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Ex: - toyota (1000 cars) $\Rightarrow Q$

Price of toyota = \$ 500

Find GDP :-

$$\begin{aligned} \text{GDP} &= Q \times P \\ &= 1000 \times 500 = \$ 500,000 \end{aligned}$$

\rightarrow Sony (20 cameras)

Price of camera = \$ 50

Find GDP :- $\text{GDP} = \text{GDP}_{\text{toyota}} + \text{GDP}_{\text{sony}}$

$$\begin{aligned} \text{GDP} &= 500,000 + (20 \times 50) \\ &= \$ 501,000 \end{aligned}$$

* Types of goods :-

- Intermediate goods
- Final goods

* السلع الوسيطة تستخدم في صناعة السلع الأخرى

* السلع النهائية تستخدم في الحياة اليومية

EX: - Toyota products 100 cars, price = 1000\$
 40 of them have been sold
 the remainder goes to inventory
 Find the GDP :-

القيمة المضافة في GDP هو ما تم بيعه
 من اياهم

$$GDP = Q \times P$$

$$= 40 \times 1000 = \$100,000$$

* GDP excludes nonproductive transactions.
 لا تدخل في حساب GDP المعاملات غير المنتجة
 مثل المعاملات التي تتم مقابل عمل لا ينتج عنه

* Value added method

$$VAM = \text{Final goods value} - \text{intermediate goods value}$$

EX: - BMW products | car
 Price of car = 20k

* wheels: price of wheels = 5k

* Leathers = 1k

Find GDP :-

$$GDP = Q \times P = 20k \times 1$$

$$= 20k$$

(القيمة المضافة)

Final : القيمة النهائية

الطود والحدود : Intermediate

intermediate.

K : ألف

الطريقة

(2) :- VAM = 20K - (5K + 1K)

BMW : 6K
GDP = 20K - 6K

= 14K

* VAM wheels = Final - intermediate = 5K - 0 = 5K

القيمة المضافة
غير صافية

* VAM Leather = 1K - 0 = 1K

GDP = Sum of VAM
= 14K + 5K + 1K
= 20K

* الأهم التي لا تدخل في GDP

- 1) second hand purchase
- 2) financial transactions (private transfer payments)
- 3) ~~the~~ public transfer payments
- 4) stock market transactions

* Two ways of looking at GDP :-
(Spending and Income).

* Expenditure approach منهجية النفقات } طريقة
* Income approach منهجية الدخل } GDP

* closed economy: Exports and imports are zero

Local production = Y = المحور الإنتاجي

* Customer :- Households \rightarrow Consumption C

المستهلكون الحكومة \rightarrow G

private sector (business) \Rightarrow investment I

Local production (output) Y and C, G, I

* $Y = C + I + G$ طريقة \rightarrow Expenditure approach

الدخل وغيره من مخرجات الإنتاج

* if $Y = C + I + G \Rightarrow$ equilibrium

* if $Y > C + I + G \Rightarrow$ inventory increase (surplus)

* if $Y < C + I + G \Rightarrow$ inventory decrease

حكومة قطاع خاص كالات
 ↑ ↑ ↑

* If $Y = C + I + G$:-

Y is the GDP

* C consists of two things :-

- 1) Durable goods بلع معمرة
- 2) non-durable goods بلع غير معمرة

* I consist of :- 1) residential investment استثمار سكني
 2) non-residential investment استثمار غير سكني

* G consist of :- government purchases and government investment

* In open economy :-

$$Y + M = C + I + G + X$$

M :- import , X :- export

\Rightarrow :- Equilibrium

$$GDP = Y = C + I_n + G + X_n - M$$

I :- net investment , X_n :- net export

* Gross and net investment :-

$$\text{Net investment} = \text{Gross Investment} - \text{Depreciation}$$

$$\text{Net export} = \text{Export} - \text{import}$$

فإن تكون مبيعاتنا أكبر من الواردات

* if $X > M$: Trade surplus

if $X < M$: Trade deficit

if $X = M$: Trade balance

* GDP using income approach :-

1) compensation of employees

2) Rents , 3) interest , 4) Proprietors income

5) corporate profit , 6) taxes

$$\text{National Income} = 1 + 2 + 3 + 4 + 5 + 6$$

إجمالي الدخل القومي

$$\text{GDP} = \text{National Income} + \text{foreign factor income}$$

Citizen factor income

الدخل الناتج عن عواملنا في الخارج

(موظفون دولتنا بالخارج)

+ Consumption of fixed capital dep

National Income

- + Foreign factor income
- + Consumption of fixed capital (Depreciation)
- Citizen factor income abroad

GDP

* error = statistical discrepancy

* Corporate profits = ???

- 1) dividends
- 2) taxes
- 3) undistributed corporate profits

* Net domestic income or products

$$NDP = GDP - \text{Depreciation}$$

* Personal Income

$$\begin{aligned} \text{Personal Income} = & \text{National Income} \\ & - \text{taxes} \\ & - \text{social security contribution} \\ & - \text{corporate income taxes} \\ & - \text{undistributed corporate profits} \\ & + \text{transfer payments} \end{aligned}$$

* Personal saving = Personal income
 - Personal income taxes
 - Consumption

* Disposable income = Income - income taxes

* Nominal and Real GDP:-

	P_{1999}	Q_{1999}	P_{2000}	Q_{2000}
EX:-	100	2000	110	2000

1) Find $NGDP_{1999}$, 2) Find $NGDP_{2000}$

3) Find $RGDP_{1999}$, 4) Find $RGDP_{2000}$

Sol :- 1

$$NGDP_{99} = P_{99} \times Q_{99} = 100 \times 2000 = 200,000$$

$$\text{② } NGDP_{2000} = P_{2000} \times Q_{2000} = 110 \times 2000 = 220,000$$

$$\text{③ } RGDP_{1999} = P_{99} \times Q_{99} = 100 \times 2000 = 200,000$$

$$\text{④ } RGDP_{2000} = P_{99} \times Q_{2000} = 100 \times 2000 = 200,000$$

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Real GDP

* $RGDP = NGDP \text{ at base year}$

* Price index, GDP Price index

* Price index in given year =

$$\frac{\text{Price of market basket in specific year}}{\text{Price of same market basket in base year}}$$

* Inflation 2001 = $100 \times \left(\frac{\text{Price index 2001} - \text{Price index 2000}}{\text{Price index 2000}} \right)$

* $Real\ GDP = Nominal\ GDP / \text{Price index}$

* $Nominal\ GDP = P * Q$

* $Real\ GDP = P(\text{Fixed}) * Q$

* if P increase ; Nominal GDP increases

* // // // ; Real // does not change

- * shortcomings of GDP
- * shortcomings of GDP

* non market activities :- I can not say that b

if GDP increases then non market activities increase *
or decrease

~~or~~ * Leisure

* No relation between GDP and leisure.

* distribution of output / income

* Inflation \Rightarrow Price index $\frac{100 \times \text{Price index } 2000}{\text{Price index } 2000}$