SIMON FRASER UNIVERSITY
Department of Economics

Econ 305   Prof. Kasa
Intermediate Macroeconomic Theory   Fall 2021

FINAL EXAM
(Solutions)

The first five questions are True, False, or Uncertain. Briefly explain your answers. No credit without explanation. (10 points each).

1. China's economy would be more stable with a flexible exchange rate.

   UNCERTAIN. *It depends on whether real shocks (IS curve) or financial shocks (LM curve) are more important. If real shocks are more important, then a flexible rate would indeed produce more stability. However, if financial shocks are more important, a fixed rate would produce more stability. (Note, it's possible that someone answers this from a neoclassical (market-clearing) perspective, in which case it doesn't matter. Don't penalize them if they do).*

2. Central Banks should not worry about the money supply.

   UNCERTAIN. *Again, it depends on what sort of shocks are more important. If financial shocks are more important, then interest rate targeting (and letting the money supply respond endogenously) would produce more stability. Hence, it would be TRUE in this case. However, if real (IS curve) shocks are more important, targeting the money supply produces more stability. Hence, it would be FALSE in this case. (See Lecture Slides 17, pages 8-10).*

3. Taxing profits reduces investment.

   FALSE/UNCERTAIN. *A pure profits tax would not affect investment. Firms would still want to maximize profits, even if they're taxed. However, in practice, true economic costs are often understated by accounting rules, in which case profits are overstated. As a result, a profits tax is more like a revenue tax, which would indeed discourage investment. (See Lecture Slides 10, pages 9-10).*

4. If the US cuts interest rates, then output in Canada will increase.

   UNCERTAIN/FALSE. *There are two opposing effects. Lower US rates would depreciate the US dollar, which would reduce Canadian net exports, and hence reduce Canada's output. However, the US monetary stimulus would raise US income, which would have a positive income effect on Canada's exports. So the answer is FALSE if the exchange rate effect dominates, but TRUE if the income effect dominates. (See Lecture Slides 18 (extended), page 21 (which considers the case of a US monetary contraction).*

5. Ricardian Equivalence suggests that government tax policy is irrelevant.

   FALSE/UNCERTAIN. *Ricardian Equivalence just says that if taxes are lump sum then the timing of taxes is irrelevant (given infinite horizons and frictionless capital markets). The level of taxes always mattters. Moreover, even the timing of taxes is important when taxes are not lump sum, and therefore have disincentive effects on labor supply and investment.*

6. (25 points). Currently in the USA, inflation is rising, while recovery from the pandemic is slower than expected. How would the market-clearing model in the textbook explain the combination of rising inflation and slow growth. How would the Keynesian model explain it? Use graphs to illustrate your answer.

This is the most difficult question on the exam. Please read carefully and be generous with partial credit. The easiest way to answer it is to refer to the AD/AS framework discussed in Lecture Slides 14 (pages 17-19). In the Keynesian model the AS curve is flat. Stagflation (low output/rising price level) is explained by an adverse cost shock, which shifts the AS curve up ('supply chain disruption'?) . In the neoclassical model, the AS curve is vertical, and stagflation is explained by a negative productivity shock, which shifts the AS curve to the left. Some students may provide a more detailed answer here, by appealing to the full dynamic market-clearing model discussed in the textbook (See Lecture Slides 13, page 6), which shows the effects of a negative productivity shock on the labor, goods, and financial markets separately. Please don't penalize them if they do this!

7. (25 points). Some economists argue that business cycles are caused by productivity fluctuations. Briefly describe the evidence in support of this claim. Use graphs to illustrate your answer. Briefly discuss the empirical difficulties associated with testing this theory. (Hint: How is aggregate productivity measured?)

This could again be answered using Lecture Slides 13, p. 6. The students just need to point out that productivity shocks produce procyclical employment, wages, investment, and consumption, as seen in the data. It also predicts a countercyclical price level, which the textbook argues is also consistent with the data, although in class I argued that the evidence is more mixed here. The main problem with this theory is the lack of independent evidence on productivity shocks. They are inferred from measured output after controlling for measured inputs, like labor and capital (ie, 'Solow residuals'). Skeptics point out that there is a large degree of endogeneity (reverse causation) in measured Solow residuals at business cycle frequencies, due to unobserved procyclical factor utilization. (See Lecture Slides 15, page 17).