

SIMON FRASER UNIVERSITY
Department of Economics

Econ 305
Intermediate Macroeconomic Theory

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Fall 2013

PROBLEM SET 3
(Solutions)

1. (25 points). What does the neoclassical/market-clearing model imply about the size of the ‘fiscal multiplier’ (i.e., the response of output to a temporary rise in government spending). Under what conditions will it be large? Under what conditions will it be small? Illustrate your answer with a graph. Why do Keynesian models generally predict a larger multiplier? If it’s positive, does that mean the government should increase spending?

The first part of this question is straight from the book (see pgs. 368-373, in the 4th edition). (Unfortunately, there is a confusing typo in eq. 11.20 in the book. The numerator should say, "length(DB)", not "length(BF)"). The second part, on the comparison between classical and Keynesian models, is from question 6 in the Spring 2012 final exam, with the answer posted on the webpage. The punchline is that both classical and Keynesian models predict a positive fiscal multiplier, but for different reasons. In the classical model, output increases because the negative wealth effect associated with higher taxes increases labor supply. This effect is reinforced by a likely rise in interest rates (since the spending increase is temporary, Y^d shifts out more than Y^s), which causes a positive intertemporal substitution effect on labor supply. Hence, the multiplier will be larger when wealth and intertemporal substitution effects on labor supply are large. In the Keynesian model, government spending increases output because it directly increases the demand for goods and services, and in Keynesian models, output is demand determined in the short-run. Keynesian models often produce larger estimated multipliers because they do not assume Ricardian equivalence, so that the adverse wealth effects do not cause much crowding-out. (Although this would also reduce the labor supply effect, Keynesian models do not focus on supply-side effects anyway).

The really important difference concerns the welfare effects of higher government spending. In classical models, the only reason output increases is because households feel poorer due to the higher taxes, or because they work harder in response to higher interest rates. As a result, household welfare decreases. In contrast, Keynesian models predict that welfare could actually increase, since the resulting increase in output moves output closer to its optimal level.

2. (25 points). Use the Mundell-Fleming model (i.e., open-economy IS-LM) to compare and contrast how Canada and China respond to USA monetary and fiscal policies. Use

graphs to illustrate your answers. (Hint: Canada has a flexible exchange rate against the US dollar, and China has a fixed exchange rate).

This is straight from the lectures. (See "Lecture 18 (Extended Version)", pgs. 21-24. For full credit, they should show the graphs). Because Canada has a flexible exchange rate against the US dollar, US monetary policy will tend to be transmitted negatively to Canada, while fiscal policy is transmitted positively. (The main caveat concerns the strength of income effects, which could offset the exchange rate effect on net exports). In contrast, since China has a fixed exchange rate, the transmission of US policy will be just the reverse (i.e., positive for monetary policy and negative for fiscal policy, again with the caveat about income effects).