

SIMON FRASER UNIVERSITY
Department of Economics

Econ 305
Intermediate Macroeconomic Theory

Prof. Kasa
Fall 2015

PROBLEM SET 3
(Solutions)

1. (25 points). There has been a lot of recent debate about the effects of ‘fiscal austerity’. Suppose the government decides to permanently reduce spending, perhaps based on the belief that that the budget deficit is ‘too high’. Use the real intertemporal model developed in chapter 11 of the textbook to analyze the effects of this policy on output, employment, investment, consumption, wages, and interest rates. Some people argue that fiscal austerity will harm the economy. What does the model predict? (Hint: Be sure to distinguish between output and welfare).

This is straight from the lectures. (See Lecture Slides 11, pg 16. There the case of a permanent increase in spending was depicted. The case of a permanent reduction is completely symmetric). A decrease in G increases private sector after-tax disposable income. The positive wealth effect causes the N^s curve to shift up. Lower employment then causes the Y^s curve to shift up. Since the spending cut is viewed as permanent, it will produce nearly a one-for-one increase in private consumption, so overall demand will not change (Y^d doesn't shift). As a result, the market-clearing interest rate rises. Intertemporal substitution then causes labor supply to increase, so N^s shifts partially back toward its original position (which then causes Y^s to partially shift back to!). At the end of the day, output is lower, wages and interest rates are higher, and private spending is higher. The main point of this question is to note that fiscal austerity is indeed ‘contractionary’, since output falls, but that isn't necessarily a bad thing in terms of welfare (at least according to this model). The only reason output falls is that people are wealthier and are enjoying more leisure!

2. (25 points). One of the things that makes economics difficult is that expectations about the future can have effects today. Use the real intertemporal model from Chapter 11 to analyze the effects today of an anticipated increase in *future* productivity. What happens to current output, employment, consumption, and investment. Suppose the expectations turn out to be incorrect, and productivity turns out to be lower than expected. What happens next period? (Hint: It might help to use graphs to illustrate your reasoning).

The first part of this question is again straight from the lectures and the book (for example, see Figure 11.24, pg 379, in the book). Expectations of higher future productivity increase investment spending. (And perhaps private consumption as well, due to a perceived wealth effect). The Y^d shifts out, which raises the market-clearing interest rate. The higher interest rate moderates the higher demand for investment and consumption.

It also produces an outward shift of the N^s curve, due to intertemporal substitution. This increases current employment. Interestingly, the mere expectation of higher productivity produces a 'boom' today. Of course, expectations can be wrong. If they are, and the anticipated productivity increase never materializes, then in the future, people anticipate (relatively) lower productivity in the future, and everything works in reverse. Some people interpret the recession which followed the bursting of the dotcom boom in the late 1990s this way.