

## DATA EDITING, PROCESSING AND MANAGEMENT

Data are distinct pieces of information, usually formatted in a special way. Data Processing is a process of converting data into the information and it can also convert information into a data. It means Data Processing can convert any data from one format to another. Information system takes that raw data as input to produce Information as output. Hence, conversion of raw data into useful information is accomplished through an application of data processing.

Data processing critically affects an investigator's ability to carry out reliable, valid research. In their haste to test hypotheses, researchers often do a slipshod or incomplete job of data processing. As a result, they may have to process data over and over again to put it into usable form. Data processing refers to the process of converting data from one format to another.

Data processing is an intermediary stage of work between data collection and data analysis. The completed instruments of data collection, viz., interview schedules/ questionnaires/ data sheets/field notes contain. A vast mass of data. They cannot straightaway provide answers to research questions. They, like raw materials, need processing. Data processing involves classification and summarisation of data in order to make them amenable to analysis.

Processing of data requires advance planning at the stage of planning the research design. This advance planning may convey such aspects as categorization of variables and preparation of dummy tables. This should be done with reference to the requirements of testing hypotheses/investigative questions. This type of preplanning ensures better identification of data needs and their adequate coverage in the tools for collection of data. Data processing consists of a number of closely related operations, viz., (1) editing, (2) classification and coding, (3) transcription and (4) tabulation Etc.

The term data processing often used more specifically in the context of a research to refer to the class of qualitative and quantitative research application.

If we are actually doing a research study, we would by now have reached a stage where we have either extracted or collected the required information. The next step is what does with this information.

- 1) How do we find the answers to our research questions?
- 2) How do we prove or disprove our hypothesis if we had one?
- 3) How do we make sense of the information collected?

### **Aim and objectives:**

Data process is one of the major themes of research process. It has some aim and objectives.

- ❖ To find out the situation of quantitative and qualitative research.
- ❖ To find out the relationship of quantity and qualitative
- ❖ Accounting the social and economic impact on the data processing

## **Data processing in quantitative research editing and coding analysis**

### **Editing analysis:**

The first step in processing of data is editing of complete schedules/questionnaires. Editing is a process of checking to detect and or correct errors and omissions. Editing is done at two stages: first at the fieldwork stage and second at office.

#### *Field editing*

During the stress of interviewing the interviewer cannot always record responses completely and legibly. Therefore after each interview is over, he should review the schedule to complete abbreviated responses, rewrite illegible responses and correct omissions.

#### *Office editing*

All completed schedules/questionnaires should be thoroughly checked in the office for Completeness, accuracy and Uniformity.

Editing consists of scrutinizing the completed research instruments to identify and minimize, as far as possible, errors, incompleteness, misclassification and gaps in the information obtained from the respondents.

Irrespective of the method of data collection, the information collected is called raw data. The first step in processing our data is to ensure that the data are “clean” that is free from inconsistencies and incompleteness. This process of cleaning is called “editing”

Editing sometimes even the best investigator can

- ❖ Forget to ask questions.
- ❖ Forget to record a response.
- ❖ Wrongly classify a response.
- ❖ Write only half a response.
- ❖ Write illegibly.

In the case of questionnaire, similar problems can crop up. These problems to a great extent can be reduced simply by

- ❖ Checking the contents for completeness
- ❖ Checking the response for internal consistency

### **Editing minimizing problem:**

It is good practice for an interviewer to take a few moments to pursue responses for possible incompleteness and inconsistency. In the case of a questionnaire, gain just by carefully checking the responses some of the problems may be reduced. There are several ways of minimizing such problems.

● **By inference:** Certain questions in a research instrument may be related to one another and it might be possible to find out the answer to one question from the answer to another. Of course, we must be careful about making such inferences or we may introduce new errors into the data.

● **By recall:** in the data are collected by means of interviews, sometimes it might be possible for the interviewer to recall a respondent's answers. Again we must be extremely careful.

● **By going back to the respondents:** if the data have been collected by means of interviews or the questionnaire contains some identifying information it is possible to visit or phone a respondent to confirm or ascertain an answer. This is of course expensive and time consuming.

### **There are two ways of editing the data:**

1. Examine answers to all questions or variable at a time
2. Examine answers to all questions at the same time that is; examine all the responses given by a respondent.

### **Coding analysis:**

Coding means assigning numerals or other symbols to the categories or responses. For each question a coding scheme is designed on the basis of the content categories. The coding schemes with their assigned symbols together with specific coding instructions may be assembled in a book. The codebook will identify a specific item of variable/observation and the

code number assigned to each category of that item. If the data are to be transferred to machine punch cards, the codebook will also identify the column in which it is entered.

Having “cleaned” the data, the next step is to code it. The method of coding is largely dictated by two considerations:

1. The way a variable has been measured (measurement scale) in our research instrument (e.g., if response to a question descriptive, categorical or quantitative).
2. The way we want to communicate the findings about a variable to your readers.

For coding, the first level of distinction is whether a set of data is qualitative or quantitative in nature.

### **Steps in coding quantitative data:**

- i. Developing a code book
- ii. Pretesting code book
- iii. Coding the data
- iv. Verifying the data

### **Developing a code book:**

A codebook describes and documents the questions asked or items collected in a survey. Codebooks and study documentation will provide you with crucial details to help you decide whether or not a particular data collection will be useful in your research. The codebook will describe the subject of the survey or data collection, the sample and how it was constructed, and how the data were coded, entered, and processed. The questionnaire or survey instrument will be included along with a description or layout of how the data file is organized. Some codebooks are available electronically, and you can read them on your computer screen, download them to your machine, or print them out. Others are not electronic and must be used in a library or archive, or, depending on copyright, photocopied if you want your own for personal use.

A code book provides a set of rules for assigning numerical values to answers obtained from respondents.

Reference:

[https://www.academia.edu/11882335/Data\\_editing\\_and\\_coding\\_in\\_quantitative\\_and\\_qualitative\\_research](https://www.academia.edu/11882335/Data_editing_and_coding_in_quantitative_and_qualitative_research)