

Numericals

Self-explanatory

National Income And Related Aggregates

(Q-1) Calculate NDP_{FC} .

	Particulars	₹ in crores
(i)	GNP_{MP}	6000
(ii)	Subsidies	200
(iii)	Depreciation	100
(iv)	Factor income received from abroad	400
(v)	Indirect tax	300

(Ans-1) We are provided with GNP_{MP} and we need to get NDP_{FC} .
We need 3 changes which are: Gross to net,
National to domestic,
MP to FC.

So $GNP_{MP} - \text{depreciation} = NNP_{MP} \rightarrow (i)$
 $NNP_{MP} - \text{Net factor income from abroad} = NDP_{MP} \rightarrow (ii)$
 $NDP_{MP} - \text{Net indirect tax} = \boxed{NDP_{FC}} \rightarrow (iii)$

$\rightarrow (i) \quad 6000 - 100 = 5900 \rightarrow NNP_{MP}$

$\rightarrow (ii) \quad 5900 - (\text{Factor income from abroad} - \text{Factor income to abroad}) = NDP_{MP}$
 $\Rightarrow 5900 - (400 - 0) \rightarrow 5900 - 400 = 5500$

$\rightarrow (iii) \quad 5500 - (\text{indirect tax} - \text{subsidy}) = \boxed{NDP_{FC}}$
 $\quad \quad \quad \uparrow \quad \quad \quad \uparrow$
 $\quad \quad \quad \text{Net indirect tax}$

$\Rightarrow 5500 - (300 - 200)$

$\Rightarrow 5500 - 100 = ₹ 5400 \text{ crores}$

Hence, solved
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(Q-2) Calculate Private Income

Particulars

₹ (in crores)

i) Net domestic product at factor cost

- Private sector 1200

- Government sector 400

(ii) Net current transfers from rest-of-the-world ^(Row) 200

(iii) Current transfers from govt. 100

(iv) Interest on national debt 500

(v) Net factor income from abroad (NFIA) 50

(Ans-2) Simple formula:

$$\begin{aligned} \text{Private income} &= \text{NDP}_{fc} \text{ (accruing/belonging to pvt. sector)} \\ &+ \text{NFIA} \\ &+ \text{Int. on national debt} \\ &+ \text{Current transfers from govt.} \\ &+ \text{Net current transfers from Row} \end{aligned}$$

$$= 1200 + 50 + 500 + 100 + 200$$

$$= ₹ 2050 \text{ crores}$$

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-x-x-

Calculate private income

	Particulars	₹ in crores
(Q-3)	(i) GDP _{mp}	4000
	(ii) Int. on national debt	200
	(iii) Consumption of fixed capital / depreciation	300
	(iv) Income from property and entrepreneurship according to govt. administrative departments	400
	(v) Indirect tax	500
	(vi) Current transfers from govt.	600
	(vii) Subsidies	100
	(viii) NFIA	(-) 30
	(ix) Net current transfers from ROW	125
	(x) Savings of non-dept. enterprises	100

(Ans-3) For finding out Pvt. income, we firstly need NDP_{fc} according to pvt. sector that is \rightarrow NDP_{fc} - NDP_{fc} of govt. sector

We are provided with GDP_{mp}, we need to convert it into NDP_{fc}

$$\begin{aligned}
 \text{So } \rightarrow \text{NDP}_{fc} &= \text{GDP}_{mp} - \text{depreciation} - \text{Net indirect tax} \\
 &= 4000 - 300 - (\text{Indirect tax} - \text{subsidy}) \\
 &= 4000 - 300 - (500 - 100) \\
 &= 4000 - 300 - 400 = \underline{\underline{₹ 3300 \text{ crores}}} \rightarrow (1)
 \end{aligned}$$

$$\begin{aligned}
 \text{Now NDP}_{fc} (\text{govt. sector}) &= \text{income from prop. \& entp.} + \text{savings of non-dept. enterprises} \\
 &= 400 + 100 = \underline{\underline{₹ 500 \text{ crores}}} \rightarrow (2)
 \end{aligned}$$

$$\begin{aligned}
 \text{So, } NDP_F(\text{pvt.}) &= 1 - 2 \\
 &= NDP_F - NDP_F(\text{govt.}) \\
 &= 3300 - 500 \\
 &= \underline{\underline{\text{₹ 2800 crores}}}
 \end{aligned}$$

$$\begin{aligned}
 \text{Now } \text{pvt. income} &= NDP_F(\text{pvt.}) \\
 &+ \text{Int. on national debt} \\
 &+ NFIA \\
 &+ \text{Current transfers from govt.} \\
 &+ \text{Net " " " Row} \\
 &= 2800 \\
 &+ 200 \\
 &+ (-) 30 \\
 &+ 600 \\
 &+ 125 \\
 &= \underline{\underline{\text{₹ 3695 crores}}}
 \end{aligned}$$

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(Q-4) Calculate personal income -

Particulars	₹ (in crores)
(i) Private income	4000
(ii) Corporate tax	300
(iii) Retained earnings	500

(Ans-4) Formula :

$$\begin{aligned}
 \text{Personal income} &= \text{Pvt. income} - \text{corporate tax} - \text{corporate savings} \quad \begin{matrix} \nearrow (\text{business tax}) \\ \nearrow (\text{retained earnings}) \end{matrix} \\
 &= 4000 - 300 - 500 \\
 &= ₹ 3,200 \text{ crores}
 \end{aligned}$$

(Q-5) Calculate Personal disposable Income -

Particulars	₹ (in crores)
(i) Pvt. income	7000
(ii) Business tax	400
(iii) Miscellaneous receipts of govt. administrative departments	150
(iv) Personal direct taxes	200
(v) Savings of pvt. sector	75

(Ans-5) formula: $PDY = \text{personal income} - \text{personal direct tax} - \text{misc. receipts of govt. depts. (fees/fines)}$

$$\text{and personal income} = \text{Pvt income} - \text{corporate tax} - \text{corporate savings} \quad \begin{matrix} \nearrow (\text{business tax}) \end{matrix}$$

First we will calculate personal income through private income given.

P.T.O

$$\begin{aligned}\text{Personal income} &= 7000 - 400 - 75 \\ &= ₹ 6525 \text{ crores}\end{aligned}$$

$$\begin{aligned}\text{Now, personal disposable income} &= 6525 - 200 - 150 \\ &= ₹ 6175 \text{ crores}\end{aligned}$$

So we found that →

- (i) in calculating PDY we need personal income and
- (ii) in calculating personal income we need private income.
- (iii) in calculating pvt. income we need NDP_{Pc} of pvt. sector which we get by deducting NDP_{Pc} of govt. from total NDP_{Pc} .

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→ (GNDY)

(Q-5) Calculate Gross National Disposable Income —

Particulars	₹ in crores
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(i) National income (NNP _{fc})	2000
(ii) Net current transfers from ROW	200
(iii) Depreciation	100
(iv) NFIA	(-) 50
(v) Net indirect taxes (NIT)	250

(Ans-5) First, we calculate Net national disposable income which is given by → NNP_{fc} + NIT + Net current transfers from ROW

$$= 2000 + 250 + 200$$

$$= ₹ 2450 \text{ crores}$$

Now → GNDY = NNDY + depreciation since [Net + dep. = Gross]

$$= ₹ 2450 + 100$$

$$= ₹ 2550 \text{ crores}$$

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