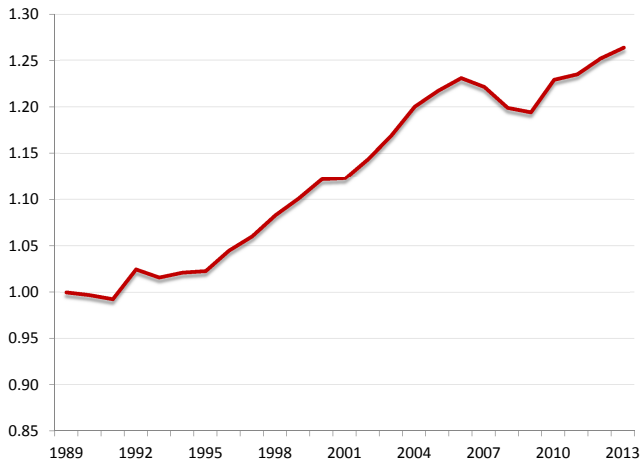
$$\begin{aligned}
 R &= (1 - \alpha_t) \frac{Y_t}{F_t} \\
 &= (1 - \alpha_t) A_t H_t^{1-\alpha_t} K_t^{\alpha_t} \frac{1}{F_t} \\
 &= \underbrace{(1 - \alpha_t)}_{\text{share}} \underbrace{A_t}_{\text{TFP}} \underbrace{\left(\frac{H_t}{F_t}\right)^{1-\alpha_t}}_{\text{hours/HH}} \underbrace{\left(\frac{K_t}{F_t}\right)^{\alpha_t}}_{\text{capital/HH}}
 \end{aligned}$$

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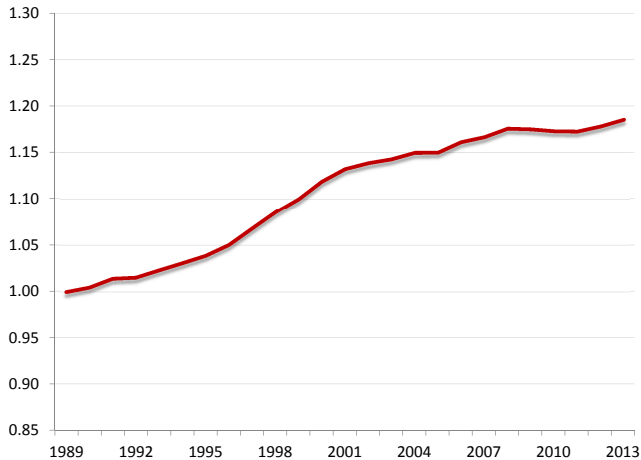
LABOR SHARE



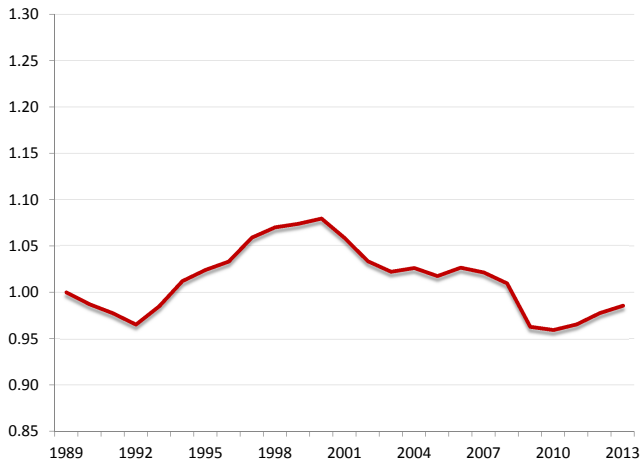
TOTAL FACTOR PRODUCTIVITY



CAPITAL PER HOUSEHOLD



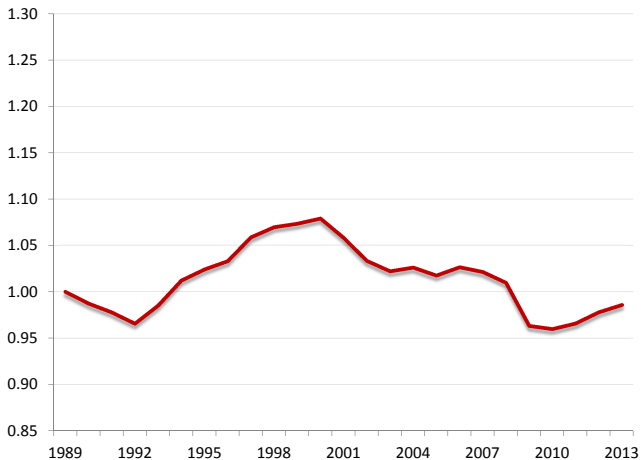
TOTAL HOURS OF WORK PER HOUSEHOLD



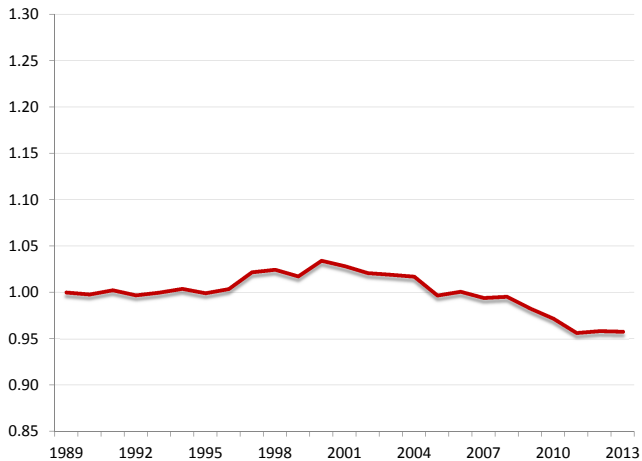
DECOMPOSITION OF HOURS PER HOUSEHOLD, USING CPS DATA

$$\begin{aligned}\text{Hours per household} &= [\text{participants per household}] \\ &\times [\text{workers per participant}] \\ &\times [\text{hours per worker}] \\ &\cdot\end{aligned}$$

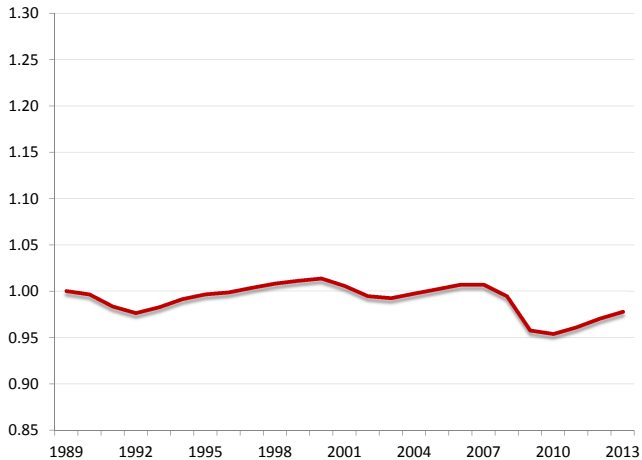
TOTAL HOURS OF WORK PER HOUSEHOLD, CPS



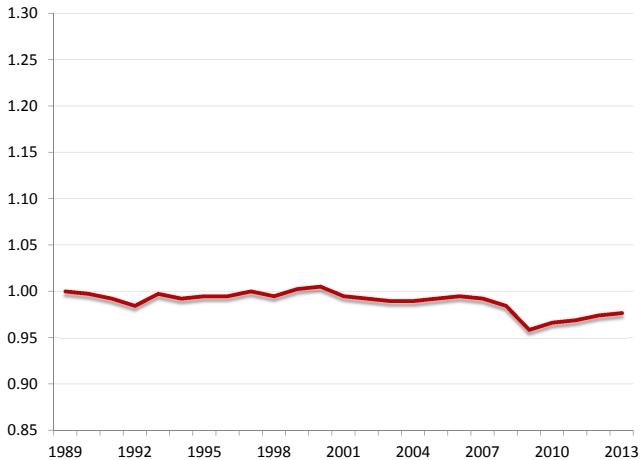
PARTICIPANTS PER HOUSEHOLD



WORKERS PER PARTICIPANT



HOURS PER WORKER



MEDIUM-TERM OUTLOOK

Capital likely to return to historical path of the capital/output ratio, as in the standard growth model

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Reasons for collapse of participation not well understood

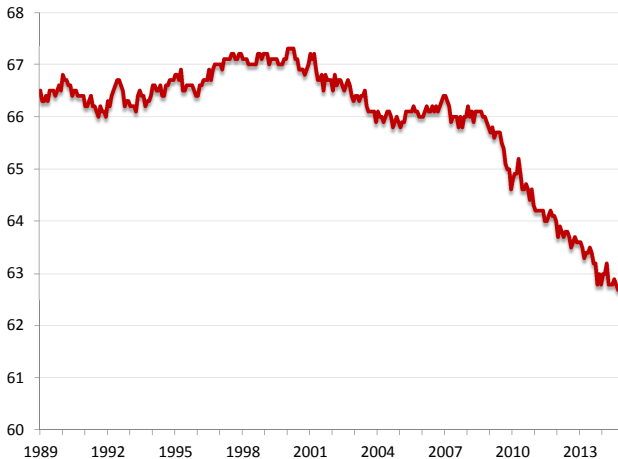
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CHANGES IN WEEKLY HOURS OF TIME USE, 2003 TO 2013

AMERICAN TIME USE SURVEY

	<i>Personal care</i>	<i>Household work</i>	<i>Market work</i>	<i>Education</i>	<i>Leisure</i>	<i>Other</i>
Men	1.3	0.1	-2.5	0.2	1.3	-0.4
Women	1.6	-0.7	-0.8	-0.1	0.8	-0.8

LABOR-FORCE PARTICIPATION RATE, MONTHLY



CONCLUSIONS ON US POLICY

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Woodford has argued cogently for continuing monetary expansion to validate earlier statements of the Fed's intention to expand aggressively to escape the ZLB

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Stagnant real compensation in lower-skill labor markets

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CONTINENTAL EUROPE (AND JAPAN?): THE ZERO LOWER BOUND

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Timidity stands in the way of effective monetary policy under secular demand stagnation

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Central banks unwilling to lower IOR despite the absence of currency hoarding

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And tax holdings of currency in excess of €10,000 at a rate sufficient to discourage accumulation

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How would financial institutions remain viable with negative interest rates?

In ordinary times, banks earn on their portfolios and pay depositors somewhat less, taking the difference as gross profit; with negative rates, banks earn from depositors and pay on portfolio holdings, taking the difference as gross profit.

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