

## Introductory Macroeconomics

In-Tutorial #4  
Week Starting 29 March 2021

### Questions.

1. Consider the *savings-investment* approach to a simple Keynesian model without government purchases or taxes. The economy is described by

$$C = \bar{C} + cY$$
$$I = \bar{I}$$

with specific numerical values  $\bar{C} = 1600$ ,  $\bar{I} = 1000$  and marginal propensity to consume  $c = 0.8$ .

- (a) Using the condition  $S = \bar{I}$  derive an equation that determines the short-run equilibrium level of output.
  - (b) Solve for short-run equilibrium output.
  - (c) Provide a graphical representation for the equilibrium in this model using the condition  $S = \bar{I}$ .
2. An economy is described by the following equations:

$$C = 400 + 0.8(Y - T)$$
$$\bar{I} = 1000$$
$$\bar{G} = 3000$$
$$T = 3000 + 0.05Y$$

- (a) Find a numerical equation relating planned aggregate expenditure to output.
- (b) Solve for short-run equilibrium output.
- (c) Is the government budget in (primary) deficit or surplus at this level of equilibrium output?
- (d) What is the value of the government purchases multiplier?
- (e) Suppose potential GDP is  $Y^* = 10500$ . What level of exogenous taxation would ensure actual GDP equals potential GDP?
- (f) What are the implications for the government's budget of the tax change you identified in part (e)? What does this imply for the level of government debt?



