Student ID.....

EE312 (1/2020 Section 046401): Quiz 3. The Core IS-LM AD-AS [100 marks 10 Min.]

Part 1. (10 marks) Short answer.

1. Please write down SRAS function applied for both sticky wage model and sticky price model.

$Y = \bar{Y} + \alpha(P - P^e)$ or $P = sP^e + (1-s)[\bar{P} + a(Y - \bar{Y})]$ or $Y = \bar{Y} + \frac{s}{(1-s)a}[P - P^e]$ or $P = P^e + \frac{(1-s)a(Y-\bar{Y})}{s}$

or $P = P^e + \frac{1}{2}(Y - \bar{Y})$

Part 2. (90 marks) Multiple choices. 3 marks each. *Use the sticky wage model.* Suppose initially the economy starts at full-employment level of output. Please choose the correct answer by **circling** the choice.

Let the economy starts at initial equilibrium $(r^*, Y^*, P^*, W^*, w^*, N^*, C^*, I^*)$. Suppose government expenditure increases.

1. (18 marks) In the Short Run, what will happen to the following curve? Compare the **initial equilibrium** with the e**quilibrium after the shocks.**

Production function	(a) rotates upward	(b) rotates downward	(c) remains the same
Labor Supply	(a) shifts to the right	(b) shifts to the left	(c) remains the same
Labor Demand	(a) shifts to the right	(b) shifts to the left	(c) remains the same
SRAS	(a) shifts to the right	(b) shifts to the left	(c) remains the same
AD	(a) shifts to the right	(b) shifts to the left	(c) remains the same
IS Curve	(a) shifts to the right	(b) shifts to the left	(c) remains the same

2. (30 marks) In the short run, how do these following variables change? Compare the **initial equilibrium** with the **equilibrium after the shocks**.

Output	(a) increases	(b) decreases	(c) remains the same
Employment	(a) increases	(b) decreases	(c) remains the same
Interest rate	(a) increases	(b) decreases	(c) remains the same
Real Wage	(a) increases	(b) decreases	(c) remains the same
Nominal Wage	(a) increases	(b) decreases	(c) remains the same
Price level	(a) increases	(b) decreases	(c) remains the same
Real Mondey Supply	(a) increases	(b) decreases	(c) remains the same
Investment	(a) increases	(b) decreases	(c) remains the same
Consumption	(a) increases	(b) decreases	(c) remains the same
Worker's expected price (P^e)	(a) increases	(b) decreases	(c) remains the same

3. (12 marks) In the medium run, how does the economy adjust to long run equilibrium? Compare the **equilibrium after the shocks** with the **long-run equilibrium.**

Worker's expected price (P^e)	(a) increases	(b) decreases	(c) remains the same
Labor Supply	(a) shifts to the right	(b) shifts to the left	(c) remains the same
SRAS	(a) shifts to the right	(b) shifts to the left	(c) remains the same
AD	(a) shifts to the right	(b) shifts to the left	(c) remains the same

4. (15 marks) In the medium-run, how following variables change? Compare the **equilibrium after the shocks** with the **long-run equilibrium.**

Output	(a) increases	(b) decreases	(c) remains the same
Employment	(a) increases	(b) decreases	(c) remains the same
Real Wage	(a) increases	(b) decreases	(c) remains the same
Nominal Wage	(a) increases	(b) decreases	(c) remains the same
Price level	(a) increases	(b) decreases	(c) remains the same

5. (15 marks) After the adjustment in the medium-run, in the long-run equilibrium, how do the following variables change? Compare the **long run equilibrium** with **the initial equilibrium.**

Output	(a) increases	(b) decreases	(c) remains the same
Employment	(a) increases	(b) decreases	(c) remains the same
Real Wage	(a) increases	(b) decreases	(c) remains the same
Nominal Wage	(a) increases	(b) decreases	(c) remains the same
Price level	(a) increases	(b) decreases	(c) remains the same

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Part 2. (90 marks) Multiple choices. 3 marks each. *Use the sticky wage model.* Suppose initially the economy starts at full-employment level of output. Please choose the correct answer by **circling** the choice.

Let the economy starts at initial equilibrium $(r^*, Y^*, P^*, W^*, w^*, N^*, C^*, I^*)$. Suppose government expenditure increases.

1. (18 marks) In the Short Run, what will happen to the following curve? Compare the **initial equilibrium** with the e**quilibrium after the shocks.**

Production function	(a) rotates upward	(b) remains the same	(c) rotates downward
Labor Supply	(a) shifts to the right	(b) remains the same	(c) shifts to the left
Labor Demand	(a) shifts to the right	(b) remains the same	(c) shifts to the left
SRAS	(a) shifts to the right	(b) remains the same	(c) shifts to the left
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Part 2. (90 marks) Multiple choices. 3 marks each. *Use the sticky wage model.* Suppose initially the economy starts at full-employment level of output. Please choose the correct answer by **circling** the choice.

Let the economy starts at initial equilibrium $(r^*, Y^*, P^*, W^*, w^*, N^*, C^*, I^*)$. Suppose government expenditure increases.

1. (18 marks) In the Short Run, what will happen to the following curve? Compare the **initial equilibrium** with the **equilibrium after the shocks.**

Production function	(a) remains the same	(b) rotates downward	(c) rotates upward
Labor Supply	(a) remains the same	(b) shifts to the left	(c) shifts to the right
Labor Demand	(a) remains the same	(b) shifts to the left	(c) shifts to the right
SRAS	(a) remains the same	(b) shifts to the left	(c) shifts to the right
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3. (12 marks) In the medium run, how does the economy adjust to long run equilibrium? Compare the **equilibrium after the shocks** with the **long-run equilibrium.**

Worker's expected price (P^e)	(a) remains the same	(b) decreases	(c) increases
Labor Supply	(a) remains the same	(b) shifts to the left	(c) shifts to the right
SRAS	(a) remains the same	(b) shifts to the left	(c) shifts to the right
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Output	(a) remains the same	(b) decreases	(c) increases
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Real Wage	(a) remains the same	(b) decreases	(c) increases
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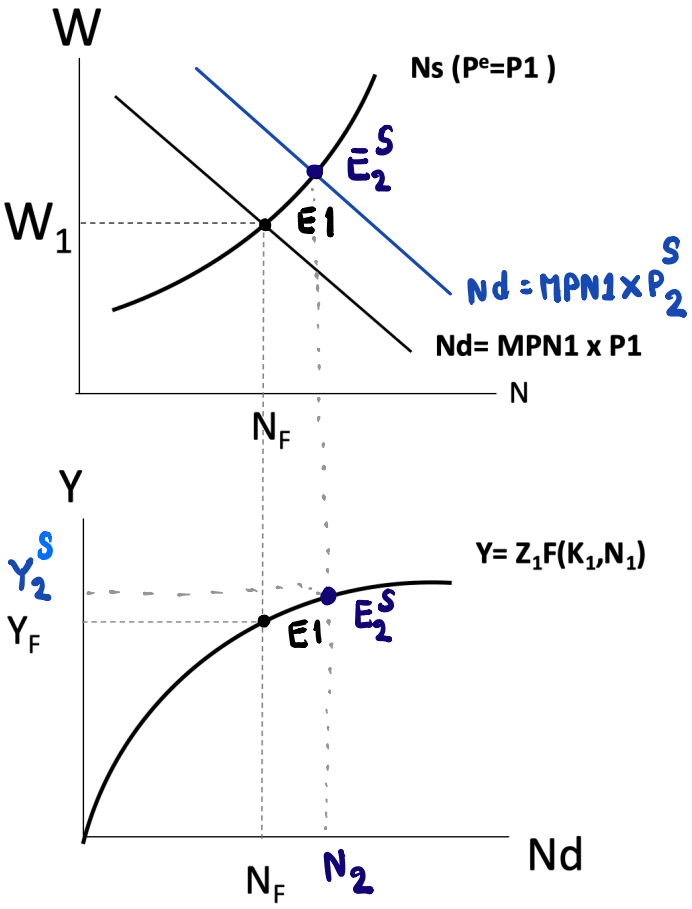
Price level	(a) remains the same	(b) decreases	(c) increases

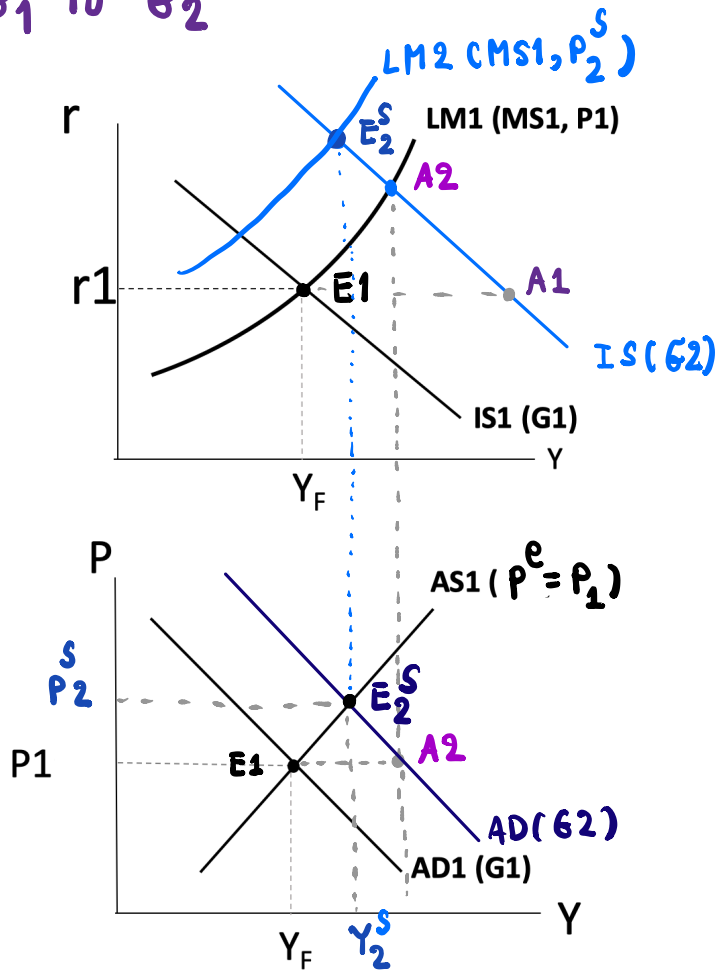
5. (15 marks) After the adjustment in the medium-run, in the long-run equilibrium, how do the following variables change? Compare the **long run equilibrium** with **the initial equilibrium.**

Output	(a) remains the same	(b) decreases	(c) increases
Employment	(a) remains the same	(b) decreases	(c) increases
Real Wage	(a) remains the same	(b) decreases	(c) increases
Nominal Wage	(a) remains the same	(b) decreases	(c) increases
Price level	(a) remains the same	(b) decreases	(c) increases

Short-run adjustment

G↑ from G_1 to G_2



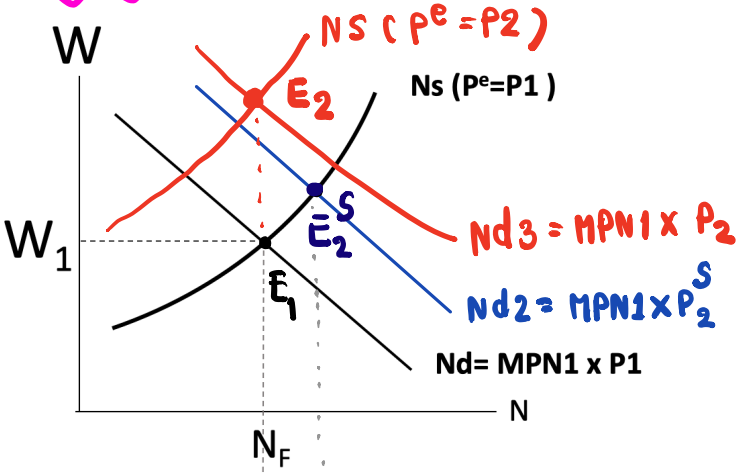


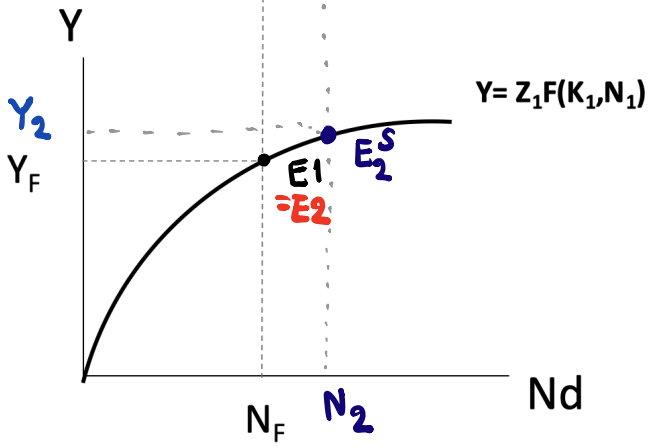
E1A1 = multiplier effect

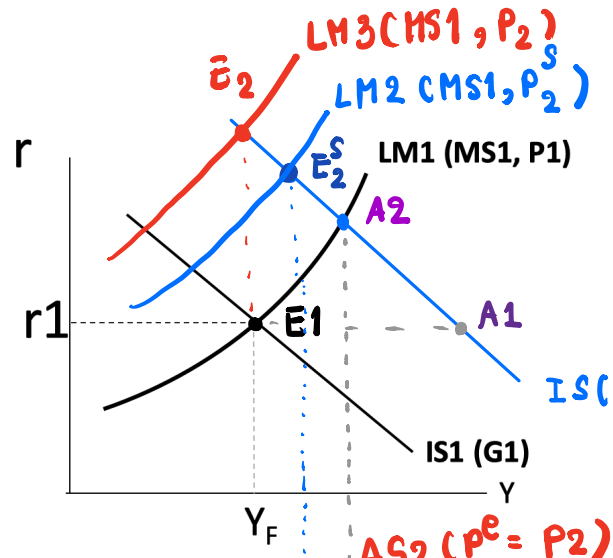
A1A2 = crowding-out effect

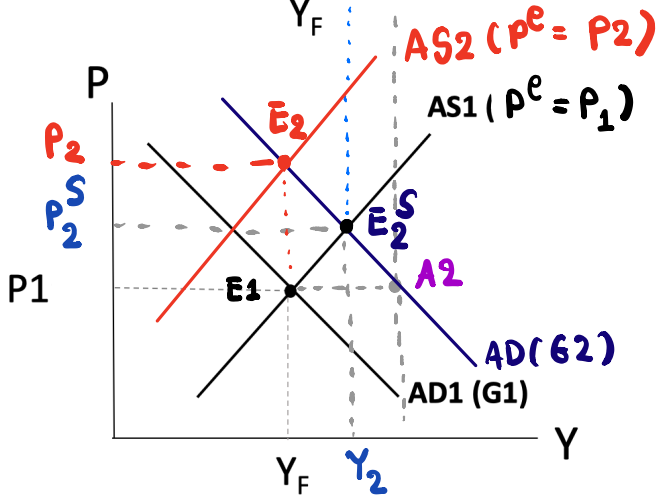
A2 E_2^S = price effect

medium-run & long-run ⇒ P^e ↑









E1A1 = multiplier effect

A1A2 = crowding-out effect

A2 E_2^S = price effect

medium-run : $E_2^S \rightarrow E_2$

long-run : $E_1 \rightarrow E_2$