

Discussion on: “Unemployment Crises,” by Nicolas Petrosky-Nadeau and Lu Zhang

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New Developments in Business Cycle Analysis: The Role of Labor Markets and International Linkages, 20 June, 2014

Outline of the discussion

- Aim and findings of the paper
- Overall evaluation
- Comments and suggestions
- Conclusions and possible extensions

- It investigates whether the Diamond-Mortensen-Pissarides model of equilibrium unemployment, when calibrated to the mean and volatility of unemployment in the postwar sample, can explain the large unemployment dynamics in the Great Depression

- Yes, Diamond-Mortensen-Pissarides (DMP) model is able to explain unemployment dynamics in the Great Depression
- Mechanism that generates results hinges on:
 - Wage bargaining game as in Hall and Milgrom (2008)
 - Congestion effect: vacancy filling rate decreases with the tightness of the labor market
- Welfare cost of business cycle is large

Overall evaluation

- Innovative research, takes the DMP model seriously and does not rely on approximation methods
- To my knowledge, this is one of the first studies that shows asymmetries in a search and matching model applied to the Great Depression
- The application can be extended to investigate an array of questions related with labor market dynamics

Comment 1

Empirical evidence and the theoretical model

- The paper assembles new statistics for unemployment and vacancies from 1929 to 2012
- It looks at labor market tightness and the Beveridge curve. It derives transition matrix and second moments
- This analysis could further exploit the information in the data and use it to test the model
 - The main mechanism is about asymmetric response of unemployment during downturns. Key question: is such an asymmetry present in the data in general, or it is a distinguishing feature of the Great Depression?
 - Show how the series co-move with output

Comment 1 (cont.)

Empirical evidence and the theoretical model

- Test the *higher order moments* more seriously, deriving distributions for unemployment and vacancies and investigating to what extent the model is able to replicate them
- The key mechanism in the paper is related with wage dynamics. Extend the analysis to include wage dynamics?

Comment 2

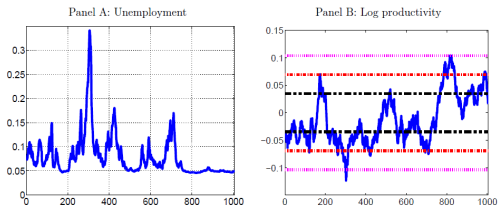
Relevance of the dynamic wage bargaining (DWB)

- One mechanism that generates results is the dynamic wage bargaining, which practically introduces wage rigidities
- Two questions needs an answer to strengthen the message of the paper:
 - ① Show how results relate to the standard Nash wage bargaining ($\delta = 1$)?—I suppose substantial difference
 - ② Why DWB superior to nominal wage rigidities?—I suppose they are both immune to the Barro's critique

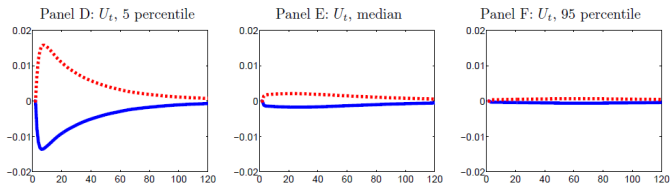
Comment 3

Clarification: the role of asymmetries in the model

- The analysis shows that DMP model delivers important asymmetries in response to shocks, see illustrative crisis example



- The impulse responses are symmetric across periods, why?
Congestion effect might differ across positive and negative shocks



Comment 3 (cont.)

Clarification: analysis on labor market volatilities

- The motivation of the paper based on three states
- The business cycle analysis based on two states: “crisis” vs. “non-crisis.” Two possible issues:
 - ① Effect of the crisis overstated
 - ② If “good” and “bad” times fairly similar, and the focus of the paper is on “crisis,” why not use two states only?

- Model is calibrated on post-war data, then applied to the Great Depression
 - Systematic changes in the labour market and the economy have occurred throughout the sample
 - No reason to expect that the economy is dictated by the same structural parameters throughout this whole period
 - Long-run equilibrium similar across states
 - No role for policy (either monetary or fiscal policies)

Comment 5

Welfare cost of business cycles

- The welfare cost of the business cycles is 150 times larger than in Lucas's estimate
- Why such a substantial difference? Do the welfare costs refer to the crisis period only?
- Crisis shocks are rare and in normal times the asymmetric response of unemployment to negative shocks should be limited

- Innovative analysis performed with state-of-the-art methods
- Very appealing finding on the asymmetry of unemployment, great for the DMP model
- The analysis should exploit the info in the data and test the model on higher order moments
- Possible extensions:
 - 1 Look at how labor market institutions attenuates the asymmetry in the unemployment response in downturns
 - 2 Include stock market dynamics to unveil the effect of the financial disruption during the Great Depression