VIVEKANANDA COLLEGE

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NAAC ACCREDITED 'A' GRADE

Topic: National Income Accounting

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National Income Accounting
(জাতীয় আয়ের হিসাব)

National Income (NI) (জাতীয় আয়):

It is the sum total of incomes earned by the citizens of a country during a period, say a year. It includes only those incomes which are earned from the participation in the production process (উৎপাদন প্রক্রিয়া). Economic growth (অর্থনৈতিক সমৃদ্ধি) of a country is measured by the growth of national income.

National income accounting (জাতীয় আয়ের হিসাব) provides a basic information (মৌলিক তথ্য) of economic activity (অর্থনৈতিক গতিবিধি) which has crucial importance for the formulation of economic policies (~~নি~~ নীতি)

The policies try to solve (সমাধান) macro economic problems (সমষ্টিগত অর্থনৈতিক সমস্যা) → A comprehensive (ব্যাপক) set of national income accounts can help to understand the conditions of an economy like boom, recession, depression, and with them the growing role of government.

→ Policy makers use NI figures to monitor short-run fluctuations (ওঠানামা) in economic activity as well as long-run growth trends (প্রবণতা).

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→ NI figures is useful to consider some accounting relationships that exists among some macroeconomic variables (উপাদানগুলির) (such as output (উৎপাদন), employment (কর্মসংস্থান) and price level (মূল্যস্তর) because we use these relationships to construct theoretical models.

However, it should be noted that all aspects of structural pattern of an economy are not reflected in NI accounts of a country. e.g. Per capita income (মাথাপিছু আয়) is not a correct index (সূচক) to measure the economic well being if the distribution (বিতরণ) of income is in favour of the rich.

Different concepts of National Income (জাতীয় আয়ের বিভিন্ন ধারণা) :-

There are different concepts of National Income and its measurements.

(1) Gross National Income (GNI) (মোট জাতীয় আয়) :- The aggregate (যোগফলের) income of the persons who are engaged in production and services activities in a particular period of time (say a year) of any country is called Gross National Income.

$$\boxed{GNI = \text{Total Rent} + \text{Total Wage} + \text{Total Interest} + \text{Total Profit.}}$$

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It can be calculated in two ways. One is at market price (বাজার দামে) and the other is at factor cost (উৎপাদন ব্যয়ে)

<u>GNI$_{MP}$</u> :- It is the amount received by multiplying the amount of goods and services which is produced in any country in a particular period of time (say one year) by their market prices is called Gross National Income at market price.

<u>GNI$_{FC}$</u> :- It is the amount received after deducting indirect tax from the gross national income at market price (GNImp).

$$\boxed{\therefore GNI_{FC} = GNI_{mp} - \text{Net Indirect tax.}}$$

(2) <u>Net National Income (NNI) (নীট জাতীয় আয়)</u> :- The amount received after deducting depreciation of the capital goods of a year from the gross national income (GNI) of that year is called net national income (NNI).

$$\boxed{\therefore NNI = GNI - \text{Depreciation of capital.}}$$

(3) <u>Gross National Product (GNP) (মোট জাতীয় উৎপাদন)</u> :- The aggregate money value of the amount of goods and services produced in a particular

period of time (say, a year) of any country is called gross national product (GNP).

GNP_{MP}:- The amount received by multiplying the amount of goods and services which is produced in any country in a particular period of time (say, a year) by their market prices is called gross national product at market price (GNP_{MP})

GNP_{FC}:- It is the amount received after deducting indirect taxe from the gross national product at market price.

$$\boxed{\therefore GNP_{FC} = GNP_{MP} - \text{Net indirect tax}}$$

(4.) **Net National Product (NNP) (নীট জাতীয় উৎপাদন)**:- It is the amount received after deducting depreciation of the capital goods of a year from the gross national product of that year.

$$\boxed{\therefore NNP = GNP - \text{Depreciation of Capital}}$$

(5.) **Gross Domestic Product (GDP) (মোট অভ্যন্তরীণ উৎপাদন)**:- It is the aggregate money value of the ~~final~~ amount of final goods and services produced in a particular period of time (say, a year) of any country within its national boundary.

If ~~any~~ a country engages in foreign trade, then GDP can be obtained by deducting ~~(GNP)~~ the net foreign income from abroad(NFIA) from the GNP.

$$\boxed{\therefore GDP = GNP - NFIA}$$

(6) **Net Domestic Product (NDP) (নীট অভ্যন্তরীণ উৎপাদন)**:- It is the amount received after deducting depreciation of the capital goods of a year from the GDP of that year.

$$\boxed{\therefore NDP = GDP - \text{Depreciation of Capital.}}$$

Real GDP Vs Nominal GDP:-

GDP of a country expressed in current price level of any year is called nominal GDP of that year. Whereas, if GDP of a country in different years are calculated on the basis of the price level of a specific year or base year then it is called Real GDP or GDP at fixed price.

(7) **Per Capita Income (মাথাপিছু আয়)**:-

It is the amount received by dividing the national income of a particular year of any country by the population (total) of that period of that country.

$$\boxed{\therefore \text{Per Capita Income} = \frac{\text{Total N.I.}}{\text{Total Population}}}$$

(8) Personal Income (ব্যক্তিগত আয়) :- It is the amount of income earned by a person in a fixed period of time by participating directly or indirectly in production of goods and services.

(PI) Personal Income = NI - Corporate profits
- social security contributions
- Net Interest
+ Govt. transfer payments
+ Business transfer payments
+ Dividends
+ Personal Interest Income.

(9) Personal Disposable Income (PDI) :
(ব্যক্তিগত ব্যয়যোগ্য আয়)

It is the amount of personal income left after deducting the direct tax from the personal income.

$$\boxed{PDI = PI - \text{Direct tax (প্রত্যক্ষ কর)}}$$

(10) Personal savings (ব্যক্তিগত সঞ্চয়)
= PDI - Personal Consumption expenditure - Interest paid to business - personal transfer payments to foreigners (Net)

when interest paid to business and personal transfer payments is negligible or do not exist, we say.

PDI (Y_D) = Consumption (c) + Personal savings (S).

$$\Rightarrow \boxed{Y_D = C + S}$$

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The Circular flow of income and expenditure :- (আয় - ব্যয়ের বৃত্তপ্রবাহ)

Economic activities of any country flow in a circular way. As a result of economic activities, income is created in one side and on the other side expenditure takes place. It is assumed that decisions regarding economic functions are taken by two economic agents - Households (পরিবার গোষ্ঠী) and firms (উৎপাদন প্রতিষ্ঠানসমূহ). The circular flow can explain the methods (পদ্ধতি) of measurement of GDP or NI by income (আয়) side and expenditure (ব্যয়) side of the concerned account.

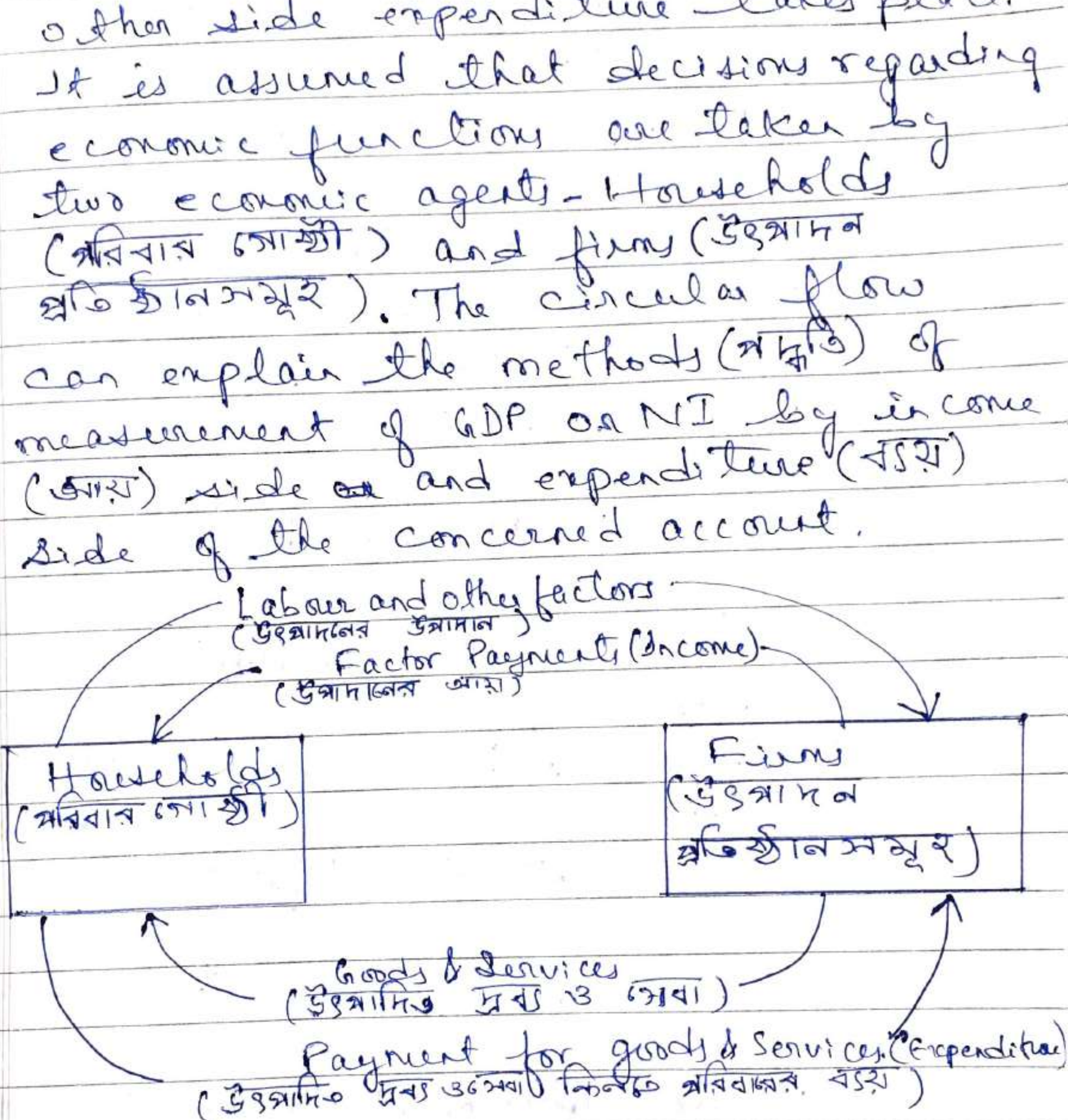

Fig. A. The circular flow of income and expenditure

There is flow of goods and factors as well as flow of money from one sector to the other sector. From this circular flow, GDP can be calculated in two ways: either from flow of money from firms

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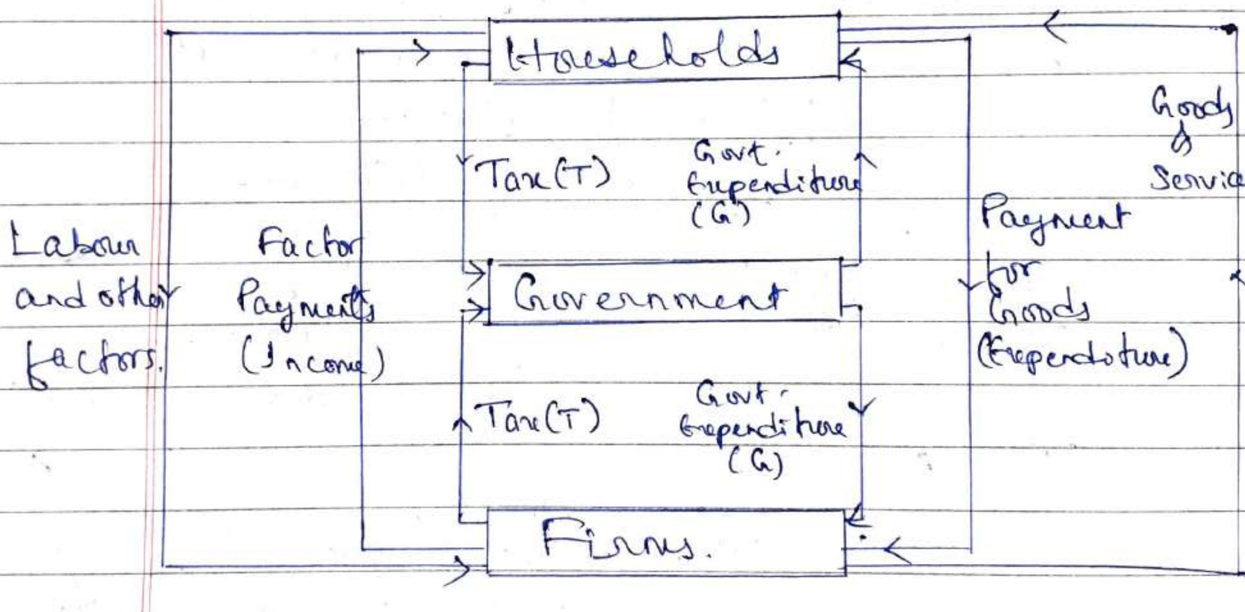
to households or from households to firms.

By the rules of accounting, expenditure by buyers (households) on the good must be equal to income to sellers (firms) of the same good. Thus total expenditure, GDP and total income are identically equal.

$\boxed{\text{Total expenditure} \equiv \text{GDP} \equiv \text{Total Income.}}$

If we take three sector economy consisting of households, firms and government the the circular flow will be as follows:



Adding government expenditure to private sector expenditure and adding government tax revenue to all other incomes, here.

$\boxed{\text{Total expenditure} \equiv \text{GDP} \equiv \text{Total Income.}}$

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Methods of measuring national Income (জাতীয় আয়ের পরিমাপ পদ্ধতি)

There are three methods of measuring national Income. They are:
(a) Product Method (উৎপাদন পদ্ধতি),
(b) Income Method (আয় পদ্ধতি), and,
(c) Expenditure Method (ব্যয় পদ্ধতি).

(a) **Product Method** (i) Final Product Method and (ii) Value added Method.

(i) **Final Product Method (চূড়ান্ত উৎপাদিত দ্রব্য পদ্ধতি)**:- In this method NI can be derived by aggregating the money value of the amount of all final goods and services produced in a particular period of time (say, a year) of any country. Here the ~~ea~~ money value of intermediate goods is not taken into account.

(ii) **Value added Method (মূল্যসংযোগ পদ্ধতি)**:
In value added method only the additional value (অতিরিক্ত মূল্য) which is created or the value added in each (প্রতিটি স্তরে) stage of production is included to avoid double counting.

Thus, if NI is measured by aggregating the amount of additional value which is created in each stage of production of the commodity produced, then the process is called value added method.

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(b) Income Method (আয় পদ্ধতি):-
As income the produced goods and services are distributed among the factors of production (উৎপাদনের উপাদানগুলি) (land, labour, capital, entrepreneur) as rent (খাজনা), wage (মজুরি), interest (সুদ) and profit (মুনাফা). NI can be derived by aggregating income of the persons who engage in production of goods and services activities in a particular period of time (say, a year) of any country. This method of measuring NI is called Income method.

(c) Expenditure Method (ব্যয় পদ্ধতি):-
The income earned by the public is spent in two ways. A part of income is used to buy consumption goods (ভোগ্য দ্রব্য) and the other part is used for investment (বিনিয়োগ).
Thus NI can be derived by aggregating total consumption expenditure and total investment expenditure in a particular period of time (say, a year) of any country. This method of measuring NI is called expenditure method.

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