

Research Methodology

Final Project
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Lecture 4



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- **Research method concept**
- **Types of research methods**
 1. Inductive Method
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Contents

By the end of this chapter, you will be able to understand the following knowledge:

- The concept of research method and its importance in scientific research.
- Identify the concept of both the Inductive and Deductive methods and their relationship to the field of administrative sciences.
- Identify the concept of the Historical method and its importance in administrative sciences.
- Identify the concept of the Experimental method, its steps, and how to use it in administrative sciences.
- Identify the concept of the Descriptive approach and its different methods in the field of administrative sciences.

Contents

By the end of this chapter, you will possess the following Skills:

- The ability to identify and choose the appropriate research method, its strengths and weaknesses, and the necessary tools.

Scientific Research

- ❑ Determining the scientific method used in the research process is one of the main elements that the researcher must identify in the early stages of the research process because defining the research method will depend on it for the rest of the research process, and the essential elements of research are not completed without specifying a transparent methodology.

- ❑ No single research approach represents the only or best approach in research design.
Still, it is expected to determine the appropriate approach according to the **purpose of the study, the nature of the available data about the phenomenon, and the methods used in data analysis.**

There are several definitions of research method:

- ❖ “The method followed to reveal the facts using a set of general rules related to the collection and analysis of data until reaching tangible results.”
- ❖ “Organized investigation by following scientific methods and methods that identify scientific facts to verify their validity, modify them, or add new ones to them.”

Scientific Research

- **some define the term research method:**

"The path leading to the disclosure of truth in sciences by means of a set of rules that dominate the functioning of the mind and determine its process until it reaches the desired result."

- **From the above, the research method can be defined as:**

"An organized method that a researcher uses to handle a specific problem he is studying. Scientific research is originally based on a fixed and specific method governed by steps, which constitute rules and principles that must be adhered to by the researcher based initially

Scientific Research

Before choosing a scientific method, the following questions must be answered:

1. Is the research problem related to the past, the present, or the future?
2. Will the research be done through **the library and published** information sources, through **actual experience** of the phenomenon by the researcher and recording the changes that occur to it, or through **direct or indirect** investigation?
3. Does the aim of the research stop at the limit of description, or does it go beyond it to explain and reveal the causal relationship between the study variables?

Types of research methods:

- According to the intellectual framework, we can distinguish between two scientific approaches, ***the Inductive approach and the Deductive approach.***
- The types of data and the researcher's data collection and analysis method are divided into historical, experimental, and descriptive methods.

Inductive Approach

- Research partial phenomena until they reach general provisions.
- Observation and experience.
- **Qualitative analysis**, not quantitative analysis.
- It requires a researcher with distinctive characteristics and great experience.

For example, observing the relationship between changes in the prices of commodities and the extent to which individuals are willing to buy these commodities has led some economists to have an inverse relationship between the required quantities of the commodity (law of demand).

Deductive Approach

- Moving from the whole to the part or from the general to the particular.
- It is based on theories.
- It goes through three steps: the significant logical introduction, the minor logical introduction, and the conclusion.

Example: “All institutions that apply strategic management thought have a high competitive ability” (a major logical introduction), and an institution was applying strategic management thought (a minor logical introduction), so it can be said that this institution, then, is an institution with the ability to highly competitive.

The deduction begins with laws to derive facts (a logical process).

Inductive & Deductive Approach

Note

- ✓ Both the inductive method and the deductive method complete each other.
- ✓ Using the inductive approach in forming and formulating the intellectual framework for research and building theories and then applying these intellectual frameworks to a specific field through the deductive method.

Historical Method

- Study of past phenomena and events
- The study of the present phenomena with reference to their origin and the developments that have passed through them.

Example: A study of the unemployment problem - the evolution of university housing habits from 2000 to 2020.

- The historical method is used when the research objective is to identify the phenomenon's beginning, how it developed, and the stages it passed through in the development process.

Historical Method

- Revealing the problems faced by business organizations in the past.
- Revealing the true origins of scientific theories.
- Determining the relationship between administrative phenomena or problems and the social, economic, and cultural environment that led to their emergence.
- Sources of information in the historical curriculum:

Primary sources (eyewitnesses - manuscripts..)

Secondary sources: (books - previous data - newspapers)

Historical Method

Negative aspects of the historical method:

- Change in information when transmitted from one person to another.
- The data may be subject to errors or intentional misrepresentations (impact from authority).
- Proving hypotheses in historical research may be tainted by inaccuracies and credibility.

Experimental Method

- The experimental method involves the manipulation of variables to establish cause-and-effect relationships.
- The key features are controlled methods and randomly allocating participants into controlled and experimental groups.

An experiment is an investigation in which a hypothesis is scientifically tested. In an experiment, an independent variable (the cause) is manipulated, and the dependent variable (the effect) is measured; any extraneous variables are controlled.

Experimental Method

The foundations (elements) of the experimental method:

- The Independent variable
- The Dependent variable
- The Moderator variable
- The Controlling group
- Study groups

Experimental Method

Single group method:

Measure the effect of a single experimental factor on the performance of the group of interest.

Example: Testing the effect of incentives on the productivity of employees in a company

1. Selection of the experimental group (e.g., 10 employees in the organization).
2. Measure the group's productivity (1,000 units per day).
3. Enter the experimental variable (incentives) (10% of the salary.)
4. Measuring the group's productivity after introducing the independent variable (1300 units per day).
5. Result analysis.

Experimental Method

Two groups:

The researcher conducts the study on two homogeneous groups, exposing one group to the independent factor, the experimental group, and avoiding exposing the other group (the controlling group) to the experimental factor. Then, the researcher measures the result and compares the two groups.

Experimental Method

❑ In the previous example

1. Select two homogeneous groups of workers (each group of 10 workers).
2. Exposing one of the two groups to the independent factor (the experimental group), which is a 10% incentive on the salary.
3. The other group (the control group) is not exposed to this stimulus.
4. Measure and Compare the productivity of the two groups of workers.
5. Result analysis]

Experimental Method

Examples of experimental research in marketing research:

1. Examine the effect of a wrapper on the sales of a product.
2. Studying the effect of price on sales of a product.
3. Studying the impact of an advertising campaign or promotional offer on product sales.

Experimental Method

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Descriptive Method

- Describe specific phenomena or events, gather facts and information about them, describe their circumstances, and report their status as they exist.
- It is also concerned with deciding how the phenomena should be.
- Using the qualitative or quantitative method to express, describe, and analyze the phenomenon.

Descriptive Method

Types of descriptive research

A. Survey Studies

- Obtaining detailed and accurate information about the current state of the phenomenon.
- It Could be a comprehensive or sample survey.

▪ Examples of survey studies

- Studying the reasons for low productivity in public sector institutions in.....
- Studying the reasons consumers are reluctant to buy a specific product in the market.

Descriptive Method

Differences between survey research and other research:

1. Survey research studies the phenomenon as it is in reality without any intervention by the researcher to influence it.
2. The survey focuses on the current reality and the current state of the phenomenon, while historical research focuses on ancient events
3. Case studies are more in-depth and analytical in studying phenomena but focus on a limited number of cases. In contrast, survey studies are more comprehensive and less in-depth in analysis.

Descriptive Method

B. Case Study

- One existing case study (a person, a company, or a country).
- Gather detailed information and data about the phenomenon under study in the current and previous situations.
- Providing accurate and in-depth scientific knowledge and analyzing its parts and dimensions.

Descriptive Method

Example:

Studying the impact of job satisfaction on the performance of employees in private companies: A case study on Aramco.

Criticism:

- The Difficulty generalizing results.
- The subjectivity and personal judgment.
- Difficulty in quantitative and statistical analysis

C. Correlative Studies

- Describe the correlations between variables (the extent to which there is a relationship between the variables)
- Predicting the phenomenon's future by recognizing the strength of the association between variables.
- Correlation coefficient $(-1, 0)$ $(1, 0)$

Descriptive Method

C. Correlative Studies

- Describe the correlations between variables (the extent to which there is a relationship between the variables)
- Predicting the phenomenon's future by recognizing the strength of the association between variables.
- Correlation coefficient $(-1, 0)$ & $(1, 0)$

Descriptive Method

- Correlational research is limited to examining the extent of an association between variables but does not address the importance of a causal relationship.

Example:

- Studying the relationship between organizational loyalty, personal qualities, and job performance for employees.
- The association may be accidental without being causal.

Descriptive Method

D. Causal-Comparative Studies:

- Analyze the causal relationships between the variables.
- Explain how and why the phenomenon occurs
- Making comparisons between different phenomena to discover the factors that accompany a particular event

Example: Studying the effect of advertising and promotional work on the purchase habits and behavior of consumers consumers' purchase habits and behavior

Descriptive Method

Descriptive method evaluation:

The descriptive approach in administrative sciences aims to achieve two goals:

1. **Applied objective:** Real information about the current state of various phenomena.
2. **Scientific objective:** to add to knowledge.

Descriptive Method

Criticisms:

- False information from various sources.
- The researcher's bias in selecting the sample or formulating the questionnaire questions.
- The results of the study were affected by the type of sample.
- The study's results were affected by the data collection method.
- The difficulty of forecasting is due to the rapid change of administrative phenomena.



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