SØK1151 V2022 Assessment guidelines

Question 1.

Suppose interest rates increase in countries that are main trading partners of Norway. Discuss the effect on main macro-economic variables in Norway from this increase in interest rates under fixed and floating foreign exchange rates. Discuss how the Norwegian policymakers may use monetary and fiscal policies to counteract possible negative consequences from the rise in foreign interest rates.

Candidates should demonstrate the ability to use simple IS LM models for open economy with perfect capital mobility presented in ch. 20 in textbook to discuss the question.

Floating exchange rates:

Candates should formulate and explain the IS and LM curve in an open economy along with the UIP curve representing uncovered interest parity condition. Should explain that an increase in foreign interest rates $i^* \uparrow$ shifts the UIP curve to the left for a given policy interest rate set by the central bank. This leads to an exchange rate depreciation $E \downarrow$. The mechanisms should be explained. The exchange rate depreciation affects aggregate demand in the Norwegian economy since it stimulates net export through the reduction in the real exchange rate (for given domestic and foreign prices, P and P* normalized to 1 for simplicity), under the assumption that the Marshall Lerner condition is fulfilled. Thus, within the model it shifts the IS curve to the right, leading output Y to increase, if the policy interest rate is kept unchanged. Given Marshall Lerner condition is fulfilled, there are two opposing effects on the trade balance represented by net exports (NX). Since $NX = NX(Y, Y^*, E)$ the appreciation of the NOK leads partially to a trade balance improvement ($NX \uparrow$) while the increase in output partially leads to a trade balance deterioration ($NX \downarrow$) due to increased imports. The mechanisms should be explained.

If the economy was at full capacity initially, candidates could argue that the policy-makers may be worried about future inflationary pressure (although this is not strictly captured in the model). Based on this argument, the central bank could consider a contractionary monetary policy (increase in the policy interest rate) to reduce output to the full capacity level. Alternatively, the government may use contractionary fiscal policy to reduce demand for good and services. The mechanisms for the working of these policies should be explained.

Fixed exchange rates

The candidates should explain that under a fixed exchange regime and full capital mobility, the Norwegian interest rate would have to be equal to the foreign interest rate, $i = i^*$, see textbook ch 20.5. Thus, in this regime the horizontal LM-curve, would shift upwards, implying an increase in Norwegian interest rates equal to the increase in foreign interest rates. Thus, private investment in Norway is reduced, represented by a movement up the IS-curve. The end result is a reduction in output, Y and increased unemployment. This also implies an improvement in the trade balance since imports is reduced. Since monetary policy is not an available option in the fixed exchange regime, the only option for the policymakers is to use expansionary fiscal policy to counteract the reduction in output and increased unemployment.

Question 2.

The current war in Ukraine implies massive destruction of buildings, plants, machines and equipment in the country. Discuss the consequences of this destruction on future economic growth and prosperity in Ukraine after the war has ended.

Candidates should use a neclassical economc growth model as presented in textbook ch.12 to discuss the effects on future growth and output. The basic elements of the growth model should be explained, including the relationship between output and capital per worker as well as the capital accumulation process and savings behavior. A figure showing the basic elements is helpful and should be used and the dynamics and long run properties should be explained. The destruction of equipment, buildings and machines in Ukraine due to the war can be interpreted as a huge reduction in capital per capita, and output per capita relative to an initial steady state situation. Thus, after the war, there will be a period with growth in output and capital until the steady state is reached. The discussion would be similar to that in the textbook figures 12.2 and 12.3 in textbook.