

宏观第2次作业

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$$1. (1) y_d = y - (t - t_r)$$

$$y = C + i + g$$

$$y = 8y - 0.8 \times (250 - 62.5) + 100 + 250$$

$$0.2y = 200$$

$$y = 1000$$

$$(2) y = \alpha + \beta[y - (t - t_r)] + i + g$$

$$(1 - \beta)y = \alpha + i + g - \beta t + \beta t_r$$

$$y = \frac{\alpha + i + g - \beta t + \beta t_r}{1 - \beta}$$

$$k_i = \frac{1}{1 - \beta} = \frac{1}{0.2} = 5$$

$$k_g = \frac{1}{1 - \beta} = 5$$

$$k_t = \frac{-\beta}{1 - \beta} = -4$$

$$k_{t_r} = \frac{\beta}{1 - \beta} = 4$$

$$k_b = 1$$

$$2. (1) \Delta y = k_g \Delta g$$

$$200 = 5 \Delta g$$

$$\Delta g = 40$$

$$(2) -\Delta y = k_t \Delta t$$

$$-200 = -4 \Delta t$$

$$\Delta t = 50$$

$$(3) \Delta g = \Delta t$$

$$\Delta y = k_g \Delta g + k_t \Delta t$$

$$200 = (k_g + k_t) \Delta g$$

$$\Delta g = \Delta t = 200$$

$$3. \Delta y = k_i \Delta i = \frac{1}{0.25} \times 200 = 800$$

$$4. (1) y_d = y - t$$

$$y = C + i + g$$

$$y = 1000 + 0.75(y - 600) + 1550$$

$$0.25y = 2100$$

$$y = 8400$$

$$y_d = y - t = 7800$$

$$(2) C = 1000 + 0.75 \times 7800 = 6850$$

$$(3) t + S = i + g$$

$$600 + S = 1550$$

$$S = 950$$

$$S_g = t - g = -150$$

$$(4) k_i = \frac{1}{1 - 0.75} = 4$$

$$J. \quad \Delta g = \frac{1}{0.2} \times 300 = 1500$$

$$\Delta t_r = \frac{1-0.2}{0.2} \times 300 = 1200$$

$$\Delta t = -\frac{1-0.2}{0.2} \times 300 = -1200$$

$$\Delta y = \Delta C - \Delta g - \Delta t_r - \Delta t$$

$$= 3000 - 1500 - 1200 + 1200$$

$$= 1500$$

$$\Delta C = 600 + 600 \times (1-0.2) + 600 \times (1-0.2)^2 + \dots + 600 \times (1-0.2)^n$$

$$= \frac{600(1-0.8^n)}{1-0.8}$$

$$= 3000$$

附加题

$$1. (1) \quad y_d = y - t_n$$

$$y = c + i + g + nx$$

$$y = 30 + 0.8(y - 50) + 10 + 50 - 0.05y$$

$$0.25y = 150$$

$$y = 600$$

$$(4) \quad y' = y + \Delta y = y + k_i \Delta i$$

$$= 600 + 4 \times 10$$

$$= 640$$

$$nx = 50 - 0.05 \times 640 = 18$$

$$5) \quad y = c + i + g + nx'$$

$$0.25y = 140$$

$$y = 560$$

$$nx' = 40 - 0.05 \times 560 = 12$$

$$(2) \quad nx = 50 - 0.05 \times 600 = 20$$

$$(3) \quad k_i = \frac{1}{1-0.8+0.05} = 4$$