

Question 1 Fill in the blanks. You must show your work.

Year	2014	2015
Nominal gross national income (GNI) (\$ billion)	291.53	358.97
Factor income sent abroad (\$ billion)	68.30	75.90
Factor income earned abroad (\$ billion) <i>net</i>	8.13	9.49
Nominal gross domestic product (GDP) (\$ billion)		358.97
GDP deflator	100	100.88
Real GDP (\$ billion)		

Net foreign factor income = 8.13

Question 2 Fill in the blanks. You must show your work.

Year	2012	2013	2014	2015
Consumer price index (CPI)	99.08	100.55	102.51	107.52
Inflation rate (%)	-0.92	1.48	1.95	4.89
Employed (millions)	12.50	12.60	12.85	13.05
Unemployed (millions)	0.99	0.71	0.68	0.61
Population (millions)	20.75	21.48	21.82	22.02
Unemployment rate (%)	7.94	5.33	5.03	4.47

inflation rate 2014

$$= \frac{CPI_{2014} - CPI_{2013}}{CPI_{2013}} \times 100 = \frac{102.51 - 100.55}{100.55} \times 100 = 1.95$$

inflation rate 2015

$$\frac{CPI_{2015} - CPI_{2014}}{CPI_{2014}} = \frac{107.52 - 102.51}{102.51} \times 100 = 4.89$$

unemployment rate = $\frac{\text{unemploy}}{\text{labor force}}$ labor force = unemploy + employ

in 2013 labor force = 12.60 + 0.71

in 2012 labor force = 12.50 + 0.99

$$= 13.31$$

$$= 13.49$$

$$\text{unemployment rate} = \frac{0.71}{13.31} \times 100 = 5.33$$

$$\text{unemployment rate} = \frac{0.99}{13.49} \times 100$$

$$= 7.34$$

Question 3 Calculate GDP and GNP. You must show your work.

Item	\$ billion
Imports	289
Transfer payments	253
Saving	82
Exports	234
Income from employment	1160
Taxation	396
Consumer spending	745
Investment	229
Net factor income from abroad	-111
Government spending on goods and services	437

$$GDP = C + I + G + X - M$$

$$= 745 + 229 + 437 + 234 - 289$$

$$= 1356$$

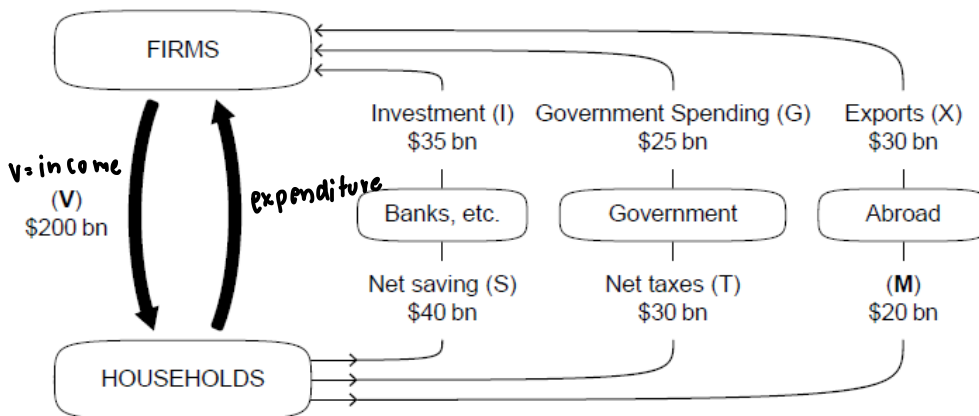
$$GNP = GDP - NFFI$$

$$= 1356 - (-111)$$

$$= 1356 + 111$$

$$= 1467$$

Question 4 Answer the following questions.



4.1 What do the flows (V) and (M) represent?

V = income, M = import

4.2 Does the government run a budget deficit or surplus? By how much?

surplus \$5

4.3 Does the country run a trade deficit or surplus? By how much?

surplus \$10

4.4 Is the economy in equilibrium? Why or why not?

equilibrium because leakage and injection are equal.

Question 5 Why does CPI tend to be higher than GDP deflator?

Year	Consumer price index (CPI)	GDP deflator	GDP (\$ million)
2014	100	100	4465
2015	105.35	105.11	4814
2016	109.21	108.92	5026

higher than because gdp deflator consist of consumption, investment, government spending, export not including import, but CPI has import. CPI is consumption of people in the country measuring change price of goods and services in the country and foreign country.

Question 6 Answer the following questions.

$$\sum P_{2014} \times Q_{fixed}$$

$$= (12.9)(10) + (1.25)(100) + (46)(10) \\ = 129 + 125 + 460 \\ = 714$$

	Price per unit in dollars (\$)	
	2013	2014
Pizza	12.50	12.90
Chocolate milk (litres)	1.15	1.25
Jazz concert	45.00	46.00
Total cost of the typical basket		

$$\sum P_{2013} \times Q_{fixed}$$

$$= (12.5)(10) + (1.15)(100) + (45)(10) \\ = 125 + 115 + 450 \\ = 690$$

The typical basket of goods purchased by an average consumer consists of 10 pizzas, 100 litres of chocolate milk and 10 jazz concerts.

6.1 With 2013 as the base year, calculate CPI of 2013 and 2014.

$$CPI_{2013} = \frac{\sum P_{2013} \times Q_{fixed}}{\sum P_{2013} \times Q_{fixed}} \times 100 = 100 \quad CPI_{2014} = \frac{\sum P_{2014} \times Q_{fixed}}{\sum P_{2013} \times Q_{fixed}} \times 100$$

$$CPI_{2013} = 100 \quad = \frac{714}{690} \times 100 = 103.48$$

$$CPI_{2014} = 103.48$$

6.2 Calculate the inflation rate of 2014.

$$inflation\ rate = \frac{CPI_{2014} - CPI_{2013}}{CPI_{2013}} = \frac{103.48 - 100}{100} = 0.0348$$

$$\text{gdp deflator} = \frac{\text{nominal}}{\text{real}} \times 100$$

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Question 7 Fill in the blanks. You must show your work.

Year	Nominal GDP (\$ billions)	GDP deflator	Real GDP (\$ billions)	Annual real growth rate (%)	Population	Real GDP per capita (\$)
2014	308.12	98.9	311.55		13 273 644	2.35
2015	321.99	100	321.99	3.35	13 340 012	2.41
2016	332.65	102.2	325.49	1.09	13 473 412	2.42

growth rate 2015

$$= \frac{\text{rgdp}_{2015} - \text{rgdp}_{2014}}{\text{rgdp}_{2014}} \times 100$$

$$= \frac{321.99 - 311.55}{311.55} \times 100$$

$$= 3.35$$

growth rate 2016

$$= \frac{\text{rgdp}_{2016} - \text{rgdp}_{2015}}{\text{rgdp}_{2015}} \times 100$$

$$= \frac{325.49 - 321.99}{321.99} \times 100$$

$$= 1.09$$

year 2014 $98.9 = \frac{308.12}{\text{real gdp}} \times 100$

real gdp per capita = $\frac{\text{real gdp}}{\text{population}}$

real gdp = $\frac{308.12}{98.9} \times 100 = 311.55$

year 2014 real gdp per capita = $\frac{31155000}{13,273,644} = 2.35$

year 2015 $100 = \frac{321.99}{\text{real gdp}} \times 100$

real gdp = $\frac{321.99}{100} \times 100 = 321.99$

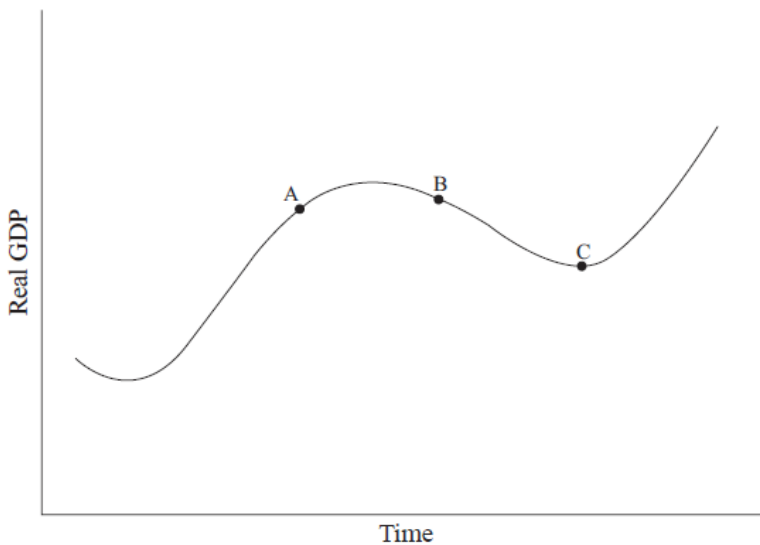
year 2015 " " = $\frac{32199000}{13,340,012} = 2.41$

year 2016 $102.2 = \frac{332.65}{\text{real gdp}} \times 100$

real gdp = $\frac{332.65}{102.2} \times 100 = 325.49$

year 2016 " " = $\frac{32549000}{13,473,412} = 2.42$

Question 8 Based on the data above, which position – A, B, or C – best describes the economy in 2016? Why?



A = expansion: positive growth rate that is confidence time to invest so output and employment are grow up to a peak this time is better standard of living, gdp is growth

B = recession: negative growth rate, economic down term, out put down, economy effect from bad situation after peak point C = trough = down term, but it will better than this time in the future

Question 9 Answer the following questions.

Country A is a closed economy with no government. The marginal propensity to save in the country is 0.25.

9.1 Calculate the value of the (investment) multiplier.

save = 0.25

$$\frac{1}{1 - c_1 + M_1} = \frac{1}{1 - 0.25} = 4$$

9.2 Due to the initial investment made by firms and the multiplier effect, the (equilibrium) output in the economy has increased by \$200m. Calculate the value of the initial investment.

$$\frac{\Delta Y^d}{\Delta I} = \frac{1}{0.25} = \frac{200 \text{ m}}{\Delta I} \quad \Delta I = (200 \text{ m})(0.25) = 50 \text{ m}$$

Country B is an open economy with government.

9.3 Do you think the multiplier effect in Country B will be larger than that of Country A? Why or why not?

Country B larger than Country A because Country B has export and import that it will motivate economy in countries more than Country A which closed country. Country B can trade with others, but Country A only trade in own country.