



AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa
(Except Nigeria and South Africa)

JOINT FACILITY FOR ELECTIVES JULY - OCTOBER 2003

INTERNATIONAL ECONOMICS II

Second Session: Final Examination

Time: 9 am - 12 noon

Date: Wednesday, October 1st, 2003

INSTRUCTIONS

- Answer 4 questions in all: All questions carry equal marks of 15 each.
- Explore mathematical models with clearly identified variables, parameters, and/or clearly labelled Diagram(s) to support your discussion where appropriate.
- In any of the questions attempted, please clearly highlight all simplifying/underlying assumptions where necessary.

QUESTION 1

- (a) An increase in the currency-deposit ratio induces an increase in the currency component of the money supply. Briefly describe how this, as well as an increase in the reserve-deposit ratio translate into a reduced credit-creating ability of the banking system in an open economy. [2 Points]
- (b) Using your explanation in (a) above and all other relevant information, show that in a typical developing open economy that operates under a fixed exchange rate system, the control of the Money supply is not completely in the hands of the Central Bank or monetary authority. [4 Points]
- (c) The following data relates to an open sub-Saharan African country that operates under a fixed exchange rate regime in a given time period.

Currency = 550 billion
Demand Deposits = 1650 billion
Bank Reserves = 250 billion



(All figures are in Botswana Pula, the currency of the country concerned).

Using above information, calculate the following for Botswana:

- | | | |
|-------|----------------------|------------|
| (i) | The money multiplier | [2 Points] |
| (ii) | The Monetary Base | [2 Points] |
| (iii) | The Money Supply | [2 Points] |
- (d) Suppose that in the month of March 2003, the country's Balance of payments position (BOP) recorded a surplus of an amount equal to P150 Billion. On the assumption that the Central Bank's credit remains unchanged, what will be the impact of the BOP surplus on the monetary Base and the money Supply[3 Points]

QUESTION 2

You have been given the following equations for an open developing economy that operates a fixed exchange rate system:

$$\begin{aligned} M^s/P &= kY - h_i && \text{(Asset Market Equilibrium condition)} \\ Y &= A + T && \text{(Goods Market Equilibrium condition)} \end{aligned}$$

(All variables are as defined in class)

- (a) Determine the level of income that clears the both the Assets and goods markets in the short run and explain very concisely the variables and parameters as derived. [5 Points]
- (b) Suppose there exist a balance of payment deficit situation that tends to disturb the short run equilibrium as obtained in (a) above, describe the adjustment process that can eventually restore full or Long run equilibrium in the economy. [5 Points]
- (c) Suppose the adjustment process as described in (b) above becomes too costly to the economy, explain one form of countervailing measure that the monetary authority in the concerned country can undertake to reasonably reduce the cost of the adjustment. [5 Points]

QUESTION 3

Using diagrammatic and mathematical expositions as appropriate, write concise explanatory notes on any five (5) of the following:

- (i) The 'twin-deficit' hypothesis. [3 Points]
- (ii) Autonomous and accommodating transactions in the Balance of Payments [3 Points]



- (iii) Covered Interest Arbitrage Margin [3 Points]
- (iv) The J-Curve effect [3 Points]
- (v) The Acceleration Hypothesis [3 Points]
- (vi) The Principle of Effective Market classification [3 Points]

QUESTION 4

- (a) Highlight the assumptions of the Mundell-Fleming Model, and explain how some of these assumptions also constitute its major weaknesses in terms of applicability to typical developing or less developed countries. [8 Points]
- (b) Using the Mundell-Fleming model, explain how the increase in capital mobility could enhance the effectiveness of fiscal policy in a low-income developing country in sub-Saharan Africa that operates under a fixed exchange rate regime. [7 Points]

QUESTION 5

On the 9th of September 2003 (09.09.03), the 3-month interest rate on a municipal Bond in the Zimbabwe was 93.7428 % per annum and on the same day the 3-month interest rate on a municipal Bond in Namibia was 12.9324 % per annum.

- (a) Highlight and explain why even with the presence of perfect international capital mobility, the Zimbabwean municipal Bond may not be perfectly substitutable for the Namibian Municipal Bond. [3 Points]
- (b) Using above information, and one, if not most or all of your explanation in (a), show that the factor-price-equalization theorem may hold for the two countries if the purchasing power parity (PPP) condition holds. [7 Points]
- (c) With due consideration to your explanations and formulations in (a) and (b) above, construct and explain very clearly the model that can be used to explain the variability in exchange rates between the Zimbabwean Currency (Z\$) and the Namibian currency (N\$). [5 Points]

(Hint: Namibia is the Home country and Zimbabwe is the foreign country).



QUESTION 6.

- (a) The Purchasing Power Parity (PPP) approach to the determination of exchange rate have been criticized on the basis that it does not take into consideration the prices of non-tradeable goods. Show how the generalized PPP approach provides some solution to this problem. (Please interpret your results very clearly). [7 Points]
- (b) Discuss some of the explanations that have been put forward in terms of the generally poor performance of the PPP theory of exchange rate determination. [4 Points]
- (c) “Explanation and Predictions are not necessarily related”. Discuss how in general, the models of exchange rate determination may constitute good examples of this dilemma. [4 Points]