SRIRAM's IAS

ECONOMICS: AN INTRODUCTION

Definition

Economics as a word comes from the Greek: oikos means 'family, household, or estate', and nomos stands for 'custom, law' etc. As the management of household, so the management of national economy. The scale is different but the nature of the operation and the principles that underlie both are the same. The basic assumption that connects both is the scarcity of resources and the need to manage them judiciously as well as equitably. Rational management of scarce resources is the substance of economics. Since last century, rationality has come to include equity and sustainability as well as that adds the long term dimension to it.

Take for example, land. It is a scarce resource. India has 15% of global population but only 2.4% of the global land. Thus there is huge pressure on land. It is needed for agriculture (food and non-food); manufacturing; residential purposes and so on. There should be rational and judicious use of land for which economics can help to make public policy. The challenges associated with land use are being grappled with presently , for instance in the Land Acquisition and Rehabilitation and Resettlement Act 2013 where the land claims of farmers, industry and other sections are addressed.

Similarly, water is scarce and is becoming even more so. There are demands for agricultural, industrial, domestic and other uses. How to apportion the existing amount of water among all these users is a public policy challenge being considered by the Draft National Water Policy (NWP, 2012). Same is the purpose of the food security law and land acquisition law.

Broadly, economics is a social science that studies human activity aimed at satisfying needs and wants. It encompasses production, distribution, trade and consumption of goods and services

Initially, economics focused on wealth and later welfare. That is, initially, what mattered was creation of wealth at any cost. It did not interest economists to be sensitive to the human dimension- the misery that it produced. Later, by the late 19th century, there was hue and cry about children being made to overwork and receive paltry payment for their work, to give one example. Then welfare became the focus of the discipline.

As a policy science, economics is always confronted with trade offs as scarcity of resources is the overriding assumption of the discipline. Tradeoffs involve making choices in policies wherein there is a compromise on one goal to achieve another goal. It is a way of balancing among desirable goals. Presently, the policy of Reserve Bank of India aims at moderating inflation that it is the overriding objective of its monetary policy (2015), even as some growth is eroded in the process. Thus, a bit of growth is traded off for price stability. Similarly, government wants to give subsidies to the poor and weak. It may mean more borrowings and thus some fiscal excess but poverty is addressed and thus political stability. Thus, fiscal prudence may be traded off to some extent in pursuit of welfare. The current state of public finance is an accurate description of this dilemma with fiscal deficit targeted at 3.2% of GDP (2017-18) even while 3% of GDP is the stated norm because public investment is urgently required in the given circumstances and thus fiscal discipline is relatively secondary in importance. In the land acquisition law, compensation for the land owners is increased to balance the interests of the industrialists and the farmers and others. Investment may moderate in the process, but social justice gets addressed. Land is to be acquired for manufacturing and consent of the land owner may be conditionally dispensed with in public interest- that is the tradeoff logic.

The focus on tradeoffs arises from the scarce resources that make it necessary to choose between competing alternatives. Choosing one benefit implies forgoing another alternative to a greater or lesser extent. Thus, there is an opportunity cost to the available resources and there is a continuous process of weighing alternatives and balancing them (opportunity cost of the opportunity foregone while choosing another).

Adam Smith, generally regarded as the Father of Economics, author of An Inquiry into the Nature and Causes of the Wealth of Nations (generally known as The Wealth of Nations) defines economics as "The science of wealth." Smith also offered another definition, "The Science relating to the laws of production, distribution and exchange."

Definitions in terms of wealth creation are limited in scope and favour the advantaged. Weak are left out, for example, women, children and old people. The belief is that non-productive activity is a cost on society. It meant that man was relegated to the secondary position and wealth was placed above life. In democratic times, it is not acceptable. There was a demand to balance wealth creation with focus on social and human welfare. Thus arose the shift in the focus to welfare economics- study of man and of human welfare, not of money and goods alone. A new dimension was added to the discipline of economics- one of welfare and equity.

As the production process evolved and as more problems cropped up, the discipline became wider while in search for new foci- sustainable development, green economy, well being, national happiness and so on.It went beyond wealth, welfare and trade offs,

Economics is usually divided into two main branches:

Microeconomics, which examines the economic behavior of individual actors such as consumers, businesses, households etc. to understand how decisions are made in the face of scarcity and what effects they have on larger economy.

Macroeconomics, on the other hand, studies the economy as a whole and its features like national income, employment, poverty, balance of payments and inflation.

The two are linked closely as the behaviour or a firm or consumer or household depends upon the state of the national and global economy and vice versa. For example, business and consumer confidence depends on the state of economy.

'Mesoeconomics' studies the intermediate level of economic organization in between the micro and the macroeconomics like institutional arrangements etc. Meso is relative. Study of a sector of economics like auto, infrastructure may be considered mesoeconomics while the study of each unit may fall under micro.

Division of Economics	**Focus**
Microeconomics	Is concerned with single factors and the effects of individual decisions. Deals with behavior of firms and consumers as to how they make their decisions.
Macroeconomics	National production/output, Gross domestic product, employment, Poverty, Inflation, BOP. Demonetisation, GST, IBC etc.

There are broadly the following approaches in the mainstream economics to boost national economic growth, the basis of all of them being the same: resources are scarce while wants are unlimited (often mentioned as the economic problem)

- During the Great Depression of the 1930s, there was no convincing economic theory either to explain why the economic crash happened or what was to be done to retrieve stability and growth. The entire focus on the discipline at that time was on free markets. British economist John Maynard Keynes changed the complexion by asserting that free markets have no self-balancing mechanisms that lead to full employment. Keynesian economists justify government intervention through public policies that aim to achieve full employment and price stability in times of slowdown and recession.Keynes argued that. An economy's output of goods and services is the sum of four components: consumption, investment, government purchases, and net exports (the difference between what a country sells to and buys from foreign countries) (Read ahead). Any increase in demand has to come from one of these four components. But during a recession, for a variety of reasons, demand slows down and may even turn negative when consumer confidence collapses causing them to reduce their spending. It in turn causes firms to either prune their operations or close down. It leads to more people out of work and the downward spiral. Under such recessionary conditions, it is the Government that has to lead by borrowing and investing. According to Keynesian theory, state intervention is necessary to moderate the booms and busts in economic activity, otherwise known as the business cycle. Intervene when there is bust and withdraw when there is boom. In normal times, it is the market that drives growth through the force of supply and demand though the respective roles of State and market are coming under critical scrutiny post-Lehman. Indian government stepped up expenditure with fiscal and monetary stimuli in the 2008-10 period to withstand the recessionary winds from the west. With growth spurting, the gradual and calibrated exit from the stimulus was begun in the 2010-11. When growth decelerated in 2017-18, the GOI launched Bharatmala as a Keynsian stimulus. It is the biggest ever highway project to develop and expand approximately 83,000 km of roads at an investment of Rs 6.9 lakh crore by 2022.It is the second largest highways construction project in the country after National Highway Development Programme connecting border areas, improving international, port and coastal connectivity and developing highway corridors connecting key economic and commercial hubs.

- Economics is about resource management and politics is about the redistributive side of resources through government power. Politics sets the larger framework in which economics operates. Thus, understanding the two as they interconnect is the substance of political economy studies. While politics sets the values, economists set the prices! In simple terms, political economy describes production, buying and selling, and their relations with law, custom, and government, as well as with the distribution of national income and wealth. It refers to examining how political forces affect the choice of economic policies. If we take the example of demonetization that took place in India in 2016 which is a millennial event, the entire process of choosing to embark on it was a political choice while the economy went through so many fundamental effects of it- banking, fiscal, industrial, agricultural etc. Similarly, unless one studies the connection between land reforms and the political context, its failure can not be fathomed in India. Political economy reveals that the landlords and the political leaders being the same, the policy had inherent limtations to success. In China, a political party, Communist Party of China, decided how the economy is to be structured. The priorities and policies of economy drastically altered according to the beliefs and biases of the political party and its leaders.

Thus, economics can be understood only when the politics that influences it, is made sense of.

- Liberalism dominated economics in its early forms. Later it fell into disrepute as socialist and welfare perspectives came up and held sway. When the latter lost charm starting from the middle of last century and decisively by late last century, liberalism staged a comeback under the term Neoliberalism. As with the earlier version, it is associated with free-market economics: free trade, privatisation, price deregulation, a reduced size of government ("that government is the best which governs the least") and flexible labour markets ("hire and fire"). Neo-liberalism is the underlying philosophy of the Washington Consensus – the free market approach of the IMF and other institutions. Individualism, competition and efficiency are its core values. Neoliberals believe that there is so much rationality and end use in their beliefs that Francis Fukuyama ,the American political economist who wrote the book *The End of History and the Last Man* (1992) argued that the worldwide popularity of free markets after the demise of Soviet communism showed that free markets are the highest point of human evolution and can not be improved upon.Neoliberalism "proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade". India's economic reforms are largely centred around it. Critics of neoliberalism hold that leaving large role to the market forces can be detrimental to genuine human and sustainable growth. The risk is compounded by the notion of "invisible hand" used by Adam Smith. It says that all economic participants are rational and their self-interest ensures order in the economy. That is the self-interest all participants makes the economic system find its equilibrium. There is no government regulation required as the "invisible hand" of collective self interest provides stability. However, the 2018 great recession is the latest example when the belief in invisible hand was exposed as irrational.

- socialist economics believes that a large part of economic resources should be in giovernemnt hands so that inequality can be minimized and give the workers greater control of the means of production. It comes in many forms- Nehruvian socialism where there is public and private sector coexisting and complementing called mixed economy. An extreme form of socialit economics is communist control where the entire economy is held by State and there is no private property at all. For example, Soviet economy and China under Mao Zedong (1893 –1976).

- Nehruvian economics is a subset of socialist economics. It rests on state -ownership of basic parts of economy like infrastructure, higher education, metal and other industries etc.;socio economic planning because Soviet Russia showed that it could be an.expeditious way of achieving equitable growth, India lacked any significant private sector when we became Independent and also because Nehru personally believed in the values of equity.Given the historical circumstances in which it emerged, Nehruvian economics supports self-reliance in economic growth. The modern foundations of it are revealed in its emphasis on capital goods industry, technical education and R&D- all being interconnected.

- Gandhian economics is the set of ideas that Mahatma Gandhi propounded. Mahatma Gandhi questioned the scarcity assumption when he said: 'Earth provides enough to satisfy every man's need but not for every man's greed.' The principle of Gandhian economic thought is small scale and locally oriented production, using local resources and meeting local needs, so that employment opportunities are made available everywhere, promoting the ideal of Sarvodaya: the welfare of all, in contrast to the rich dominating. Gandhian economy aims to boost employment which is very desirable for India where there is abundance of labour. It had no aversion to machinery and welcomes it where it avoids drudgery and reduces monotony, for example, sewing machine. It is opposed to labour-displacing technology. It is worth imagining whether Gandhi would support artificial intelligence and machine learning. It emphasises dignity of labour, and criticises the society's contemptuous attitude to manual labour. It insists on everybody doing some 'bread labour'. Another axiom of Gandhian economics is "trusteeship": while an individual or group of individuals is free not only to make a decent living through an economic enterprise but also to accumulate, their surplus wealth above what is necessary to meet basic needs and investment, should be held as a trust for the welfare of all, particularly of the poorest and most deprived. It thus combines economics of development with ethics of equity, self-reliance (with minimum wants), sustainability, trust and cooperation.

- Development economics. By the middle of last century the challenge of enabling economic growth of the poor countries to transition from low income to decent standard of living was the focus for a school of economic thought called the Development economics. The concern was the human challenge of promoting economic growth and structural change (from agriculture to industry) but also improving the well being of the population as a whole through focus on health , education and employment, whether through public or private channels. The most prominent contemporary development economists are Nobel laureates Amartya Sen and Joseph Stiglitz. Currently, Jean Dreze, Ejaz Ghani, Abhijit Banerjee, Jeffrey Sachs and Esther Duflo are some global names in the field.

- China model of economic growth: Beijing Consensus is the name given to the political economy of People's Republic of China under Deng Xiaoping since early eighties which continues till today under Xi Jinping (2012-). The term captures China's economic development model as an alternative to the Washington Consensus of market-friendly policies advocated by the Bretton Woods Twins- World Bank and International Monetary Fund; and the World Trade Organization (WTO). There is no clear set of implications of the term but is generally taken t mean pragmatic economic policy led by State but liberal use of private initiative: "stable, if repressive, politics and high-speed economic growth". It does not follow text book economics but sets out its own mix of State, market and redistribution. Its growing global reach is striking. Officially it called socialism with Chinese characteristics but critics call it capitalism with Chinese characteristics.

- Mercantilism wants Government to make policies for maximising net exports because the best way of ensuring a country's prosperity is to reduce imports and promote exports, thereby generating a net inflow of foreign exchange and maximising the country's gold stocks. Mercantalists believe that the country that has more gold is stronger. That belief however is outdated though the foundational mercantilist views are still influential. Import substitution means selective use of globalization for national prosperity which in the medium to long term is unworkable as national growth is premised at the expense of other countries. It is in contrast to the theory of free trade – which states that countries can have economic growth through the reduction of tariffs and fair free trade. While it dominated European thought between the 16th and 18th centuries, in the current world it is acquiring dominant importance under the US President Donald Trump who stands for "America First" and also Brexit. Brexit argued against import of human capital from the European Union as influx of immigrants from Eastern Europe deprived unskilled British workers of their jobs, lowered their wages and increased unemployment.

- Behavioural economics: Behavioral economics is a relatively new field that combines insights from various fields of study to generate a more accurate understanding of human behavior. Behavioral models integrate insights from psychology, neuroscience and microeconomic theory. Behavioral economics is concerned with the bounds of rationality of economic agents.Economics has long differed from other disciplines in its belief that most if not all human behavior can be easily explained by relying on the assumption that our preferences are well-defined and stable across and are rational. Richard Thaler, the University of Chicago professor who won the Nobel Memorial Prize in Economic Sciences. In 2017 challenged that view by writing about anomalies in people's behavior that could not be explained by standard economic theory. Thaler inspired the creation of behavioral science teams, often call "nudge units," in public and private organizations around the globe. He suggests that there are many opportunities to "nudge" people's behavior by making subtle changes to the context in which they make decisions.Nudges can solve a variety of problems that governments and businesses alike consider important. (More in the classroom)

- Green Economics: When the growth of economy all over the world created environmental degradation, a school of thought emerged showing alternative paths to growth where there is sustainability of economic growth without damaging the growth rates. It is called green economics and focuses on and supports the harmonious interaction between humans and nature and attempts to reconcile the two. It is referred by many names like sustainable development, green economy. "A Green Economy promotes a triple bottom line: sustaining and advancing economic, environmental and social well-being." New indices of measuring growth have been built to promote green economy: Green GDP, *Social Progress Index and* Environmental Performance Index (EPI) are some examples. Millennium Development Goals and Sustainable Development Goals also advocate green economics.

Measuring Economic Growth

Economic growth is the change- increase or decrease, in the value of goods and services produced by an economy. Measures of national income and output are used in economics to estimate the value of goods and services produced in an economy. Common measures are Gross National Product (GNP) and Gross Domestic Product (GDP).

National Income Accounting

National income accounting refers to a set of rules and techniques that are used to measure the output of a country. It centres around basic concepts of Gross Domestic Product (GDP) and Gross National Product (GNP).

GDP is defined as the total market value of all final goods and services produced within the country in a given period of time- usually a calendar year or financial year or a fraction like quarter.

GDP can be real or nominal. Nominal GDP refers to the current year production of final goods and ervices valued at current year market prices. Real GDP refers to the current year production of oods and service valued at base year prices. Base year prices are constant prices. For the current ational income series introduced in 2015, the base year is 2011-12.

1 estimating GDP, only final marketable goods and services are considered. When it is compared) the base year figure, the real growth levels are seen.

In calculating GDP, certain transactions are excluded. For example, gains from resale are excluded but the services provided by the agents are counted. That is, when a used car or house is sold, no new goods are being produced. But the real estate or the auto agent makes some money though commission which adds to the service economy.

Final goods are goods that are ultimately consumed rather than used in the production of another good. For example, a car sold to a consumer is a final good; the components such as tyres sold to the car manufacturer are not; they are intermediate goods used to make the final goods. The same tyres, if sold to a consumer, would be a final goods. Only final goods are included when measuring national income. If intermediate goods were included too, this would lead to double counting; for example, the value of tyres would be counted once when they are sold to the car manufacturer, and again when the car is sold to the consumer.

Only newly produced goods are counted. Transactions in existing goods, such as second-hand cars, are not included, as these do not involve the production of new goods. (mentioned earlier)

GDP considers only marketed goods. If a cleaner is hired, his pay is included in GDP. If one does the work himself, it does not add to the GDP. Thus, much of the work done by women at home-taking care of the children, aged; chores etc. which is called 'care economy' is outside the GDP. Even what the elder sibling teaches the younger one is outside the scope of national accounts.

The value of intermediate goods is a part of the final goods and services and so are not counted separately as it amounts to double counting and exaggerates the value of the output.

Not all goods and services from productive activities enter into market transactions. Imputations are made for some of these non-marketed but productive activities: for example, imputed rental for owner-occupied housing.

Market Price and Factor Cost

Market price refers to the actual transacted price and it includes indirect taxes- custom duty, excise duty, sales tax, service tax etc.

Factor cost refers to the actual cost of the various factors of production and it includes government grants and subsidies but it excludes indirect taxes.

Factors of Production

Factors of production, which are also called resource or inputs are what we use used in the production process to produce output—that is, finished goods and services. There are three factors of production: land, labor and capital. All three of these are required in combination at a time to produce a commodity.

There are two types of factors: *primary* and *secondary*. Primary factors are land, labor (the capacity to work), and capital goods. Materials and energy (fuel) are considered secondary factors in classical economics because they are obtained from land, labor and capital. The primary factors facilitate production but neither become part of the product (as with raw materials) nor become significantly transformed by the production process (as with fuel used to power machinery). Land includes not only the site of production but natural resources above or below the soil. Some scholars distinguish human capital (skills, talent and knowledge in the labor force) from labor. Capital can have other forms also intellectual capital, social capital (networks of relationships necessary for cooperative work for production of value) and even civic capital (citizens working together for facilitating social and political order based on constitutional values).

Some scholars list Entrepreneurship as a factor of production.

Factor Costs

Factor costs are the actual production costs at which goods and services are produced by the firms and industries in an economy. They are the costs of all the factors of production such as land, labor, capital, energy, raw materials like steel etc. that are used to produce a given quantity of output in an economy. They are also called factor gate costs (farm gate, firm gate and factory gate) since all the costs that are incurred to produce a given quantity of goods and services take place behind the factory gate i.e., within the walls of the firms, plants etc. in an economy.

Relationship Between Market Price And Factor Cost:

GNP at factor cost = GNP at market price – indirect taxes + subsidies

GDP at factor cost = GDP at market price – indirect taxes + subsidies

Transfer Payments

Transfer payments are made by the government as 'one-way' payment of money for which no money, good, or service is received in exchange. Governments use such payments as means of income redistribution (universal basic income) under social welfare programs such as social security, old age or disability pensions, student grants, unemployment compensation, etc. There is a need to differentiate them from subsidies. Transfer payments are a part of personal income. Subsidies paid to exporters, farmers, manufacturers are not considered transfer payments because they are linked to an economic transaction.

Transfer payments may be conditional cash transfers or unconditional cash transfers (universal basic income). IGMSY is a transfer payment. It is a conditional cash transfer. Under Indira Gandhi Matritva Sahyog Yojana (IGMSY) GOI provides financial aid of Rs 6,000 to pregnant woman who undergo institutional delivery for hospital admission. The sum is also meant to help with their child's vaccination, as well as nutritional food.The money will be directly transferred to the bank accounts of pregnant women. The scheme is aimed at encouraging institutional deliveries n order to reduce maternal as well as infant mortality.

irect Benefit transfer of LPG (DBT) scheme PAHAL (Pratyaksh Hanstantrit Labh) is a part of DP and thus is not a transfer payment.

ransfer payments are excluded in computing gross national product.

stimating GDP/GNP

here are three different ways of calculating GDP. The expenditure approach adds consumption, vestment, government expenditure and net exports (exports minus imports). The income proach adds what factors earn: wages, profits, rents etc. Output approach adds the market value final goods and services .The three methods must yield the same results because the total penditures on goods and services (GNE) must by definition be equal to the value of the goods d services produced (GNP) which must be equal to the total income paid to the factors that oduced these goods and services.

In reality, there will be minor differences in the results obtained from the various methods due to changes in inventory levels. This is because goods in inventory have been produced (and therefore included in GDP), but not yet sold. Similar timing issues can also cause a slight discrepancy between the value of goods produced (GDP) and the payments to the factors that produced the goods, particularly if inputs are purchased on credit. Inventory is a detailed list of all the items in stock

Gross GDP means depreciation (wear and tear of machinery in their use) of capital stock is not subtracted. If depreciation is subtracted, it becomes net domestic product.

Calculating the real GDP growth-inflation adjusted GDP growth-allows us to determine if production increased or decreased, regardless of changes in the inflation and purchasing power of the currency.

Output expressed as GDP at factor cost at constant prices makes more genuine sense as inflation/deflation is factored out and the distortions of subsidies and indirect taxes are also deducted. Thus, quantitative levels of production changes are expressed.

The data from the current prices is adjusted to the constant prices by using deflator- it helps take out the contribution of inflation to the value of the output. GDP deflator is a price index.

GDP and GNP

The two are related. The difference is that GNP includes net foreign income- what foreigners produce in the country is subtracted from what Indians produce abroad or vice versa. That is meant by net foreign income. GNP adds net foreign income compared to GDP. GDP shows how much is produced within the boundaries of the country by both the citizens and the foreigners. GDP focuses on where the output is produced rather than who produced it- it is a geographical concept. GDP measures all domestic production, disregarding the producing entities' nationalities.

In contrast, GNP is a measure of the value of the output produced by the "nationals" of a country-both within the geographical boundaries and outside. That is, all the output that the Indian citizens produce in a given year – both within India and all other countries makes up the GNP of India. For example, there are Indian and foreign firms operating in India. Together what they produce within the Indian geography is the GDP of India. The profits of foreign firms earned within India are included in India's GDP, but not in India's GNP.

In other words, income is counted as part of GNP according to who owns the factors of production rather than where the production takes place. For example, in the case of a German-owned car factory operating in the US, the profits from the factory would be counted as part of German GNP rather than US GNP because the capital used in production (the factory, machinery, etc.) is German owned. They are a part of US GDP.

GDP is essentially about where production takes place. GNP is about who produces. If it is an open economy with great levels of foreign investment (FDI) and lesser levels of outbound FDI, its GDP is likely to be larger than GNP.

If it is an open economy but more of its nationals tend to move economic activity abroad or earn more from investing abroad compared with non-nationals doing business and earning incomes within its borders, its GNP will be larger than GDP.

If it is a closed economy where nobody leaves its shores, nobody invests abroad, nobody comes in and nobody invests in the country, its GDP will be equal to GNP.

For most countries, GDP and GNP have more or less the same values.

However, for East Timor, GNP is 3 times or so more than GDP. East Timor which gained Independence in 2002 has low level of production of goods and services on Timorese soil—the country's GDP. It receives foreign aid which is counted as remittance from abroad thus enlarging the GNP value. Whether foreign aid is to be so counted is a separate matter of methodology.

Take the case of Ireland. Its GDP is much larger than its GNP. In Ireland, Google, Apple, Microsoft, Accenture and such other multinational corporations are headquartered due to the tax advantage they get as corporate tax rates are very low. They only have registered offices in Ireland without any production activity. These MNCs contribute to its GDP through exports. Here, the difference between GDP and GNP can be significant. This is due to the fact that such exports far outweigh the Irish imports. The higher GDP value however is illusory.

India's GDP is a little more than its GNP.

Analysts tend to say that GDP is a better measure than GNP. The reason is that GDP is domestic production where employment is created; inflation is moderated; tax revenues are more, exports can be made for foreign exchange reserve build up and so on. GNP also has its advantages and India is a big beneficiary of it- remittances from aborad; acquisition of foreign companies; invest abroad to tap on foreign opportunities etc. But the consensus is that former is of greater value than the latter for the reasons cited.

There are other related concepts too.

Gross National Product and Net National Product

We have seen GDP and GNP above.

Net National Product

In the production process a country uses machines and equipment. When there is depreciation, we have to repair or replace the machinery. The expenses incurred for this are called the depreciation expenditure. Net National Product is calculated by deducting depreciation expense from gross national product.

NNP = GNP - Depreciation

National Income is calculated by deducting indirect taxes from Net National Product and adding subsidies. National Income (NI) is the NNP at factor cost.

NI = NNP - Indirect Taxes + Subsidies

er Capita Income is per capita GDP: GDP divided by mid year population of the corresponding ear. Similarly, per capita GNP can also be calculated.

The real GDP per capita of an economy is often used as an indicator of the average standard of living of individuals in that country, and economic growth is therefore often seen as indicating an increase in the average standard of living.

Base Year

Base year is a specific year from which the economic growth is measured. It is allocated the value of 100 in an index. The estimates at the prevailing prices of the current year are termed as "at current prices", while those prepared at base year prices are termed "at constant prices". The comparison of the two estimates gives the measure of real growth. It means the production of the current year is valued at base year prices so that the real growth is worked out by deducting the impact of inflation or deflation. That is, the increase in the value of the GDP due to inflation is excluded and the `real increase' of goods and services is found out.

The base year of the national accounts is changed periodically to take into account the new goods and services in the economy and thus to depict a true picture of the economic growth. For example, software, digital hardware etc are of recent origin and if the base year remained in the 1990's, the same would be not tracked. Thus, we are blind to growth in its statistical measurement. Similarly, when we continue to measure the goods and services that are no longer in production as they were- jute, type writers etc, we see the decline as fall of growth while in reality they are replaced by new products. Therefore, base year needs to be brought closer to the current year. The National Statistical Commission wants that the base year should be revised every five years.

The first official estimates of national income were prepared by the Central Statistical Office (CSO) with base year 1948-49 for the estimates at constant prices. These estimates were published in the publication, "Estimates of National Income" in 1956. With the gradual improvement in the availability of basic data over the years, a comprehensive review of methodology for national accounts statistics has constantly been undertaken with a view to updating the database and shifting the base year to a more recent year. As a result, base years of the National Accounts Statistics series have been shifted and 2011-12 is the base year for the new series of national accounts being followed from 2015.

Normally, when the base year of national accounts statistics is changed, there is some change in the levels of GDP estimates. This happens due to widening the coverage and counting the actual production.

A base year has to be a normal year without large fluctuations in production, trade and prices of commodities in general. Reliable price data should be available for it. It should be as recent as possible.

GDP Deflator

GDP Deflator is a measure of inflation that tracks the price changes in the entire economy and not a specific limited basket of goods and services as in the price indices of Whole-sale price index (WPI) and Consumer price index (CPI). It is implicitly derived from national accounts data as a ratio of GDP at current prices to constant prices. It encompasses the entire spectrum of domestic economic activities including services, and is available on a quarterly basis with a lag of two months since 1996. At present, the GDP deflator is available only annually with a long lag of over one year and hence has very limited use for the conduct of policy.

A change in prices can distort perception of actual gross domestic product even without an increase or decrease in the quantity of goods and services produced by an economy. In 2015, in India, the goods and services produced were higher than their market prices indicated. That was an exception. Normally, it is the opposite- market value of the production is higher than the actual goods produced. In both cases, there is distortion that can misguide public policy. Therefore, the impact of prices has to be removed to arrive at a true measure of economic growth. A deflator is used to restate output estimates at current prices into what they would be if calculated with reference to prices in an earlier year- be it the immediately preceding year or the base year or any year in between. This will give an idea of the real growth in the economy, minus the price effect. The ratio between the GDP at current prices and GDP at constant prices gives an idea of the increase in prices of all goods and services with reference to the base year. However, the deflator comes with a lag, which limits its usefulness.

When the GDP deflator is in the negative as mentioned above, nominal GDP is less than real GDP. It means there is deflation in the country.

Seasonality

Estimates of GDP should be seasonally adjusted to factor for fluctuations that normally occur at about the same time and the same magnitude each year. Seasonal adjustment ensures that the movements in GDP, or any other economic series, more accurately reflect true patterns in economic activity. Examples of factors that may influence seasonal patterns include weather, agricultural production, holidays and production schedules. Take the case of India. When we say that India's economic growth was 5.7% in the April-June quarter of the 2017-18 fiscal year, it means that it grew that much over the base value in the same quarter of the previous fiscal year. Its accuracy will be lost if it is a comparison with the previous quarter that is January-March as the seasonal factors of the two quarters are different. Southwest monsoons begin in June and continue for 2-3 months which impacts of construction activity. Similarly, October-December quarter should be compared with the same quarter in the earlier years as it has festivals in it that are relatively absent in other quarters.

Potential GDP

Potential gross domestic product (GDP) is the level of output that an economy can produce without inflating the economy. It is the highest level of real gross domestic product (output) that can be sustained over the long term. Sustainability is in terms of prices, fiscal deficit, current account deficit (exports can not be boosted by devaluing the exchange rate as it can be dysfunctional), financial sector not accumulating non-performing assets etc. Potential output depends on ta variety of factors like infrastructure, human capital and skills, potential labour force (which depends on demographic factors), level of technological development and labour productivity. These limits thus pertain natural and institutional factors.

If actual GDP rises and stays above potential output, it is inflationary as demand for factors of production exceeds supply. In the opposite set of conditions, if GDP is below potential GDP, inflation will come down. Ideally, potential GDP is not to be exceeded for the reasons given above. Towards this objective, government's fiscal policy and Reserve Bank of India (RBI) monetary policy is suitably used. The difference between potential output and actual output is referred to as the output or GDP gap.

Hard And Soft Landing

The Hard Landing of the economy means a sudden fall in the growth rate of economy that is otherwise growing well for any reason. The fall is so steep that a rapidly growing economy may slip into recession. It can be internal or external reason. When the economy is gorwing too fast and for long- when there is inflation along with growth, government wil slow it down by monetary tightening to make the growth sustainable. If such slowdown lands the economy all the way into recession, it hard landing otherwise it is soft landing

India's National Income Statistics

The Central Statistical Office (CSO) in the Ministry of Statistics and Programme Implementation (MoSP & I) is responsible for the compilation of NAS. At the State level, State Directorates of Economics and Statistics (DESs) have the responsibility of compiling there State Domestic Product and other aggregates.

The statistics that are released by the CSO and the State DESs relate to various macro-economic aggregates of the Indian economy. The aggregates compiled and released (at current and constant prices) at annual periodicity by the CSO include gross and net domestic product by economic activity, consumption, saving, capital formation and capital stock, public sector transactions and dis-aggregated statements, as well as the consolidated accounts of the nation namely like Gross Domestic Product. The CSO also releases the quarterly GDP estimates.

The CSO revises the base year of the NAS series periodically. The CSO releases the current series of NAS with 2011-12 as Base Year. The first estimates for a reference year are released by the CSO, about two months before the close of the year, in the form of Advance Estimates (AE) of National Income. These estimates present at both current and constant prices and at factor cost, the Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP), Net Domestic Product (NDP), and Per Capita Income. These estimates are subsequently revised and released as updates of advance estimates. Quick Estimates of NAS and the Revised Estimates of the earlier years are released by the CSO utilising the available data of various sectors provided by the statistical system, in the month of January or February of the following year (with a 10-month lag). Along with the Quick Estimates for the previous financial year, estimates for the earlier years are also revised using the detailed data supplied by various source agencies and final figures released.

"New GDP Series" 2015

The Central Statistics Office (CSO) came out with a new series of national accounts with 2011-12 as base year for computing size of the economy and economic growth rate. It has the effect of broadening the coverage across segments including farm, corporate and unorganised sectors - a move that will likely expand the size the economy's size. The base year of the national accounts is changed periodically to factor in structural changes in the economy. The new series includes data on unorganised manufacturing and services. Under the new series, the data for corporate income is collated from the corporate affairs ministry's MCA21 records, a comprehensive compendium that allows collecting granular information even from the level of the small firms.In the earlier series such data was taken primarily from the Reserve Bank of India's study on companies and finances. The series also incorporates results of recent National Sample Surveys such as those on enterprises, unemployment, debt and investment, situation assessment of farmers and survey of land livestock holdings.The National Statistical Commission suggested that the base year for computing national account should be revised every five years.

The 2004-05 GDP data was under-estimating industrial growth as the coverage was low and the weights were wrong. New GDP series has captured the changing structure of the Indian economy. The share of manufacturing has increased to 15.8% from 11.9% in the 2004-05 series. The share of agriculture has increased marginally in the new series to 17.2% from 16.8%.

The base year was last revised in 2010.

Real GDP or GDP at constant (2011-12) prices for the year 2016-17 is estimated at `121.90 lakh crore showing a growth rate of 7.1 percent over the year 2015-16 of `113.81 lakh crore.

Nominal GDP or GDP at current prices in the year 2016-17 is projected at Rs. 152.51 lakh crore, with growth rate of 11.5 percent against Rs. 136.75 lakh crore for 2015-16.

The GNI at current prices is estimated at 150 lakh crore during 2016-17, as compared to 135 lakh crore during 2015-16, showing a rise of almost 11% percent. The Gross National Income (GNI) at 2011-12 prices is estimated at 120.35 lakh crore during 2016-17.

The per capita income at current prices during 2016-17 is estimated to have attained a level of Rs.103219 as compared to the estimates for the year 2015-16 of Rs.94130 showing a rise of 9.7 percent.

India is behind by only $237 and $399 billion from 6th and 5th ranked France and United Kingdom, respectively. It is projected that India will be 6th largest economy of world in 2019 by overtaking France and will become 5th largest in 2019 by overtaking United Kingdom.

Per Capita

India's per capita income grew was Rs1,03,219 in 2016-17 compared to the estimates for the year 2015-16 of Rs94,130 showing a rise of 9.7%. In real terms (at 2011-12 prices), per capita income in 2016-17 rose 5.7% to Rs.82,269.

The Need To Measure Economic Growth

The following aims can be attributed to the study of economic growth:

- when growth is quantified, we can understand whether it is adequate or not for the given goals of the economy. When we can understand its potential and accordingly set targets
- we can adjust growth rates for their sustainability
- we can prevent inflation or deflation to some extent if we see the performance of the economy in quantitative terms
- we can balance the contributions of the three sectors of the economy and steer the direction of growth towards national goals- away from agriculture to manufacturing as in the case of India in recent years
- target appropriate levels of employment creation and poverty alleviation
- forecast tax revenues for governmental objectives
- corporates can plan their business investments

Economic Growth: Its Benefits And Side Effects

The first benefit of economic growth is wealth creation. It helps create jobs and increase incomes. It ensures an increase in the standard of living, even if it is not evenly distributed. Government has more tax revenues: fiscal dividend. Economic growth boosts tax revenues and provides the government with extra money to finance spending projects. For example, the flagship programmes of the government like Mantri Awaas Yojana-Gramin (PMAY-G), Pradhan Mantri Ujjwala Yojana (PMUY), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Pradhan Mantri Gram Sadak Yojana (PMGSY) are a direct result of the tax buoyancy of growth . It sets up the positive spiral: rising demand encourages investment in new capital machinery which helps accelerate economic growth and to create more employment.

Economic growth can also have a self-defeating effect: violate the principles of fairness and equity thus setting off social conflicts. Environmental costs are another risk.

Problems in Calculating National Income

The measurement of national income encounters many problems.

Black Money Illegal activities like smuggling ind unreported incomes due to tax evasion and corruption are outside the GDP estimates. Thus, parallel economy poses a serious hurdle to accurate GDP estimates. GDP does not take into account the 'parallel economy' as the transactions of black money are not registered.

Non-Monetization In most of the rural economy, considerable portion of transactions occurs informally and they are called as non-monetized economy- the barter economy. The presence of such non-monetary economy in developing countries keeps the GDP estimates at lower level than the actual.

Household Services The national income accounts do not include the 'care economy'- domestic work and housekeeping. Most of such valuable work rendered by our women at home does not enter our national accounting.

Social Services It ignores voluntary and charitable work as it is unpaid.

Environmental Cost National income estimation does not account for the environmental costs incurred in the production of goods. For example, the land and water degradation accompanying the Green revolution in India. Similarly, the climate change that is caused by the use of fossil fuels. However, in recent years, green GDP is being calculated where the environmental costs are deducted from the GDP value and the Green GDP is arrived at.

Reliability of GDP As a Measure of Progress

Economic growth is generally taken as the measure of advancement in the standard of living of the country. Countries with higher GDP often score highly on measures of welfare, such as life expectancy. However, there are limitations to the usefulness of GNP as a measure of welfare:

- GDP does not value intangibles like leisure, quality of life etc. Quality of life is determined by many other things than economic goods.

- the impact of economic activity on the environment may be harmful-pollution, climate change, unsustainable growth, ecological refugees, life style diseases etc.
- It only gives average figures that hide stratification. Economic inequality is not revealed by GDP figures
- Condition of poor is not indicated
- Gender disparities are not revealed
- It does not matter how the increase in wealth takes place- whether by civilian demand or war
- GDP does not measure the sustainability of growth. A country may achieve a temporarily high GDP by over-exploiting natural resources

The major advantages to using GDP per capita as an indicator of standard of living are that it is measured frequently, widely and consistently. Frequently in that most countries provide information on GDP on a quarterly basis, which allows a user to spot trends more quickly. Widely in that some measure of GDP is available for practically every country in the world, which allows crude comparisons between the standard of living in different countries. And consistently in that the technical definitions used within GDP are relatively consistent between countries, and so there can be confidence that the same thing is being measured in each country.

The major disadvantage of using GDP as an indicator of standard of living is that it is not, strictly speaking, a measure of standard of living. For instance, in an extreme example, a country which exported 100 per cent of its production would still have a high GDP, but a very poor standard of living. The argument in favour of using GDP is not that it is a good indicator of standard of living, but that , in general, standard of living tends to increase when GDP per capita increases. This makes GDP a proxy for standard of living, rather than a direct measure of it. Because of the limitations in the GDP concept, other measures of welfare such as the Human Development Index (HDI), Genuine Progress Indicator (GPI) , Gross National Happiness (GNH), Green GDP, natural resource accounting have been suggested.

They are proposed in an attempt to give a more complete picture of the level of well-being and the position with reference to natural resource depletion, but there is no consensus as to which is a better measure than GDP. Some of the above defy quantification. GDP still remains by far the most often-used measure.

Alternatives to GDP

Robert F. Kennedy once said that a country's gross domestic product (GDP) measures "everything except that which makes life worthwhile". The metric was developed in the 1930s and 1940s amid the upheaval of the Great Depression and global war. Even before the United Nations began requiring countries to collect data to report national GDP, Simon Kuznets, the metric's chief architect, had warned against equating its growth with well-being.

Economic activity has depleted natural resources. The philosopher John Stuart Mill noted more than 200 years ago that, once decent living standards were assured, human efforts should be directed to the pursuit of social and moral progress and the increase of leisure, not the competitive struggle for material wealth. Economist John Kenneth Galbraith once observed: "To furnish a barren room is one thing. To continue to crowd in furniture until the foundation buckles is quite another."

How GDP number misguide about the general welfare GDP is now clear. Increased crime rates do not raise living standards, but they can lift GDP by raising expenditures on security systems. Despite the destruction wrought by the oil spills and environmental disasters like in Uttarakhand in 2013, J&K in 2014 and Chennai in 2015, they boosted GDP because they stimulated rebuilding. Despite the devastation for Houston (USA) and surrounding areas, there could be a pickup in GDP due to rebuilding from the storm, Hurricane Harvey in mid-2017. It could boost GDP when rebuilding results in a national shortage of construction workers or puts pressure on building materials prices.Competition for construction workers could raise wages. Following the massacre in Las Vegas in 2017 October, firearm manufacturers saw their stock prices go up as more guns were expected to be sold.

As Kuznets noted in 1934, "the welfare of a nation can scarcely be inferred from a measure of national income."

Commercial agricultural production in a country might expand, for example, leading to a rise in GDP; but if the increase is made possible by displacing women from land they farm to feed their family, or through practices that degrade the environment, like deforestation or the use of chemical fertilizers, pesticides and herbicides, misery will increase.

Accordingly, other measures of human well-being in a nation-state have been developed, such as the Human Development Index, Bhutan's Gross National Happiness etc. These approaches assess specific indicators of human welfare like longevity, literacy, and maternal and infant mortality, and are not exclusively economic in orientation.

Human Development Index (HDI)

The UN Human Development Index (HDI) is a standard means of measuring well-being. The index was developed in 1990 by the Pakistani economist Mahbub ul Haq, and has been used since 1993 by the United Nations Development Programme in its annual report.

The HDI measures the average achievements in a country in three basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary, and tertiary gross enrolment ratio (with one-third weight).
- A decent standard of living, as measured by gross domestic product (GDP) per capita at purchasing power parity (PPP) in US Dollars.

Each year, UN member states are listed and ranked according to these measures. The HDI goes beyond a nation's gross domestic product (GDP) to measure the general well-being of people under a host of parameters, such as poverty levels, literacy and gender-related issues.

The 2010 Human Development Report came up for the first time with an Inequality-adjusted Human Development Index (IHDI), which factors in inequalities in the three basic dimensions of human development (income, life expectancy, and education) and adjusts the HDI.

In the Human Development Report 2017, India has been placed at 131th position in the Human Development Index (HDI) among the 188 countries. India's human development index (HDI) value of 0.624 puts it in the "medium human development" category, alongside countries such as Congo, Namibia and Pakistan. It is ranked third among the SAARC countries, behind Sri Lanka (73) and the Maldives (105), both of which figure in the "high human development" category.

Human Poverty Index (HPI)

The Human Poverty Index (HPI) is an indication of the standard of living in a country, developed by the United Nations (UN) to complement the Human Development Index (HDI). In 2010 it was supplanted by the UN's Multidimensional Poverty Index.

Genuine Progress Indicator (GPI)

Genuine progress indicator (GPI) is a metric that is designed to take fuller account of the well-being of a nation, only a part of which pertains to the size of the nation's economy, by incorporating environmental and social factors which are not measured by GDP. For instance, some models of GPI decrease in value when the poverty rate increases. The GPI separates the concept of societal progress fromeconomic growth.

The GPI is deducts environmental costs of economic activity like biodiversity loss, resource depletion, pollution, loss of farmland and wetlands, and ozone depletion, and social costs like increase in crime and family breakdown.

For example, in coastal mangrove regions of India, shrimp farming generated substantial profits for those involved in the export market. Once the environmental costs of biodiversity loss through destruction of mangroves, ecosystem damage as well as social costs are factored in, however, the economic gains of shrimp farming no longer look like genuine progress, sustainable development, or poverty alleviation.

GPI incorporates sustainability by looking at losses and gains in "natural capital" like resources, biodiversity and ecosystem health.
In a world increasingly dominated by pursuit of "growth at any cost", the GPI provides economic perspectives in support of social justice, poverty alleviation and sustainable development even as the economic growth is maintained.

Some of the he "costs" of economic activity include the following potential harmful effects:

- Cost of resource depletion
- Cost of crime
- Cost of ozone depletion
- Cost of family breakdown
- Cost of air, water, and noise pollution
- Loss of farmland
- Loss of wetlands

Social Progress Index

The *Social Progress Index* measures the extent to which countries provide for the social and environmental needs of their citizens. Fifty-four indicators in the areas of basic human needs, foundations of well-being, and opportunity to progress show the relative performance of nations. The index is published by the nonprofit Social Progress Imperative, and is based on the writings of Amartya Sen and Joseph Stiglitz.The social and environmental factors include wellness (including health, shelter and sanitation), equality, inclusion, sustainability and personal freedom and safety. India has ranked 93rd among 128 countries on 2017 Social Progress Index report released by Social progress Imperative (SPI).

The index defines social progress as *the capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.*

The index is prepared based on indicators like health, sanitation, personal safety, ecosystem sustainability, shelter, access to knowledge, personal rights, and tolerance and inclusion. India faces challenges across many dimensions. The country scores particularly low on shelter in the basic human needs dimension, access to information in the foundations of well-being dimension, and tolerance and inclusion in the opportunity dimension.

GNH

Gross National Happiness (GNH) is an attempt to define quality of life in more holistic and psychological terms than Gross National Product.

The term was coined by Bhutan's former King Jigme Singye Wangchuck in 1972 to indicate his commitment to building an economy that would serve Bhutan's unique culture based on Buddhist spiritual values. While conventional development models stress economic growth as the ultimate objective, the concept of GNH is based on the premise that true development takes place when material and spiritual development occur side by side to complement and reinforce each other. The four dimensions of GNH are the promotion of equitable and sustainable socio-economic development, preservation and promotion of cultural values, conservation of the natural environment, and establishment of good governance.

Natural Resources Accounting and Green GDP

Natural resources are essential for production and consumption, maintenance of life-support systems, as well as having intrinsic value in existence for intergenerational and other reasons. It can be argued that natural capital should be treated in a similar manner to man-made capital in accounting terms, so that the ability to generate income in the future is sustained by using the stock of natural capital judiciously. By failing to account for reductions in the stock of natural resources, standard measures of national income do not represent economic growth genuinely. Soil, water and biodiversity are the three basic natural resources.

National Biodiversity Action Plan published by Government of India, Ministry of Environment and Forests in 2008 highlights as an action point the valuation of goods and services provided by biodiversity. More specifically, the Action Plan states: to assign appropriate market value to the goods and services provided by various ecosystems and strive to incorporate these costs into national accounting.

In the Nagoya (Japan) meet in 2010 on biodiversity protection, India declared that it will adopt natural resource accounting. The 2010 UN biodiversity summit decided to respect the link between economic policy, natural capital and human wellbeing. There should be global partnership is to mainstream natural resources accounting into economic planning. India, Colombia and Mexico accepted it. This will plug deficiencies in traditional accounting systems. As mentioned above, India's national biodiversity action plan has already incorporated some of these concepts.

Green GDP

Green Gross Domestic Product (Green GDP) is an index of economic growth with the environmental consequences of that growth factored in. From the final value of goods and services produced, the cost of ecological degradation is deducted to arrive at Green GDP.

In 2004, China announced that the green GDP index would replace the Chinese GDP index. But the effort was dropped as green GDP figures shrank the size of the GDP to unimpressive levels. An Expert Group was convened in 2011 to examine the prospects of developing green national accounts in India, chaired Shri Partha Dasgupta and submitted its report in 2013.

Sarkozy's Alternative

The Commission on the measurement of economic performance and social progress was set up in 2008 on French government's initiative.

Increasing concerns have been raised since a long time about the adequacy of current measures of economic performance, in particular those based on GDP figures. Moreover, there are broader concerns about the relevance of these figures as measures of social well-being, as well as measures of economic, environmental, and social sustainability.

Reflecting these concerns, President Sarkozy decided to establish this Commission, to look at the entire range of issues. Its aim was to identify the limits of GDP as an indicator of economic performance and social progress, to consider additional information required for the production of a more relevant picture etc. The Commission was chaired by Professor Joseph E. Stiglitz. Amartya Sen and Bina Agarwal are also associated with it. The commission gave its report in 2009.

The Stiglitz report recommends that economic indicators should stress well-being instead of production, and for non-market activities, such as domestic and charity work, to be taken into account. Indexes should integrate complex realities, such as crime, the environment and the efficiency of the health system, as well as income inequality. The report brings examples, such as traffic jams, to show that more production doesn't necessarily correspond with greater well-being.

Stiglitz explains: The big question concerns whether GDP provides a good measure of living standards. In many cases, GDP statistics seem to suggest that the economy is doing far better than most citizens' own perceptions. Moreover, the focus on GDP creates conflicts: political leaders are told to maximise it, but citizens also demand that attention be paid to enhancing security, reducing air, water, and noise pollution, and so forth – all of which might lower GDP growth. The fact that

Happiness Index

The World Happiness Report is a measure of happiness published by the United Nations Sustainable Development Solutions Network. In 2011, the UN General Assembly passed a resolution inviting member countries to measure the happiness of their people and to use this to help guide their public policies. In 2012, this was followed by the first UN High Level Meeting called "Happiness and Well-Being: Defining a New Economic Paradigm," which was chaired by Prime Minister Jigme Thinley of Bhutan, the first and so far only country to have officially adopted gross national happiness instead of gross domestic product as their main development indicator.

The first World Happiness Report was released in 2012. It drew international attention as the world's first global happiness survey. The report outlined the state of world happiness, causes of happiness and misery, and policy implications highlighted by case studies. In September 2013 the second World Happiness Report offered the first annual follow-up and reports are now issued every year.The report primarily uses data from the Gallup World Poll.

In the reports, leading experts in fields including economics, psychology, survey analysis, and national statistics, describe how measurements of well-being can be used effectively to assess the progress of nations. Reports delve deep into issues relating to happiness, including mental illness, the objective benefits of happiness, the importance of ethics, policy implications, and links with subjective well-being and the Human Development Report.

India ranked at 122 out of 155 countries in the World Happiness Report 2017.

Norway is the happiest country based on the index compiled from data which combine economic, health and polling data compiled by economists that are averaged over three years from 2014 to 2016. It is recommended that statistics and surveys, which normally deal with income, spending, health and housing, include a few extra questions on happiness because it would lead to better policy that affects people's lives. The entire top ten were wealthier developed nations. Yet money is not the only ingredient in the recipe for happiness. In fact, among the wealthier countries the differences in happiness levels had a lot to do with differences in mental health, physical health and personal relationships: the biggest single source of misery is mental illness.China, has made major economic strides in recent years. But its people are not happier than 25 years ago, it found.

The United States meanwhile slipped to the number 14 spot due to less social support and greater corruption; those very factors play into why Nordic countries fare better on this scale of smiles.What works in the Nordic countries is a sense of community and understanding in the common good. The rankings are based on gross domestic product per person, healthy life expectancy with four factors from global surveys. In those surveys, people give scores from 1 to 10 on how much social support they feel they have if something goes wrong, their freedom to make their own life choices, their sense of how corrupt their society is and how generous they are.

Madhya Pradesh's Department of Happiness

In 2016, Madhya Pradesh became the first state to announce its happiness department. Madhya Pradesh said that the department would ensure happiness in the lives of people and stop them from taking extreme steps, such as suicide. MP joined hands with the Indian Institute of Technology (IIT) Kharagpur to develop a happiness index for "measuring the well-being of the people".IIT KGP will develop the Index and analyze data collected by the Government of Madhya Pradesh in order to assess the level of happiness and develop recommendations that can be used to enhance happiness. The institute will also develop online courses on happiness.

Andhra Pradesh

Andhra Pradesh is the second state in the country after Madhya Pradesh to start a Happiness Index Department. Chief Minister heads the newly formed departmentas in Madhya Pradesh. The State had recently launched an "achieving happiness" programme under which civic bodies organised song and dance events.The Andhra Pradesh government's 'Sunrise AP Vision 2029' has taken Bhutan as a model to focus on matters including psychological well-being, health, time use, education, etc.

Maharashtra

The state of Maharashtra plans to set up a "happiness department" in the government and has set up a seven-member committee to plan the formation of a happiness department under the state department of relief and rehabilitation in mid-2017.

Environmental Performance Index (EPI)

It is a method of quantifying and numerically marking the environmental performance of a state's policies. The 2016 Environmental Performance Index is a project lead by the Yale Center for Environmental Law & Policy (YCELP), Columbia University, in collaboration with World Economic Forum.

The 2016 Environmental Performance Index provides a global view of environmental performance and country by country metrics to inform decision-making. Launched at the World Economic Forum, the EPI is in its 15th year and more relevant than ever to achieving the United Nations' Sustainable Development Goals and carrying out the recent international climate change agreement. The Environmental Performance Index (EPI) ranks countries' performance on high-priority environmental issues in two areas: protection of human health and protection of ecosystems but factors taken into consideration also include tree cover and reduction in carbon intensity.2016 report ranked India 141st among 180 countries worldwide. The ten best performers in EPI are Finland, Iceland, Sweden, Denmark, Slovenia, Spain, Portugal, Estonia, Malta, and France. United Kingdom ranks 12th and the United States ranks 26th.The report stresses, there is no relationship between countries' EPI performance and economic development. "For instance, countries located in Europe tend to have higher EPI scores in relation to their Gross Domestic Product (GDP) per capita", while "China and India both have "high GDP per capita but receive low scores on the overall EPI."

Referring to unsafe water, unsafe sanitation, ambient particulate matter pollution, household air pollution from solid fuels, and ambient ozone pollution, the report states, **"Some countries, like India, perform poorly across all five environmental risk factors"**.The report is titled "Global Metrics for the Environment".

Purchasing Power Parity: PPP

Purchasing power parity is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the US. The concept of purchasing power parity allows us to estimate what exchange rate between two currencies is needed to express the accurate purchasing power of a currency in relation to another

The PPP system allows GDP comparisons to be made by asking how much money would be needed to purchase the same goods and services in two countries and using that to calculate an implicit foreign exchange rate. Purchasing power parity exchange rates are useful for comparing living standards between countries. Actual exchange rates can give a very misleading picture of living standards. For example, if the value of Indian rupee falls by half compared to the dollar, the Gross Domestic Product measured in dollars will also halve.

However, this doesn't necessarily mean that Indians are any poorer. Measuring income in different countries using purchasing power parity exchange rates helps to avoid this problem. PPP has been developed to remove the distortions in the exchange rate in the forex market. Market exchange rate doesn't reflect the purchasing power of a currency. PPP removes distortions that come with market exchange rates, which are often volatile, affected by political and financial factors that do not lead to immediate changes in income and tend to understate the standard of living in poor countries.

Let us assume that the market exchange rate between Dollar and Rupee is 66. One Dollar in the US fetches one liter of milk in the US. Rs 66 can buy three liters of milk in India. Assume that India's GDP is Rs 660. It is worth $10 by nominal exchange rate in the forex market. If milk is all that the world produces, one concludes that India's GDP is 10 liters of milk, if we use the market exchange rate. Actually, India produces 30 liters of milk. Thus, GDP calculated at market rates of foreign exchange tends to distort GDP. Remedy lies in the World Bank concept of Purchasing Power Parity (a type of exchange rate).Under PPP, we measure the GDP of India by measuring how much milk that Rupees 66 can purchase in India and One Dollar can purchase in the US. Here, one dollar in the US can purchase one liter of milk whereas Rs 22 can purchase one liter of milk in India.

$ 1 = Rs 22

Using this PPP exchange rate instead of market rate, we can calculate that India's GDP of Rs 660 becomes $30. Thus, in terms of PPP, India's GDP is $30 and not $10 which is the value that we arrive at by using market exchange rate. Big Mac Index says the same as can be seen below:

Big Mac Index

The Big Mac index was developed by The Economist magazine in 1986 as a lighthearted guide to whether currencies are at their "correct" level. It is based on the theory of purchasing-power parity (PPP). For example, the average price of a Big Mac in America in January 2017 was $6.6. In India, it was about Rs.120. It means, under PPP, the equation is Rs.18.18 per dollar. Thus, rupee is seen to be grossly undervalued.

How PPP is more reliable than market exchange rate is as follows: Firstly, market exchange rates can quickly change, which artificially changes the value of GDP. Secondly, market exchange rates are determined by demand and supply of currencies that includes speculation and expectations and confidence. The Gross Domestic Product per capita in India was at 6092.60 US dollars in 2016, when adjusted by purchasing power parity (PPP).

Business Cycles

Alternating periods of expansion and decline in economic activity is called business cycle. That is, the ups and downs of the economy. There are four stages in the business cycle: expansion, growth, slowdown and recession. Recession may not follow every time.

Recession

A recession is economic contraction (de-growth) which results in a general slowdown in economic activity. Macroeconomic indicators such as GDP (gross domestic product), investment, capacity utilization, household income, business profits, and inflation fall, while the unemployment rate rises. In the United Kingdom, it is defined as a negative economic growth for two consecutive quarters. This may be triggered by various events, such as a financial crisis (2008), an external trade shock, an adverse supply shock or the bursting of an economic bubble. Governments usually respond to recessions by adopting expansionary macroeconomic policies, such as increasing money supply, increasing government spending and decreasing taxation. Recession may end with the corrective measures taken by the government and the market. If it does not end and relapses for any reason, due to external or internal shocks, it is called double dip recession. In 2012, UK was in double dip recession. When recession worsens, with de-growth becoming stubborn and deeper and more and more people lose jobs, it is called depression- statistical markers may differ- whether 10% GDP is lost or more or less.

Great Recession 2008-9

The Great Recession was a period of steep economic decline observed in world economies, particularly the developed world during the late 2000s and early 2010s. The scale and timing of the recession varied from country to country. In terms of overall impact, the International Monetary Fund concluded that it was the worst global recession since the 1930s (the Great Depression). The causes of the recession largely originated in the United States, particularly related to the real-estate market. It began in December 2007 and ended in June 2009, thus extending over 19 months. The Great Recession was related to the financial crisis of 2007–08 and U.S. subprime mortgage crisis of 2007–09. It resulted in the collapse of the financial sector in USA. The banks were then bailed out by the U.S. government.

The recession was not felt evenly around the world. Whereas most of the world's developed economies, particularly in North America and Europe (including Russia), fell into a definitive recession, many of the newer developed economies suffered far less impact, particularly India and China whose economies grew substantially during this period.

2008 Subprime Crisis

The financial crisis is linked to reckless lending practices by financial institutions in the United States. The US mortgage-backed securitieswere marketed around the world. When these securities lost value and were considered toxic, the financial institutions that bought them either went into heavy losses or went bankrupt fully. These companies being listed on the stock market, equities collapsed in their value as a result. Indian banks had negligible exposure to them.

Credit boom fed a global speculative bubble in real estate and equities, which served to aggravate the risky lending practices. The emergence of Sub-prime loan losses in 2007 began the crisis and exposed other risky loans and over-inflated asset prices. With loan losses mounting and the fall of Lehman Brothers on September 15, 2008, a major panic broke out in the global financial transactions. As share and housing prices melted, many large and well established investment and commercial banks in the United States and Europe suffered huge losses and even faced bankruptcy, resulting in massive public financial assistance.A global recession resulted in a sharp drop in international trade, rising unemployment and slumping commodity prices.The conditions leading up to the crisis, characterized by an exorbitant rise in asset prices and associated boom in economic demand, are considered a result of the extended period of easily available credit, inadequate regulation and oversight etc.Some trace the genesis to the Chinese buying US treasuries with their export earnings thus supplying the US cheap money that they could lend recklessly.

The recession renewed interest in Keynesian economic ideas on how to combat recessionary conditions. Fiscal and monetary policies have been significantly eased to stem the recession and financial risks.

(The best authors on the meltdown are Arun Kumar (JNU); Joseph Stiglitz, Paul Krugman and Dr.C.Rangarajan)

Depression

A depression is a more severe economic downturn than a recession, which is a slowdown in economic activity over the course of a normal business cycle. Technically, recession is negative growth in two successive quarters.

A depression is an unusual and extreme form of recession. Depressions are characterized by their length, by abnormally large increases in unemployment, falls in the availability of credit (often due to some form of banking or financial crisis), shrinking output as buyers are not there and producers cut back on production and investment, large number of bankruptcies including sovereign debt defaults, significantly reduced amounts of trade and commerce (especially international trade), as well as highly volatile relative currency value (often due to currency devaluations). Price deflation, financial crises and bank failures are also common elements of a depression that do not normally occur during a recession.Greece was in depression in 2012 with 50% of the young people out of work.According to the International Monetary Fund, Venezuela's GDP in 2017 is 35% below 2013 levels. That is a significantly sharper contraction than during the 1929-1933 Great Depression in the United States, when US GDP is estimated to have fallen 28%.

Structural Composition of The Economy

Economies can be classified into three sectors by activity: extraction of raw materials (primary), manufacturing (secondary), and services (tertiary). As the economy develops, there is a progression from primary to secondary to tertiary sector. The development of technology, improvement in quality of life, social security, growth of education and culture are the benefits of such transition.

The primary sector of the economy involves changing natural resources into primary products. Most products from this sector are considered raw materials for other industries. This sector includes agriculture, fishing, forestry and all mining and quarrying industries. Primary sector is a larger sector in developing countries; for instance, animal husbandry is more common in Africa than in Japan.

The secondary sector of the economy includes those economic sectors that create a finished, usable product: manufacturing and construction. This sector generally takes the output of the primary sector and manufactures finished goods or where they are suitable for use by other businesses, for export, or sale to domestic consumers. This sector is often divided into light industry and heavy industry.

Light industry is that part of an economy's secondary sector which is less capital-intensive and more labor-intensive operations. They are argely consumer goods. Consumer electronics, clothes, shoes, furniture and household items like consumer electronics are the examples. Heavy industry is capital intensive and produces goods for businesses: auto, steel, cement, petroleum etc producing large quantities. The tertiary sector of economy (service sector) produces "intangible or invisible goods". The tertiary sector of economy involves the provision of services to businesses as well as final consumers. Services may involve the transport, distribution and sale of goods from producer to a consumer, entertainment. The service sector consists of the "soft" parts of the economy such as insurance, government, tourism, banking, retail, education, retail, insurance, and government.

The quaternary sector includes activities which provide information services (information generation, information sharing and research and development); computing, ICT (information and communication technologies), consultancy (offering advice to businesses) and R&D (research and development). The quaternary sector is sometimes included with the tertiary sector, as they are both service sectors but many argue that intellectual services are distinct enough to warrant a separate sector. To many industries, such as the pharmaceutical industry, the sector is the most valuable because it creates future branded products which the company will profit from. This sector evolves in well developed countries and requires a highly educated workforce.

Quinary sector is not clearly conceptualized like the preceding four sectors. Some include the highest levels of decision making in an economy in it: CEOs of firms; HODs in government, science, universities, nonprofit, healthcare, culture and the media. Some include police and fire departments which are public services and not for-profit enterprises.Some economists include care economy in it. Structural change of an economy refers to a long-term and broad based change of the fundamental structure, rather than microscale or short-term change. Originally it meant the way the economy is evolving impacting on the respective contributions of the three sectors of economy (agriculture, industry and services) to Gross Domestic Product (GDP). It may also mean other changes. For example, a subsistence economy is transformed into commercial economy or a regulated economy is liberalized. An insulated and protectionist economy becomes open and globalized. India has been structurally reorienting its economy since the early 1990s under which there is more room for markets; privatization of the public sector; greater flow of foreign investment and foreign goods etc.

Indian Economy: Sectoral Classificaion and Components
I. Agriculture, forestry & fishing
Crops
Livestock
Forestry & logging
Fishing and aquaculture
II. Industry Sector
Mining & quarrying
Manufacturing
Food Products, Beverages and Tobacco
Textiles, Apparel and Leather Products

Metal Products
Machinery and Equipment
Other Manufactured Goods
Electricity, gas, water supply & other utility services
Construction
III. Services Sector
Trade, repair, hotels and restaurants
Trade & repair services
Hotels & restaurants
Transport, storage, communication & services related to broadcasting
Railways
Road transport
Water transport
Air transport
Services incidental to transport
Storage
Communication & services related to broadcasting
Financial, real estate & prof. servs
Financial services
Real estate, ownership of dwelling & professional services
Community, social & pers. Servs
Public administration & defence
Other services

Indian economy is classified in three sectors — Agriculture and allied, Industry and Services. Agriculture sector includes Agriculture (Agriculture proper & Livestock), Forestry & Logging, Fishing and related activities. Industry includes 'Mining & quarrying', Manufacturing (Registered & Unregistered), Electricity, Gas, Water supply, and Construction. Services sector includes 'Trade, hotels, transport, communication and services related to broadcasting', 'Financial, real estate & prof servs', 'Public Administration, defence and other services'. Services sector is the largest sector of India. Services sector accounts for 53.66% of GDP. Industry sector contributes 29.02%. While, Agriculture and allied sector share is 17.32%.

Some Terms

A developed country or industrialized country has advanced technological infrastructure. Most commonly, the criteria for evaluating the degree of economic development are gross domestic product (GDP), level of industrialization, amount of widespread infrastructure and general standard of living.

Developed countries have post-industrial economies, meaning the service sector provides more wealth than the industrial sector. They are contrasted with developing countries, which are in the process of industrialization, or undeveloped countries.

A developing country or underdeveloped country, is a nation with an underdeveloped industrial base, and a low Human Development Index (HDI) relative to developed countries. There is no universal criterion as to what makes a country developing or developed although there are general markers such as a nation's GDP per capita, HDI, demographic state etc. A developing country is well short of the modern and Western standards of democratic governments, economic development, social security and civil rights guarantees for their citizens.

NIC: Newly industrialized country (NIC) is one which adopted the market model of growth; is showing rapid growth of economy for a considerable period of time; falls between a developed country and a developing country characterized by rapid export-driven economic growth and migration of workers from rural to urban areas.For example, India, Brazil, South Africa etc.NICs are attractive investment destinations given their strong economic growth rates and future potential.

World Bank classification of countries (2017)

Category	**Per Capita (current US$)**
Low-income	< 1,005
Lower-middle income	1,006 - 3,955
Upper-middle income	3,956 - 12,235
High-income	> 12,235

A high-income economy is defined by the World Bank as a country with a per capita income of US$12,235 or more in 2017. The term "first world" commonly refers to those prosperous market economies like the west, Japan etc.

According to the United Nations, for example, some high income countries may also be developing countries. The GCC (Persian Gulf States) countries, for example, are classified as developing high income countries. Thus, a high income country may be classified as either developed or developing. GCC countries for example are rich but not developed. They have pockets of export economy based on oil and gas and the rest of the economy is under developed.

The term developed country, or advanced country, is used to categorize countries that have achieved a high level of industrialization in which the tertiary and quaternary sectors of industry dominate; a high income per capita and a high Human Development Index (HDI).

First, Second, Third and Fourth World countries

First world was the western dceloped world. Second world was the communist countries with commmand economies but they do not exist today. Third world was made up of the developing countries.

Least Developed Countries (LDCs/ Fourth World countries)

They are countries which according to the United Nations exhibit the lowest indicators of socioeconomic development, with the lowest Human Development Index ratings of all countries in the world. The concept of LDCs originated in the late 1960s. A country is classified as a Least Developed Country if it meets three criteria:

- Poverty. As of 2015 a country must have per capita less than US $1,035 to be included on the list, and over $1,242 to graduate from it.
- Human resource weakness (based on indicators of nutrition, health, education and adult literacy) and
- Economic vulnerability (based on instability of agricultural production, instability of exports of goods and services, economic importance of non-traditional activities, merchandise export concentration, handicap of economic smallness, and the percentage of population displaced by natural disasters)

Least developed countries (LDCs) are low-income countries confronting severe structural impediments to sustainable development. They are highly vulnerable to economic and environmental shocks and have low levels of human assets.LDC criteria are reviewed every three years by the Committee for Development Policy (CDP) of the UN Economic and Social Council (ECOSOC). Countries may "graduate" out of the LDC classification when indicators exceed these criteria. There are currently 47 countries on the list of LDCs.