Answer on Question #40605 - Economics - Macroeconomics

Assignment

For the given data calculate the nominal and real economic growth rate for the given years .Also calculate the gdp deflator for the given data. (Assume 1997 as base year.)

year	*apples*		*computers*		*pizza*	
	price	*quantity*	*price*	*quantity*	*price*	*quantity*
1997	*$0.45*	*475*	*$1100*	*70*	*$7*	*380*
1998	*$0.48*	*510*	*$1050*	*85*	*$8*	*390*
1999	*$0.50*	*500*	*$1000*	*100*	*$9*	*400*

Solution

First of all, we have to calculate nominal GDP for three years

Nominal GDP 1997 = 0,45*475 + 1100*70 + 7*380 = 79873.75

Nominal GDP 1998 = 0,48*510 + 1050*85 + 8*390 = 92614.80

Nominal GDP 1999 = 0,50*500 + 1000*100 + 9*400 = 103850.00

The growth rate is

Growth rate 1998 = (GDP 1998 - GDP 1997)/ GDP 1997*100% = 15.95%

Growth rate 1999 = (GDP 1999 - GDP 1997)/ GDP 1997*100% = 30.03%

The next step is to calculate real GDP for three years

Real GDP 1997 = 0,45*475 + 1100*70 + 7*380 = 79873.75

Real GDP 1998 = 0,45*510 + 1100*85 + 7*390 = 96459.50

Real GDP 1999 = 0,45*500 + 1100*100 + 7*400 = 113025.00

The growth rate is

Growth rate 1998 = (GDP 1998 - GDP 1997)/ GDP 1997*100% = 20.76%

Growth rate 1999 = (GDP 1999 - GDP 1997)/ GDP 1997*100% = 41.50%

The formula for GDP deflator is

GDP Deflator = (Nominal GDP/Real GDP) * 100%

So,

GDP Deflator 1997 = (79873.75/79873.75) * 100% = 100% (base year)

GDP Deflator 1998 = (92614.80/96459.50) * 100% = 96.01%

GDP Deflator 1999 = (103850.00/113025.00) * 100% = 91.88%