



ECON 105 TUTORIAL

FINAL EXAM

Wednesday 21st
2- 3pm in F1

OVERVIEW + Mark Breakdown

- Economic History (5)
- National Accounts, BOP (5)
- Foreign Exchange (5)
- Labour Market (10)
- Money and Inflation (15)
- AD/AS Model (25)
- OCR news release and Economic Growth (30)
- Government and Taxes (5)

WAYS TO PRACTICE MULTI-CHOICE QUESTIONS

- Weekly quizzes - all quizzes have re-opened until the day before the exam, you cannot make your grade worse by attempting them
- Past exams
- Past term tests
- Input the range of Questions to any AI to give you another selection of possible questions.

Economic history can ONLY be multichoice however broad range

PRICES, MEASUREMENT, BOP

Core Formulas

$CA = X - M + NFI$	Current Account balance determinant by outflows and inflows between countries
$S_{row} = -CA$	Rest of world savings is negative of NZ's current account
$GDP = C + G + I + (X - M)$	GDP measured by our 4 main sectors
$NDI = GDP + NFI$	National disposable income measured by GDP and net foreign income
$SG = T - G$	Government savings are tax revenue subtract whatever the government spending was
$S_p = Y_d - C - T$	Private savings are the amount of disposable income left over by households and businesses after accounting for expenditure and taxation.
$I = S_p + S_g + S_{row}$	Investment represents amount spent on capital goods, infrastructure and business expansion

BOP EXAMPLE QUESTION

- From 2015 S2 Exam

- (a) New Zealand has a current account deficit. What does this imply about the value of New Zealand domestic savings compared to investment?

(Hint: explain your answer by showing you understand the link between investment, savings and the current account balance).

(2 marks)

BOP EXAMPLE QUESTION

- (a) New Zealand has a current account deficit. What does this imply about the value of New Zealand domestic savings compared to investment?
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$$\text{CAB} = - \text{ROW Savings}$$

$$I = S_p + S_G + \text{ROW Savings}$$

$$I = S_{\text{NZ}} + \text{ROW Savings}$$

If the CAB is negative (deficit) then ROW Savings must be positive and NZ is borrowing money to fund investment.

Domestic savings must be lower than investment.

FOREIGN EXCHANGE



FOREIGN EXCHANGE EXAMPLE QUESTION

- From 2018 S2 Exam

- (b) Energy companies explore the coast of New Zealand in the hope of uncovering a large oil or gas field with export potential. Use a supply and demand diagram of the foreign exchange market to explain what would happen to the value of the \$NZ if a large field is discovered and oil exports increase rapidly. Why might other industries such as tourism and dairy farming refer to this as an “oil curse”?

(5 marks)

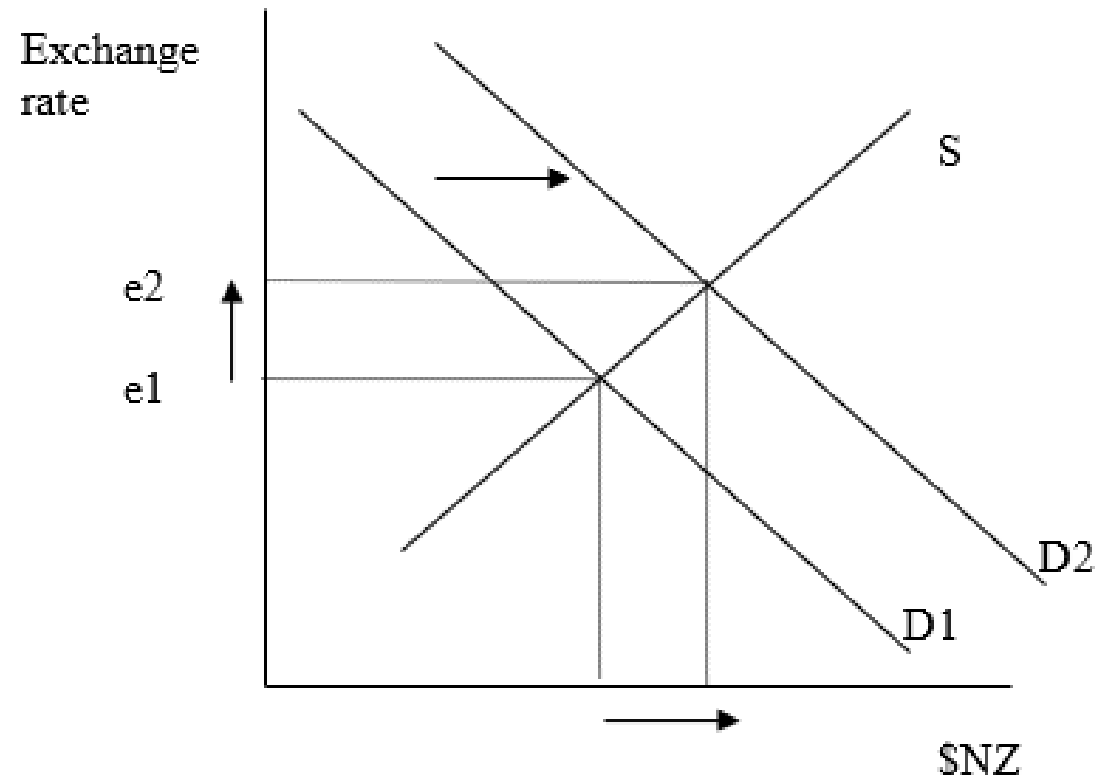
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PART 1: Use a supply and demand diagram to explain

To buy NZ goods (exports):

1. Foreigners must first change their foreign currency into \$NZ.
2. An increase in the demand for NZ oil will increase the demand for \$NZD.
3. On our NZ money market market diagram, demand will shift out from D1 to D2.
4. The quantity of \$NZD will increase and the exchange rate will increase.

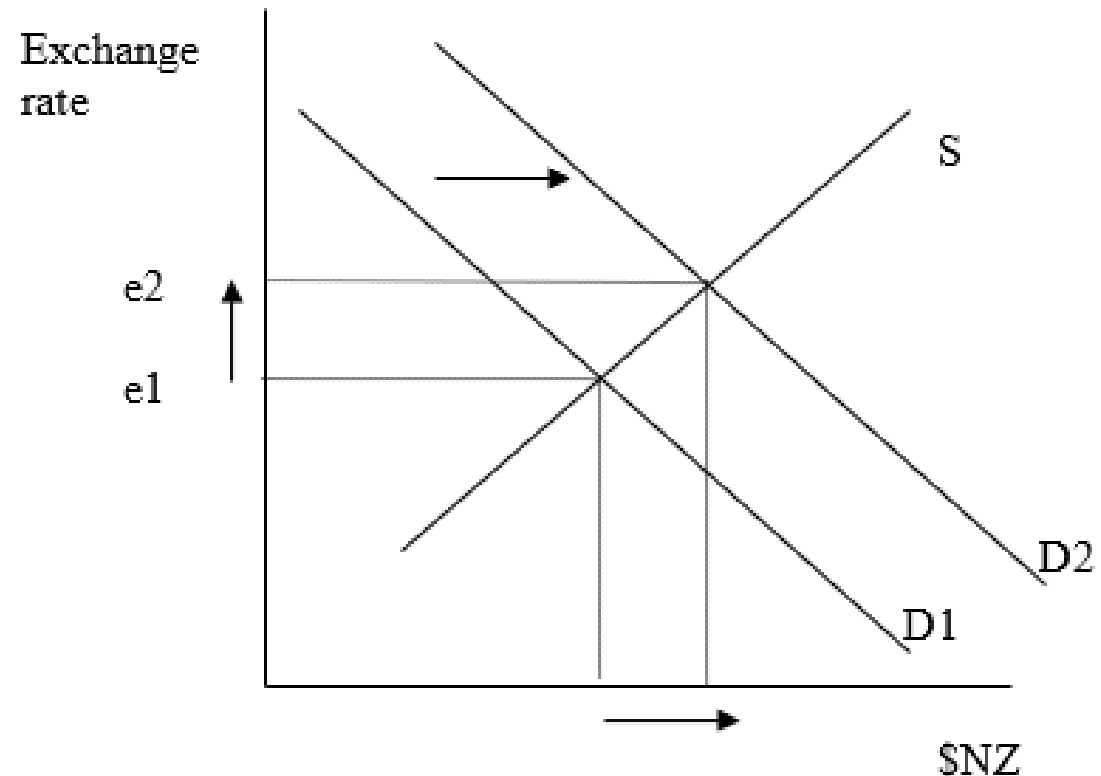


FOREIGN EXCHANGE EXAMPLE QUESTION

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PART 2: Why do other industries refer to this as an ‘oil curse’?

The increase in the exchange rate (value of \$NZ rise) makes other exports such as tourism and milk more expensive to overseas customers. These industries are therefore less competitive compared to overseas goods so might suffer.



LABOUR MARKET

Labour Market Details

- Important to understand Minimum Wages and the effects on different groups
 - More of an effect on the working population that receive wages instead of salary and work hourly.
 - e.g. waitress rather than dentist
- Have a timeline of the different reforms that occurred especially after 1991 as common multi choice questions
- Understand the differences in unemployment – Frictional, Structural, Cyclical
 - All contribute to the natural rate of unemployment
- What are efficiency wages and why do firms pay them
 - When firms pay above the market rates
- What defines someone as Unemployed- Official and Job Seeker definitions
- The participation rate, unemployment rate, underemployed definitions

LABOUR MARKET

Likely to be in the multi-choice

12. Josh has finished his university studies and is looking for a job. He currently works 10 hours a week in his part time job at Subway. However, he really wants full time work. He can start a new job right away and he is actively seeking a new job. Josh's employment status as measured using the Household Labour Force Survey is that he is
1. employed.
 2. unemployed.
 3. jobless.
 4. a discouraged worker.
12. The unemployment rate is defined as
1. $(\text{number of unemployed}) / (\text{population})$
 2. $(\text{number of unemployed} + \text{number of employed}) / (\text{labour force})$
 3. $(\text{number of unemployed}) / (\text{labour force})$
 4. $(\text{number of unemployed}) / (\text{number of working age adults})$

MONEY AND INFLATION

Money

Money Market

2 Motives for Demand (M_d) -> Settle transactions or for speculation

Shifts in Demand -> Price level or Real GDP increasing causes M_d to increase

Supply (M_s) -> Fixed vertical curves as the central bank policy doesn't fluctuate with interest rates

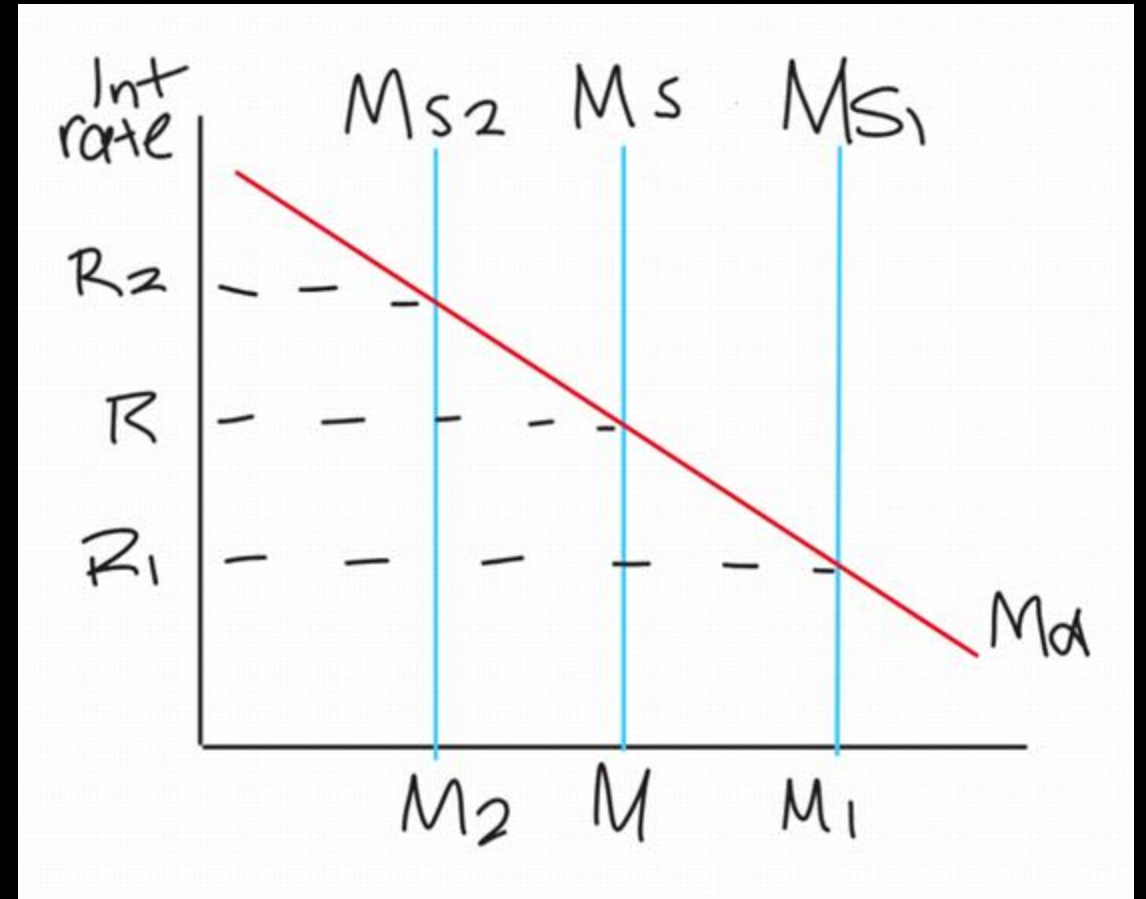
2 Scenarios:

Tightening Monetary Policy - Higher Interest Rates and less M_s

$M \rightarrow M_2$

Loosening Monetary Policy - Lower Interest Rates and increased M_s

$M \rightarrow M_1$



Inflation

Core Formulas:

$$V = PL \cdot Y / M$$

V= how fast money is circulating the economy to generate a given level of GDP

PL = Price Level, Y = Real GDP, M = Money Supply

$$\% \Delta M + \% \Delta V = \% \Delta PL + \% \Delta Y$$

Idea is that if we assume changes in Velocity of circulation is constant then changes in Price Level can be modelled by the difference in changes in money supply and real GDP

If $\Delta M_s > \Delta Y$, then Inflation occurs

Q1. Using the quantity theory of money ($MV = PY$), if money supply grows at 8% and real GDP grows at 3%, what happens to the price level? State your assumption.

Q2. What are the two motives for holding money? How does an increase in real GDP affect money demand, and what happens to the interest rate if money supply is held constant?

Q1. Assuming velocity (V) is constant: $\% \Delta PL = \% \Delta M - \% \Delta Y = 8\% - 3\% = 5\%$ **inflation.**

Extra money supply outpaces real output growth, so prices rise to absorb the difference.

Q2. The two motives are **transactions** (need money to buy things) and **speculation** (hold money instead of assets when returns are uncertain).

- A rise in real GDP means more transactions are happening, so money demand shifts right. Like normal demand
- With fixed money supply, this excess demand pushes the interest rate **up**, people compete for the same pool of money.

AD/AS, MONETARY POLICY, INFLATION & UNEMPLOYMENT TRADE-OFF

AD/AS MODEL

AD shifts if C, I, G, X or M change

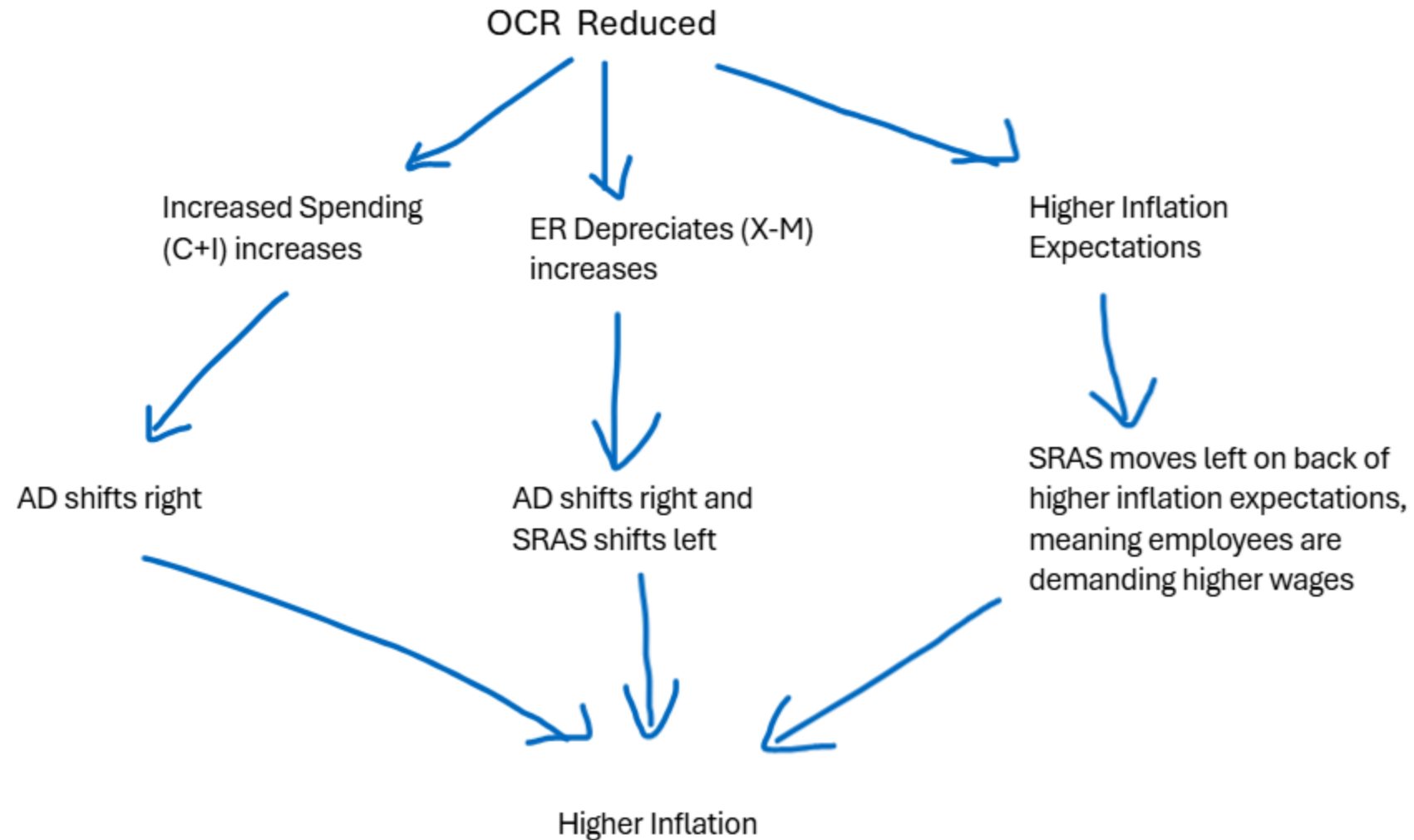
SAS shifts if wages or input costs change

LRAS shifts if the economy's productivity changes with an increase in the quantity of scarce resources, such as inward migration or organic population growth, or improvements in the quality of resources, such as through better education and training

Label the axes PL and Y

MONETARY POLICY

- RBNZ uses the Official Cash Rate (OCR) as a tool for Monetary Policy
 - Tightening MP - Raising the OCR
 - Loosening MP - Lowering the OCR
- Inflation can be influenced through 3 mechanisms
 1. Interest rate
 2. Exchange rate
 3. Inflation expectations



MONETARY POLICY

1. C and I

Lower interest rate

= less costly to borrow so borrowers have more disposable income, less incentive to save money
consumers have more to spend

= firms have more incentive to borrow and invest

- C and I increase
- AD shifts right

MONETARY POLICY

2. X and M

Lower interest rates lead to a lower exchange rate (less demand for NZD)

= increases demand for NZ goods

= makes inputs more expensive, raw material imports more expensive

- X rises and M falls (X-M) rises
- AD shifts right
- Inputs fall
- SAS shifts left but less than AD shifts

MONETARY POLICY

3. INFLATION EXPECTATIONS. PEOPLE MAKE DECISIONS BASED ON WHAT THEY EXPECT PRICES WILL BE IN THE FUTURE

HIGH INFLATION EXPECTATIONS

= WORKERS DEMAND WAGE INCREASES

- HIGHER WAGES
- SAS SHIFTS LEFT

RBNZ NEWS RELEASE

Big Picture:

- NZ's economy has been weak but beginning to recover
- RBNZ has been cutting interest rates to stimulate growth
- Inflation at top of their target band but expected to naturally fall

The Economy

- Growth stalled mid 2025 due to global uncertainty and cautious households
- Significant spare capacity, businesses aren't operating at full potential and unemployment has risen
- Early signs of recovery are now emerging heading into late 2025

Inflation

- Currently sitting at the top of the target band but driven by temporary factors
- Underlying inflation pressures are actually easing
- Expected to return to 2% midpoint by mid 2026

Interest Rates

- RBNZ cut OCR to support recovery
- Lower rates = cheaper borrowing = increased C = economy picks up
- Concern is not enough inflation / growth not too much



RBNZ NEWS RELEASE

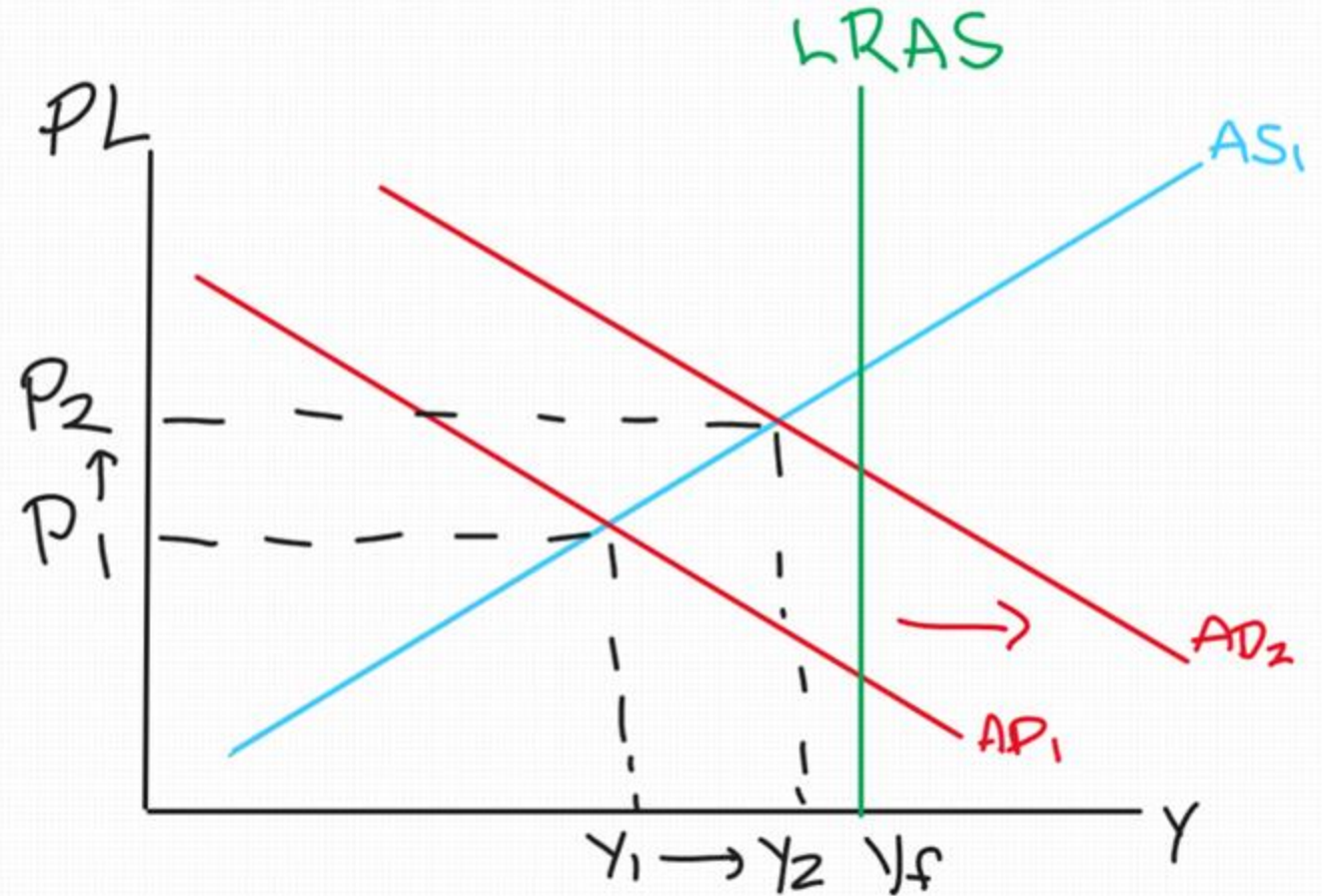
The exchange rate has fallen, supporting exporters' incomes" and "the New Zealand dollar Trade Weighted Index has depreciated since August

Draw and explain the effect of the **exchange rate depreciation** on the NZ economy using ADAS

Exchange rate:

AD shifts right because a cheaper NZD boosts export demand. Overseas market has greater purchasing power of our goods so exports relatively cheaper, whilst imports becoming relatively more expensive. (X-M) increases causing AD to increase.

Output moves closer to Y_f and the price level rises from P_1 to P_2 . Note Y_2 is still at or just reaching Y_f , consistent with the RBNZ view that the economy is recovering toward potential.



RBNZ NEWS RELEASE

Why did the RBNZ cut rates even though inflation is at the top of the band?

Some Ideas:

- What does cutting rates / OCR mean?
- How does this influence higher Inflation
- Is there a short term outcome where the tradeoff for higher inflation can result in a strong economic outcome for NZ?

Overview of Cutting Rates despite Inflation

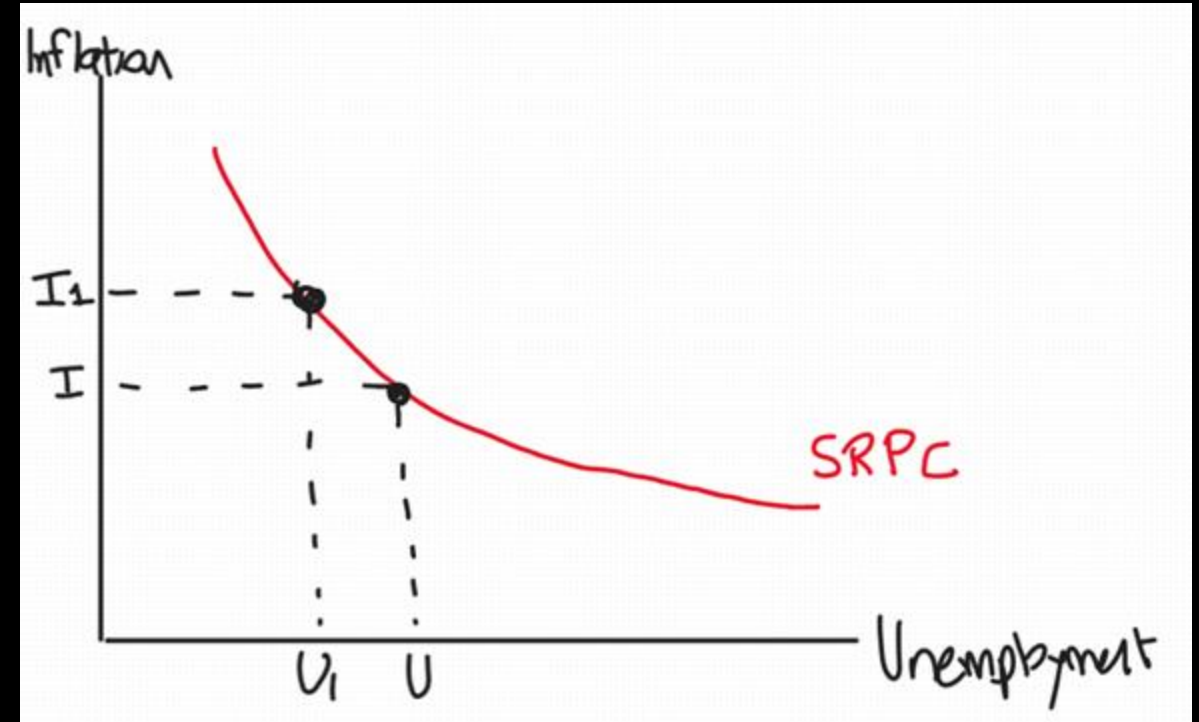
- The economy is currently operating below full capacity
- Inflation despite being at the top of the band is not occurring as what we expect.
- The reason for Inflation is lagged Covid effects, not the rising demand and consumption of goods
- Therefore we have to prioritise an underperforming economy over rising inflation
- Once the economy is near full employment then inflation will fall back within the guided target on its own.
- Overall the government want to prioritise maximising employment as if the output gap remained then there would be the issue of inflation undershooting its target

ECONOMIC GROWTH, INCOME & POVERTY

Trade off: Inflation and Growth

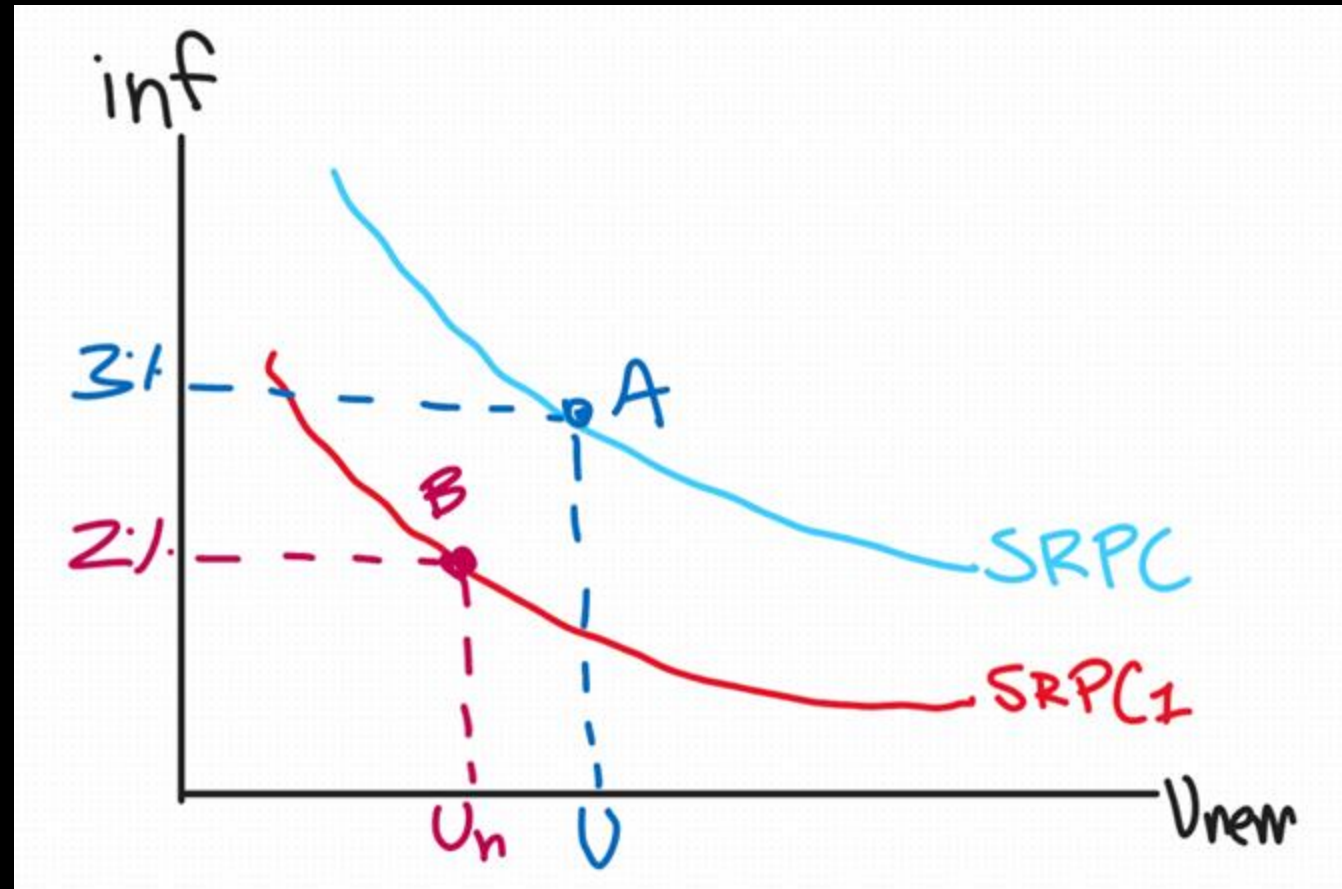
When we think about Inflation and Growth Government Policies there is often a trade off involved:

- As previously discussed the Government's decision to cut rates despite strong inflation demonstrates these trade offs.
- We can model this via a Phillips Curve as modelled on the right
- The SRPC shows there are two outcomes can have strong growth (low unemployment) but high inflation, or low inflation but low growth (high unemployment).



Using the Phillips Curve, illustrate the RBNZ's expected path for the NZ economy from late 2025 to mid-2026. What trade-off is the RBNZ trying to manage?

- 1) The SRPC will shift downwards, because inflation expectations fall.
- 1) Due to the OCR cuts, the boost in AD causes greater demand and growth in the economy in turn bringing unemployment toward the natural rate (U_n).
- 1) Here we can see that due to these two factors, we transition from a higher SRPC point A to a lower one point B due to the lower inflation expectations.
- 1) We end at a point where inflation is around the midpoint at 2% and unemployment is at the natural rate around 3%.



Growth Model

We can compare countries using this model where our two factors measured are capital per labour (K/L) and output per labour (Y/L).

Effectively we view how much output a worker produces based on a given amount of capital they can work with.

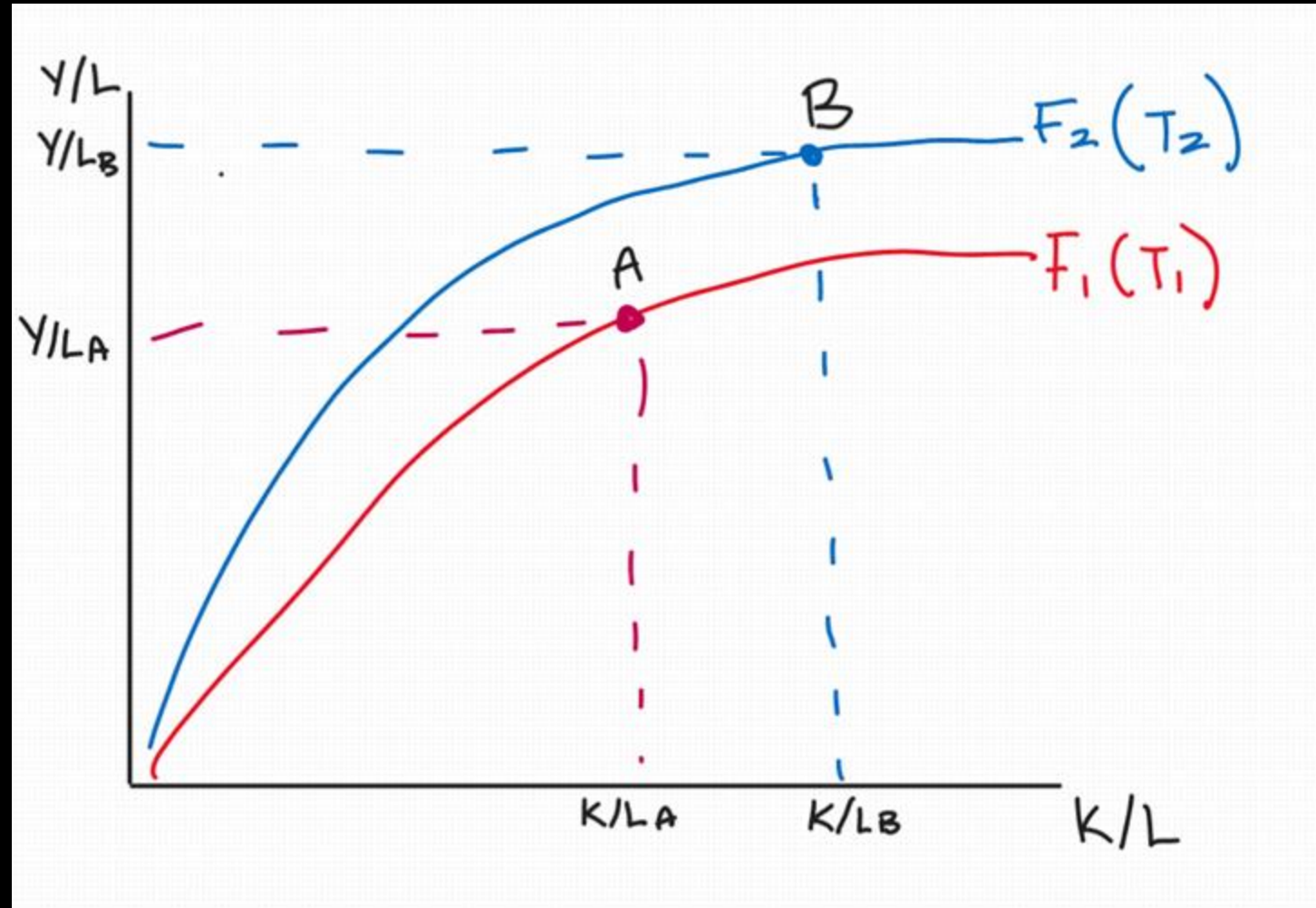
The relationship is diminishing, i.e. the rate at which you generate more output given additional capital slows down as there is a limit to the efficiency of a worker where no capital will further improve their performance.

Comparisons:

A - Lower output and capital however a faster rate at which they can generate output.

B - On a higher growth curve could be due to a more efficient use of capital.

A can move from F_1 to F_2 if they improve education, skills, innovation.



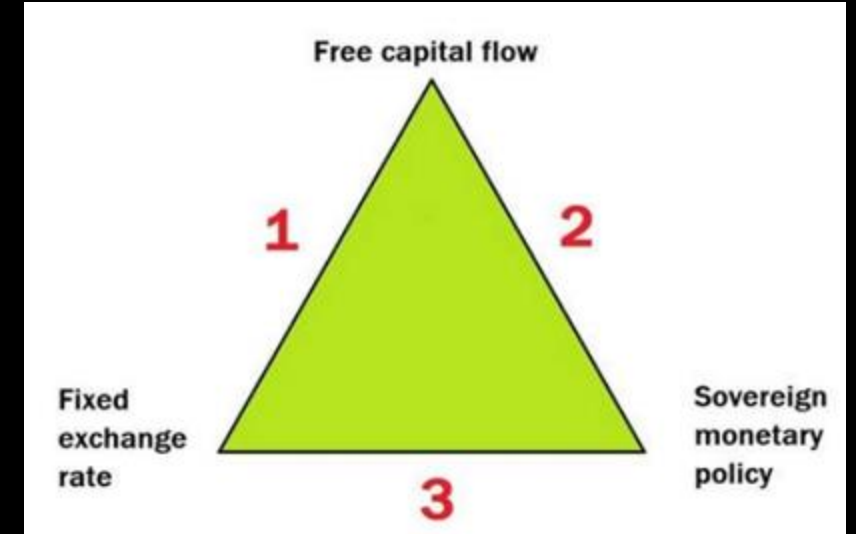
Q1. What is the difference between moving along the production function versus shifting it upward? What kinds of changes cause each?

GOVERNMENT & TAX

GOVERNMENT AND TAX

- Fiscal policy
- Taxes
- The Impossible Trinity
- The GFC and Great Depression

Some marks are likely to be multi-choice



Q1. Explain fiscal drag. Why does it reduce real wages even when nominal wages rise with inflation? What are two policy solutions?

Q2. A worker earns \$35,000. Using a progressive tax structure (\$0-\$20k taxed at 20%, \$20,001-\$40k at 33%), calculate their total tax bill and effective tax rate.

Q3. Short answer: Explain one argument for and one argument against progressive taxation.

Q1. Fiscal drag: inflation pushes nominal wages up, dragging workers into higher tax brackets even though their real purchasing power hasn't changed. Result: real after-tax income falls. Two fixes: (1) index tax brackets to inflation, or (2) reduce the progressivity of the scale.

Q2. Tax on first \$20,000: $20\% \times \$20,000 = \$4,000$. Tax on next \$15,000: $33\% \times \$15,000 = \$4,950$. **Total tax = \$8,950. Effective rate = $\$8,950 / \$35,000 = 25.6\%$.**

Q3. For: redistributes income from high to low earners, reducing inequality and funding public services those on lower incomes rely on most.

Against: reduces incentive to earn more at higher income levels, potentially discouraging work, investment, or causing high earners to shift income offshore.

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