

2023 春季学期第一次作业

$$1.1) Y_d = Y + tr - t = Y + 62.5 - 250 = Y - 187.5$$

$$Y_{MC} = 100 + 0.8Y_d = 100 + 0.8(Y - 187.5) = 0.8Y - 50$$

$$Y_{MI} = C + i + g = 0.8Y - 50 + 50 + 200 = 0.8Y + 200$$

解得 $Y = 10000$ (100亿美元)

$$12) \text{投资乘数 } k_i = \frac{1}{1 - MPC} = \frac{1}{1 - 0.8} = 5$$

$$\text{政府支出乘数 } k_g = \frac{1}{1 - \beta} = \frac{1}{1 - 0.8} = 5$$

$$\text{税收乘数 } k_t = \frac{-\beta}{1 - \beta} = \frac{-0.8}{1 - 0.8} = -4$$

$$\text{转移支付乘数 } k_{tr} = \frac{\beta}{1 - \beta} = \frac{0.8}{1 - 0.8} = 4$$

$$\text{平衡预算乘数 } k_b = \frac{\Delta Y}{\Delta G} = \frac{\Delta Y}{\Delta t} = \frac{1 - \beta}{1 - \beta} = 1$$

$$2.11) \Delta Y = 1200 - 1000 = 200$$

$$\Delta G = \frac{\Delta Y}{k_g} = \frac{200}{5} = 40$$

答: 需40亿美元

$$12) \Delta t = \frac{\Delta Y}{k_t} = \frac{200}{-4} = -50$$

答: 需50亿美元

$$13) k_b = \frac{\Delta Y}{\Delta G} = \frac{\Delta Y}{\Delta t} = 1$$

答: 需200亿美元

$$\therefore \Delta G = \Delta t = 200$$

$$3. S_1 = -1600 + 0.25Y_{d1} = 400 \text{ 解得 } Y_{d1} = 8000$$

$$S_2 = -1600 + 0.25Y_{d2} = 600 \text{ 解得 } Y_{d2} = 8800$$

$$\Delta Y = Y_{d2} - Y_{d1} = 800$$

$$4.11) Y_d = Y - t = Y - 600$$

$$Y_{MC} = 1000 + 0.75Y_d = 0.75Y + 550$$

$$Y_{MI} = C + i + g = 0.75Y + 550 + 800 + 750 = 0.75Y + 2100$$

$$\text{解得 } Y = 8400, Y_d = 7800$$

$$12) C = 1000 + 0.75Y_d = 6850$$

13) 私人储蓄 $S_p = Y_d - C = 7800 - 6850 = 950$

政府储蓄 $S_g = T - G = 600 - 750 = -150$

14) $KI = \frac{1}{1-MPC} = \frac{1}{1-0.75} = 4$

5. 已知 $C=600$, g, tr, t 各减 300, $MPS=0.2$

$\beta = MPC = 1 - MPS = 1 - 0.2 = 0.8$ 且 $C = \alpha + 0.8Y_d$

原均衡收入 $Y_1 = \frac{C + i + g + \beta tr - \beta t}{1 - \beta}$

新均衡收入 $Y_2 = \frac{C + i + g - 300 + \beta(tr - 300) - \beta(t - 300)}{1 - \beta} = \frac{C + i + g + \beta tr - \beta t}{1 - \beta} + \frac{-300 - 300\beta + 300\beta}{1 - \beta}$

$\Delta Y = Y_2 - Y_1 = \frac{-300}{1 - \beta} = \frac{-300}{1 - 0.8} = -1500$

附加题: 已知 $C = 30 + 0.8Y_d$ $tn = t - tr = 50$ $i = 60$ $g = 50$ $nx = 50 - 0.05Y$

11) $Y_d = Y - tn = Y - 50$ 且 $C = 30 + 0.8Y - 40 = 0.8Y - 10$

且 $Y = C + i + g + nx = 0.8Y - 10 + 60 + 50 + 50 - 0.05Y = 0.75Y + 150$

解得 $Y = 600$

12) $nx = 50 - 0.05Y = 50 - 0.05 \times 600 = 20$

13) $KI = \frac{1}{1 - \beta + \gamma} = \frac{1}{1 - 0.8 + 0.05} = 4$

14) 当投资增长到 70 时, 有 $Y_2 = C + i_2 + g + nx = 0.8Y - 10 + 70 + 50 + 50 - 0.05Y = 0.75Y + 160$

解得 $Y_2 = 640$ $nx_2 = 18$

15) 当净出口变为 $nx = 40 - 0.05Y$ 时, 有 $Y_3 = C + i + g + nx_2 = 0.8Y - 10 + 60 + 50 + 40 - 0.05Y$
 $= 0.75Y + 140$

解得 $Y_3 = 560$, $nx_3 = 12$