EC 349
International Finance
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Suggested Solutions to Assignment 4 (REQUIRED)

Total Marks: 30

Part A True/ False/ Uncertain Questions 10 Marks

Explain why the following statements are True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important.

A1. [10 Marks]

In an open economy IS-LM model, a permanent increase in domestic government purchases leads to an increase in domestic equilibrium interest rate and output, and results into a depreciation of domestic currency against foreign currency in the short run. [Diagrams required]

False

See Appendix I to Chapter 16 (pages 471, 473-474) and Figure 16AI-3 of the textbook (**6th edition).**

Note: I posted this additional course material on the course website.

Part B Analytical Questions 20 Marks

B1. [20 marks]

Consider the model of output and exchange rate determination (the AA-DD model) we have studied in class. Suppose the economy begins at its long-run level with output at its full-employment level.

Compare and contrast the short-run effects of the temporary policies by the home government listed below on home output, the home current account, and the nominal exchange rate under a floating exchange rate regime to the effects on these variables under a fixed exchange rate regime.

Use AA-DD-XX diagrams to support your answers.

I. An increase in the home money supply.

An increase in the home money supply leads to excess supply in the money market and a fall in the home interest rate to clear the home money market. This decreases the return on home assets and leads to a rise in the nominal exchange rate to satisfy UIRP (uncovered interest rate parity condition). This is depicted as a rightward shift in *AA* curve to *AA′* in Figure B1.I.a.

Under floating rates, the rise in the nominal exchange rate leads to a rise in the real exchange rate which causes an increase in the current account. This increase in the current account stimulates aggregate demand for home output and causes home output to increase. The increase in home output causes a rise in imports and thereby decreases the current account balance. This decrease in the current account cannot fully offset the increase in the current account which results from the depreciation of the nominal exchange rate. So, the net effect on the current account is an increase. This is depicted in Figure B1.I.a with the original equilibrium at 1 and the new equilibrium at 2, which lies above the *XX* curve. Note that along the *XX* curve the current account is constant at the level $CA = X$. Below the *XX* curve, the current account balance is lower than the level of *X* and above the *XX* curve the current account balance is higher than the level of *X*.

Under fixed rates, the home central bank cannot allow the nominal exchange rate to rise. So, they must reverse the increase in the money supply through a contraction of the money supply. Thus, the exchange rate does not change, nor does the current account, nor does output. This is shown in Figure B1.I.b where the new equilibrium is the same as the original equilibrium.

In comparing the effects under the two exchange rate regimes, we see that under floating rates an increase in the home money supply is effective in increasing all three variables while it has no effect on any variables under fixed rates.

II. A decrease in the home government taxes.

A decrease in the home government taxes increases the home disposable income which raises home demand for home goods and raises home demand for foreign goods. The first effect increases home aggregate demand but the second effect (which decreases the current account) decreases home aggregate demand. In the model, we assume the first effect dominates. So, a decrease in taxes raises aggregate demand and the *DD* curve shifts to the right. The rise in aggregate demand leads to an increase in output, an increase in the demand for real balances, an increase in the home interest rate, and a fall in the nominal exchange rate.

Under floating rates, the fall in the nominal exchange rate leads to a fall in the real exchange rate which decreases the current account and decreases output, offsetting part of the rise in output from the rise in aggregate demand described above. Overall, output increases because the rise in output due to the rise in aggregate demand is larger than the fall in output due to the lower current account. Overall, the current account falls because of three reasons: 1) the rise in imports induced by an increase in disposable income 2) the decrease in the real exchange rate and 3) the rise in imports induced by the increase in equilibrium output. This is depicted in Figure B1.II.a with the original equilibrium at 1 and the new equilibrium at 2, which lies below the *XX* curve.

Under fixed rates, the central bank must expand the home money supply to prevent the exchange rate from falling. This is depicted as a shift in the AA curve to the right to AA′ in Figure B1.II.b. Output increases because of the rise in aggregate demand. The current account falls because of two reasons: 1) the rise in imports induced by the rise in disposable income and 2) the rise in imports induced by the increase in equilibrium output. This is depicted in Figure B1.II.b with the original equilibrium at 1 and the new equilibrium at 2, which lies below the *XX* curve.

So comparing we see that the nominal exchange rate falls under floating rates but not under fixed rates. Output increases by less under floating than under fixed rates. The current account decreases both under floating and fixed rates. However, without knowing the actual strengths of the responsiveness of the current account with respect to nominal exchange rate and with respect to home output, we can not conclude in which case the decrease in the current account will be greater.