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CORE CONCEPT OF
BUSINESS ECONOMICS & ENVIRONMENT

1. Point out the elements of deductive method?
2. Briefly explain the merits & demerits of deductive method.
3. What is inductive method? Briefly explain.
4. Illustrate the merits & demerits of inductive method?
5. What do you mean by Equilibrium-Stable?
6. Briefly explain the Static Equilibrium.
7. Illustrate the Stable Vs. Unstable Equilibrium.
8. Differentiate the Dynamic, natural & partial equilibrium.
9. Define economic equilibrium and point out its concept.

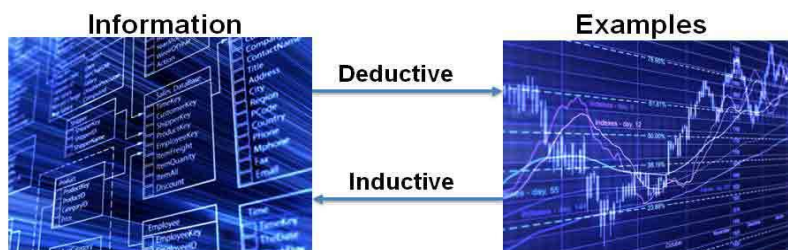
Methods of study of Economics:

There are two method of reasoning in theoretical economics. They are the deductive and inductive methods. As a matter of fact, deduction and induction are the two forms of logic that help to establish the truth.

Deductive Method:

Deduction Means reasoning or inference from the general to the particular or from the universal to the individual. The deductive method derives new conclusions from fundamental assumptions or from truth established by other methods. It involves the process of reasoning from certain laws or principles, which are assumed to be true, to the analysis of facts. Then inferences are drawn which are verified against observed facts. Bacon described deduction as a “descending process” in which we proceed from a general principle to its consequences.

Deductive vs. Inductive





Mill characterised it as a priori method, while others called it abstract and analytical.

Deduction involves four steps: (1) Selecting the problem. (2) The formulation of assumptions on the basis of which the problem is to be explored. (3) The formulation of hypothesis through the process of logical reasoning whereby inferences are drawn. (4) Verifying the hypothesis. These steps are discussed as under.

(1) Selecting the problem: The problem which an investigator selects for enquiry must be stated clearly. It may be very wide like poverty, unemployment, inflation, etc. or narrow relating to an industry. The narrower the problem the better it would be to conduct the enquiry.

(2) Formulating Assumptions: The next step in deduction is the framing of assumptions which are the basis of hypothesis. To be fruitful for enquiry, the assumption must be general. In any economic enquiry, more than one set of assumptions should be made in terms of which a hypothesis may be formulated.

(3) Formulating Hypothesis: The next step is to formulate a hypothesis on the basis of logical reasoning whereby conclusions are drawn from the propositions. This is done in two ways: First, through logical deduction. If and because relationships (p) and (q) all exist, then this necessarily implies that relationship (r) exists as well. Mathematics is mostly used in these methods of logical deduction.

(4) Testing and Verifying the Hypothesis: The final step in the deductive method is to test and verify the hypothesis. For this purpose, economists now use statistical and econometric methods. Verification consists in confirming whether the hypothesis is in agreement with facts. A hypothesis is true or not can be verified by observation and experiment. Since economics is concerned with human behaviour, there are problems in making observation and testing a hypothesis.

For example, the hypothesis that firms always attempt to maximise profits, rests upon the observation that some firms do behave in this way. This premise is based on a priori knowledge which will continue to be accepted so long as conclusions deduced from it are consistent with the facts. So the hypothesis stands verified. If the hypothesis is not confirmed, it can be argued that the hypothesis was correct but the results are contradictory due to special circumstances.

Under these conditions, the hypothesis may turn out to be wrong. In economics, most hypotheses remain unverified because of the complexity of factors involved in human behaviour which, in turn, depend upon social, political and economic factors. Moreover, controlled experiments in a laboratory are not possible in economics. So the majority of hypotheses remain untested and unverified in economics.

Merits of Deductive Method: The deductive method has many advantages.

(1) Real: It is the method of “intellectual experiment,” according to Boulding. Since the actual world is very complicated, “what we do is to postulate in our own minds economic systems which are simpler than reality but more easy to grasp. We then work out the relationship in these simplified systems and by introducing more and more complete assumptions, finally work up to the consideration of reality itself.” Thus, this method is nearer to reality.



(2) Simple: The deductive method is simple because it is analytical. It involves abstraction and simplifies a complex problem by dividing it into component parts. Further, the hypothetical conditions are so chosen as to make the problem very simple, and then inferences are deduced from them.

(3) Powerful: It is a powerful method of analysis for deducing conclusions from certain facts. As pointed out by Cairnes, The method of deduction is incomparably, when conducted under proper checks, the most powerful instrument of discovery ever wielded by human intelligence.

(4) Exact: The use of statistics, mathematics and econometrics in deduction brings exactness and clarity in economic analysis. The mathematically trained economist is able to deduce inferences in a short time and make analogies with other generalisations and theories. Further, the use of the mathematical-deductive method helps in revealing inconsistencies in economic analysis.

(5) Indispensable: The use of deductive method is indispensable in sciences like economics where experimentation is not possible. As pointed out by Gide and Rist, “In a science like political economy, where experiment is practically impossible, abstraction and analysis afford the only means of escape from those other influences which complicate the problem so much.”

(6) Universal: The deductive method helps in drawing inferences which are of universal validity because they are based on general principles, such as the law of diminishing returns.

Demerits of Deductive Method: Despite these merits, much criticism has been levelled against this method by the Historical School which flourished in Germany.

1. Unrealistic Assumption: Every hypothesis is based on a set of assumptions. When a hypothesis is tested, assumptions are indirectly tested by comparing their implications with facts. But when facts refute the theory based on the tested hypothesis, the assumptions are also indirectly refuted. So deduction depends upon the nature of assumptions. If they are unrealistic, in this method, economists use the ceteris paribus assumption. But other things seldom remain the same which tend to refute theories.

2. Not Universally Applicable: Often the conclusions derived from deductive reasoning are not applicable universally because the premises from which they are deduced may not hold good at all time and places. For instance, the classicists assumed in their reasoning that particular conditions prevailing in England of their times were valid universally. This supposition was wrong. Prof. Lerner, therefore, points out that the deductive method is simply “armchair analysis” which cannot be regarded as universal.

3. Incorrect Verification: The verification of theories, generalisations or laws in economics is based on observation. And right observation depends upon data which must be correct and adequate. If a hypothesis is deduced from wrong or inadequate data, the theory will not correspond with facts and will be refuted. For instance, the generalisations of the classicists were based on inadequate data and their theories were refuted. As pointed out by ircholson, “the great danger of the deductive method lies in the natural aversion to the labour of verification.”



4. Abstract Method: The deductive method is highly abstract and requires great skill in drawing inferences for various premises. Due to the complexity of certain economic problems, it becomes difficult to apply this method even at the hands of an expert researcher. More so, when he uses mathematics or econometrics.

5. Static Method: This method of analysis is based on the assumption that economic conditions remain constant. But economic conditions are continuously changing. Thus this is a static method which fails to make correct analysis.

6. Intellectually: The chief defect of the deductive method “lies in the fact that those who follow this method may be absorbed in the framing of intellectual toys and the real world may be forgotten in the intellectual gymnastics and mathematical treatment.”

Inductive Method:

Induction “is the process of reasoning from a part to the whole, from particulars to generals or from the individual to the universal.” Bacon described it as “an ascending process” in which facts are collected, arranged and then general conclusions are drawn. The inductive method was employed in economics by the German Historical School which sought to develop economics wholly from historical research. The historical or inductive method expects the economist to be primarily an economic historian who should first collect material, draw generalisations, and verify the conclusions by applying them to subsequent events. For this, it uses statistical methods. The Engel’s Law of Family Expenditure and the Malthusian Theory of Population have been derived from inductive reasoning. The inductive method involves the following steps:

1. The Problem: In order to arrive at a generalisation concerning an economic phenomenon, the problem should be properly selected and clearly stated.

2. Data: The second step is the collection, enumeration, classification and analysis of data by using appropriate statistical techniques.

3. Observation: Data are used to make observation about particular facts concerning the problem.

4. Generalisation: On the basis of observation, generalisation is logically derived which establishes a general truth from particular facts. Thus induction is the process in which we arrive at a generalisation on the basis of particular observed facts.

The best example of inductive reasoning in economics is the formulation of the generalisation of diminishing returns. When a Scottish farmer found that in the cultivation of his field an increase in the amount of labour and capital spent on it was bringing in less than proportionate returns year after year, an economist observed such instances in the case of a number of other farms, and then he arrived at the generalisation that is known as the Law of Diminishing Returns.

Merits of Inductive Method: The chief merits of this method are as follows:



(1) **Realistic:** The inductive method is realistic because it is based on facts and explains them as they actually are. It is concrete and synthetic because it deals with the subject as a whole and does not divide it into component parts artificially

(2) **Future Enquiries:** Induction helps in future enquiries. By discovering and providing general principles, induction helps future investigations. Once a generalisation is established, it becomes the starting point of future enquiries.

(3) **Statistical Method:** The inductive method makes use of the statistical method. This has made significant improvements in the application of induction for analysing economic problems of wide range. In particular, the collection of data by governmental and private agencies or macro variables, like national income, general prices, consumption, saving, total employment, etc., has increased the value of this method and helped governments to formulate economic policies pertaining to the removal of poverty, inequalities, underdevelopment, etc.

(4) **Dynamic:** The inductive method is dynamic. In this, changing economic phenomena can be analysed on the basis of experiences, conclusions can be drawn, and appropriate remedial measures can be taken. Thus, induction suggests new problems to pure theory for their solution from time to time.

(5) **Histico-Relative:** A generalisation drawn under the inductive method is often historico-relative in economics. Since it is drawn from a particular historical situation, it cannot be applied to all situations unless they are exactly similar. For instance, India and America differ in their factor endowments. Therefore, it would be wrong to apply the industrial policy which was followed in America in the late nineteenth century to present day India. Thus, the inductive method has the merit of applying generalisations only to related situations or phenomena.

Demerits of Inductive Method: However, the inductive method is not without its weaknesses which are discussed below.

(1) **Misinterpretation of Data:** Induction relies on statistical numbers for analysis that “can be misused and misinterpreted when the assumptions which are required for their use are forgotten.”

(2) **Uncertain Conclusions:** Boulding points out that “statistical information can only give us propositions whose truth is more or less probable it can never give us certainty.”

(3) **Lacks Concreteness:** Definitions, sources and methods used in statistical analysis differ from investigator to investigator even for the same problem, as for instance in the case of national income accounts. Thus, statistical techniques lack concreteness.

(4) **Costly Method:** The inductive method is not only time-consuming but also costly. It involves detailed and painstaking processes of collection, classification, analyses and interpretation of data on the part of trained and expert investigators and analysts



(5) Difficult to Prove Hypothesis: Again the use of statistics in induction cannot prove a hypothesis. It can only show that the hypothesis is not inconsistent with the known facts. In reality, collection of data is not illuminating unless it is related to a hypothesis.

(6) Controlled Experimentation not Possible in Economics: Besides the statistical method, the other method used in induction is of controlled experimentation. This method is extremely useful in natural and physical sciences which deal with matter. But unlike the natural sciences, there is little scope for experimentation in economics because economics deals with human behaviour which differs from person to person and from place to place.

Further, economic phenomena are very complex as they relate to man who does not act rationally. Some of his actions are also bound by the legal and social institutions of the society in which he lives. Thus, the scope for controlled experiments in inductive economics is very little. As pointed Out by Friendman, "The absence of controlled experiments in economics renders the weeding out of unsuccessful hypo-these slow and difficult."

Conclusion:

The above analysis reveals that independently neither deduction nor induction is helpful in scientific enquiry. In reality, both deduction and induction are related to each other because of some facts. They are the two forms of logic that are complementary and co-relative and help establish the truth. Marshall also supported the complementary nature of the two methods when he quoted Schmoller: "Induction and deduction are both needed for scientific thought as the right and left foot are needed for walking." And then Marshall stressed the need and use of integrating these methods.

Now-a-days, economists are combining induction and deduction in their studies of economic phenomena in various fields for arriving at generalisations from observed facts and for the indirect verification of hypotheses. They are using the two methods to confirm the conclusions drawn through deduction by inductive reasoning and vice versa. Thus true progress in economic enquiries can be made by a wise combination of deduction and induction.

Concept of Equilibrium-Stable:

A common example of a stable equilibrium in the study of economics is a market equilibrium. Prompted by the imbalance in the market, the price changes, which causes changes in quantity demanded and quantity supplied. The quantity changes eliminate the shortage or surplus and restores equilibrium balance in the market. Economic equilibrium is a condition or state in which economic forces are balanced. These economic variables remain unchanged from their equilibrium values in the absence of external influences. Economic equilibrium may also be defined as the point at which supply equals demand for a product, with the equilibrium price existing where the hypothetical supply and demand curves intersect.

Meaning - The word equilibrium has been derived from the Latin word "aequilibrium" which means Equal Balance. In economics it entails a point of relax characterised by non-existence of change. It is a condition where absolute concord of the economic strategy of an assortment of market partaker so that no one has a propensity to rework or modify this judgment. Economist Scitovsky defines as "A market or Economy or any other group of persons and firms is in Equilibrium when none of its members feels impelled to change his behaviour. For a group to be in equilibrium



therefore all its members must be in equilibrium and the equilibrium behaviour of each member must be compatible with the equilibrium behaviour of all other members."

Static Equilibrium

Prof. Boulding has explained static equilibrium as "A Mechanical analogy may be found in a ball rolling at a constant speed, or better still of a forest in equilibrium where tree sprout grows or dies but where the composition of a forest as a whole remains unchanged." This is static equilibrium which is based on given and invariable prices, volume, revenue, taste, expertise, inhabitants etc.

Dynamic Equilibrium

Dynamic equilibrium has constant changing prices, volume, earnings, tastes, technology etc. Therefore for over an interlude of time, a state of disequilibrium fairly than equilibrium is to be found. If there is difference in the judgement being made by few of the market partakers, it is likely to alter the existing equilibrium situation and there is disequilibrium. Those partakers who are in disequilibrium in their pains to arrive at the equilibrium condition throw others into disequilibrium. Thus a chain reaction sets in which ultimately brings the judgements of all the partakers in synchronization and a novel equilibrium condition is accomplished. Prof. Mehta, has defined as "When after a fixed period the equilibrium position is disturbed it is called Dynamic Equilibrium."

Stable Vs. Unstable Equilibrium

Marshall has defined as "When the demand price is equal to the supply price, the amount produced has no tendency either to be increased or to be diminished it is equilibrium. Such an equilibrium is stable, that is the price, if is displaced a little from it, will tend to return as a pendulum oscillates about its lowest point." Alternatively, equilibrium is unstable when any commotion in equilibrium condition brings in forces which move the structure away from it, never be restored.

Neutral Equilibrium

Neutral equilibrium is another type of equilibrium. When an early equilibrium point is bothered the forces of commotion fetch it to the fresh location of equilibrium where the structure has come to relax. For instance, a ball in the billiard table if bothered will come to rest at the new position to which it has moved. "An egg lying on its side is in neutral equilibrium.

Partial Equilibrium

Prof. Stigler defines as "Partial Equilibrium is one which is based on only a restricted range of data, a standard example is price of a single product, the prices of all other products being held fixed during the analysis." This analysis consists of two types of economic problems. First those relevant to only exacting characteristic of the economic activities of a definite person, firm or industry. For example, it may bind to itself to the market for a single item where its value, the methods of production and the sum of aspects used in its manufacture are taken into account



while all other aspects affecting it are supposed to be constant. Second, it studies only the first order consequences of the economic actions it analyses. It pays no attention to the effects on the cost of other products fetched about by the product being analysed and in turn secondary influences of the former on the product.

General Equilibrium

General equilibrium analysis is a widespread study of a number of economic variables, their interconnections and inter-reliance for sympathetic operations of the economic structure as a whole. It fetches mutually the grounds and consequent series of changes in prices and volume of products and services in association to the entire financial system. A financial system can be in general equilibrium only if all customers, all firms, all industries and all factor-services are in equilibrium concurrently and they are interrelated through product and factor cost. It subsists when all cost are in equilibrium each customer expends his given earnings in a mode that yields him the utmost satisfaction all firms in each industry are in equilibrium at all prices and productivity and the supply and demand for productive resources are at equal at equilibrium prices.

BREAKING DOWN 'Economic Equilibrium '-

The equilibrium price is where the supply of goods matches demand. When a major index experiences a period of consolidation or sideways momentum, it can be said that the forces of supply and demand are relatively equal and that the market is in a state of equilibrium.

DR. S.K. SINGH