

QUANTIFYING THE FORCES LEADING TO THE COLLAPSE OF GDP AFTER THE FINANCIAL CRISIS

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Structural and Cyclical Elements in Macroeconomics

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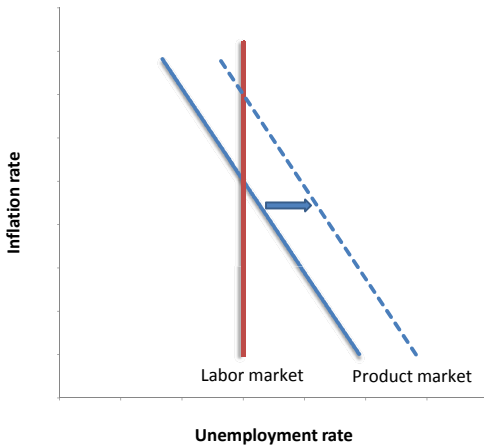
Moot in normal times because under a wide class of objective functions, the central bank will fully offset shifts in product demand, leaving unemployment constant.

The exception occurs when the interest rate is pinned at the zero lower bound.

In this setting, the real interest rate is minus the rate of inflation.

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RESPONSE TO SHOCK WITH STANDARD DMP LABOR MARKET



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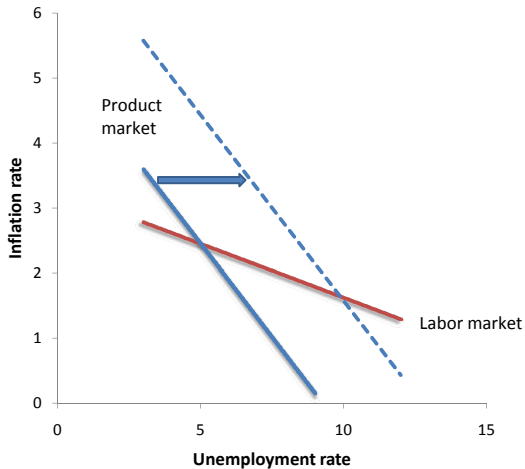
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Higher inflation raises employers' incentives to recruit new workers.

The rest of the talk is about the mechanism underlying the negative dependence.

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EQUILIBRATION WITH A NEGATIVE DEPENDENCE OF DMP UNEMPLOYMENT ON INFLATION



BASIC CONCLUSION

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Thus, to explain the observation that inflation falls when unemployment rises by introducing a dependence of DMP unemployment on the inflation rate, the DMP labor-market curve must be flatter than the product-market curve.

GETTING INFLATION INTO THE WAGE-DETERMINATION FUNCTION

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V. Ramey (2010) questions empirical evidence of countercyclical variations in markups.

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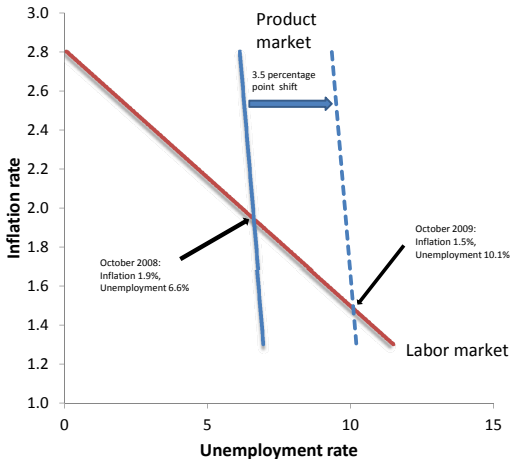
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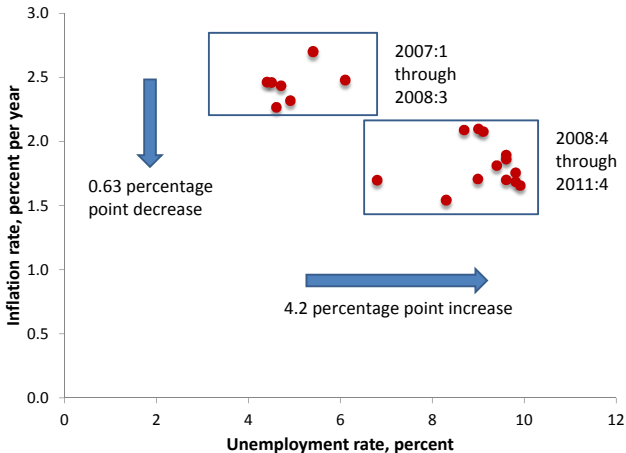
No departure from strict rationality.

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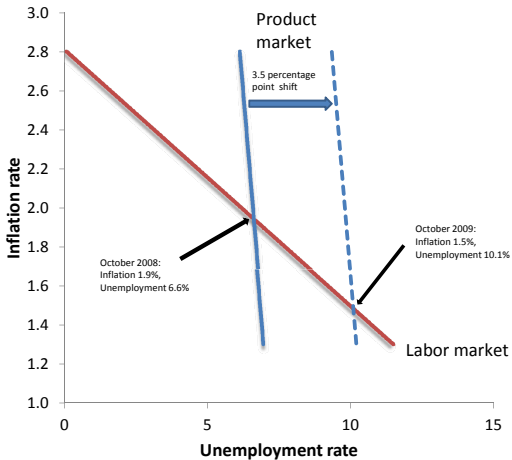
THE U.S. ECONOMY IN OCTOBER 2008 AND OCTOBER 2009, WHILE AT THE ZERO LOWER BOUND



INFLATION AND UNEMPLOYMENT AFTER THE CRISIS



THE U.S. ECONOMY IN DECEMBER 2007 AND DECEMBER 2009



TWO TYPES OF HOUSEHOLDS

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FINANCIAL FRICTION

$$f_t = \frac{1}{q_t} \left[\alpha \frac{y_t}{k_t} + (1 - \delta)q_{t+1} \right] - 1 - r_t.$$

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BORROWING BY IMPATIENT HOUSEHOLDS

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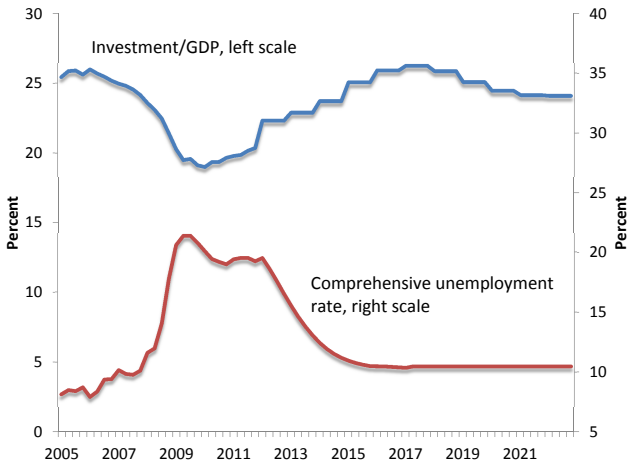
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TAYLOR RULE

$$r_{N,t} = [\tau_0 + \tau_\pi \pi_t - \tau_u u_t]^+$$

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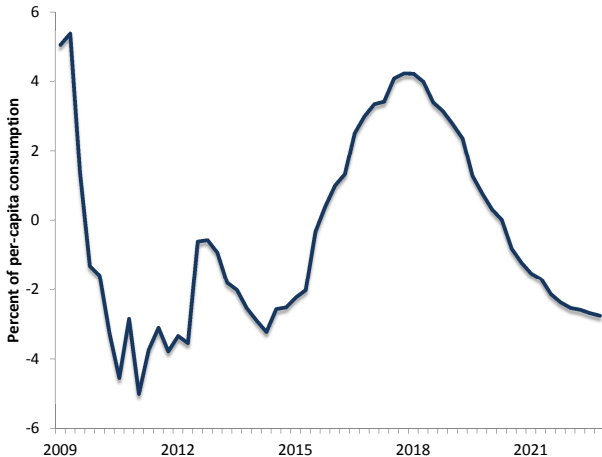
INVESTMENT/GDP RATIO AND COMPREHENSIVE UNEMPLOYMENT RATE, 2005 TO 2022



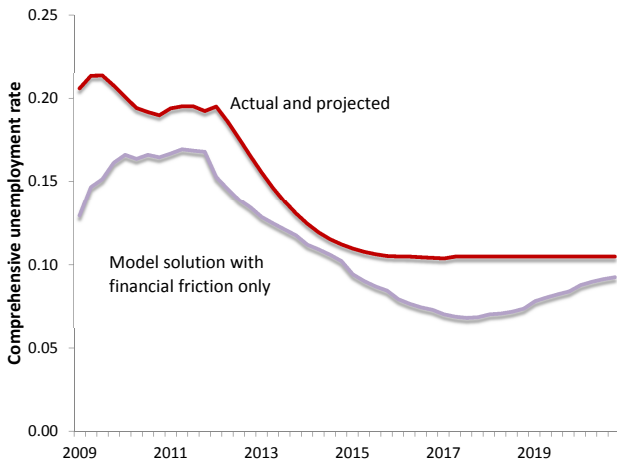
THE IMPLIED VALUES OF THE FINANCIAL FRICTION



IMPLIED VALUES OF THE TIGHTENING OF THE BORROWING CONSTRAINT AS A PERCENT OF TOTAL CONSUMPTION



MODEL SOLUTION WITH FINANCIAL FRICTION ONLY



BURDEN OF DELEVERAGING AS A PERCENT OF CONSUMPTION

