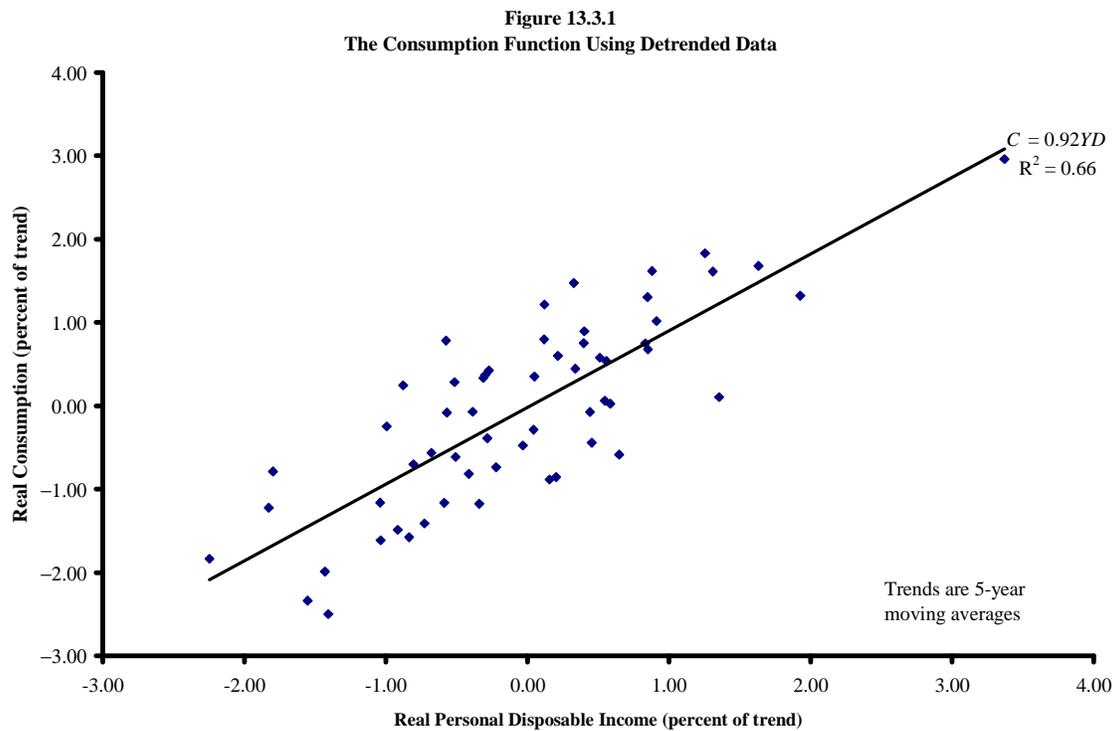


Chapter 13 Selected Answers

Problem 13.3: There are various ways to detrend the data. Figure 13.3.1 expresses the detrended data as percentage deviations from a 5-year centered moving average. The regression line in Figure 13.3.1 provides an estimate of the marginal propensity to consume of $mpc = 0.92$. The multiplier estimated in the text in equation (3.17) was $\mu = 2.9$. Here, using the formula for the multiplier in equation (13.16) and a tax rate of 0.27, the multiplier is almost the same:

$$\mu = \frac{1}{1 - 0.92(1 - 0.27)} = 3.0.$$



Problem 13.5:

- (a) $\tau = 1/6 = 16.67$ percent
- (b) $\Delta Y = 400$
- (c) $\Delta Y = 900$; $\tau = 12.28$ percent
- (e) $\Delta Y = 100$; $\tau = 18.37$ percent

Problem 13.6:

See *Errata* for p. 534, *Problem 3.16*. The problem is incorrect as printed: the correct value for $tr_0 = 500.00$ (not 666.67). At the correct value, the budget will balance. At the printed value, the budget should show a deficit of 51.29. If this value for the deficit – rather than a balanced budget – is taken as the target for policy, then the remainder of the problem works. However, not only does the budget balance with the correction $tr_0 = 500.00$, but the numbers are all much easier to work with.

Problem 13.7:

- (a) $Y = 3,400$ and $\tau = 0.1471$
- (b) $\Delta Y = 193.50$; $\Delta \text{Deficit} = 21.40$
- (c) $\Delta Y = 0$; $\tau = 0.1618$
- (d) $\Delta Y = -107.50$
- (e) $\Delta Y = 107.50$

Problem 13.8:

- (a) $Y = 4,200$
- (b) $\Delta Y = 394$; $\Delta \text{Deficit} = 44$
- (c) $\Delta Y = -100$; $\tau = 12.19$ percent

Problem 13.12:

- (b) shifts right
- (d) shifts left.
- (f) shifts left.

Problem 13.13.

- (a) reduces Y ; reduces rr
- (c) reduces Y ; reduces rr
- (e) reduces Y ; reduces rr
- (g) increases Y ; increases rr

Problem 13.14:

- (b) reduces Y ; increases rr