

1.

If the PPP holds,

$$\varepsilon = e \frac{P}{P^*} = 1 \implies e = \frac{P^*}{P}.$$

Employing the formula, we can solve the Price and the Predicted column. However, for the actual exchange rate, it lacks the information about the real exchange rate.

Country	Currency	Big-Mac Price	Exchange rate (per US dollar)	
			Predicted (PPP)	Actual
USA	Dollar	5	1	1
China	Yuan	20	4	7
Japan	Yen	375	75	100
UK	Pound	4	0.8	?

2.

(1).

As Y , T and r are exogenous variables, we firstly compute

$$C = 1000 + \frac{3}{4}(Y - T) = 6400,$$

$$I = 1200 - 100r^* = 700.$$

Then we have

$$S = Y - C - G = 600,$$

$$\text{Excess Savings} = S - I = -100,$$

$$X = \text{Excess Savings} = -100.$$

(2).

To achieve the equilibrium,

$$500 - 200\varepsilon = X(\varepsilon) = \text{Excess Savings} \implies \varepsilon = 3.$$

(3).

With G rising to 1200 and Y and T unchanged,

$$S_{ng} = Y - C - T = 800,$$

$$S = Y - C - G = 400,$$

$$\text{Excess Savings} = S - I = -300,$$

$$X = \text{Excess Savings} = -300.$$

Again, we can compute that

$$500 - 200\varepsilon = X(\varepsilon) = \text{Excess Savings} \implies \varepsilon = 4.$$