

January Examination Period 2025

ECN102 World Economy

Duration: 2 hours

**YOU ARE NOT PERMITTED TO READ THE CONTENTS OF THIS QUESTION PAPER
UNTIL INSTRUCTED TO DO SO BY AN INVIGILATOR**

Answer ALL questions

Non programmable calculators are permitted in this examination. Please state on your answer book the name and type of machine used.

Complete all rough workings in the answer book and cross through any work that is not to be assessed.

Possession of unauthorised material at any time when under examination conditions is an assessment offence and can lead to expulsion from QMUL. Check now to ensure you do not have any notes, mobile phones, smartwatches or unauthorised electronic devices on your person. If you do, raise your hand and give them to an invigilator immediately.

It is also an offence to have any writing of any kind on your person, including on your body. If you are found to have hidden unauthorised material elsewhere, including toilets and cloakrooms it will be treated as being found in your possession. Unauthorised material found on your mobile phone or other electronic device will be considered the same as being in possession of paper notes. A mobile phone that causes a disruption in the exam is also an assessment offence.

EXAM PAPERS MUST NOT BE REMOVED FROM THE EXAM ROOM

Examiner: Professor Rachel Male

Answer all questions.**Question 1. [20 marks]**

Consider the following statements and explain if they are True or False.

- a) Heavily indebted developing countries (HIDCs) have higher values for GNI than for GDP. [5 marks]
- b) In the steady-state, the Golden Rule savings rate (s^{GR}) maximises investment. [5 marks]
- c) Based on the data in Table 1, females in Jamaica have a better standard of living, as measured by the Human Development Index (HDI), than males in Jamaica. [5 marks]

Table 1. Components of the Human Development Index (HDI) split by gender. (UNDP Human Development Report, 2023).

Country	Gender	Life expectancy at birth (years)	Expected years of schooling	Mean years of schooling	GNI per capita (2017 PPP \$)
Jamaica	Female	73	13.6	9.9	7,647.11
Jamaica	Male	69	11.4	8.6	11,774.96
Minimum value		20	0	0	100
Maximum value		85	18	15	75,000

- d) There tends to be a smaller difference between the purchasing power parity (PPP) conversion rate and the market exchange rate in lower-middle income countries than in high income economies. This is because prices and wages for non-traded goods are lower in lower income economies. [5 marks]

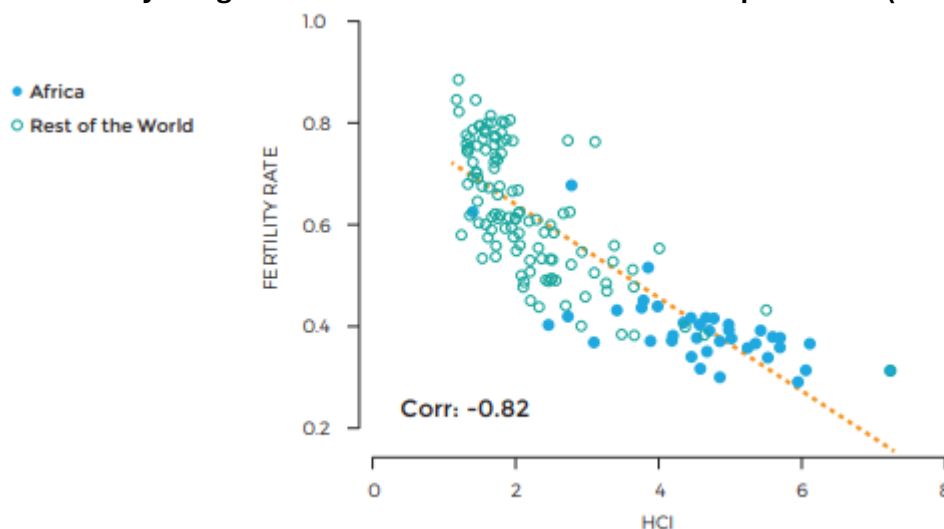
Question 2. [20 marks]

The World Bank Africa Human Capital Plan is a project embedded within 19 African economies with the aim of developing human capital in the region (World Bank, 2024). The Human Capital Plan (HCP) has the following targets:

- Survival: Reduce the under-5 mortality rate from 75 deaths per 1,000 live births to 45 deaths per 1,000 live births.
- Health: Reduce the stunting rate from 32% to 26% of all children, and increase the overall adult survival rate from 0.73 to 0.81 through improved prevention and stronger health systems.
- Education: Increase learning-adjusted years of school by 20%, from 4.94 to 5.88 years.
- Social Protection: Increase social protection coverage from 20% to 30% of those in the poorest economic quintile in low-income countries, adding coverage for 13 million people.
- Fertility: Reduce the adolescent fertility rate from 102 to 83 births per 1,000 women aged 15 to 19 years.

The relationship between human capital and fertility rate is shown in Figure 1:

Figure 1: Fertility is highest in countries with a low Human Capital Index (HCI) score



Source: World Bank (2024) The World Bank Human Capital Plan: Powering Africa's Potential Through its People.

- a) What does the GINI coefficient measure? What effect will this project have on the value of the GINI coefficient in the participating economies?
[4 marks]
- b) Use the Solow model to explain the expected impact of the above project on economic growth in the region.
[10 marks]
- c) How will this project contribute towards achieving Goal 1 (No Poverty) of the UN Sustainable Development Goals (SDGs)?
[3 marks]
- d) In total there are 17 SDGs, which were adopted by all UN member states in 2015. Provide examples of two SDGs that the above project will support.
[3 marks]

Question 3. [40 marks]

- a) Consider the information in Table 2:

Table 2: Hours of Labour per unit of Output.

Good	Country	
	Argentina	Brazil
Soya beans	20	8
Maize (corn)	15	14

If Argentina and Brazil engage in international trade, how will this affect total world output of the two goods? Briefly explain your answer and calculate the gain (in units) from trade.

[6 marks]

- b) Given the data in Table 2, should Argentina and Brazil completely specialise production in their comparative advantage good? Briefly explain your answer.

[4 marks]

- c) Consider trade in soya beans and parts for motor vehicles, where soya beans are labour intensive goods and parts for motor vehicles are capital intensive. Given the data in Table 3, draw a diagram to represent the pattern of trade in these two goods between Argentina and Brazil.

Table 3: Data on Capital (K) and Labour (L) supply in Argentina and Brazil, 2023.
World Bank (2024).

	Argentina	Brazil
Labor force (total, millions)	21.9	108.7
Gross capital formation (current US\$, billions)	124.7	349.7

[8 marks]

- d) Brazil and Argentina are major trading partners, with 4.6% of Brazil's exports going to Argentina and 14.3% of Argentina's exports going to Brazil (WTO, 2022). However, Brazil's largest export markets are China (26.8%) and the United States (11.4%). Explain the observed export volumes using a simple gravity model:

$T_{ij} = A \times Y_i \times \frac{Y_j}{D_{ij}}$, where T_{ij} is the trade between countries i and j , A is a constant term, D is a measure of distance, and Y is GDP.

Table 4: GDP data in selected countries. World Bank (2024)

Country	GDP (current US\$, trillions) 2023
Argentina	0.641
Brazil	2.174
China	17.795
United States	27.361

[5 marks]

Continues on next page...

- e)** Brazil exports iron and steel to the United States, with the United States accounting for 34% of Brazil's export market for these goods. If the United States places an import tariff of 25% on imports of steel from Brazil, what effect will this have on the price consumers pay for steel in the United States? Explain the effect on the importing economy using a welfare table.

[6 marks]

- f)** How is an economy's openness to trade measured?

[3 marks]

- g)** Consider the following country pairs:

- (i) The Central African Republic and Malaysia;
- (ii) The United States and Luxembourg.

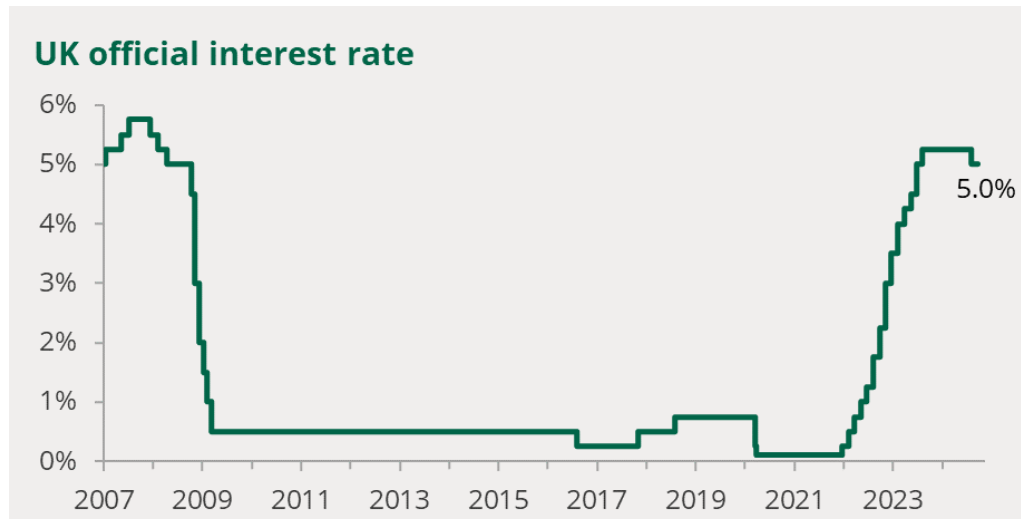
For each of the pairs, explain which country you would expect to have the greatest degree of openness and why.

[8 marks]

Question 4. [20 marks]

Consider the information presented in Figure 2:

Figure 2. The Bank of England's Monetary Policy Committee Interest Rate decisions, 2007 - 2024.



Harari, D. (2024) D1: Interest Rates and Monetary Policy, Economic Indicators, House of Commons Library (17 October 2024).

- a) What is the main reason why the Bank of England began raising interest rates in January 2022? [3 marks]
- b) Use the IS-LM-BP model to explain how the increase in the UK's official interest rate from 0.1% to 5.25% affects the economy. Draw a diagram to support your explanation. [Hint: you can treat this as a single large increase, you don't need to indicate the small incremental increases in the interest rate on your diagram.] [10 marks]
- c) True or False? Monetary policy is always more effective than fiscal policy. [5 marks]
- d) Provide one example of a fiscal policy tool. [2 marks]

End of Paper