

# JIE LI

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## Research Fields

Macroeconomics, Monetary Economics, Bayesian Econometrics, Time Series Analysis, Markov Switching, Dynamic Factor Model, Financial Econometrics, Forecasting

## Education

2010 Ph.D. Economics, University of California, Riverside (expected)  
2005 M.A. Finance, University of International Business and Economics, Beijing  
2001 B.A. Economics, University of International Business and Economics, Beijing

## Dissertation

Title: "Markov Switching and Bayesian Methods for the Analysis of US Postwar Business Cycle Fluctuations"

Committee Members: Professor Marcelle Chauvet (Chair), Professor Gloria Gonzalez-Rivera, Professor Aman Ullah

Expected date of completion: June 2010

**Job Market Paper:** "Regime Switching, Monetary Policy and Agents' Beliefs in US Business Cycles", 2009

## Research Papers

"Adaptive Expectations and Inflation Persistence," with Marcelle Chauvet and Insu Kim, 2009, (Submitted)

"How largely can Commitment Beat Policymakers' Misperception?" with Marcelle Chauvet, 2008

## Work in Progress

"Forecasting Horizons and Monetary Policy," with Marcelle Chauvet and Insu Kim, 2009

"Common Shocks in the New Keynesian Model," 2008

## Conference Presentations

Nov 2009 UC Riverside, Department of Economics: Seminar Presentation  
Oct 2009 Missouri Valley Economics Association, Kansas City: Presenter  
Apr 2009 Federal Reserve Bank of Atlanta  
Society for Nonlinear Dynamic and Econometric Conference  
Session Chair and Presenter  
Apr 2009 Business Cycles: Theoretical and Empirical Advanced  
UC Riverside Conference: Session Chair and Presenter

## Awards

2009	Graduate Student Association Conference Travel Grant, UC Riverside
2005-2010	Distinguished Fellowship Award, University of California, Riverside
2002-2005	Government Sponsorship Scholarship, UIBE, Beijing
2000-2001	First-class Scholarship, UIBE, Beijing

## Teaching Experience

2007-2009	Lecturer of Economics, University of California, Riverside Introduction to Macroeconomics Stock Market
2005-2010	Teaching Assistant in Economics, University of California, Riverside Introduction to Microeconomics, Introduction to Macroeconomics Introduction to Environmental Economics, Introductory Econometrics I, Research Methods in Business and Economics, Statistics for Economics, Macroeconomics Theory Introductory to Money, Banking and Credit Macroeconomic Theory II (Graduate level) Econometric Methods III (Graduate level)

## Referee for

Macroeconomic Dynamics  
Pakistan Journal of Applied Economics (2)

## Other Skills

Software	Matlab, Gauss, R, C, Perl, Eviews, Stata, LaTeX, Asymptote
System	Linux, Windows
Language	Mandarin (Native), English (Fluent), French (Beginner)

## References

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# **Markov Switching and Bayesian Methods for the Analysis of US Postwar Business Cycle Fluctuations**

## **Dissertation Summary**

### **Chapter 1: Regime Switching, Monetary Policy and Agents' Beliefs in US Business Cycles**

This paper investigates the evolution of inflation and output dynamics in the United States over the last 60 years. In particular, it proposes a dynamic stochastic general equilibrium (DSGE) with Markov switching and heteroskedastic shocks to investigate the role of agents separately from changes in monetary policy in explaining inflation fluctuations. The results support regime switches in the private sector, in the conduct of monetary policy and in the volatility of shocks in the US postwar business cycle fluctuations, which are related to the “Great Inflation”, “Great Moderation” and 2008 financial crisis. A counterfactual analysis found that if agents maintained a weak response to macroeconomic dynamics over time, there would be lower inflation during the “Great Inflation”. The paper also finds that irrespective to monetary policy regimes, supply shocks are the main drivers of inflation fluctuations, while demand shocks are the main source of changes in the output gap. However, when agents maintain a higher risk aversion with a higher slope in the Phillips curve, demand shocks also play a role in driving inflation, even though supply shocks are still the main driver of inflation.

### **Chapter 2: How largely can Commitment Beat Policymakers' Misperception?**

This paper investigates the assumption that policy-makers commit to a Taylor rule, using a time-varying inflation-unemployment dynamic model for the US economy. Our paper is based on the conjecture that potential policymaker's misperception may be originated from unobserved deviations of unemployment from its natural rate. We propose five processes for policymakers' belief under commitment to inflation and unemployment and compare them with a baseline autoregressive process without commitment. The models are estimated using Bayesian techniques. Our empirical results are as follows. First, policy-makers' belief is very persistent even when it commits to a Taylor-type policy rule. Second, the run-up of U.S. inflation around 1980 can be mostly attributed to policymakers' misperception while the peak surge of inflation in 1974 is possibly a result of non-policy shocks. Third, we find that models with commitment dominate models without commitment, especially in periods of large oscillations in inflation. In particular, when policymakers are committed to respond to a Taylor-type policy rule, the average loss function is considerably reduced over time, thus effectively lessening potential misperceptions.

### **Chapter 3: Common Shocks in the New Keynesian Model**

This paper investigates the possibility that U.S. business cycles are driven by a common shock in a New Keynesian Dynamic Stochastic General Equilibrium model. The common shock is assumed to follow a regime-switching process in order to investigate potential asymmetries across the phases of the business cycle. First, the results indicate that the common shock has similar dynamics to a cost-push shock. Second, there is evidence of asymmetries in the impulse response function of the common shocks. Third, common shocks are a more important driving source during expansions than during recessions.

## **Other Research**

### **Adaptive Expectations and Inflation Persistence, with Marcelle Chauvet and Insu Kim**

This paper proposes a dynamic stochastic general equilibrium (DSGE) model with a simple version of adaptive expectations (e.g., Cagan 1956) to evaluate goodness of fitness and forecasting performance. Although both models generate plausible responses to economic shocks, we find that a DSGE model with adaptive expectation outperforms a rational expectations DSGE model in several dimensions. First, adaptive expectations yield a better performance in tracking the U.S. data. Second, the estimated people's beliefs about future variables outperform forecasts obtained from vector autoregression systems. We also find that that under adaptive expectations the role of lagged inflation becomes redundant in fitting inflation dynamics.