

MACROECONOMICS

measuring economic activities (02)



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Nominal and Real GDP

It explains how adjusting for price changes allows us to distinguish between actual and real growth, and growth caused by inflation.

هذا المحور يشرح لنا كيف أن تعديل قيمة الناتج الوطني أو المحلي بالنسبة لتغيرات الأسعار يساعدنا للتمييز جيدا بين النمو الاقتصادي الحقيقي والفعلي وبين النمو الاقتصادي الوهمي أو الشكلي الناتج عن تضخم الأسعار.

The nominal GDP is the market value of GDP as calculated above (is measured in terms of current market values), or as is:

$$\sum P_i \times Q_i$$

Example:

	YEAR 1 Base Year		YEAR 2 Current Year	
	Q	P	Q	P
COMPUTERS	5	1000	10	500
BICYCLES	200	100	250	150
GDP	$=(5 \cdot 1000) + (200 \cdot 100) = \mathbf{25000}$		$=(10 \cdot 500) + (250 \cdot 150) = \mathbf{42500}$	

The Growth Rate

$$= \frac{\textit{Current year's GDP} - \textit{Last year's GDP}}{\textit{Last year's GDP}} \times 100$$

According to our previous example:

current Year is Year 2:

base Year here is the last Year: Year 1



	YEAR 1		YEAR 2	
	Q	P	Q	P
COMPUTERS	5	1000	10	500
BICYCLES	200	100	250	150
GDP	$=(5.1000)+(200.100)=25000$		$=(10.500)+(250.150)=42500$	
Growth rate	$/$		$70\% = \left[(42500 - 25000) / 25000 \right] \times 100$	

the GDP increase with 70%

Do we can confirm if this increase reflects the change in the quantity or the price?

NO

we need to calculate the Real GDP to accurately answer that question.

The Real GDP

Measures:

The GDP of the two years at the same prices of certain base year.

that means we use the prices of year 1 but we change the quantities.



	YEAR 1		YEAR 2	
	Q	P	Q	P
COMPUTERS	5	1000	10	500
BICYCLES	200	100	250	150
GDP	$=(5 \cdot 1000) + (200 \cdot 100) = \mathbf{25000}$		$=(10 \cdot 500) + (250 \cdot 150) = \mathbf{42500}$	
REAL GDP	$=(5 \cdot 1000) + (200 \cdot 100) = \mathbf{25000}$		$=(10 \cdot 1000) + (250 \cdot 100) = \mathbf{35000}$	

The Real GDP in Base year

=

The nominal GDP in Base year

because we used the same prices

	YEAR 1		YEAR 2	
	Q	P	Q	P
COMPUTERS	5	1000	10	500
BICYCLES	200	100	250	150
GDP	$=(5.1000)+(200.100)=25000$		$=(10.500)+(250.150)=42500$	
REAL GDP	$=(5.1000)+(200.100)=25000$		$=(10.1000)+(250.100)=35000$	
REAL Growth RATE	/		$40\% = \left[(35000 - 25000) / 25000 \right] \times 100$	

NOW we can compare the values without any confusion

**because we removed the effect of price
changes.**