SIMON FRASER UNIVERSITY
Department of Economics

Econ 305 — Prof. Kasa
Intermediate Macroeconomic Theory — Spring 2021

PROBLEM SET 3
(Solutions)

1. (25 points). When he was president, Donald Trump imposed tariffs on both Canadian and Chinese exports to the USA. Use the Keynesian Mundell-Fleming model to compare and contrast the effects of these tariffs on Canada and China. Which economy will be hurt more by the tariffs? (Ignore retaliation). Use graphs to illustrate your answer. Note: Canada has a flexible exchange rate against the US dollar, whereas China has a fixed exchange rate against the US dollar.

   The tariff shifts out the USA IS curve, since it redirects US spending onto US goods. As a result, it puts upward pressure on the US interest rate, which then puts upward pressure on the US dollar. (If the USA were a small open economy, an appreciation of the dollar would completely offset the effect of the tariff!) A strengthening of the US dollar has opposite effects on Canada and China, since Canada has a flexible exchange rate against the US dollar, whereas China pegs to the dollar. An appreciation of the US dollar against the Canadian dollar increases Canadian net exports, which shifts out the Canadian IS curve until it intersects its LM curve at the same common higher interest rate as in the USA. (This outward shift is reinforced by a positive income effect, i.e., when USA income rises, it increases the demand for Canadian goods, which also partly offsets the tariff). In contrast, China responds to the higher US interest rates and a strengthening US dollar by contracting its money supply and shifting its LM curve left. That is, to keep the RMB from depreciating, it must match the higher USA interest rate. The required shift in the LM curve is amplified by the fact that the US tariff produces a downward shift in China's IS curve. The monetary contraction reinforces the negative effects of the US tariff on China's economy. (Of course, China could mitigate these effects by simply letting the RMB depreciate!)

2. (25 points). Recently, there has been a lot of speculation about China's future exchange rate rate policy. Some people think China should allow its exchange rate to be more flexible. Use the Keynesian Mundell-Fleming model to analyze the effects (on China) of increased RMB flexibility. Under what conditions would increased exchange rate flexibility produce greater stability in China? Under what conditions would it cause greater instability? Use graphs to illustrate your answer.

   This is from Lecture Slides 18 (extended version), pages 19-20. If most shocks are to the goods market (IS curve), then greater exchange rate flexibility would produce greater output stability. However, if most shocks are to the financial markets (LM curve), then fixed exchange rates would produce greater output stability.