# Problems in the Calculation of India's National Income

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**Abstract:**

In developing countries like India, major issues with the calculation of national income is lack of accurate data. As the population of the country is exploding, the amount of dependent and fake data is increasing inversely. The Major limitations lay in the assets which cannot be counted, or the people of the country won't allow you to gather the exact desirable data. All the occupations that are traditionally intangible make the exact value of India's National Income very low. Out of all the intangible assets in India, this is just an example of a housewife in a household. There are many such examples that cannot be counted in precision. Such as the barter system in the farming culture of India, farmers having farms and also working at some place on wages, Black money, Small vendors. This research paper focuses on important terms related to National Income, Methods of Calculating National Income and majorly problems in the calculation of National Income. After framing this paper we came to a conclusion that problems mentioned in the paper severely affects the total valuation of GDP level of the country.

**Keywords:** National Income, GDP, GNP, NDP, NNP

## Introduction:

The assessment of money of all goods and services produced by a country during a period of one year is known as the National Income of that country. National Income is the cumulative collection of various goods and services as we measure these goods in different physical units, so it is impossible to add them together because of the insufficient and inaccurate data in the under-developed and developing countries like India. Hence the common measure to test them is the unit of money.

## Important Terms and Concepts related to National Income:

There are several terms that in relation to the National Income and they are as below,

1) **Gross Domestic Product (GDP):**

   Total Monetary value of all the finished goods and services being produced in the specified territory of the country during the current financial year in known ad GDP

   **Important Components of GDP:**

   Since, GNP (Gross National Product) should equate total demand for output so expressed mathematically as:

   $GNP(Gross\ National\ Product)= C+G+I+NX+NFP$

   Where,

   **i) Consumption (C):** The total consumable spending of the domestic sector which consist of food, clothing, etc. Consumption being the largest component of GNP is accountable for approximately two-thirds of the total demand.

**ii) Goods and Services (G):** The second largest component of government purchases that includes salaries of the government employees, national defence, state and local government spending: Unemployment compensation as government transfer payments can not be included

**iii)Investment Spending (I):** Investment spending refers to business spending without including the purchase of stocks and bonds as it enhances the ability to produce in the future. Whereas investment spending, capital improvements and building machinery, and investment in housing constructions are all included in this category.

**iv) Net Exports (NX):** This component of net export is equal to exports minus imports, where exports refers to purchase of goods and services by foreign residents, and imports refers to purchase of goods and services by domestic buyers. Countries like the U.S. have exceeded its purchase of foreign goods and services over the sale of goods and services, thus creating a trade deficit resulting in a reduction of GNP.

**v) Net Factor Payments (NFP):** These payments are the net amount of payments that the economy pays to the foreigners for the utilisation of inputs to produce goods and services minus the money that the economy receives for selling the same factors of production.

**GDP at Market Price and Factor Cost are explained below:**

**i) GDP calculated at Market Price:** Gross domestic product at market price can be defined as the market value of the output of final goods and services produced in the domestic geographical area of a country during a financial year.

*GDP calculated at Market Price = GDP calculated at Factor Cost + (Indirect Taxes - Subsidies)*

**ii) GDP calculated at Factor Cost:** GDP at factor cost is the sum of net value added by all producers within the country. As the net value added gets distributed as income to the owners of factors of production. GDP is the aggregate of domestic factor incomes and fixed capital consumption (or depreciation).

*GDP calculated at Factor Cost = GDP calculated at Market Price - (Indirect Taxes + Subsidies)*

GDP calculated at factor cost includes:

i) Compensation of Employees, i.e., wages, salaries, etc.
ii) Operating Surplus, this is the profit of both unincorporated and incorporated firms.
ii) Mixed Income of Self-employed.

2) **Gross and Net Concepts:** Gross means that neither any capital consumption nor any depreciation or any deduction should be made. Whereas, net implies the

application of capital consumption and deductions already been done. Thus, depreciation is the value of difference between the gross total and the net total.

3) **National and Domestic Concepts:** The total income catted by any normal resident of the country for his/her contribution in the total production of the world for a particular year is known as national The term national refers to total accumulation covering many factors of income, being gain by the normal resident of the country ignoring those factors of productive supplied by them either from home or abroad. Contrary to this, the possibility of measuring the aggregate output or income deriving from the pre-defined geographical boundary of a country, termed as "domestic territory" resulting product, is called a domestic product.

4) **Market Prices and Factor Casts:** After the valuation of the national product at market prices refers to the total amount i.e. paid by the ultimate buyers Whereas, the national product being valued and assessed at factor cost is the amount of total earnings accrued by the factors of production contributing to the final output.

*GNP calculated at Market Price = GNP calculated at Factor Cost + (Indirect Taxes - Subsidies)*

*NNP calculated at Market Price = NNP calculated at Factor Cost + (Indirect Taxes - Subsidies)*

5) **Gross National Product:** the aggregate GDP and net factor incomes from abroad (NFIA) is known as gross national product. The calculation of GNP of India is done based on adding income earned by Indian residents who has been settled abroad, subtracting the income earned by non-residents of India i.e.,

*GNP = GDP + NFIA.*

Where, NFIA = Factor income received from abroad - Factor income paid to overseas residents

We explain GNP at Market Price and Factor Cost as below:

**i) GNP at Market Price:** When we multiply the total output produced in one year by their market prices prevalent during that year in a country, we get the Gross national product at market prices. Thus GNP calculated at market prices is considered as the gross value of final goods and services produced in a year in a country and adding net income from abroad to it.

*GNP calculated at Market Prices = GDP calculated at Market Prices + NFIA.*

**ii) GNP at Factor Cost:** GNP at factor cost eliminates the effect of indirect taxes and subsidies. It provides an estimate of the total value of the final goods and services produced during a year at the cost of production.

*GNP calculated at Factor Cost = GNP calculated at Market Price - Net Indirect Taxes + Subsidies*

6) **Net Domestic Product (NDP):** When GDP is calculated, there are no provisions for depreciation allowances (also known as capital consumption allowances). Hence, in this situation, it is difficult for GDP to disclose the complete flow of goods and services through various sectors of the economy. It is well known that certain capital goods like machines, equipment, tools, buildings. Tractors, etc., should be depreciated during production. Hence they should be replaced after a certain period. Therefore, some part of the capital can be retained as depreciation allowance. We get Net Domestic Product after the subtraction of depreciation allowance from Gross Domestic Product.

*NDP = GDP - Depreciation*

7) **Net National Product (NNP):** Derivation of NNP is by subtracting the depreciation allowance from GNP, or otherwise NNP can be measured by adding net factor income from abroad to the net domestic product. If the net or income from abroad surpasses the outflow, then. NNP > NDP. If it is less than an outflow then, NNP < NDP. If NNP = NDP, it states that the net factor income from abroad is zero. Hence,

*NNP = NDP+NFIA*

We explain NNP at market price and factor cost as below;

**i) NNP at Market Prices:** Net national product at market prices is the net value of final goods and services tested at market prices in the course of one year in a country. To get NNP calculated at market price, we need to subtract depreciation from GNP calculated at market price. So,

*NNP calculated at Market Prices = GNP calculated at Market Prices - Depreciation*

**ii) NNP at Factor Cost:** Net national product at factor cost is the net output tested at factor prices. It includes income earned by factors of production through participation in the production process, such as wages and salaries, rents, profits. This method differs from NNP calculated at market prices in that indirect taxes should be deducted, and we add subsidies to NNP calculated at market prices in order to arrive at NNP calculated at factor cost.

*NNP calculated at Factor Cost = NNP calculated at Market Prices - Indirect Taxes + Subsidies.*

*= GNP calculated at Market Prices - Depreciation - Indirect Taxes + Subsidies.*

*= National Income*

Usually, NNP calculated at market prices is higher than NNP calculated at factor cost because indirect taxes exceed government subsidies. However, NNP calculated at market prices can be less than NNP calculated at factor cost when government subsidies exceed indirect taxes.

8) **Domestic Income:** That income which is earned by factors of production within the said country from its indigenous resources

is known as domestic income or domestic product. This includes wages, salaries, rent (includes claimed house rent), interest, dividends, undistributed corporate profits. (Includes surpluses of public undertakings), mixed income that includes profits of those firms which can not be incorporated or allowed to operate, self-employed persons, partnerships, direct taxes, etc.

Hence, domestic income does not include income from abroad that can be stated as: *Domestic Income = National Income - Net Income earned from abroad*

9) **Private Income:** Income that is earned by private individuals or is irrespective of any source, productive or non-productive, and reserved income of the corporations. We can arrive private income at NNP factor cost by making certain provisions of additions and subtractions.Thus,

*Private Income = National Income (or NNP at Factor Cost) + Transfer Payments + Interest on Public Debt - Social Security - Profits and Surpluses of Public Undertakings.*

10) **Per Capita Income:** The average income of the people of a country in a particular year is known as per capita income of the people for that year. We measure the income both at current prices and at constant prices. For example, to measure the per capita income for the year 2011 at constant prices, the national income of a country can be divided by the population of that country in that year.

*Per Capita Income for 2011=National Income for 2011/ Population in 2011*

11) **Personal Income (PI):** The total of an individual's earnings during a particular period. Such as salary or wages, profits realised from passive enterprises, dividend, interest, and rental income National income, i.e.. income received must be different because some income which can be earned from social security contributions, corporate income taxes and undistributed corporate profits that is not in fact received by households and, conversely some income which is in fact received as transfer payments is not currently earned. (Transfer payments are old-age pensions. unemployment gratuity, relief payments, interest payment on the public debt, etc.).

*Personal Income = NNP at Factor Cost - Undistributed Profits - Corporate Taxes + Transfer Payment*

12) **Disposable Income (DI):** After a substantial part of personal income can be paid to government as personal taxes like income tax, personal property taxes, etc., whatever remains of personal income can be called as disposable income

*Disposable Income = Personal Income - Personal Taxes*

**Methods of Calculation of National Income:**

National Income can be calculated using three methods:

1. Production or Output Method

2. Income Method
3. Expenditure Method

**1) Production or Output Method:**

This is also known as the 'Value Added Method', National income is accessible from the output side by this method. If we go with this method, then the economy can be divided into different sectors named as, agriculture, mining, manufacturing, small enterprise, commerce, transport, communication and other services. The gross product can be calculated by adding up net values of all the production that has taken place in these all the above sectors during a given year, In order to arrive at the net value of production of a given industry, the purchases of the producers of this industry and from the producers of other industries or sectors is subtracted from the gross value of output of that industry or sector. Gross National Product is obtained by adding up the net values of production of all the Nades and sectors of the economy plus the net income from abroad. By subtracting the total amount of depreciation from the amount of gross national product, we get the net national product, or national income.

*GNP = Money value of total good and services + Net factor income received from abroad*

*NI (National Income) = GNP (Gross National Product) - Depreciation*

This method of estimating national income enables us to trace the origin of the national income aggregate up to the different sectors of the economy. Therefore, this is called national income by the industrial sector.

**2) Income Method**

This Income method has the approach of distribution towards the National Income. Calculation of national income is done after it has been distributed and appears as income earned or received by individuals of the country. Thus, according to this method, national income is obtained by aggregating incomes of all individuals in the country. All these incomes are the incomes earned by individuals by contributing their own services and the services of their property such as land and capital to the national production. Therefore, national income is measured by aggregating rent of land, salaries and wages of employees, interest on capital. profits earned by entrepreneurs (including undistributed profits of joint-stock companies) and income of self-employed people.

*NI (National Income)= Rent + Wage + Interest + Profit + Net Factor Income from Abroad*

Incomes that are earned by owners of primary factors of production are only included in national income. Transfer incomes are excluded from national income. Thus, while the wages of labourers are included, pensions of retired workers are excluded from national income. This method of estimating national income is advantageous for indicating the distribution of national income among different income groups such as landlords, capitalists, workers, etc. Therefore, this is called national income by distributive shares.

*GNP according to Income Method = Wages and Salaries + Rents + Inter + Dividend + Undistributed Corporate Profits + Mixed Incomes + Direct Taxes + Indirect Taxes + Depreciation + Net Factor Income from Abroad*

**3) Expenditure Method:**

This method is also called the Total Outlay Method of national income by this method is by adding up all the expenditures made on goods and services during a year. Income can be expensed either on consumer products and investment products. Thus, national income is received by aggregating all consumption expenses and investment expenses made by all individuals as well as the government of a country during a particular year.

*GNI (Gross National Income) = Individual expenditure + Government expenditure*

Hence, the gross national product is found by aggregating :

1) The amount spend on consumer goods and services by the individuals, called personal consumption expenditure;

2) What amount being spent by private business on replacement, renewal and new investment, is known as gross domestic private investment.

Net foreign investment is the amount spent by the foreign countries on the goods and services of the national economy over and above what this economy spends on the output of the foreign countries, ic export-Imports Whatever amount the government spends on the purchase of goods and services, In government purchases.

Thus, according to Expenditure Method

*GNP (Gross National Product) = Private Consumption Expenditure (C) + Gross Domestic Private Investment (1) + Net Foreign Investment (XM) + Government Expenditure on Goods and Services (G) C 1+X+(X- M) +G+ Net Factor Income Received from Abroad*

**Problems in Measurements of National Income:**

1) **Non-Monetised Sector:** In the estimation of national income, the assumption that the economy of the country is a moralised economy in which goods and services are exchanged for money. But in India, the quantity of goods and services produced do not come to the market for sale; these are either consumed by the producers themselves or exchanged through the Barter System of Trade. This practice is very common and significant in the agricultural

sector 5o it becomes very difficult to find out the market value of production.

The numbers suggest that the Agriculture sector produces 53% of the total workforce in the country but the output of the agriculture industry has been volatile since the last decade and half. While the annual growth declining from 8.6% in 2011-12 to -0.2% in 2014-15 to 0.8% in 2015-16 and it is gradually decreasing after every year[1]

2) **Double Income Problems:** In India, a large number of workers are engaged in many activities simultaneously. Therefore, it is difficult to make an assessment of national income for different economic activities. For example, many small farmers of India are simultaneously engaged in cottage and small industries, and in jobs in urban areas. As such. it is difficult to differentiate between their income from a number of economic activities.
3) **Absence of Particular Incomes:**

Country like India has a tradition of married women working as a housewife in most of the cases, if we take a look at the efforts they take throughout their life compared to other women/ men working for the same cause but on the wage basis, then we get to know that housewives are being considered a person without income even though they are working most of the hours in a day.

According to the Economic Survey of 2019, 60% of the women in the age group of 15-59 age( Working capacity) are engaged in the house chores being a housewife. While the india's female labour participation rate has gradually decreased from 33.1% for the year 2011-12 to 25.3% in 2017-18 and 23.4% in the year 2019.[2]

There are a number of income that doesn't get calculated as precisely as they should such as small vendors like Tea stalls, Breakfast stalls, number of small vendors in Indian market etc., whose income can be a contributing factor in the valuation of India's National Income

4) **Changing Concept Problem**: There are a number of changing concept problems in the estimation of national income of India. Different bases are used in terms of production, income and expenditure. According to that, it is very difficult to obtain accurate estimates of national income. Many new commodities emerge in the country which did not exist in the base year. Many different types of electronic gadgets and defence goods come in this category. It is difficult to find out the exact value of production of these goods at the constant prices. Thus, while it is easy to prepare estimates at current prices, it is very difficult to prepare similar estimates at constant prices.
5) **Black Money**: A parallel economy operates through black money Economic activities of this sector are neither reported nor under-reported. To avoid excise duties, production of manufacturing units is under-reported. To avoid income tax, income from different sources is under-reported. So the estimate of national income goes wrong. The size of black money is inflating, so correct estimation of national income has become very difficult.

According to the reports of three major institutes,

1. According to the report of The National Institute for Public Finance andProduct Policy(NIPFP) concluded from 1997 to 2009 money flow of illicit money in the foreign countries was from 0.2 to 7.4 % of India's Gross Domestic.
2. According to the report of the National Council of Applied Economic Research, The aggregate amount of illicit money accumulated in foreign countries from 1980 to 2010 was about 2.8% of Gross Domestic Product.
3. According to the report of National Institute of Financial Management (NIFM), total illicit money flow from India into foreign countries was Rs. 941837 Crore from the year 1990 to 2008[3.

6)**Regional Differences**: Circumstances differ in different regions of the country. Conditions differ not only within each State but also in two different states. Under such circumstances, it becomes very difficult to obtain required information through sample surveys or to use the same data of one region for another region in expanded form.

**Conclusion:**

As the title of the presented research paper, there are a number of problems in the calculation of India's National Income such as, non-monetized sectors, Lack of Distinct Differentiation of Economic Activities, black money, Inter- regional difference respectively affects the total valuation and the progression or advancement of National Income of respective countries. To overcome these problems the government should regulate strict policies, majorly for the agricultural sector and black money. One of the major sources for the same could be the accurate flow of information which doesn't really reach to the government in the proper and accurate format.

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