Discussion of Bob Hall's Paper

By

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San Francisco Fed, March 16th 2012

Questions this paper addresses

- What triggered the Great Recession?

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- What triggered the Great Recession?
- Why is high unemployment persistent?

Answers the Paper Gives

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- What triggered the Great Recession?
  - An increase in a financial friction
- Why is high unemployment persistent?
  - Sticky nominal wages

What are the Facts?

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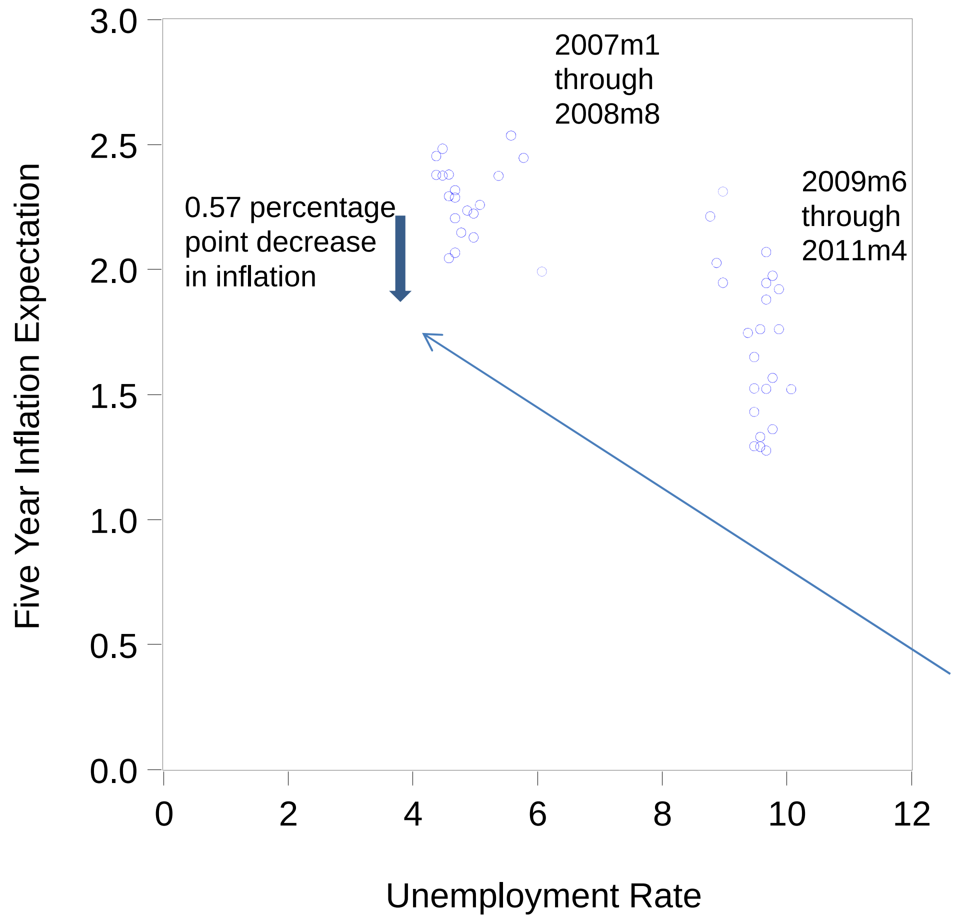
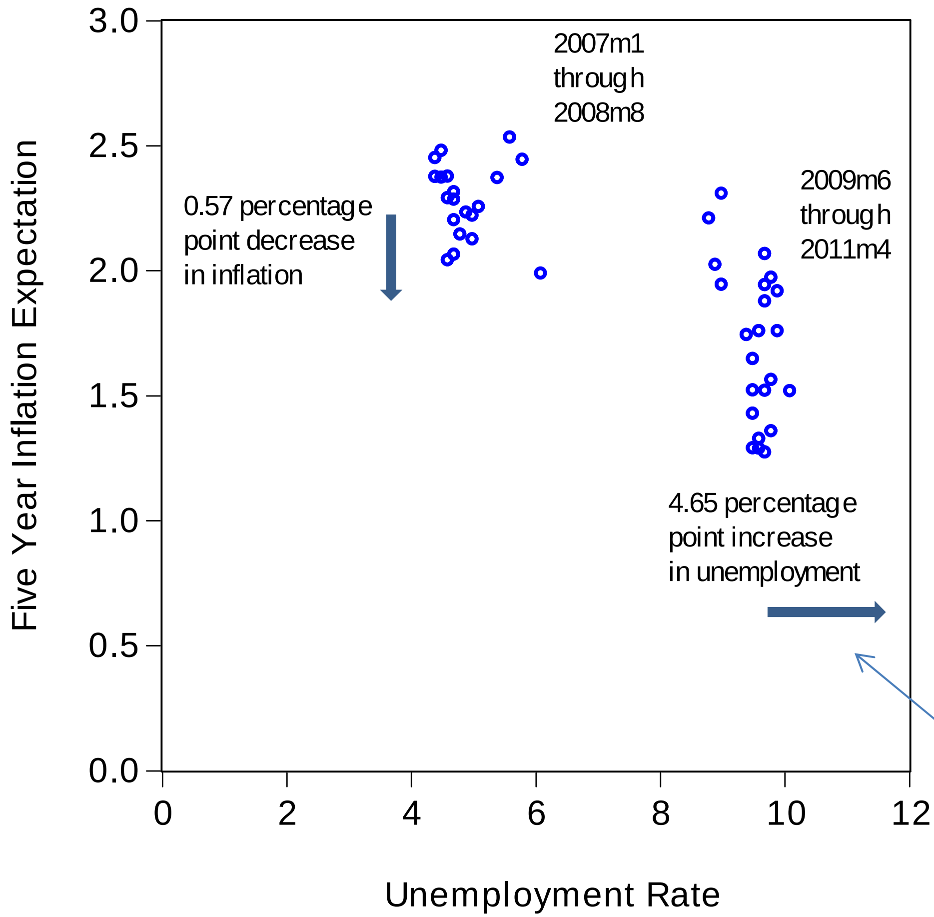


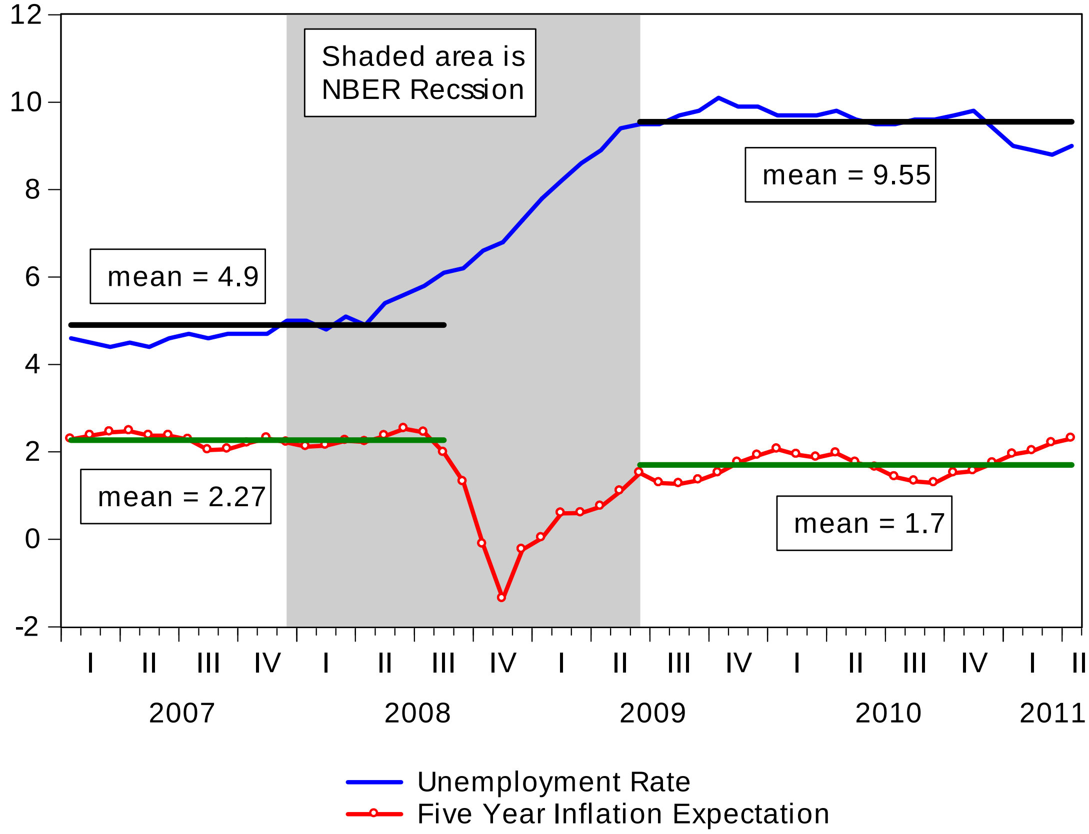
Inflation fell

What are the Facts?



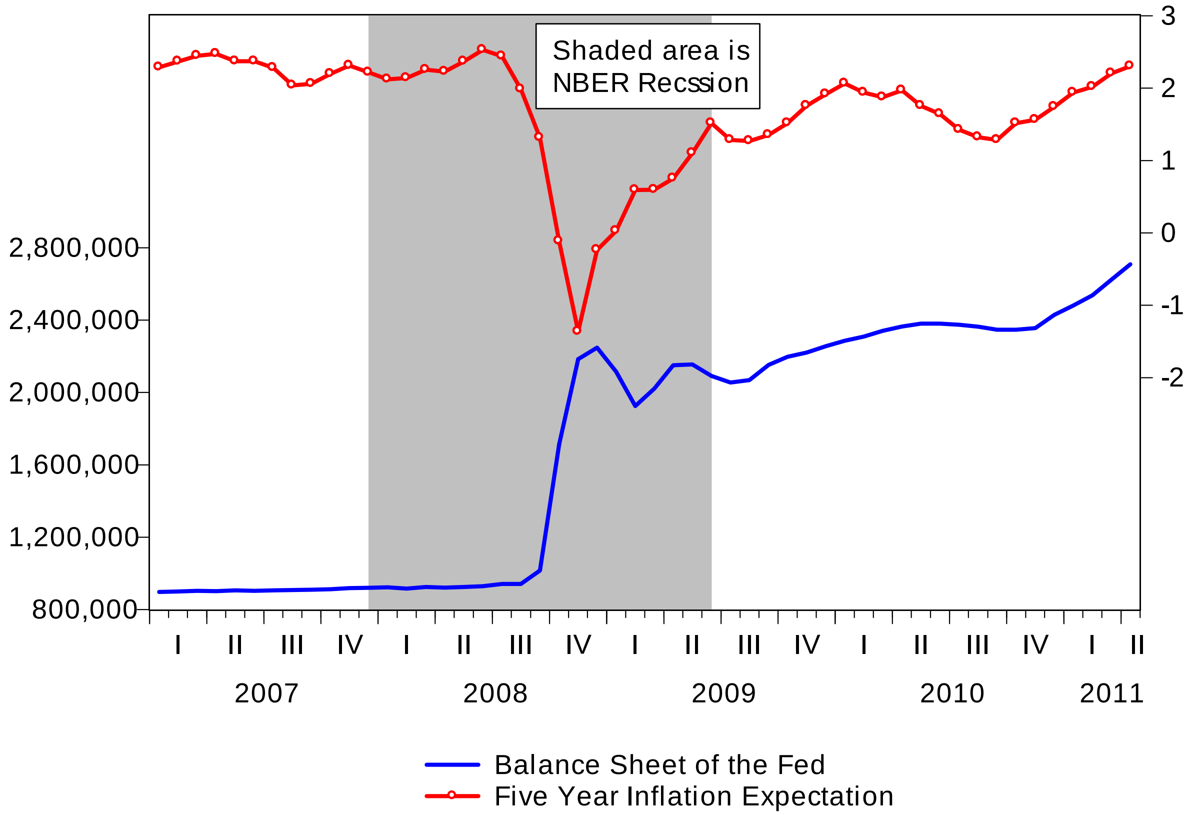
Unemployment increased

What are the Facts?



The recovery in inflation expectations….

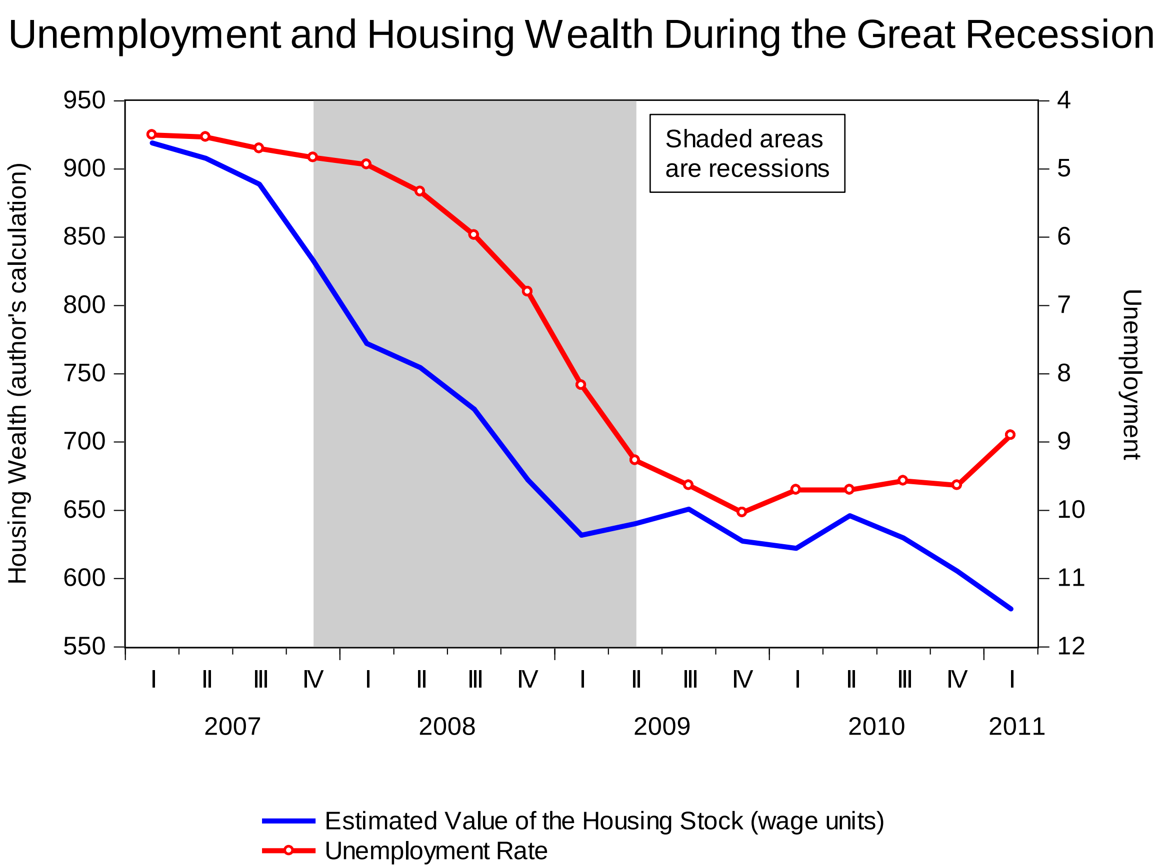
QE Worked



The recovery in inflation expectations….

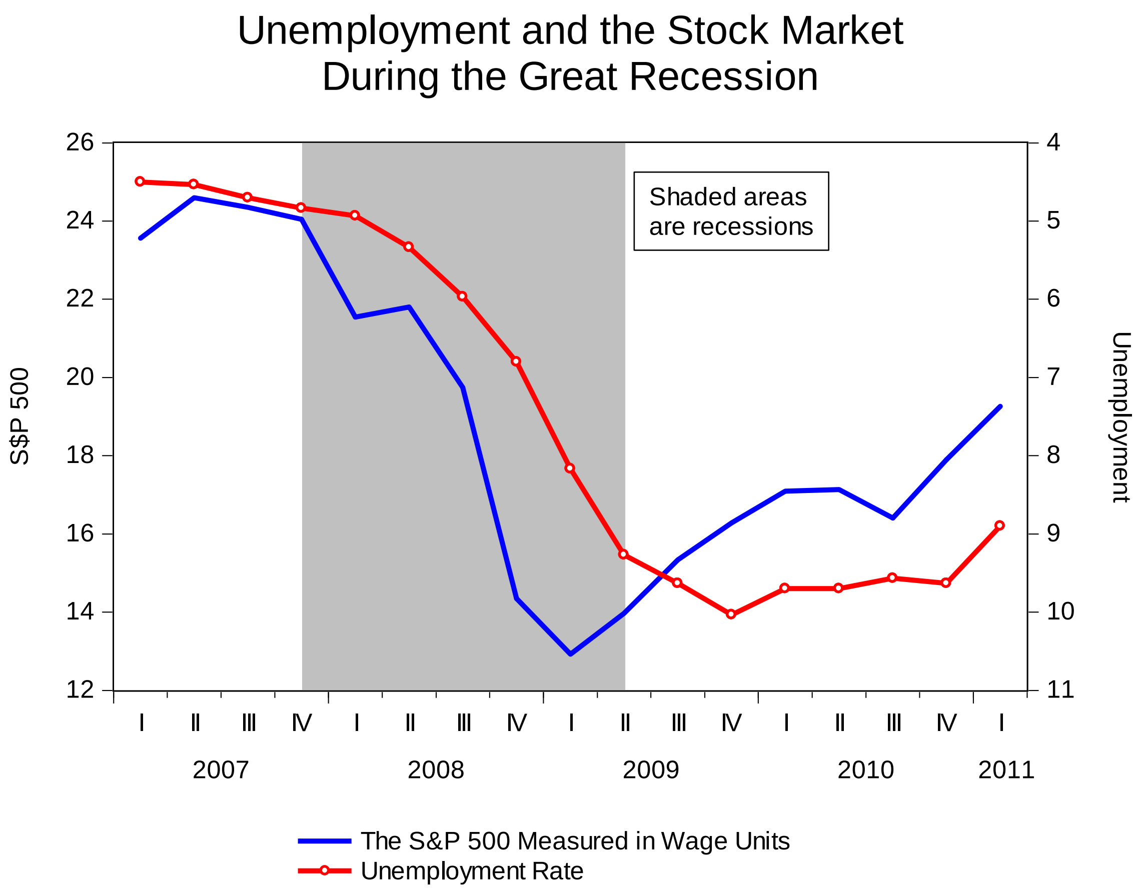
was due to Quantitative Easing

What are the Facts?



House prices crashed

What are the Facts?



The stock market crashed

What are the Facts?

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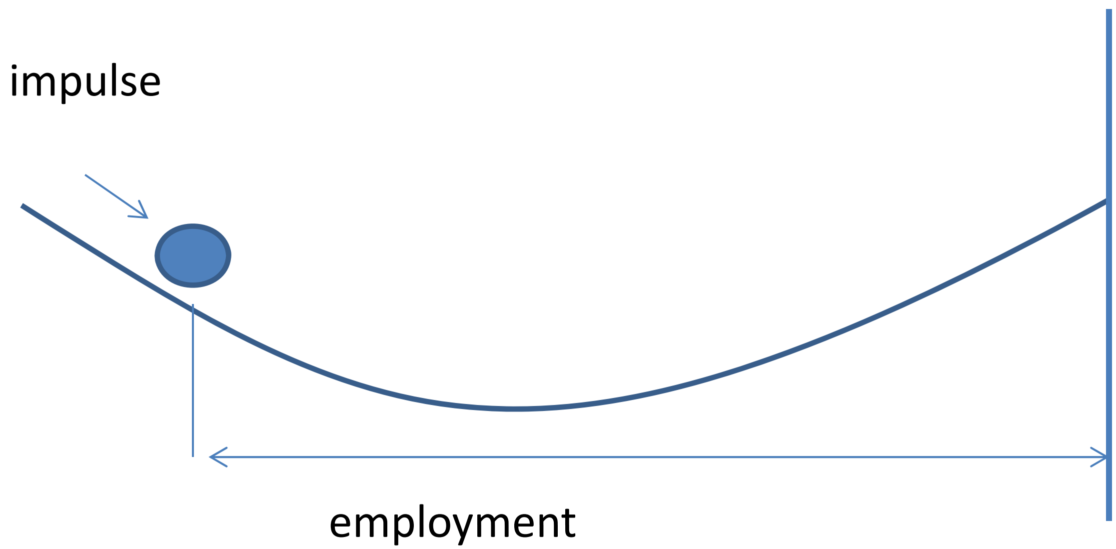
What are the Facts?

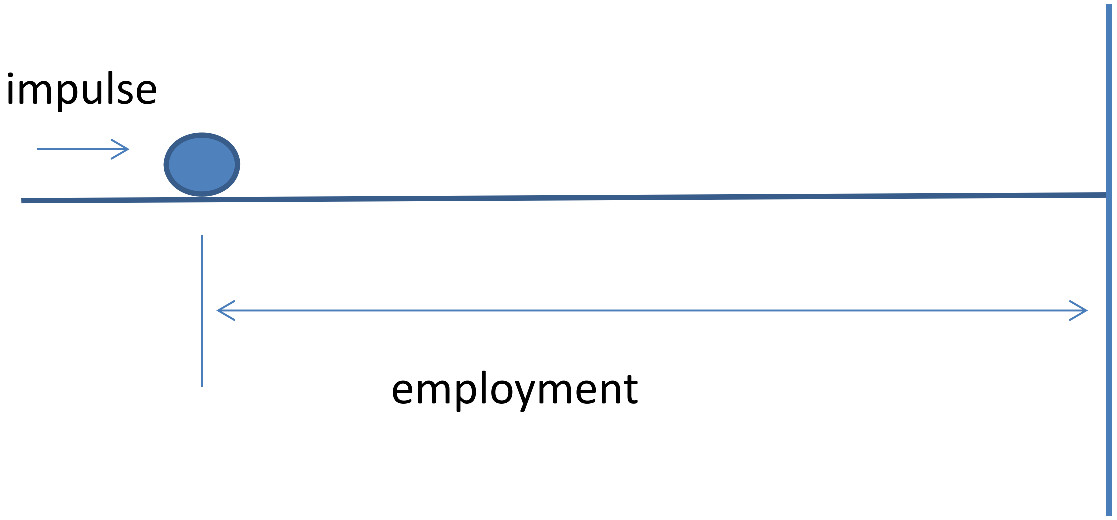
- Inflation fell
- Unemployment increased
- Asset prices crashed

Alternative Visions: A



- Market systems are self-stabilizing
  - Classical economics
  - Neoclassical synthesis

Alternative Visions: B



- Market systems are inherently unstable
  - Keynes
  - Minsky

Two Visions: Model A

- What is the impulse?

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- What is the impulse?
  - Increase in a financial friction

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Models where there is a unique steady state equilibrium with frictions

Two Visions: Model B

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- What is the impulse?
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- What is the impulse?
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Two Visions: Model B

- What is the impulse?
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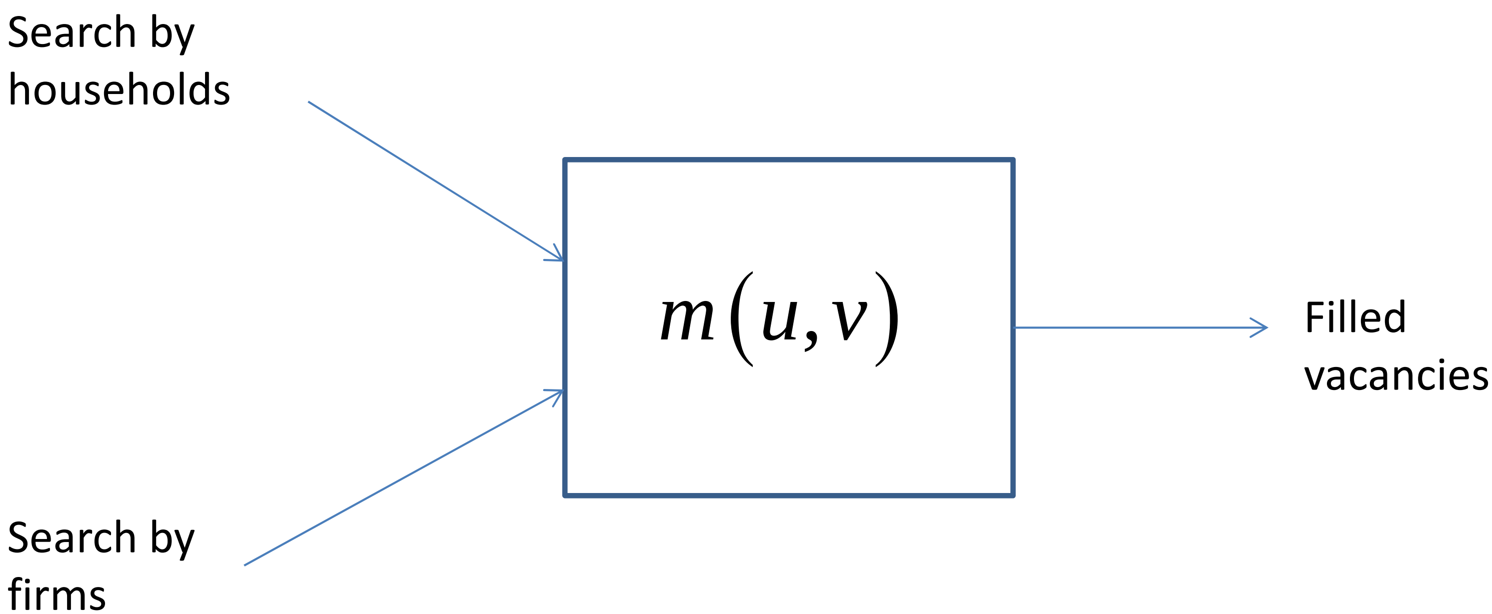
- Why is economic terrain flat?
  - Missing markets

Model B

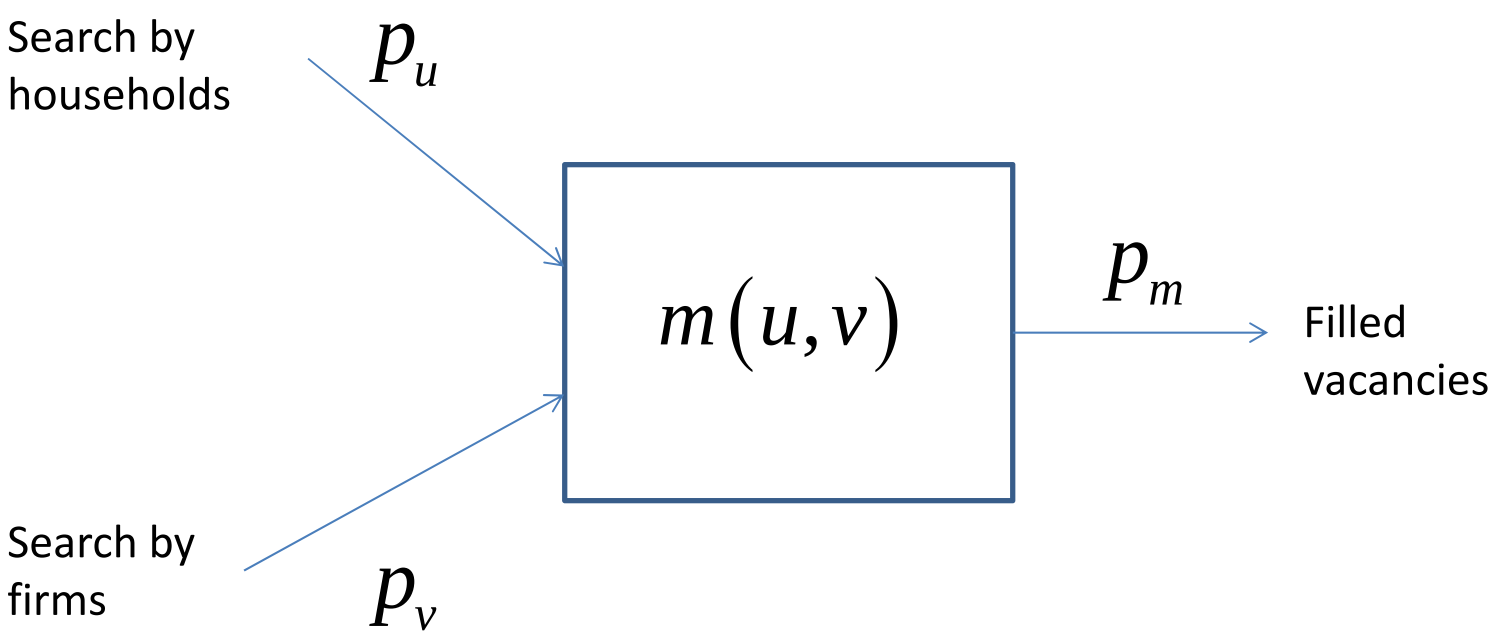
- What is the impulse?
  - Confidence shock
- Why is economic terrain flat?
  - Missing markets

Models where there are multiple steady state equilibria driven by beliefs

Search

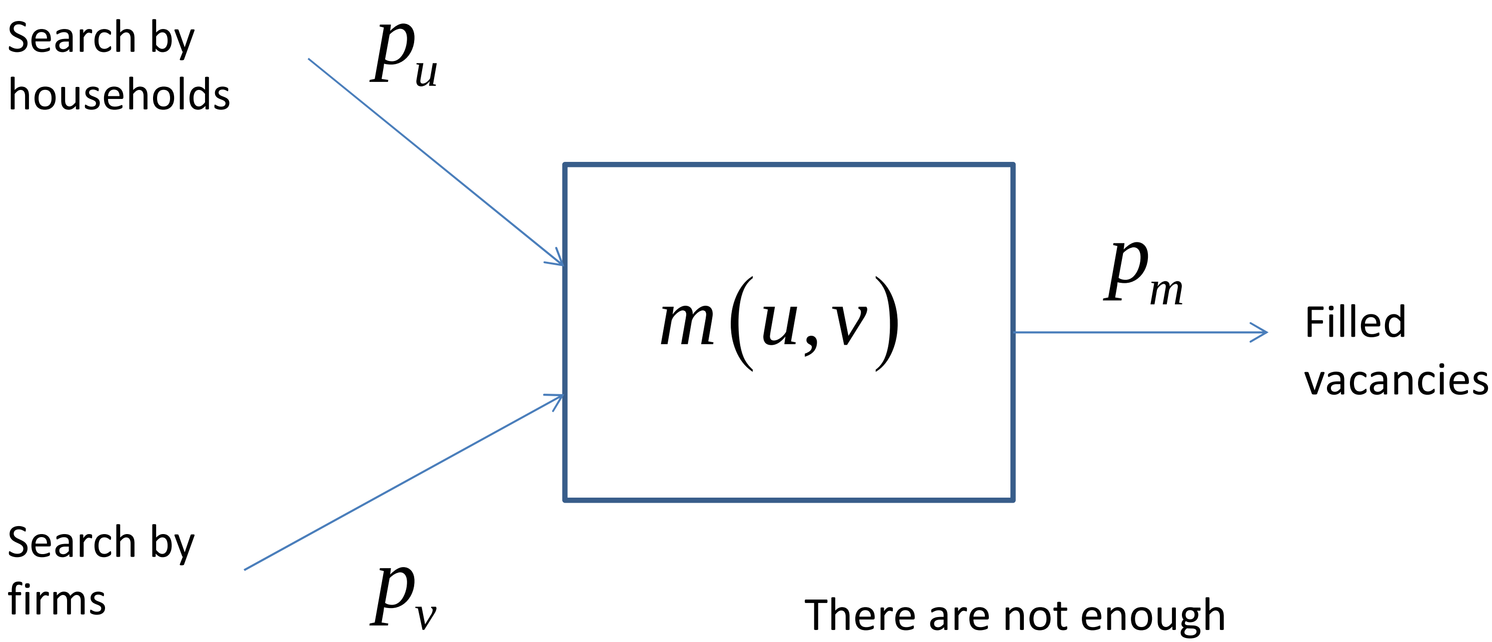


Search



Search by households
p_u
$m(u,v)$
p_m
Filled vacancies
Search by firms
p_v

Search



There are not enough prices in a search market to determine *u* and *v*

Closing a search model

- Nash bargaining

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  - Add a new parameter

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Vision B

Multiple Equilibrium and Search

- Finite multiplicities
  - Diamond RE Studs (1982),
  - Diamond *JPE* (1982)

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- Finite multiplicities
  - Diamond RE Studs (1982),
  - Diamond *JPE* (1982)
- Continuum of equilibria
  - Howitt and McAfee *IER* (1987)
  - Hall *AER* (2005)

Search and Asset Markets: Model A

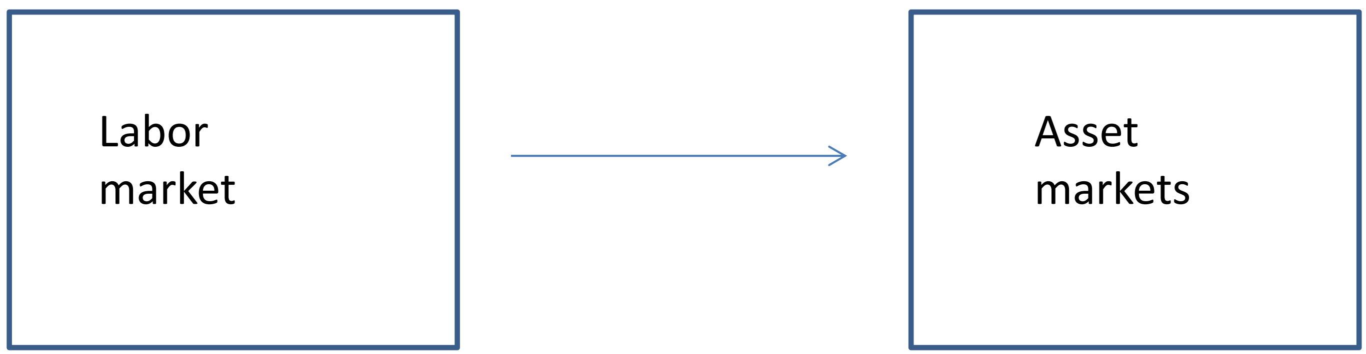
Unique steady
state equilibrium

Labor
market

Search and Asset Markets: Model A

Unique steady
state equilibrium

Fundamentals pin
down asset prices



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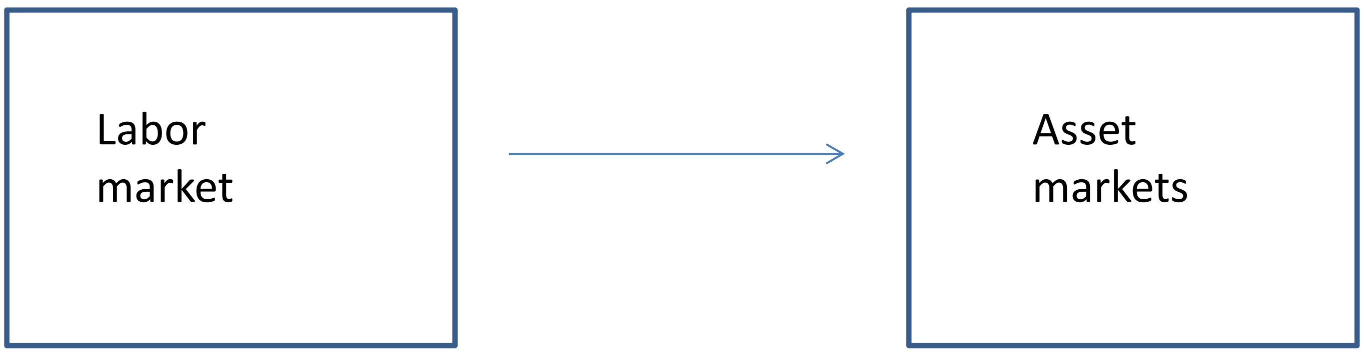


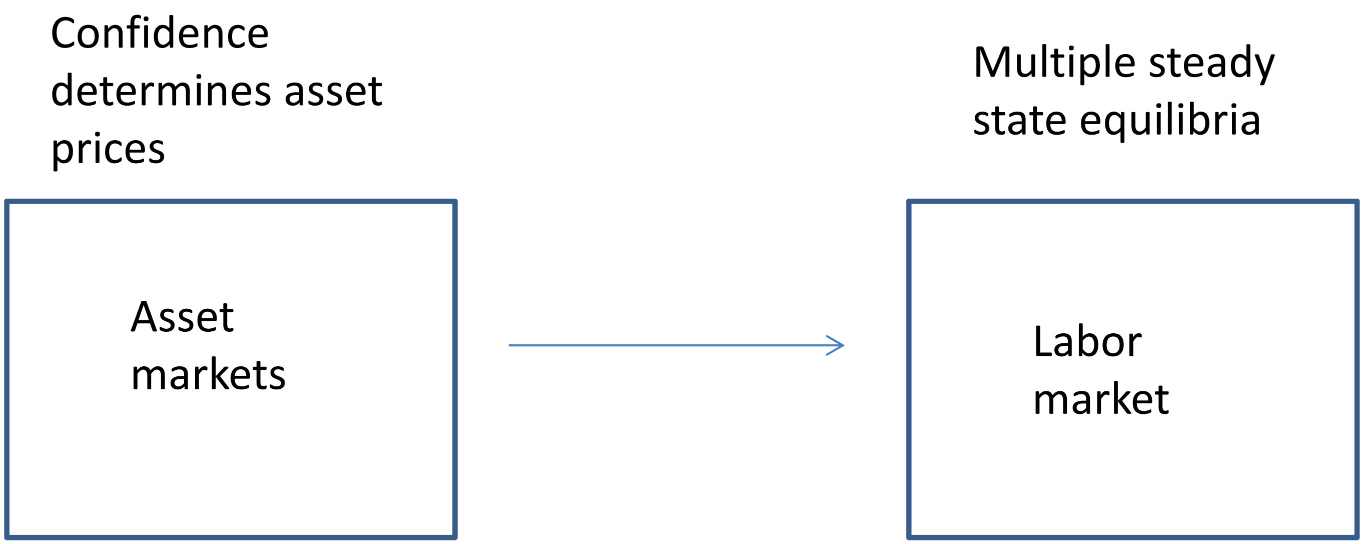
What's happening in the
labor market is reflected in
asset prices

Search and Asset Markets: Model B

Confidence determines asset prices

Asset markets

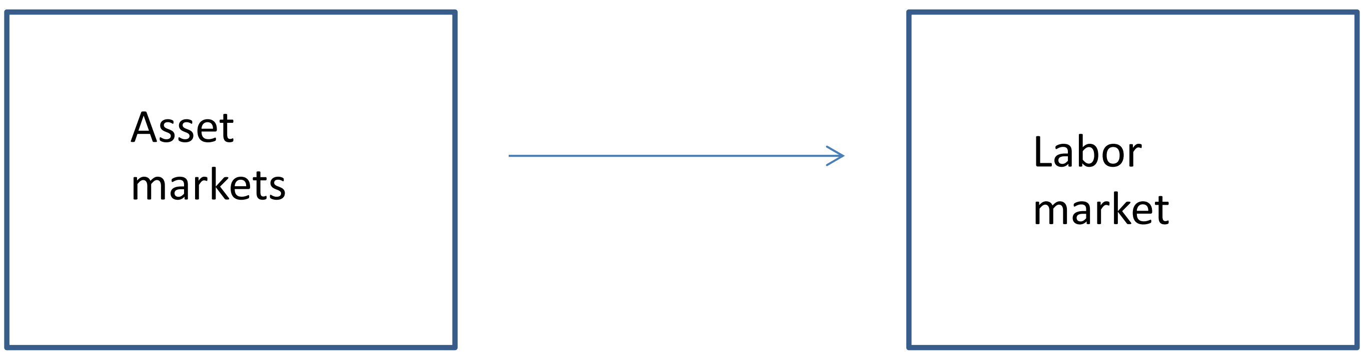
Search and Asset Markets: Model B



Search and Asset Markets: Model B

Confidence determines asset prices

Multiple steady state equilibria



What's happening in the asset markets CAUSES permanent movements in unemployment

Can we Distinguish Models A and B?

- Suppose that we close a search model with Nash bargaining: call this model A

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Proposition

- Suppose that we close a search model with Nash bargaining: call this model A
- Suppose that we close a search model with self-fulfilling beliefs in the asset markets: call this model B
- For every equilibrium generated by Model A there will be a process driving beliefs in Model B that makes the models observationally equivalent

Can we Distinguish Models A and B?

- Suppose that we allow bargaining weights to be time dependent in model A

Proposition

- Suppose that we allow bargaining weights to be time dependent in model A
- For every equilibrium generated by Model B there will be a sequence of bargaining weights such that the models are observationally equivalent

Questions Raised by Model A

- What was the trigger?

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Questions Raised by Model A

- What was the trigger?
  - The increased financial friction is not explained.
  - There was no big change in fundamentals so why did the market crash
- Why are asset prices so volatile
  - If there is a unique asset market equilibrium: why don’t asset market participants buy when prices are low and sell when they are high?

Explanations Given By Model B

- What was the trigger?

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Explanations Given By Model B

- What was the trigger?
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- Why are asset prices so volatile
  - Any asset price is an equilibrium

Implications of Accepting Vision B

- The stock market crash *caused* the Great Recession

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Implications of Accepting Vision B

- The stock market crash *caused* the Great Recession
- There is no "natural rate of unemployment"
- The economy was more stable in the post-war period because of successful monetary policies and fiscal stabilizers

Summary

- The paper uses the nominal wage bargaining model of Gertler-Trigari to understand the Great Recession

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- The paper uses the nominal wage bargaining model of Gertler-Trigari to understand the Great Recession
- As with all of Bob’s papers: this one is elegant, simple and attacks an important issue
- Search theory is the right way to address the unemployment issue
- But there is a better way to close the model than with the sticky money wage assumption