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# Lecture 4: Rational Expectations: Implications for Policy

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# Econometric Policy Critique

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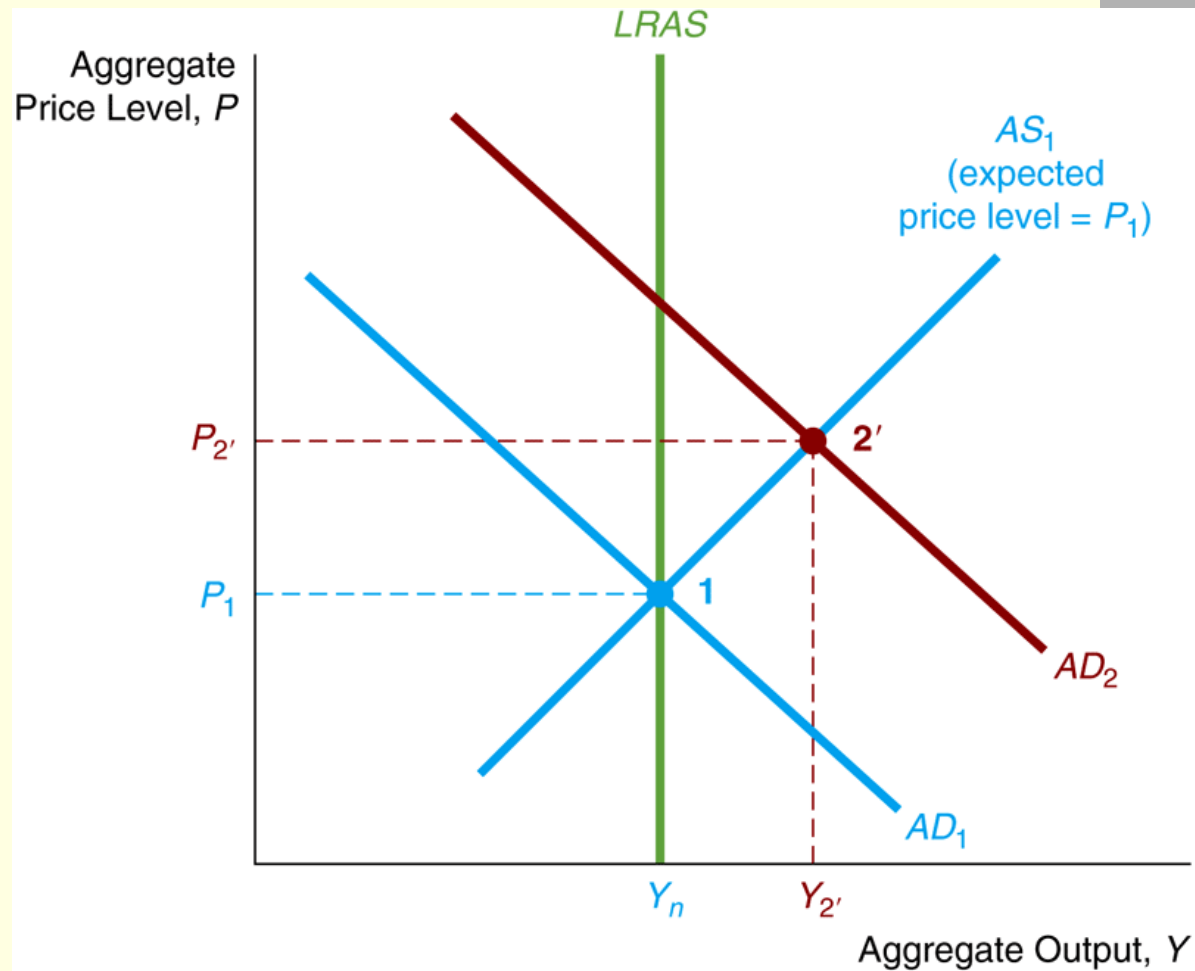
- Econometric models are used to forecast and to evaluate policy
- Lucas critique, based on rational expectations, argues that policy evaluation should not be made with these models
  - The way in which expectations are formed (the relationship of expectations to past information) changes when the behavior of forecasted variables changes
  - The public's expectations about a policy will influence the response to that policy

# New Classical Macroeconomic Model

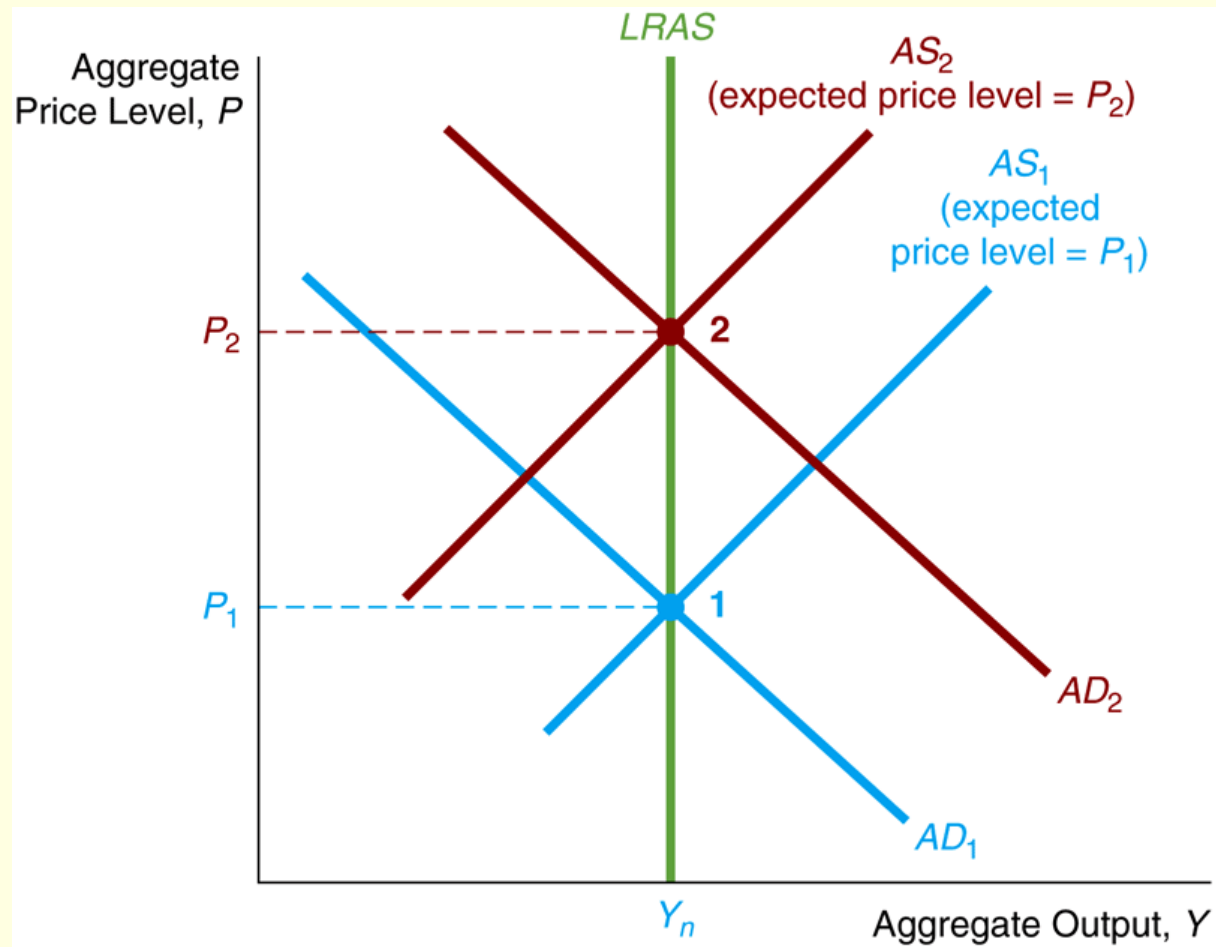
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- All wages and prices are completely flexible with respect to expected change in the price level
- Workers try to keep their real wages from falling when they expect the price level to rise
- Anticipated policy has no effect on aggregate output and unemployment
- Unanticipated policy does have an effect
- Policy ineffectiveness proposition

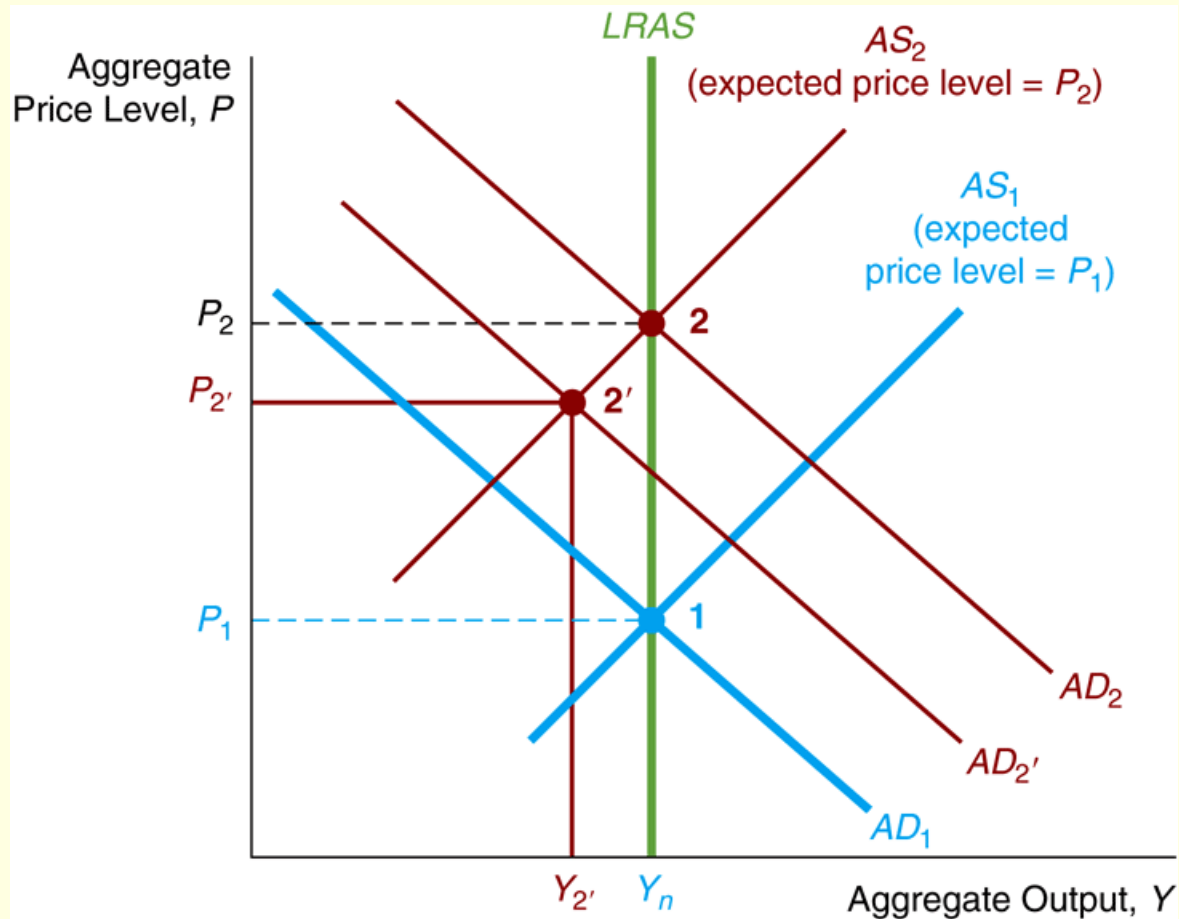
# FIGURE 1 Short-Run Response to Unanticipated Expansionary Policy in the New Classical Model



## FIGURE 2 Short-Run Response to Anticipated Expansionary Policy in the New Classical Model



# FIGURE 3 Short-Run Response to an Expansionary Policy That Is Less Expansionary Than Expected in the New Classical Model



# Implications for Policymakers

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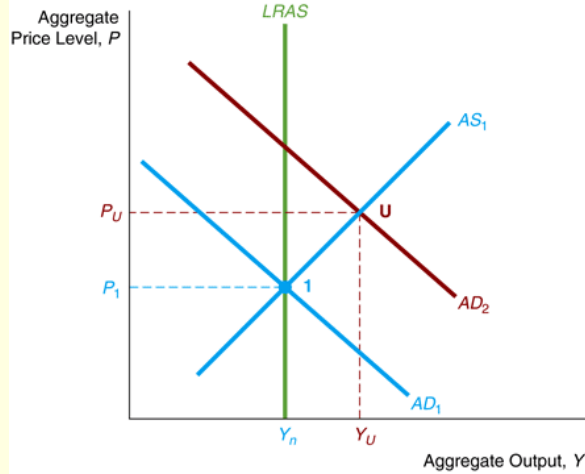
- Distinction between effects of anticipated and unanticipated policy actions
- Policymakers must know expectations to know outcome of the policy
  - Nearly impossible to find out expectations
  - People will adjust expectations guessing what the policymaker will do
- Design policy rules so prices will remain stable

# New Keynesian Model

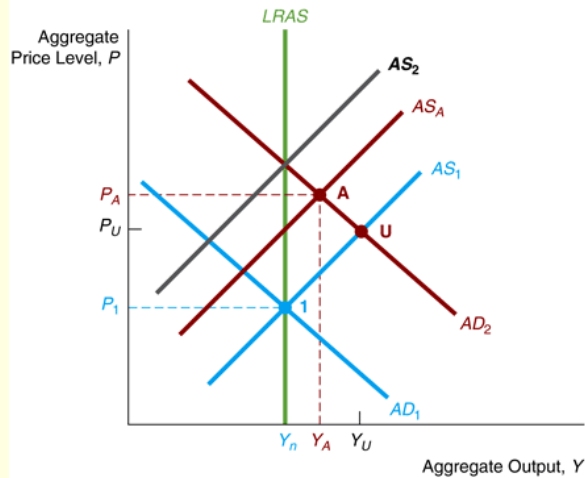
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- Objection to complete wage and price flexibility
  - Labor contracts
  - Reluctance by firms to lower wages
  - Fixed-price contracts
  - Menu costs
- Model assumes rational expectations but wages and prices are sticky

# FIGURE 4 Short-Run Response to Expansionary Policy in the New Keynesian Model



(a) Response to an unanticipated expansionary policy



(b) Response to an anticipated expansionary policy

# Implications for Policymakers

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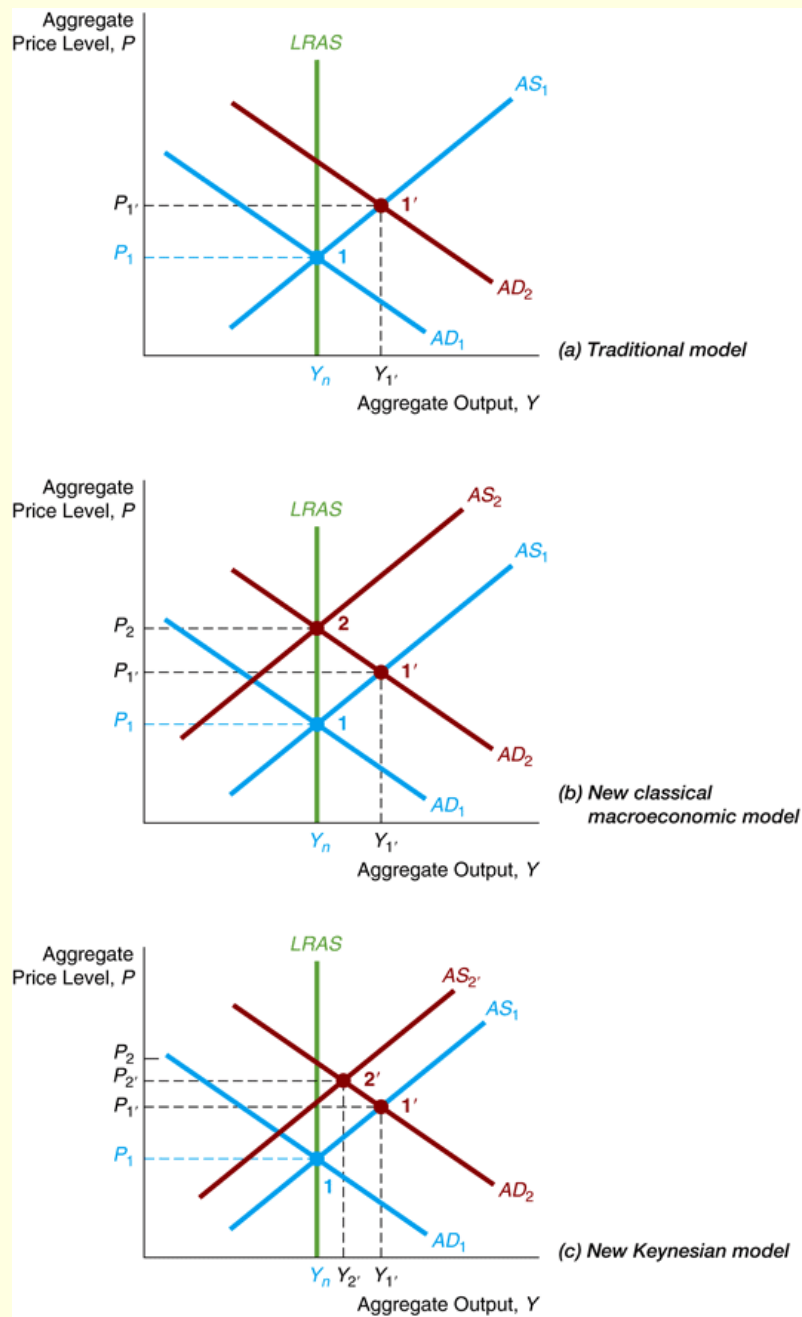
- There may be beneficial effects from discretionary stabilization policy
- Designing the policy is not easy because the effect of anticipated and unanticipated policy is very different
- Must understand public's expectations

# Summary Table 1 The Three Models

Model	Response to Unanticipated Expansionary Policy	Response to Anticipated Expansionary Policy	Can Discretionary Policy Be Beneficial?	Response to Unanticipated Anti-inflation Policy	Response to Anticipated Anti-inflation Policy	Is Credibility Important to Successful Anti-inflation Policy?
Traditional model	$Y \uparrow, P \uparrow$	$Y \uparrow, P \uparrow$ by same amount as when policy is unanticipated	Yes	$Y \downarrow, \pi \downarrow$	$Y \downarrow, \pi \downarrow$ by same amount as when policy is unanticipated	No
New classical macro-economic model	$Y \uparrow, P \uparrow$	$Y$ unchanged, $P \uparrow$ by more than when policy is unanticipated	No	$Y \downarrow, \pi \downarrow$	$Y$ unchanged, $\pi \downarrow$ by more than when policy is unanticipated	Yes
New Keynesian model	$Y \uparrow, P \uparrow$	$Y \uparrow$ by less than when policy is unanticipated, $P \uparrow$ by more than when policy is unanticipated	Yes, but designing a beneficial policy is difficult	$Y \downarrow, \pi \downarrow$	$Y \downarrow$ by less than when policy is unanticipated, $\pi \downarrow$ by more than when policy is unanticipated	Yes

*Note:  $\pi$  represents the inflation rate.*

# FIGURE 5 Comparison of the Short-Run Response to Expansionary Policy in the Three Models



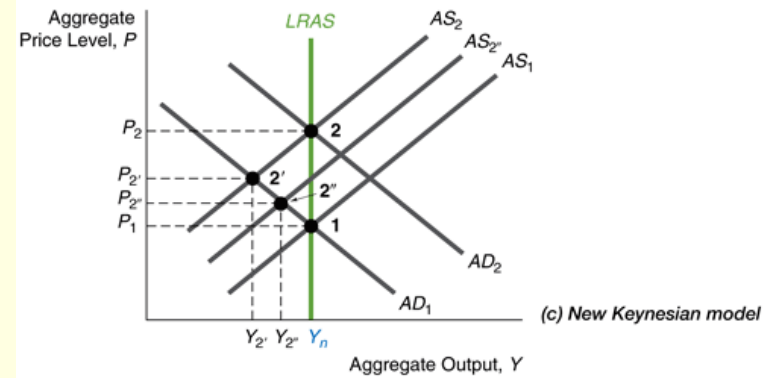
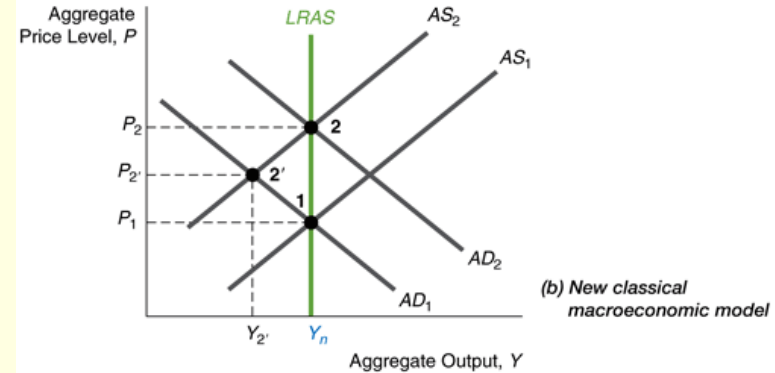
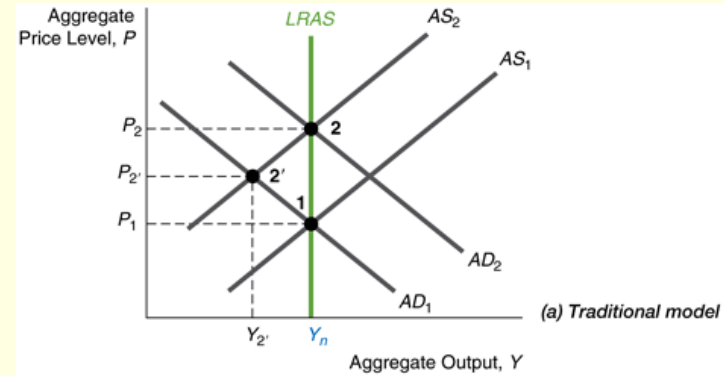
# Stabilization Policy

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- Traditional
  - It is possible for an discretionary policy to stabilize output fluctuations
- New Classical
  - Discretionary stabilization policy aggravates output fluctuations
- New Keynesian
  - Anticipated policy does matter to output fluctuations
  - More uncertainty about the outcome than the traditional model

# FIGURE 6

## Anti-inflation Policy in the Three Models



# Credibility in Fighting Inflation

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- Public must believe (expect) that the policy will be implemented
- New Classical
  - Cold turkey approach
- New Keynesian
  - More gradual approach
- When considering credibility, actions speak louder than words

# Impact of the Rational Expectations Revolution

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- Expectations formation will change when the behavior of forecasted variables changes
- Effect of a policy depends critically on the public's expectations about that policy
- Empirical evidence on policy ineffectiveness proposition is mixed
- Credibility is essential to the success of anti-inflation policies
- Less fine-tuning and more stability