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Research Methodology For Management Decisions

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Sample Preview of the Solved Sample Question Papers

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QUESTION PAPER

June – 2024

(Solved)

RESEARCH METHODOLOGY FOR MANAGEMENT DECISIONS

M.M.P.C.-15

Time: 3 Hours] ***[Maximum Marks : 100***
Weightage: 70%

Note: *(i) This question paper contains two sections – A and B. (ii) Attempt any four questions from Section A. Each question carries equal marks. (iii) Section B is compulsory.*

SECTION-A

Q. 1. What are the sources of a research topic? What do you consider in selecting a research problem? Discuss the steps in formulating a research problem.

Ans. Ref.: See Chapter-2, Page No. 10, 'Sources of Research Topic', 'Consideration in Selecting a Research Process', 'Steps in Formulating a Research Problems'.

Q. 2. What is secondary data? State their main sources and point out the dangers involved in their use and the precautions necessary to use them. Illustrate with examples.

Ans. Ref.: See Chapter-4, Page No. 36, Q. No. 2.

Q. 3. What are the various non-probability sampling methods? Discuss their use in business and government.

Ans. Ref.: See Chapter-7, Page No. 71, 'Non-Probabiling Sampling Methods'.

Q. 4. What is data processing in the research? What are the various types of data classification in the research? Explain the significance of data presentation in the research.

Ans. Ref.: See Chapter-8, Page No. 83, 'Introduction', Page No. 88, Q. No. 1, Page No. 89, Q. No. 2, Page No. 91, Q. No. 4.

Q. 5. What kind of questions will arise while reviewing the draft report? Discuss.

Ans. Ref.: See Chapter-12, Page No. 131, 'Reviewing the Draft'.

Q. 6. Write short notes on any three of the following:

(a) **The questionnaire method**

Ans. Ref.: See Chapter-4, Page No. 35, 'Questionnaire Methods'.

(b) **The field experiments**

Ans. Ref.: See Chapter-3, Page No. 21, 'The Fixed Experiments'.

(c) **The Semantic Differential Scale**

Ans. Ref.: See Chapter-5, Page No. 45, 'The Semantic Differential Scale'.

(d) **Discriminant Analysis**

Ans. Ref.: See Chapter-10, Page No. 112, 'Discriminant Analysis'.

(e) **Line or Arithmetic Chart**

Ans. Ref.: See Chapter-8, Page No. 85, 'Linear Arithmetic Chart'.

Also add: The line or arithmetic chart is used to identify the changes or the trend that exist in a series of data. Two types of line diagrams are used, natural scale and ratio scale. In the natural scale equal distances represent equal amounts of change. But in ratio scale equal distances represent equal ratios. Below we provide an example of line diagram.

SECTION-B

Q. 7. A large industrial plant's daily emission of sulphur oxides (in tons) is given in the following table:

17	15	20	29	19	18	22	25	27	9
24	20	17	6	24	14	15	23	24	26
19	23	28	19	16	22	24	17	20	13
19	10	23	18	31	13	20	17	24	14

Use the one-sample sign test to test the null hypothesis that the plant's true average daily emission of sulphur oxide is $\mu = 23.5$ tons against the alternative hypothesis $\mu = 23.5$ tons at the 0.05 level of significance. Tabulated value at 5% level of significance is 1.645.

Ans. Ref.: See Chapter-9, Page No. 96, 'Example'.

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QUESTION PAPER

December – 2023

(Solved)

RESEARCH METHODOLOGY FOR MANAGEMENT DECISIONS

M.M.P.C.-15

Time: 3 Hours] ***[Maximum Marks : 100***
Weightage: 70%

Note: *(i) This question paper contains two sections – A and B. (ii) Attempt any four questions from Section A. Each question carries equal marks. (iii) Section B is compulsory. (iv) Use of calculator is permitted.*

SECTION-A

Q. 1. What do you mean by research process? Explain the steps in formulating a research problem.

Ans. Ref.: See Chapter-2, Page No. 9, 'Research Process', Page No. 10, 'Steps in Formulating a Research Problem'.

Q. 2. What do you understand by the terms 'attitude' and 'attitude measurement'? Discuss.

Ans. Ref.: See Chapter-5, Page No. 50, Q. No. 1 and Q. No. 2.

Q. 3. What do you mean by sampling design? What point should be taken into consideration while developing the sampling design for studying the problems of domestic airline passengers? Discuss.

Ans. Ref.: See Chapter-7, Page No. 69, 'Introduction', Page No. 71, 'Sampling Design', Page No. 79, Q. No. 8.

Q. 4. Describe, in brief, the importance of editing, coding, classification, tabulation and presentation of data in the context of the research study.

Ans. Ref.: See Chapter-8, Page No. 88, Q. No. 1.

Q. 5. What are the merits and demerits of different methods of collecting primary data? Explain.

Ans. Ref.: See Chapter-4, Page No. 35, Q. No. 1.

Q. 6. Write short notes on any three of the following:

(a) **Different types of scaling techniques in research**

Ans. Ref.: See Chapter-5, Page No. 52, Q. No. 4.

(b) **Quota Sampling**

Ans. Ref.: See Chapter-7, Page No. 72, 'Quota Sampling'.

(c) **Coding of data**

Ans. Ref.: See Chapter-8, Page No. 83, 'Coding of Data'.

(d) **Factor analysis**

Ans. Ref.: See Chapter-10, Page No. 116, Q. No. 6.

(e) **Parts of a report**

Ans. Ref.: See Chapter-13, Page No. 145, 'Parts of Report', 'Cover and the Title Page', 'Introductary Pages', Page No. 146, 'Text', Page No. 149, 'Reference Section'.

SECTION-B

Q. 7. The data given below is on a large industrial plant's daily emission of sulphur oxide (in tons):

17	15	20	29	19	18	22	25	27	9
24	20	17	6	24	14	15	23	24	26
19	23	28	19	16	22	24	17	20	13
19	10	23	18	31	13	20	17	24	14

Use the one-sample sign test to test the null hypothesis that the plant's true average daily emission of sulphur oxide is $\mu = 23.5$ tons against the alternative hypothesis $\mu = 23.5$ tons at the 0.05 level of significance.

Ans. Ref.: See Chapter-9, Page No. 96, 'Example'.

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Sample Preview of The Chapter

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RESEARCH METHODOLOGY FOR MANAGEMENT DECISIONS

Research Methodology: An Overview

1

INTRODUCTION

Managers that employ research are bringing scientific methodologies into the art of managing. All commercial endeavours function in an unpredictable environment. Uncertainty cannot be completely eliminated by a single technique. But more than any other strategy, research methodology can reduce the level of uncertainty. As a result, it decreases the likelihood of selecting the incorrect course of action when faced with a decision. This is especially important given the growing size and increased rivalry, which make it challenging for any company enterprise to decide on the best course of action.

CHAPTER AT A GLANCE

MEANING OF RESEARCH

Research is not a fishing expedition or encyclopaedia. Research is a purposeful investigation. The scientific method thoroughly investigates a subject. It organises decision-making. Real-world judgements must address social and environmental challenges, sales, employee retention and more. Before examining a problem, worry, or issue, you need a question. Investigations have three parts:

1. Implied question,
2. The direct response,
3. Data gathering, analysis and interpretation to answer the query.

This research-based third component defends the recommendation. "We recommend model A TV be priced at Rs. 14,000", for instance. The marketing research manager advised the vice president. This quote asks what model A should sell for Rs.14,000. The third stage collects, analyses, and interprets the data to reach the answer of Rs.14,000.

Observation, historical research, professional literature and peer recommendations can generate research topics. Research must start with the right question to answer your question. Thus, research involves scientifically investigating a topic. Business research delivers qualitative or quantitative data for problem-solving and decision-making.

Research is how the company gathers data for management choices.

Research isn't common sense. 'Systematic', 'objective', and 'reproducible' make the difference. Research and common sense both employ information, but their techniques differ. Research cannot cover all topics. Thus, 'relevance' and 'control' are secondary research features.

Research must be systematic. Plan each step to lead to the next. It is often impossible to undo earlier mistakes. It will cost time and money if possible. Authors separated study into steps. The number of stages and names are arbitrary, but sequence recognition is critical. This systematic method emphasises interconnectedness and planning and organisation.

RESEARCH METHODOLOGY

In research initiatives, the word 'methodology' is frequently employed and it provides a thorough review of the investigation's rationale. Research methodology is the process used to do scientific research. It entails methodically implementing a number of approaches to address research issues. Understanding methodology helps one understand both the process and the results of scientific research.

The 'how' of any piece of research is essentially related to the research technique and how a researcher plans a study in a systematic fashion to ensure accurate results that take into account the aims and objectives of the study.

Therefore, it ought to draw attention to some fundamental (what, how, why) questions of our research. For instance:

1. What was the goal of your study?
2. What kinds of 'research methods' are available and why?
3. What kinds of data should we take into account for your research's analytical goals?

4. What procedures were used to gather the data?
5. How were the data gathered analysed?
6. What kind of sources did you employ for your investigation?

RESEARCH METHOD

Research methods are the strategies, processes or methods utilised in gathering data or evidence for analysis to produce new information or a deeper understanding of a subject. All of the procedures the researcher goes through to look into his research question are referred to as 'research methods'. Techniques will therefore be viewed as the core of research methodology. There are various research techniques and each one makes use of a particular set of data collection tools. Therefore, you will need to evaluate the various research methodologies critically as you prepare your approaches. Consider the methods of data collection (qualitative vs. quantitative) and data analysis (Descriptive *vs.* experimental).

BUSINESS RESEARCH METHOD

A set of research techniques, tactics or procedures used by firms to determine whether a specific business endeavour is worthwhile of their time and effort is referred to as a business research approach. In addition, research approaches help companies assess their viability and suggest the best marketing approach for their products.

Business research can help in identifying possible customer preferences and enabling the development of better products and services. It emphasises the company's products' primary focus and includes every action a business takes to meet its goals.

- Reducing risks is one of the crucial areas where business research is applied.
- Any business, regardless of size, should make every effort to reduce risks.
- Identify potential business threats.
- Aids in creating customer-centric businesses.
- Forecasting sales.
- Purchase a company that is more competitive.

TYPES OF RESEARCH

Experts and domines also define research differently. Depending on research philosophy, research definitions can be interpreted and supported. Philosophies influence researchers' strategies for answering research questions. Based on 'social science' domain perspectives, research can be categorised into three basic categories: application, objective and enquiry.

Pure and applied research are the main application categories. Pure research examines, develops, verifies and tests theories and procedures for abstract or specialised notions.

Descriptive, correlation and explanatory research are also categorised by objectivity. Descriptive study defines a situation, person, group or thing. This strategy works when the research issue is understudied or poorly understood. Correlational basis studies focus on identifying a link between two or more phenomena. Instead, researchers use explanatory basis research to clarify two or more facets of a phenomenon.

Social research uses three basic methods to solve research questions from the 'Mode of investigation' standpoint. Qualitative/unstructured research provides researchers flexibility in all elements of the study process and follows an open, flexible manner of enquiry.

IMPORTANCE OF BUSINESS RESEARCH

The following bullet points illustrate the key ways that research is crucial for organisations.

For new ideas and insights: Research encourages the development of logical thought patterns and organisational skills while instilling scientific and rational thinking.

Modern times have seen a significant increase in the importance of research in many areas of applied economics, whether they are related to business or the economy. For philosophers and thinkers, research may be the means of finding a home for fresh perspectives.

Solving operational problems: Fixing operational issues, the complexity of industry and government has brought more emphasis to the application of research to operational issues.

Nearly, all government policies in our economic systems are based on research.

Decisions for policymaking: We can create various policies and analyse the effects of each policymaker through research. Although research may not directly influence decision-making, it undoubtedly helps policymakers make better decisions.

Solving problems: Research plays a specific role in addressing operational and planning issues in business and industry.

Companies also performed research in their core competencies to identify specialised answers to problems:

(a) **Products:** For the purpose of extending existing or new product lines by testing or introducing new products, identifying the key value components of products that appeal to consumers the most, such as extended product shelf life and packaging-related research.

(b) **Price:** Recognizing the target audience's price sensitivity in relation to the cost of the good or service. Find out if customers used price as a significant metric to gauge perceived value.

(c) **Place:** Selecting a platform or location that is appropriate for conducting commercial transactions and conducting a preventive measurement based on supplier and distributor satisfaction.

***(d)* Promotions:** Choose telecast frequency-time commercials and effective/efficient media channels for conducting product adver-tisements. Determine how much money we should spend on promotional activities in addition to that.

Business decisions: Operational research, market research and motivational research are important, and their findings help in several different ways:

1. For students: Research may signify careerism or a means of achieving a high social status to students who are writing master's or doctoral theses. It is useful to think of the 'researcher' as a library user.

2. To generalize the new theories: Research may be interpreted by analysts and intellectuals as the generalisation of novel theories. Builds a critical and scientific mindset, as-well-as the ability to examine things objectively (scientific deduction and inductive thinking). Research skills will be beneficial in the long run, especially in the 'age of information'.

ROLE OF RESEARCH IN IMPORTANT AREAS

By advancing knowledge through scientific theories, concepts and ideas, research aims to benefit society and business. An executive may swiftly summarise the present situation through research, which expands his knowledge base and helps him make decisions that will have an impact on the company's operations in the future.

Marketing: Making wise marketing decisions now heavily relies on marketing research. The systematic collecting, compilation, analysis and interpretation of pertinent data for marketing choices is a component of marketing research.

Production: An organisation can make decisions about what to produce, how much to produce, when to produce and for whom to produce, thanks to research. Research tools are also incredibly helpful for building up the ideal inventory level and for quality control.

Banking: Banking institutions have established research departments with the goal of acquiring and analysing information for their internal operations as well as conducting in-depth analyses of the corporate economic environment.

Materials: The materials department conducts research to develop appropriate policies about when, where, how much and how much to acquire.

Human resource development: The human resource development department conducts research to examine employment trends, wage trends, incentive programmes, cost of living and performance evaluation. It also employs research well for one of its most crucial tasks, that is workforce planning.

Government: All government policies in our economic system are built on research.For the union finance budget and the railroad budget, research is used to make changes each year. Planning the economy and making the best use of available resources for national growth, both need research.

ACTIVITIES

Q. 1. The three parts concerning any research investigation are:

Ans. Any investigation will consist of the following three components:

1. The implicit question that is posed.
2. The direct response that is being suggested.
3. The gathering, examination and interpretation of the material that links the query to the solution to the problem.

This third element is considered research, since it defends the recommendation and argues why it should be followed.

Q. 2. The five distinguishing features of any good research are:

Ans. A number of factors, including the following, might be considered to be features of research:

1. Research should be controlled: This is necessary due to the fact that the relationships between two or more variables are influenced by one another (whether it is internal or external). In the event that the research cannot be controlled, then the report on the research will not be able to be designed in any particular way.

2. Research should be rigorous: There should be a high standard of rigour in research since it helps to follow the procedures to discover the answers to questions that are pertinent and appropriate in nature. The knowledge obtained from the research comes from a variety of scientific fields, including the social and physical sciences. These two branches of knowledge are also distinct from one another.

3. Research should be systematic: The third reason why research should be conducted in a methodical manner is because if a researcher wants to conduct a perfect research design or process, then the researcher will need to systematically evaluate or obtain the necessary information from the market. To do research in an appropriate or organised manner requires completing a number of procedures, all of which are connected to one another in some way.

4. Research should be valid: This signifies that the data gathered by the researcher must be accurate and capable of being independently verified by the reader (that is, researcher himself). If the information we have obtained can be trusted or is valid, then the manner in which we do our research will be considered ethical.

5. Research should be empirical: It is important for research to be empirical, which means that any conclusions drawn should be based solely on ethical or hard evidence acquired from observations and real-world experiences.

Q. 3. Mention a few research studies where it is impossible to have control on all other factors.

Ans. The control portion of research is especially difficult to pin down. It is imperative that we acknowledge the possibility that the outcomes of our research could be attributable to the existence of a variable that is not one of the ones we are looking at. It is impossible for us to have control over all of the other things; the most that we can do is to have control over those that we believe are most likely to give us difficulties.

Control must take into account two different aspects:

1. You are required to change the variables that are actually under your control in accordance with the type of enquiry that you are conducting.
2. You need to keep a track of the variables that are beyond of your control.

Q. 4. Identify any three research methods.

Ans. ***(i)*** **Descriptive *vs.* Analytical:** Descriptive research involves various forms of surveys and fact-finding enquiries. The primary goal of descriptive research is to describe the situation as it is at any given moment. *Ex post facto* research is the phrase for descriptive research investigations in the social sciences and business research. It is evident that the researcher has no control over these variables because he only reports on the components that have been detected and cannot change the information that is already available. The majority of ex post facto research projects are employed for descriptive studies, in which the researcher seeks to learn details about, for instance, how frequently people eat out, their preferences, etc.

Researchers that do ex post facto studies also make an effort to identify explanations even when they are unable to control the variables. Survey techniques of all kinds, including comparative and correlative techniques are used in descriptive research. Contrarily, in analytical research, the researcher must employ already known facts or information and analyse it in order to provide a critical assessment of the subject matter.

(ii) **Applied *vs.* Fundamental:** Research can be classified as either fundamental (to basic or pure research) or applied (or action) research. While fundamental research is primarily concerned with generalisations and the creation of a theory, applied research tries to discover a solution for an immediate issue facing a society or an industrial/business entity.

Pure or basic research is defined as the pursuit of knowledge for its own sake.

Examples of fundamental research include studies into pure mathematics or certain scientific phenomena.

Examples of applied research include copy research (detection of whether particular communications will be read and understood), marketing research, evaluation research and study to uncover social, economic, or political trends that may have an impact on a specific institution.

(iii) **Quantitative *vs.* Qualitative:** The measurement of quantity or amount is the foundation of quantitative enquiry. It is applied to phenomena that have a quantitative form. For instance, examining the volume of requests for accommodation reservations made via various channels, such as the internet, emails, phone calls, letters, or various sources, such as travel and tour operators, businesses and governmental bodies.

On the other hand, qualitative research focuses on phenomena that are related to or include quality or kind, or qualitative phenomena. For instance, researching staff stress levels and the causes of inconsistent performance across shifts in the same hotel department. With a modification in timing, the same people could behave differently. It can entail conducting research on how consumer preferences alter with the seasons.

Another illustration is attitude or opinion research, which is research designed to ascertain how people feel or what they think about a specific topic or institution. Through behavioural study, we may assess the various aspects that influence people's behaviour or whether they like or dislike something in particular. Therefore, it is crucial that the researcher seek advice from knowledgeable people within the chosen subject in order to be applicable in qualitative research in practise.

Q. 5. Differentiate methodology and method.

Ans. Research methods are the strategies, processes or techniques that are utilised in the process of collecting data or evidence for the purpose of analysis in order to either develop new information or generate a better understanding of a subject. When a researcher is looking into his or her subject issue, they will engage in a number of different activities, which collectively make up what is known as 'research methodologies'. As a consequence of this, techniques will be considered the fundamental component of research methodology. There are numerous methodologies for conducting research, each of which makes use of its own particular collection of data collection tools. Therefore, in the process of developing your strategies, you will need to exercise critical thinking regarding the various study methodologies that were utilised. For example, how do you go about collecting data (qualitative vs. quantitative methods) and how do you go about analysing the data? (Descriptive vs. experimental). As a result, research methodology isn't just about the research methods themselves; rather, it requires taking into consideration the reasoning behind the application of the methodologies. The researchers have to determine the reasoning and logic behind why they are utilising one method rather than another.

Q. 6. List out the uses of research in the field of: