Market Research

Market Research

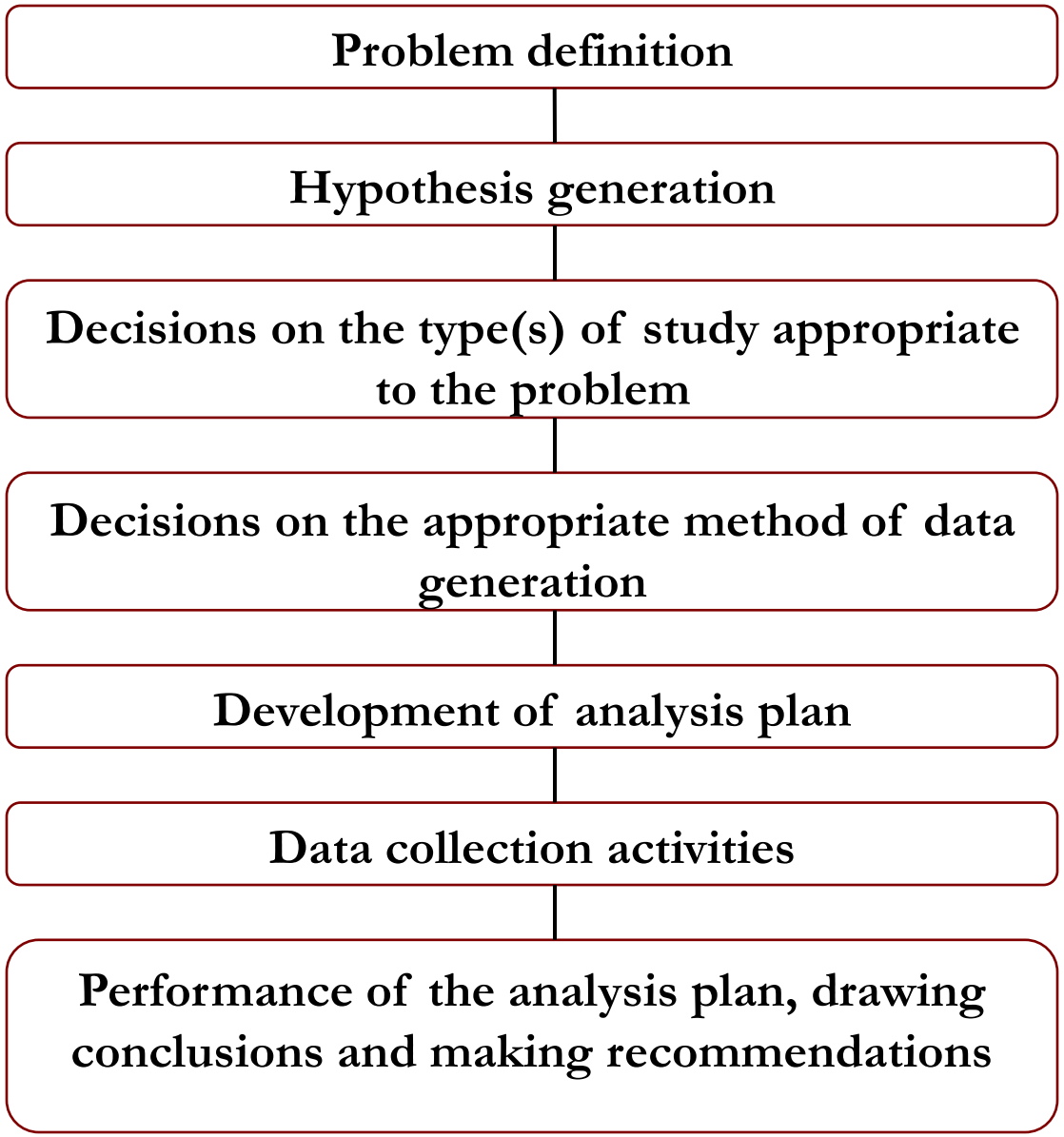
- Marketing research is the systematic and objective search for, and analysis of information relevant to the identification and solution of any problem in the field of marketing.
  - **Systematic:** means that a detailed and carefully design research plan is developed in which each stage of the research is specified.
  - **Objectivity**: marketing researchers employ the scientific method. The characteristics of the scientific method are that it translates personal prejudices, notions and opinions into explicit propositions (or hypothesis). These are tested empirically.

Market Research

- **Analytical**
  - The marketing researcher's task goes beyond collecting data. He/she must also interpret it in terms of what the data means to the target reader.
  - Data is equivalent to the raw materials of manufacturing - it has to be converted to information before it becomes useful in decision making. The process of converting data into information is achieved through analysis.
  - Whilst there is a need for accuracy, precision and thoroughness in marketing research it is to be remembered that, in practice, there is a perpetual conflict between the demands of expediency and the search for truth.

Research Proposal

- The research proposal sets out the research design and the procedures to be followed.
- Research Design



Research Design

- Problem definition
  - The most important part of research designing.
  - The marketing problem to be analyzed should be clearly and comprehensively described.
  - The marketing problem can be identified by any of the key parties in the marketing system.
  - Clear definition of the problem should result in clear formulation of the objectives and questions of the study.
  - This process might involve brainstorming, reviews of research on related problems and researching secondary sources of information as well as studying competitive products.
  - Problem definition should follow from general to specific structure.

Research Design

- Hypothesis formulation
  - The purpose of research is to address some questions nonetheless one does not test research questions directly.
    - Example: Research question – "Does a person's disposable income bear any relation to red meat consumption?"
  - A hypothesis is a speculative statement of the relation between two or more variables.

Research Design

- Hypothesis formulation
  - There are two key characteristics which all hypotheses must have; they must be statements of the relationship between variables and they must carry clear implications for testing the stated relations.
  - These characteristics imply that it is relationships, rather than variables, being tested. The hypotheses specify how the variables are related and that these must be measurable. Statements lacking any or all of these characteristics are not research hypotheses.

Research Design

- Consider the following hypothesis:
  - "Red meat consumption increases as real disposable incomes increase."
- The criteria are satisfied however for the purposes of statistical testing it is more usual to find hypotheses stated in the so-called ***null*** form.
- The following is an example of a null hypothesis:

  'There is no relationship between red meat consumption and the level of disposable incomes.'

- A hypothesis to comment on:

'There is no relationship between a **farmer's educational level** and his **degree of innovativeness** with respect to new farming technologies.'

Research Design

- Hypotheses
  - direct the researcher's efforts by forcing him/her to concentrate on gathering the data which will enable the hypotheses to be tested. It is all too easy when conducting research to collect "interesting data" as opposed to "important data".
  - enable making implicit notions or explanations for events explicit and this often leads to modifications of these explanations, even before data is collected.

Research Design

- Types of research
  - Marketing research can be carried out on one of three levels; exploratory, descriptive or causal.
  - Exploratory research
    - Has the objective of giving a better understanding of the research problem. This includes helping to identify the variables which should be measured within the study.
    - When we have little understanding of the topic we find it difficult to formulate hypotheses without some exploratory research.
    - Can take the form of literature searches, personal visit, informal personal interviews with distributors and users/non-users of the product and/or focus group interviews with prospective customers and/or distributors.

Research Design

- **Descriptive research**
  - Is concerned with describing market characteristics and/or marketing mix characteristics.
    - Typically specifies the number and size of market segments, the alternative ways in which products are currently distributed, listing and comparison of the attributes and features of competitive products etc.
    - When descriptive research is conducted, a great deal is already known about the research problem - perhaps because of a prior exploratory study - and researchers are in a position to clearly define what they want to measure and how to do it.

Research Design

- **Causal research**
  - Attempts to deal with the 'why' questions.
  - Is employed when there the objective is to understand why a change in one variable brings about a change in another variable.
  - If we can understand the causes of the effects we observe then the ability to predict and control such events is increased.

Research Design

- Type of data and data collection methods
  - Primary Vs Secondary data
    - Primary data – data and information generated by and for the research at hand.
    - Secondary data- data and information generated by others for different purposes.
  - No marketing research study should be undertaken without a prior search of secondary sources of data and information. Why?? Next 2 slides!

Importance of due emphasis for secondary data

- Secondary data may be sufficient to solve the problem.
  - Adequate data may be available to the extent that primary data collection is unnecessary.
- Data collection costs are substantially lower for secondary data in comparison to primary data.
- The time involved in searching secondary sources is far less than that needed to complete primary data collection.
- Secondary sources of information can yield more accurate data than that obtained through primary research. Census or large scale survey might be more accurate than those based on small samples.

Importance of due emphasis for secondary data

- Secondary data help define the research problem and to formulate hypotheses.
  - The assembly and analysis of secondary data almost invariably improves the understanding of the marketing problem, the various lines of inquiry the study could take and the alternative course of action which might be pursued.
  - **Research begins and ends in the library!**
- Secondary sources help define the population. Secondary data can be extremely useful both in defining the population and in structuring the sample to be taken.

Limitations of secondary sources

- Definitions of key words and concepts
  - The secondary data can have different working definitions of variables and concepts.
    - Family size and farm size can mean a number of things each.
    - Farm land
      - the land an individual owns,
      - the land an individual owns plus any additional land he rents,
      - the land an individual owns minus any land he rents out,
      - all of his land or
      - only that part of it which he actually cultivates.

Limitations of secondary sources

- Measurement error
  - Whenever we estimate parameters there is error associated with the estimates. These errors can be expressed with standard deviation and standard error of the sampling means. These measures are however hardly reported in secondary data sets.
- Source bias
  - Researchers have to be aware of vested interests when they consult secondary sources.
  - Example, food shortages are usually exaggerated when reports are being prepared for submission to aid organizations.

Limitations of secondary sources

- Reliability
  - The reliability of published statistics may vary over time. It is not uncommon, for example, for the systems of collecting data to have changed over time but without any indication of this to the reader of published statistics.
  - Geographical or administrative boundaries may be changed by government or the basis for stratifying a sample may have altered.

Sources of data

- Sources of secondary data
  - Internal sources
    - All organizations collect information in the course of their everyday operations.
    - Organizations frequently overlook this valuable resource by not beginning their search of secondary sources with an internal audit.
  - External sources
    - government departments
    - trade associations
    - domestic and international commercial information services
    - national and international research and development organizations institutions.

Primary Research

- The principal approaches to primary marketing research are:
  - Survey research
  - Fully qualitative research
  - Observation
  - Experimentation
  - Continuous research

Survey research

- Surveys are characterized by a relatively large number of respondents and the desire to infer from sample results to a population.
- When studies are carried out on a large scale the questionnaires tend to be highly structured. Most, if not all, of the questions will have a closed-end response format.

Survey research

- Large scale surveys are useful where the questions are of the 'how many?, 'how often' and 'when' type but they are blunt instruments for answering questions of the 'why' kind.
- It would be rather better to conduct a smaller number of in-depth interviews when the focus is on "why?" questions.

Fully qualitative research methods

- Are employed when the researcher is primarily interested in *why* people think and/or behave in a particular way rather than in being able to quantify variables.
- Qualitative methods have at least four distinguishing characteristics:
  - Small numbers of respondents. The idea is to devote a considerable amount of time on each interview to get to the heart of a matter.
  - Unstructured question formats. That is, the questions are not completely predetermined and the interviewer is free to probe for all details and underlying feelings.

Fully qualitative research methods

- Indirect measurement of respondents' feelings and beliefs. Respondents provide descriptive information about their thought and feelings.
- Direct observation. The interviewer not only records answers but observes how questions affect interviewees. Hesitant answers, agitation, smiling, sweating, calmness, boredom etc. are all observable and all tell us something about the individuals state of mind.

Fully qualitative research (FQR) methods

- Three commonly applied FQR methods
  - **Focus groups**
  - **Depth interviews**
  - **Projective techniques**
- Focus groups
  - Each focus group generally involves six to eight people who meet with a moderator for a discussion. The discussion is ***focused***, by the moderator on a particular topic.
  - Typically, a group session will last one to two hours. The discussion is free ranging with the moderator intervening only periodically to stimulate the discussion in a particular direction.

Fully qualitative research (FQR) methods

- Focus groups
  - The moderator uses a discussion guide rather than a questionnaire.
  - Participants in the groups are chosen on the basis that they belong to the target market.

Fully qualitative research (FQR)

- Depth interviews
  - are like lengthy psychoanalytic sessions between a single respondent and a highly skilled interviewer.
  - are of most value where a study deals with
    - a confidential, emotionally charged or embarrassing matter;
    - a behavior for which socially acceptable norms exist and the need to conform in group discussions influences responses;
    - a complex behavioral or decision-making process that requires a detailed idiosyncratic, step-by-step description; and
    - when group interviews are difficult to schedule for the target population.

Fully qualitative research (FQR)

- Projective technique
  - Sometimes the interests of the research are best served by obtaining information on respondents' beliefs and feelings indirectly.
  - Projective techniques presume that respondents cannot or will not communicate their feelings and beliefs directly.
  - Hence, respondents are encouraged to respond indirectly by projecting their own feelings and beliefs into the situation as they interpret the behavior of others.
  - Examples: word association, sentence completion, scenario/story completion.

Observation

- Observational measures
  - Household audits
  - Physiological methods
- Household audits – pantry and dustbin audits
  - Participating families are asked to place all product packaging in specially marked plastic bags. These are picked up by the research company perhaps twice per week and taken to a central location for checking.
  - Researchers then record, for each item,
    - **the product type and class,**
    - **the number of items of that product,**
    - **product size (weight for solids, fluid ounces for liquids etc.)**
    - **price of the product on the container and**
    - **the brand name of the product.**

Observation

- Physiological measurement
  - More sophisticated methods that monitor respondent's involuntary responses to stimuli.
  - Two types: pupilometer and galvanometer
    - The pupilometer attaches to a person's head and measures interest and attention by the amount of dilation in the pupil of the eye. It has been used most extensively in the testing of advertisements and product packaging.
    - The galvanometer measures excitement levels by recording the electrical activity in the person's skin.

Experimentation

- An experiment entails some sort of test which allows us to discern the effects of an independent variable on a dependent variable.
- Experimental approaches to marketing research can be classified as either laboratory experiments or field experiments.

Experimentation

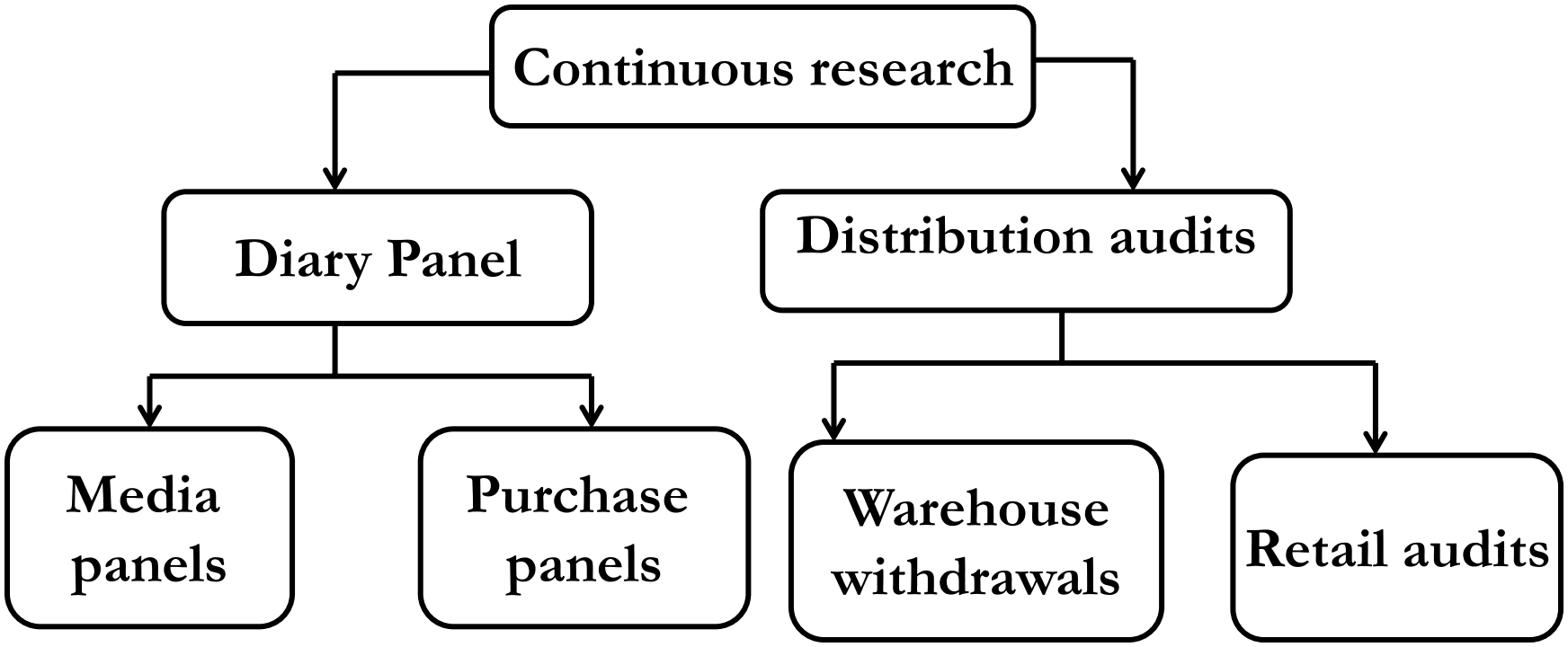
- Field experiments
  - Can be applied to many marketing problems.
  - Usually applied to test markets.
    - Prior to a company or organization undertaking a national launch of a new product/service it may be decided to launch not only the product but the proposed marketing program in a limited area.
  - The area is normally selected on the basis of its being a microcosm of the country.
  - Test markets are used to test the whole of the proposed marketing mix.
  - If the results of the test market warrant an adjustment to elements of the marketing mix then this can be done before the national launch.

Experimentation

- Laboratory experiments
  - Laboratory experiments have been used in concept testing, taste testing, packaging testing, advertising effectiveness studies and simulated test markets.

Continuous research

- Certain types of data are gathered on a regular basis as opposed to the *ad hoc* survey.
- In this way, a picture of market ***trends*** can be built up.
- Included diary panels and distributional audits.



Continuous research

- Diary panels
  - Diary panels involve samples of households that have agreed to provide specific information regularly over an extended period of time.
  - Purchase panels record details of the products they purchased, sizes, brands, flavors, prices paid etc.

Continuous research

- Purchase panel data can be used:
  - To forecast sales levels or market shares of new products,
  - For identifying trends and establishing demographic profiles of specific user groups,
  - For evaluating test markets,
  - For testing different advertising campaigns and for estimating brand switching and repeat purchase rates.

Continuous research

- Media panels record details of newspapers, magazines, periodicals bought and/or read, television program watched, radio stations listened to and so on.
- Media panels are primarily used for establishing advertising rates for radio, television and printed media.
- **N.B. Panels can, and have been, successfully established using farmers**.

Continuous research

- Audit services
  - An audit involves a systematic examination of either how much of a product has been sold at the shop/store level (retail audit) or how much of a product has been withdrawn from warehouses and delivered to retailers (warehouse withdrawal audits).
  - Participating wholesale/retail outlets receive basic reports and a cash payment.
  - Audits provide relatively precise information on the movement of many different types of goods.

Research Design

- **Data Analysis plan**
  - Part of the research design which has to be done before the data collection.
  - Researchers should address the following questions before data generation:
    - Do I know how each and every question is to be analyzed? (e.g. which univariate or bivariate descriptive statistics, tests of association, parametric or nonparametric hypotheses tests, or multivariate methods are to be used?)
    - Do I have a sufficiently sound grasp of these techniques to apply them with confidence and to explain them to the readers/users of the study?

Research Design

- Data Analysis plan
  - Checklist (continued)
    - Do I have the means to perform these calculations? (e.g. access to a computer which has an analysis program with which I am familiar? Or, if the calculations have to be performed manually, is there sufficient time to complete them and then to check them?)
    - If a computer program is to be used at the data analysis stage have the questions been properly coded?
    - Have I scaled the questions correctly for the chosen statistical technique? (e.g. A t-test cannot be used on data which is only ordinal or ranked)
  - There is little point in spending time and money on collecting data which subsequently is not or cannot be analyzed.

Research design

- Data collection
  - Needs meticulous planning
  - Is not a mechanical task.
    - interviewers are required to achieve, and maintain, a high standard of work without continuous supervision or daily contact with colleagues.
    - interviewers often have to use a great deal of initiative and effort, for example in locating obscure addresses, securing appointments and co-operation from reluctant -perhaps suspicious- respondents and administer complex questionnaires.

Research Design

- Data collection
  - Fieldworkers have to be fully trained before they go into the field.
  - We need to be very selective when employing field staff since their task is technically skilled and requires a high level of dedication and a tenacious spirit if the work is to be properly completed.
  - In addition to ensuring that field personnel are adequate to the task both in number and training, care has to be taken in
    - the planning of sampling,
    - call backs on respondents absent on the first visit,
    - logistics with respect to data gatherers and the collection and submission of questionnaires,
    - checking of completed data forms/questionnaires,
    - data analysis and so on.

Research design

- Data Analysis
  - Making sense of the data and information generated.
    - Ana – above
    - lysis = to break up or dissolve
  - "…a process of resolving data into its constituent components, to reveal its characteristic elements and structure."
  - When the data are quantitative, three issues determine the selection of analytical tools:
    - **the number of samples to be compared,**
    - **whether the samples being compared are independent of one another and**
    - **the level of data measurement.**

Number of samples

Test A	**Comparing sales in a test market and the market share of the product it is targeted to replace.**	**Number of samples = 1**
Test B	**Comparing the responses of a sample of regular drinkers of fruit juices to those of a sample of non-fruit juice drinkers to a trial formulation,**	**Number of samples = 2**
Test C	**Comparing the responses of samples of heavy, moderate and infrequent fruit juice drinkers to a trial formulation**	**Number of samples = 3**

Dependent and independent samples

- Samples are said to be independent, or related, when the measurement taken from one sample in no way affects the measurement taken from another sample.
- Variables measured from different sets of respondents.
  - Comparing preferences for brand A and brand B by giving the brands to two different groups of consumers.
- Dependent samples - measurement of the variable is related to measurement of another.
- Variables measured from the same set of respondents.
  - Comparing brand A and brand B by giving both brands to a respondent.

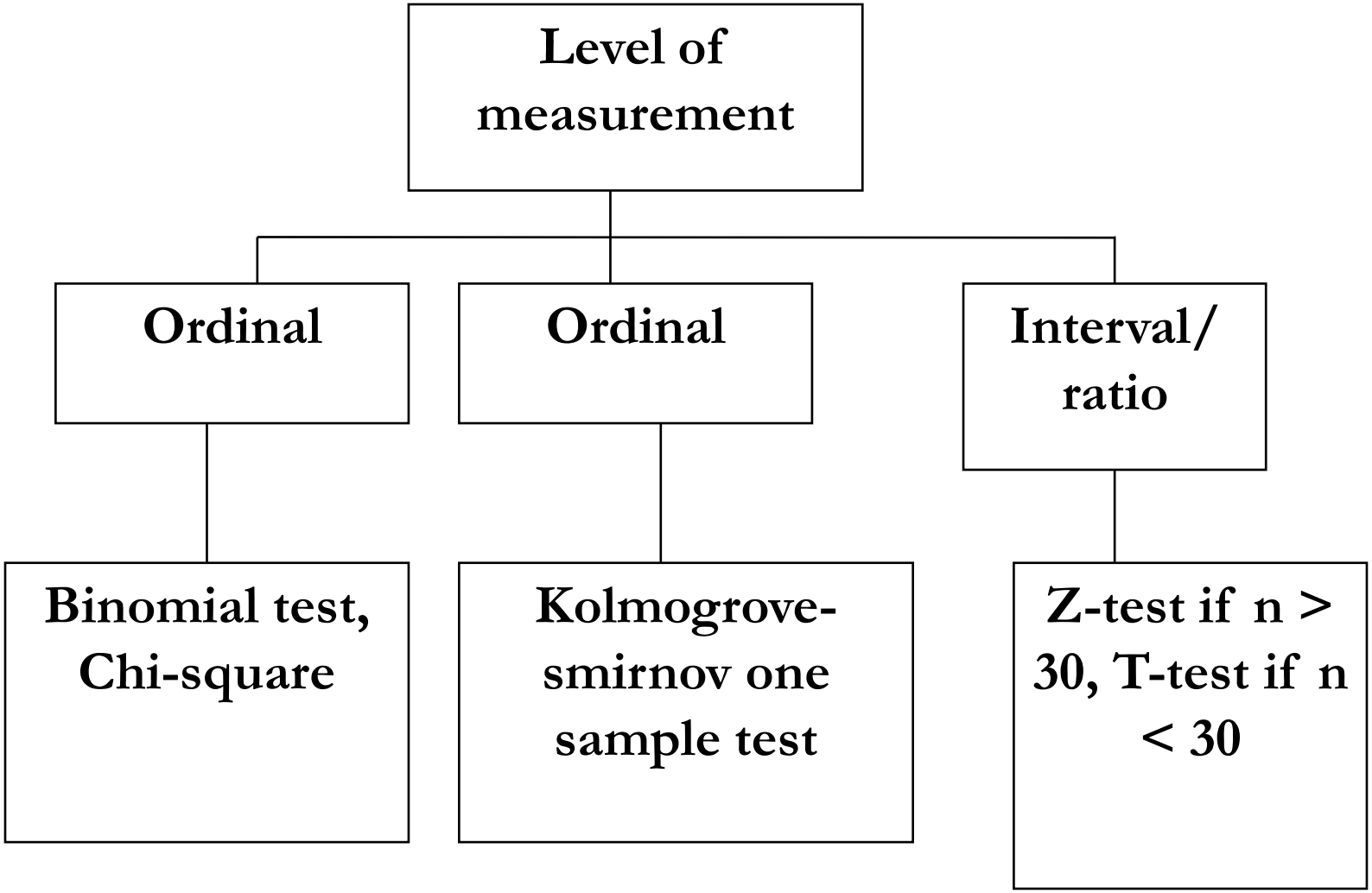
Levels of Measurement

Measurement scale	Measurement Level	Examples	Mathematical properties
Nominal	**Frequency counts**	**Produce grading categories**	**Confined to a small number of tests using the mode and frequency.**
Ordinal	**Ranking of items**	**Placing brands of cooking oil in order of preference**	**Wide range of nonparametric tests which test for order.**
Interval	**Relative differences of magnitude between items**	**Scoring products on a 10 point scale of like/dislike**	**Wide range of parametric tests**
Ratio	**Absolute differences of magnitude**	**Stating how much better one product is than another in absolute terms.**	**All arithmetic operations**

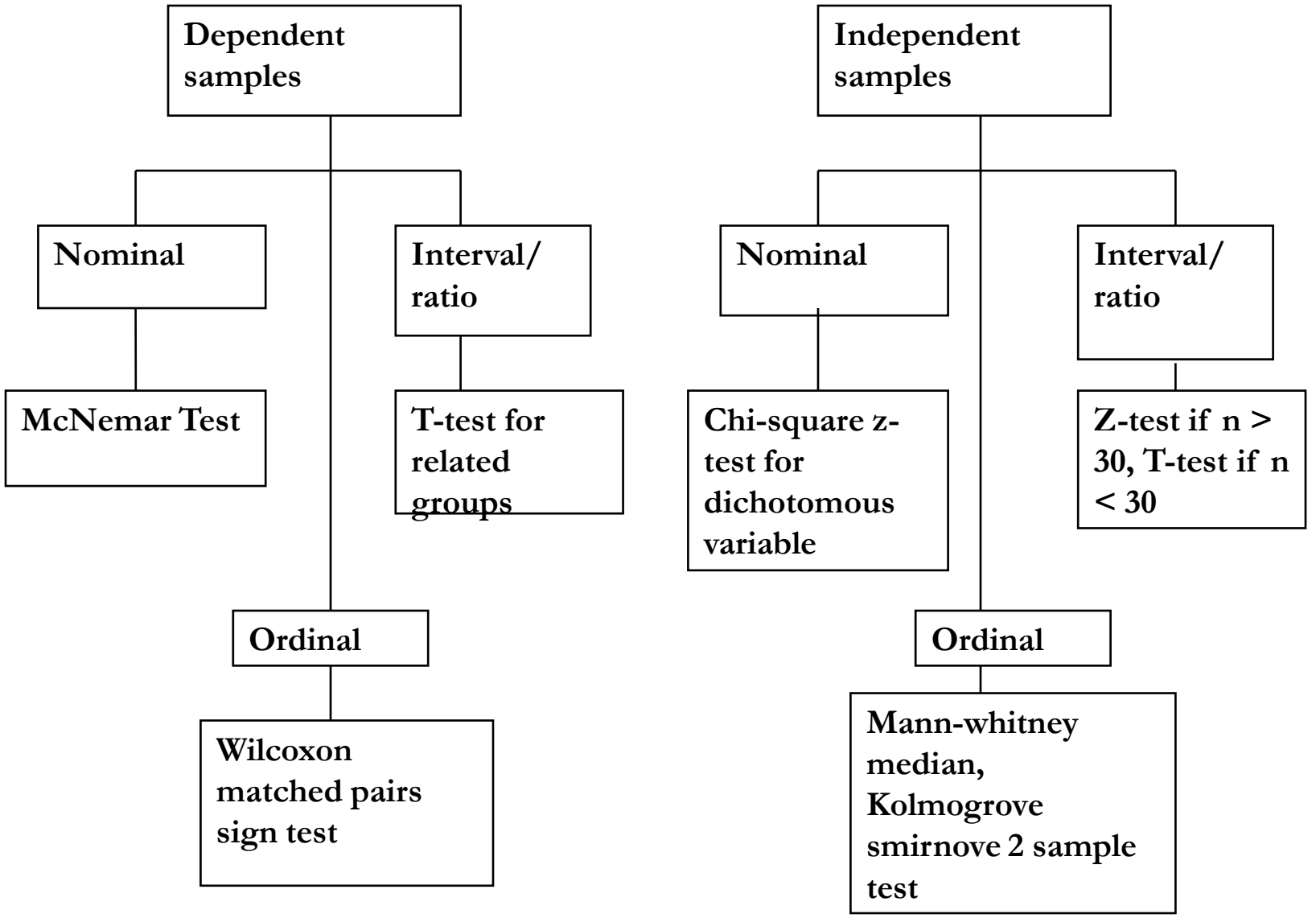
Data Analysis

- The way questions are framed has a significant implication on the level of measurement and the analysis to be applied thereof.
- Once the marketing researcher knows how many samples are to be compared, whether these samples are related or unrelated to one another and the level of measurement then the selection of the appropriate statistical test is easily made.

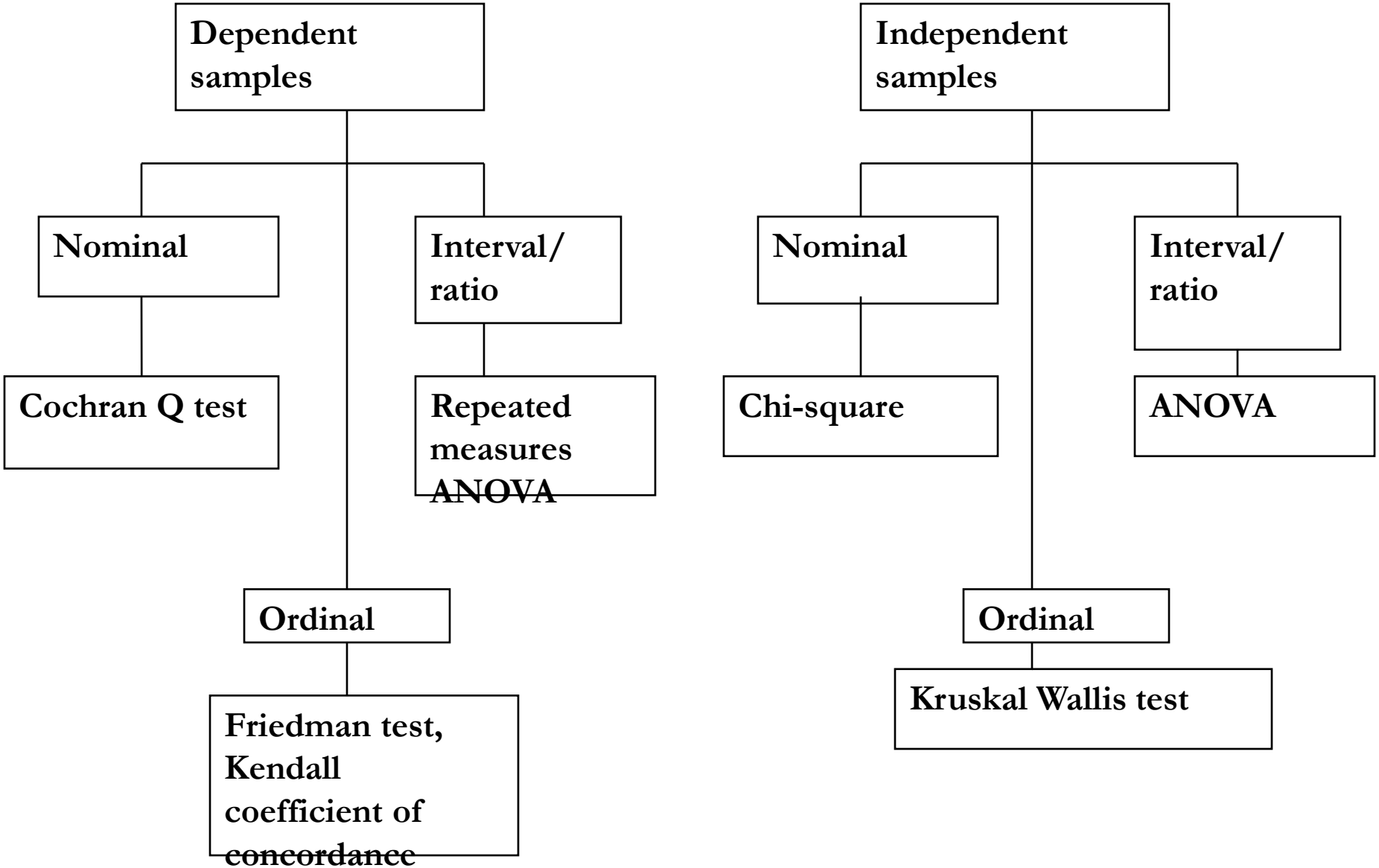
One – sample observation



Two – samples observation



More than two – samples observation



Research design

- Reaching conclusions and recommendations
  - Marketing research should be designed to help
    - to identify potential threats and opportunities,
    - generate alternative courses of action,
    - provide information to enable marketing managers to evaluate those alternatives and
    - advises on the implementation of the alternatives.
  - The results of marketing research must be effectively communicated to all key stakeholders.

Reaching conclusions and recommendations

- General guidelines while writing research reports
  - Think of the audience
  - Be concise yet complete
  - Understand the results and draw conclusions.
- The summary of findings is perhaps the most important component of the written report, since many of the management team who are to receive a copy of the report will only read this section.