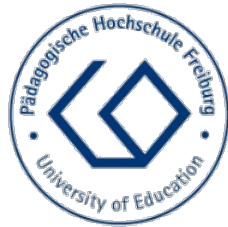


Consumer Research



Hochschule Reutlingen
Reutlingen University



Co-funded by
the European Union

Learning Objectives

After this lecture students should be able to:

- Describe the market research process
- Differentiate between different market research methods
- Explain the need for sampling
- Explain the difference between qualitative and quantitative research

Companies must produce bundles of benefits that consumers will view as valuable

What is Marketing Research?

Key questions:

- What do we sell?
- How do consumers view our company?
- What does our company/product mean?
- What do consumers desire?

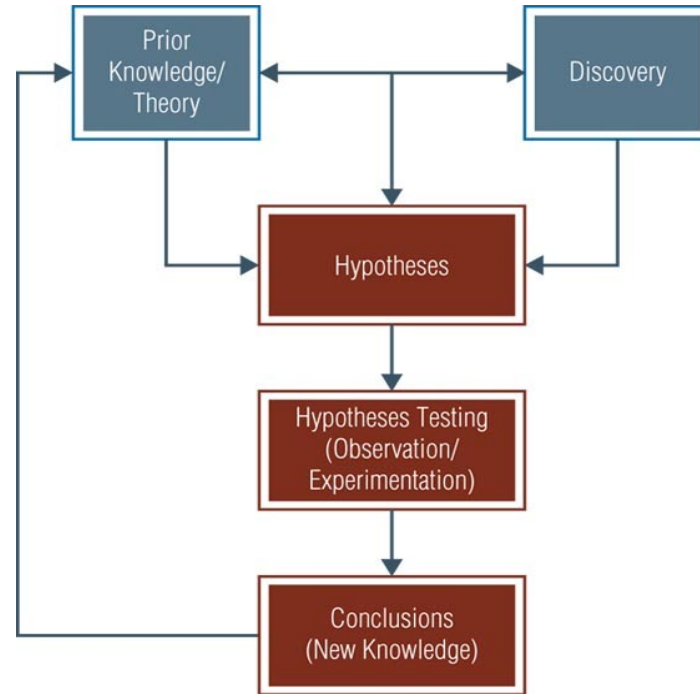
Marketing research is the application of the scientific method in searching for the truth about marketing phenomena



- not intuitive or haphazardly gathered
- accurate and objective
- relevant to all aspects of the marketing mix
- limited by one's definition of marketing

Scientific method is the way researchers go about using knowledge & evidence to reach objective conclusions about the real world

A Summary of the Scientific Method



Basic Marketing Research is conducted without a specific decision in mind that does not address the needs of a specific organization

Basic marketing research

- Attempts to expand the limits of marketing knowledge in general.
- Not aimed at solving a pragmatic problem.
- Example:
 - Do consumers experience cognitive dissonance in low-involvement situations?
- **Scientific Method:**
 - The way researchers go about using knowledge and evidence to reach objective conclusions about the real world
 - The analysis and interpretation of empirical evidence (facts from observation or experimentation) to confirm or disprove prior conceptions

Developing and implementing a marketing strategy involves four stages

Marketing Research and Strategic Marketing Management

- Identifying and evaluating market opportunities
- Analyzing market segments and selecting target markets
- Planning and implementing a marketing mix that will provide value to customers and meet organizational objectives
- Analyzing firm performance

Factors relevant for considering the ethics of data gathered through data technology

Data Technology and Ethics

- Has the consumer implicitly or explicitly consented to being traced?
- Does the tracking behavior violate any explicit or implicit contracts or agreements?
- Can researchers enable users to know what information is available to data miners?
 - Open data partnership – researchers agree to make the information they collect from Web tracking available to the consumers from which they gather the information.
- Do the benefits to consumers balance out any potential invasion of privacy?

When and how should we inform test persons about our research aims?

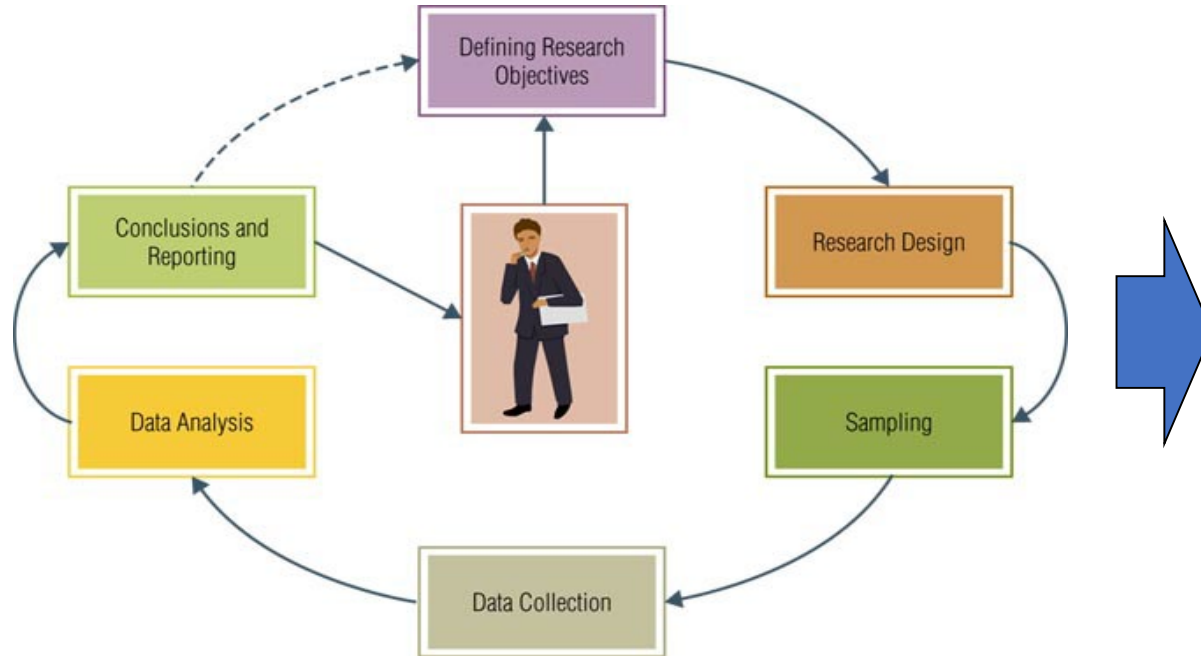
Deception in research designs and the right to be informed

Research Designs

- Placebo
 - A false experimental effect used to create the perception of a true effect.
- Debriefing
 - Research subjects are fully informed and provided with a chance to ask any questions they may have about the experiment.
- Mystery shoppers
 - Employees of a research firm that are paid to pretend to be actual shoppers.
- **Questions to ask to help avoid harming a research participant:**
 - Has the research subject provided consent to participate in an experiment?
 - Is the research subject subjected to substantial physical or psychological trauma?
 - Can the research subject be easily returned to his or her initial state?

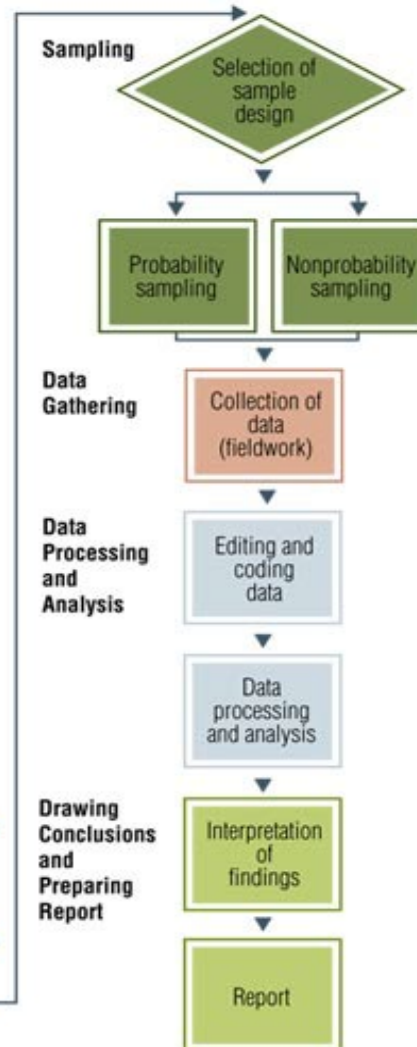
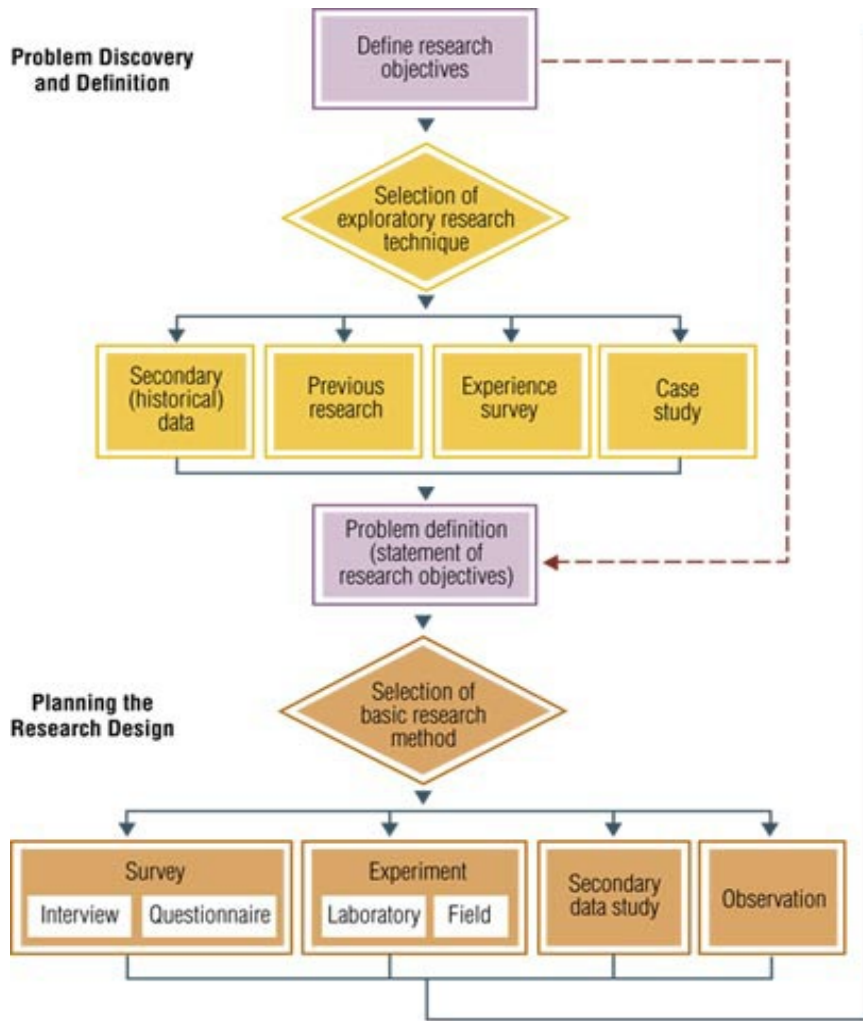
There are 6 stages of the research process – Same structure for academic papers!

Stages of the Research Process



General Structure of Academic Papers:

1. Introduction
2. Literature Review
3. Empirical Research
4. Discussion
5. Conclusion



The 6 stages in the research process start with defining the objectives

Zikmund & Babin (2015), p. 54

Finally, you will have to transfer the elements into a structured academic paper!

Structure of academic papers

1. Introduction

- This topic is relevant, because..
- There is already something investigated, but there are open questions, therefore the paper aims to answer the following research question(s).
- To answer the question a method is used.
- The structure of the paper is....

2. Literature Review

- What is known and what is current state of literature Stream A.
 - 2.1.1. Substream A1
 - Text
 - 2.1.2 Substream A2
 - Text
- Substream B
 - Text

3. Empirical Research

- Literature Review shows gaps, which will be clarified by empirical fieldwork.
- Methodology of the empirical research
- Results of the research (data and facts)

4. Discussion

- How do the results have to be interpreted?
- Do they fit to the current state of literature?
- What is the contribution?

5. Conclusion

- Implications of the newly gained knowledge?
- What are limitations of the paper?
- What should be further research focus on?

Discussion

Discuss (10 minutes):

What are the differences in the main research objectives of exploratory, descriptive, and causal research designs? Which design type would be most appropriate to address the following question: “How satisfied or dissatisfied are customers with the sales assistance in our fashion stores?”

And comment on the following statements (5 minutes):

- a) the primary responsibility for determining whether marketing research activities are necessary is that of the marketing research specialist.
- b) the information research process serves as a blueprint for reducing risks in making marketing decisions.
- c) selecting the most appropriate research design is the most critical task in the research process.

Theory is a formal, logical explanation of some events that includes predictions of how things relate to one another.



Theory and Hypotheses

- Theory
 - A formal, logical explanation of some events that includes predictions of how things relate to one another.
- Hypothesis
 - A formal statement explaining some outcome.
- Empirical Testing
 - Something has been examined against reality using data.



Measurement is the process of describing some property of a phenomenon, usually by assigning numbers in a reliable and valid way

Measurement

- The process of describing some property of a phenomenon, usually by assigning numbers in a reliable and valid way.

Concept

- A generalized idea about a class of objects, attributes, occurrences, or processes.



In order to measure we have to operationalize our research

- **Operationalization**

- The process of identifying scales that correspond to properties of a concept involved in a research process.

- **Scales**

- A device providing a range of values that correspond to different characteristics or amounts of a characteristic exhibited in observing a concept.

- **Correspondence rules**

- Indicate the way that a certain value on a scale corresponds to some true value of a concept.

- **Variables**

- Capture different values of a concept.

- **Constructs**

- Concepts measured with multiple variables.

The Net Promoter Score is widely used in business

Net Promoter Score (NPS)

- Net promoter score (NPS) represents how favorable a customer is toward a business.
- ≤ 6 is labeled a detractor
- 7-8 is labeled passively satisfied
- ≥ 9 signifies a promoter

On the 0-to-10-point scale shown below, how likely is it that you would recommend Blackberry to a friend or colleague?

0 1 2 3 4 5 6 7 8 9 10

- But how valid is this measure?

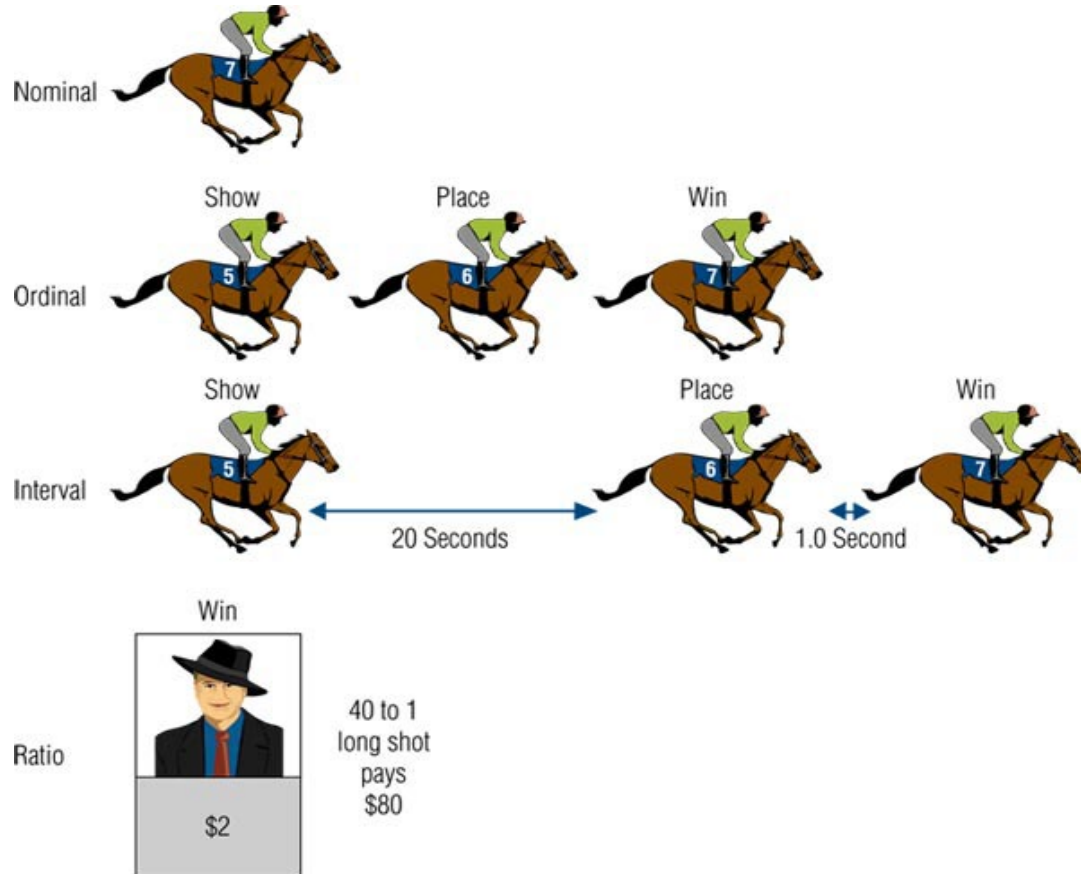
There are 4 levels of scales

Scale levels

- **Nominal Scale**
 - Assigns a value to an object for identification or classification purposes.
 - Most elementary level of measurement.
 - E.g. Athletes wear nominal numbers on their jerseys
- **Ordinal Scale**
 - Ranking scales allowing things to be arranged based on how much of some concept they possible.
 - Have nominal properties.
- **Interval Scale**
 - Capture information about differences in quantities of a concept from one observation to the next.
 - Have both nominal and ordinal properties.
- **Ratio Scale**
 - Highest form of measurement.
 - Have all the properties of interval scales with the additional attribute of representing absolute quantities.
 - Absolute zero.

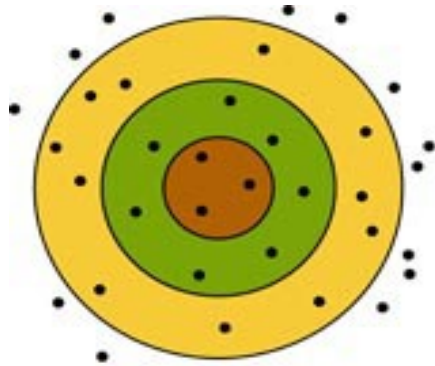
Nominal, ordinal, interval and ratio scales provide different Information

Scale levels

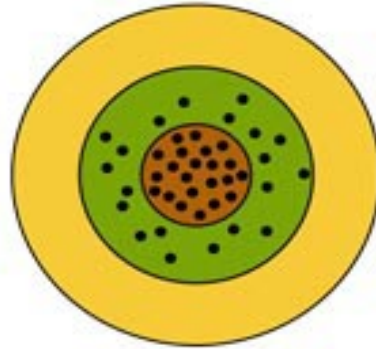


The differences between reliability and validity can be illustrated by picturing target shooting

Reliability and Validity



Old Rifle
Low Reliability
(Target A)



New Rifle
High Reliability
(Target B)



New Rifle—Bad Shot
Reliable but not Valid
(Target C)

There are several elements to check reliability of any research

Reliability

- **Internal Consistency**

- Represents a measure's homogeneity or the extent to which each indicator of a concept converges on some common meaning.
- Split-half method
 - Checks the results of one-half of a set of scaled items against the results from the other half.
- Coefficient alpha (α)
 - The most commonly applied estimate of a multiple item scale's reliability.
 - Represents the average of all possible split-half reliabilities for a construct.

- **Test-retest Method**

- Administering the same scale or measure to the same respondents at two separate points in time to test for stability.
- Represents a measure's repeatability.

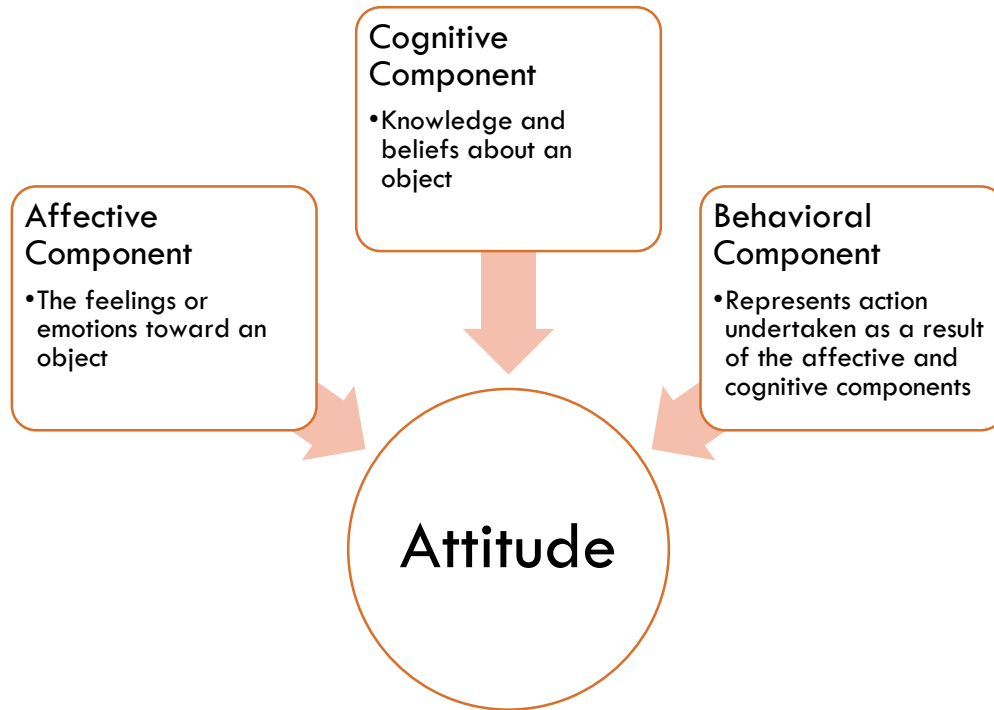
Validity consists of several components, including face validity, convergent validity, criterion validity, and discriminant validity

Validity

- **Face (content) Validity**
 - Extent to which individual measures' content match the intended concept's definition.
- **Criterion Validity**
 - The ability of a measure to correlate with other standard measures of similar constructs or established criteria.
- **Convergent Validity**
 - Depends on internal consistency so that multiple measures converge on a consistent meaning.
- **Discriminant Validity**
 - Represents how unique or distinct is a measure; a scale should not correlate too highly with a measure of a different construct.

Attitude is an enduring disposition to consistently respond in a given manner to various aspects of the world

Attitude & Components of an Attitude



Generally, consumers act in a way consistent with their attitudes- therefor attitudes are a popular research topic

Attitudinal Rating Scales

- Physiological Measures
- Rating Scales
 - Ranking
 - Rating
 - Sorting
 - Choice

The Likert-Scale is a means for measuring attitudes

Attitudinal Rating Scales- Likert Scale

Respondents indicate their own attitudes by checking how strongly they agree or disagree with statements.

I like to go to Walmart when buying food for my family.				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(1)	(2)	(3)	(4)	(5)

Walmart is a bad place to shop for fresh foods.				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(1)	(2)	(3)	(4)	(5)

There are several trade-offs between balanced/unbalanced and forced/non-forced choice scales

Balanced vs Unbalance; Forced vs Non-forced choice?

Balanced Rating Scale

- A fixed-alternative rating scale with an equal number of positive and negative categories; a neutral point or point of indifference is at the center of the scale.

Unbalanced Rating Scale

- A fixed-alternative rating scale that has more response categories at one end than the other resulting in an unequal number of positive and negative categories.

Forced-choice Rating Scale

- A fixed-alternative rating scale that requires respondents to choose one of the fixed alternatives.

Non-forced Choice Scale

- A fixed-alternative rating scale that provides a “don’t know” or “no opinion” category or allowing respondents to indicate that they cannot say which alternative is their choice.

Multi-Attribute Attitude Score is assessed within a two step process



	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
The Honda Fit is the most reliable car in its class.	<i>SD</i>	<i>D</i>	<i>N</i>	<i>A</i>	<i>SA</i>
The Honda Fit has a low price for a car of its type.	<i>SD</i>	<i>D</i>	<i>N</i>	<i>A</i>	<i>SA</i>
I know that my Honda dealer will provide great service if I buy a Honda Fit.	<i>SD</i>	<i>D</i>	<i>N</i>	<i>A</i>	<i>SA</i>
The Honda Fit is one of the most stylish cars you can buy.	<i>SD</i>	<i>D</i>	<i>N</i>	<i>A</i>	<i>SA</i>

All things considered ...							
<i>Buying a car that is reliable is</i>							
Very bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very good
<i>Buying a car with a low price is</i>							
Very bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very good
<i>Buying a car from a dealer with excellent service is</i>							
Very bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very good
<i>Buying a car with the latest styling is</i>							
Very bad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very good



Beliefs	×	Evaluations	=	(B)(E)
5		6		30
3		3		9
2		4		8
1		2		2
<i>Total</i>				49

Qualitative research focuses on discovering true inner meanings and new insights

Qualitative marketing research

- Research that addresses marketing objectives through techniques that allow the researcher to provide elaborate interpretations of market phenomena without depending on numerical measurement

Researcher-dependent

- Researcher must extract meaning from unstructured responses such as text from a recorded interview or a collage representing the meaning of some experience.

Useful, when....

- It is difficult to develop specific and actionable decision statements or research objectives.
- The research objective is to develop a detailed and in-depth understanding of some phenomena.
- The research objective is to learn how consumers use a product in its natural setting or to learn how to express some concept in colloquial terms.
- The behavior the researcher is studying is particularly context-dependent.
- A fresh approach to studying the problem is needed.

Main differences between qualitative and quantitative are regarding sample size and evaluation method

Qualitative “versus” Quantitative Research

Qualitative marketing research

- Exploratory
- Uses small versus large samples
- Asks a broad range of questions versus structured questions
- Subjective interpretation versus statistical analysis



Quantitative marketing research

- Descriptive and conclusive
- Addresses research objectives through empirical assessments that involve numerical measurement and statistical analysis.



Qualitative research is often used in an exploratory research context, e.g. in order to develop ideas or concept testing

Qualitative Research and Exploratory Research Designs

Qualitative data

- Data that are not characterized by numbers but rather are textual, visual, or oral.
- Focus is on stories, visual portrayals, meaningful characterizations, interpretations, and other expressive descriptions.

Quantitative data

- Represent phenomena by assigning numbers in an ordered and meaningful way.

Idea generation

- Can generate ideas for new products, advertising copy, promotions, and product improvements.

Probing

- An interview technique that tries to draw deeper and more elaborate explanations from the discussion.

Concept testing

- A frequently performed type of exploratory research representing many similar research procedures all having the same purpose: to screen new, revised, or repositioned ideas.

There is four main types of qualitative research – all of them may be relevant for your research aims

Major Categories of Qualitative Research

Phenomenology— originating in philosophy and psychology

- A philosophical approach to studying human experiences based on the idea that human experience itself is inherently subjective and determined by the context in which people live.
- Seeks to describe, reflect upon, and interpret experiences.
- Relies on conversational interview tools and respondents are asked to tell a story about some experience.

Ethnography—originating in anthropology

- Represents ways of studying cultures through methods that involve becoming highly active within that culture.
- An ethnographic research approach where the researcher becomes immersed within the culture that he or she is studying and draws data from his or her observations.

Grounded theory— originating in sociology

- Represents an inductive investigation in which the researcher poses questions about information provided by respondents or taken from historical records.
- The researcher asks the questions to him or herself and repeatedly questions the responses to derive deeper explanations.

Case studies - originating in psychology and in business research

- The documented history of a particular person, group, organization, or event.
- Are identified by the frequency with which the same term (or a synonym) arises in the narrative description.

Survey Research

- Respondents
 - People who verbally answer an interviewer's questions or provide answers to written questions.
- Survey
 - A method of collecting primary data in which information is gathered by communicating with a representative sample of people.
 - Surveys in which the respondent takes the responsibility for reading and answering the questions are called self-administered questionnaires
- Response Rate
 - The number of questionnaires returned or completed divided by the number of eligible people who were asked to participate in the survey.
- Factors that Bias the Response Rate
 - Persons who will complete questionnaires versus those persons who will not.
 - Respondents are usually better educated and more likely to be a homeowner.
 - Person filling out survey is not the intended subject.

Researchers have to consider advantages / disadvantages of surveys



Advantages of Surveys

- Gathering information via surveys is:
 - Quick
 - Inexpensive
 - Efficient
 - Accurate
 - Can apply straightforward statistical tools to analyze data
 - Flexible

Disadvantages

- Results are no better than the quality of the sample and answers obtained
- Errors lead to misleading results



Response Rates for Mail Surveys can be increased by several means

- Increasing Response Rates for Mail Surveys
- Cover letter
- Incentives help
- Interesting questions
- Follow-ups
- Advance notification
- Survey sponsorship
- Keying mail questionnaires with codes

Good question lead to good answers – bad to....

What Should Be Asked?

- Questionnaire Relevancy

- All information collected should address a research question in helping the decision maker in solving the current marketing problem.

- Questionnaire Accuracy

- The information is valid; it faithfully represents reality.
- Questionnaires should use simple, understandable, unbiased, unambiguous, and nonirritating words.
- Questionnaire design should facilitate recall and motivate respondents to cooperate.
- Proper question wording and sequencing to avoid confusion and biased answers.

Question phrasing is important for operationalizing the testing



- Open-ended Response Questions

- Pose some problem and ask respondents to answer in their own words.

- Fixed-alternative Questions

- Questions in which respondents are given specific, limited-alternative responses and asked to choose the one closest to their own viewpoint.
- Advantages:
 - Require less interviewer skill
 - Take less time to answer
 - Are easier for the respondent to answer
 - Provides comparability of answers

- Multiple-choice Question

- Requires the respondent to choose one response from among multiple alternatives (e.g., A, B, or C).



Avoid ambiguity: Be as specific as possible

Guidelines For Avoiding Mistakes

- Avoid double-barreled items
 - Double-barreled question – may induce bias because it covers two or more issues at once.

Between you and your husband, who does the housework (cleaning, cooking, dishwashing, laundry) over and above that done by any hired help?

- I do all of it
- I do almost all of it
- I do over half
- We split the work fifty-fifty
- My husband does over half

- Avoid making assumptions

Should Macy's continue its excellent gift wrapping program?

- yes
- No

- Avoid taxing respondent's memory

Survey flow might determine the quality of answers

Survey flow

- The ordering of questions through a survey.
- Breakoff
 - A respondent who stops answering questions before reaching the end of the survey.
- Filter question
 - A question that screens out respondents who are not qualified to answer a second question.
- Branching
 - Directing respondents to alternative portions of the questionnaire based on their response to a filter question.

A large portion of respondents give up before finishing and abandoning the survey (break-offs)

I Give Up!

- Guidelines

- Visually appealing and easy to read
- Fewer questions per page
- Sensitive questions and open-ended questions encourage break-offs
- Sophisticated samples increase response rate
- Pretesting is important

Observation is useful when....

Observation of Human Behavior







- Communication with respondent is not necessary
- Data not distorted by self-report bias (e.g., without social desirability)
- No need to rely on respondents' memory
- Nonverbal behavior data may be obtained
- Certain data may be obtained more quickly
- Environmental conditions may be recorded
- May be combined with survey to provide complementary evidence

The various types of observation have to deal with limitations

Types and Limitations of Observation

- Unobtrusive
 - No communication with the person being observed is necessary so that he or she is unaware of being an object of research.
- Visible Observation
 - Observation in which the observer's presence is known to the subject.
- Hidden Observation
 - Observation in which the subject is unaware that observation is taking place.
- Limits
 - Cannot observe cognitive phenomena such as attitudes, motivations, and preferences.
 - Observation can describe the event that occurred but cannot explain why the event occurred.
 - Observation period generally is short because long periods are expensive or even impossible.

Observation can look on various aspects depending on the situation and research question

Behavior		Description	Example
Facial expressions		Expressions of emotion such as surprise (eyes wide open, mouth rounded and slightly open, brow furrowed)	A consumer reacts to the price quoted by a salesperson.
Body language		Posture, placement of arms and legs	A consumer crosses arms as salesperson speaks, possibly indicating a lack of trust.
Eye activity		Eye contact, staring, looking away, dilated pupils. In U.S. culture, not making eye contact is indicative of a deteriorating relationship. Dilated pupils can indicate emotion or degree of honesty.	A consumer avoids making eye contact with a salesperson knowing that he or she will not make a purchase.
Personal space		Physical distance between individuals; in the United States, people like to be about eight feet apart to have a discussion.	A consumer may back away from a salesperson who is viewed to be violating one's personal space.
Gestures		Responses to certain events with specific body reactions or gestures	A consumer who wins something (maybe at the casino or a sports contest) lifts arms, stands tall, and sticks out chest.
Manners		Accepted protocol for given situations	A salesperson may shake a customer's hand, but should not touch a customer otherwise.

Mechanical observation are in use almost everywhere

Mechanical Observation

- Television and Radio Monitoring
 - Computerized mechanical observation used to obtain television ratings.
- Monitoring Web site Traffic
 - Hits and page views
 - Unique visitors
 - Click-through rate (CTR)
 - Proportion of people exposed to an Internet ad who actually click on its hyperlink to enter the Web site; click-through rates are generally very low.
 - Conversation volume
 - A measure of the amount of Internet postings that involve a specific name or term.

InStore Traffic

- Footfall analytics
- Conversion Rate

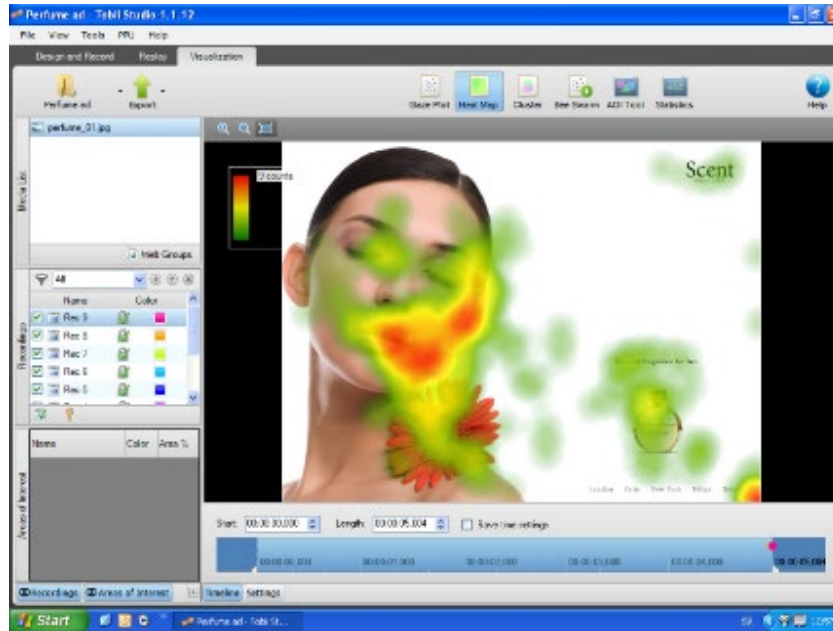
Measuring physiological reactions is another widespread used tool for understanding consumer behavior

Measuring Physiological Reactions

- **Eye-Tracking Monitor**
 - Records how the subject actually reads or views an advertisement.
 - Measures unconscious eye movements.
- **Pupilometer**
 - Observes and records changes in the diameter of the subject's pupils.
- **Voice Pitch Analysis**
 - Measures emotional reactions through physiological changes in a person's voice.
- **Psychogalvanometer**
 - Measures galvanic skin response—involuntary changes in the electrical resistance of the skin.
 - Assumes that physiological changes accompany emotional reactions.
- **Neurological Devices**
 - Magnetic resonance imaging (MRI)

Records how the subject actually reads or views an advertisement- Website analysis also possible

Eyetracking



Personal interviews

Advantages

- Opportunity for feedback
- Probing complex answers
- Length of interview
- Completeness of questionnaire
- Props and visual aids
- High participation rate

Disadvantages

- Interviewer influence
- Lack of anonymity of respondents
- Cost

Depth Interviews is commonly used for exploratory research designs – mostly as semi-structured interview

- Depth interview
 - A one-on-one interview between a professional researcher and a research respondent conducted about some relevant business or social topic.
 - Laddering technique to trigger answers
- Semi-structured interviews
 - Written form and ask respondents for short essay responses to specific open-ended questions.
 - Advantages
 - An ability to address more specific issues
 - Responses are easier to interpret
 - Without the presence of an interviewer, semi-structured interviews can be relatively cost effective

Listening skills and creating a comfortable relationship is essential for personal interviews

Skills Required for conducting In-Depth Interviews.

- Probing questions. questions that result when an interviewer takes the subject's initial response to a question and uses that response as the framework for the next question (the probing question) in order to gain more detailed responses.
- Interpersonal communication skills. the interviewer's ability to articulate questions in a direct and clear manner.
- Listening skills. the interviewer's ability to accurately interpret and record the subject's responses.
- Highly important. create comfort zone!

Let's start for developing some interviews!

- WORK!
 - Form 3-4 groups!
 - Decide on a topic you would like to interview later! (5-10mins interview duration!)
 - Think about questions, question-flow, type of interview!
 - Prepare your interview outline (scribble!)

Focus Groups are an unstructured, free-flowing interview with a small group (6-10 people) led by a moderator

- Relatively fast
- Easy to execute
- Allow respondents to piggyback off each other's ideas
- Provide multiple perspectives
- Flexibility to allow more detailed descriptions
- High degree of scrutiny

Group Composition

- 6 to 10 people
- Relatively homogeneous
- Similar lifestyles and experiences

Focus groups are very helpful to analyse complex situation and problems

Main Research Objectives of Focus Group Interviews (I)

- **To provide data for defining and redefining marketing problems.**
In those situations where managers or researchers experience difficulties in identifying and understanding a specific marketing problem, focus groups can help in distinguishing the differences between symptoms and root problem factors.
- **To identify specific hidden information requirements.**
In some situations decision makers and researchers are not totally sure what specific types of data or information should be investigated. In these situations, focus groups can reveal unexpected components of the problem and thus can directly help researchers determine what specific data should be collected

Focus groups are very helpful to analyse complex situation and problems

Main Research Objectives of Focus Group Interviews (II)

- **To provide data for better understanding results from quantitative studies.**
there are situations where quantitative research investigations leave the decision maker or researcher asking why the results came out the way they did.
- **To discover new constructs and measurement methods.**
For academics and practitioners alike, focus group interviews play a critical role in the process of developing new marketing constructs and creating reliable and valid construct measurement scales.
- **To help explain changing consumer preferences.**
This objective refers to the use of focus group interviews to collect data that can be useful in understanding how customers describe their experiences with different products and services.

The preparation of focus groups happens in 3 phases!

Conducting Focus Group Interviews. in three phases:

Phase I. planning the study

Phase II. conducting the discussion

Phase III. analyze and report the results

Step 1 focuses on planning the focus group

Phase I – Planning the Study.

▪ **Focus Group Participants**

- As homogeneous as possible
- But with enough variations to allow contrasting points
- Potential Group dynamics
- Commonalities may include: occupation; past use of a product, service, or program; educational level; age; gender; or family structure

▪ **Selection and Recruitment of Participants**

- Selection
- Sampling Procedures for Focus Groups
- Recruitment of Participants
- Focus Group Incentives

▪ **Size of the Focus Group**

- Number of Focus Group Sessions

▪ **Focus Group Locations**

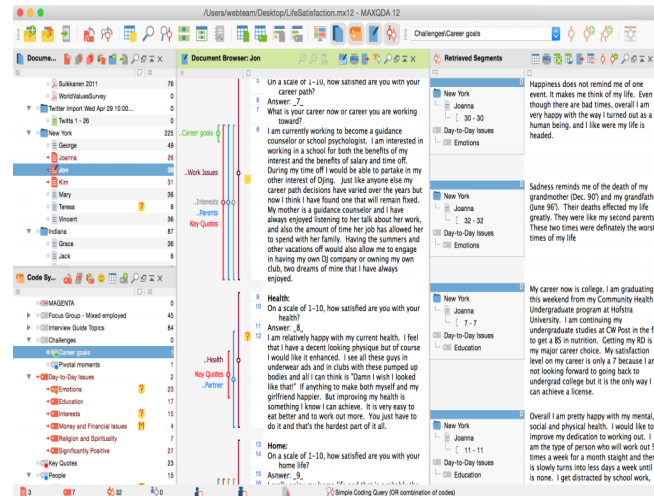
Step 2 needs a guideline, i.e. a detailed outline of the topics, questions, used by the moderator to lead the focus group session

- Phase II – Conducting
 - opening questions
 - introductory questions
 - transition questions
 - critical questions
 - ending questions

Step 3 is the analysis of the group(s)

Phase III – Analysis

Content analysis. the systematic procedure of taking individual responses and grouping them into larger theme categories or patterns → e.g. **MAXQDA**



A puzzle is a sample until it is done! -The sample allows to guess the picture

- Sample
 - A subset, or some part, of a larger population.
- Population (universe)
 - Any complete group of entities that share some common set of characteristics.
- Population Element
 - An individual member of a population.
- Census
 - An investigation of all the individual elements that make up a population.

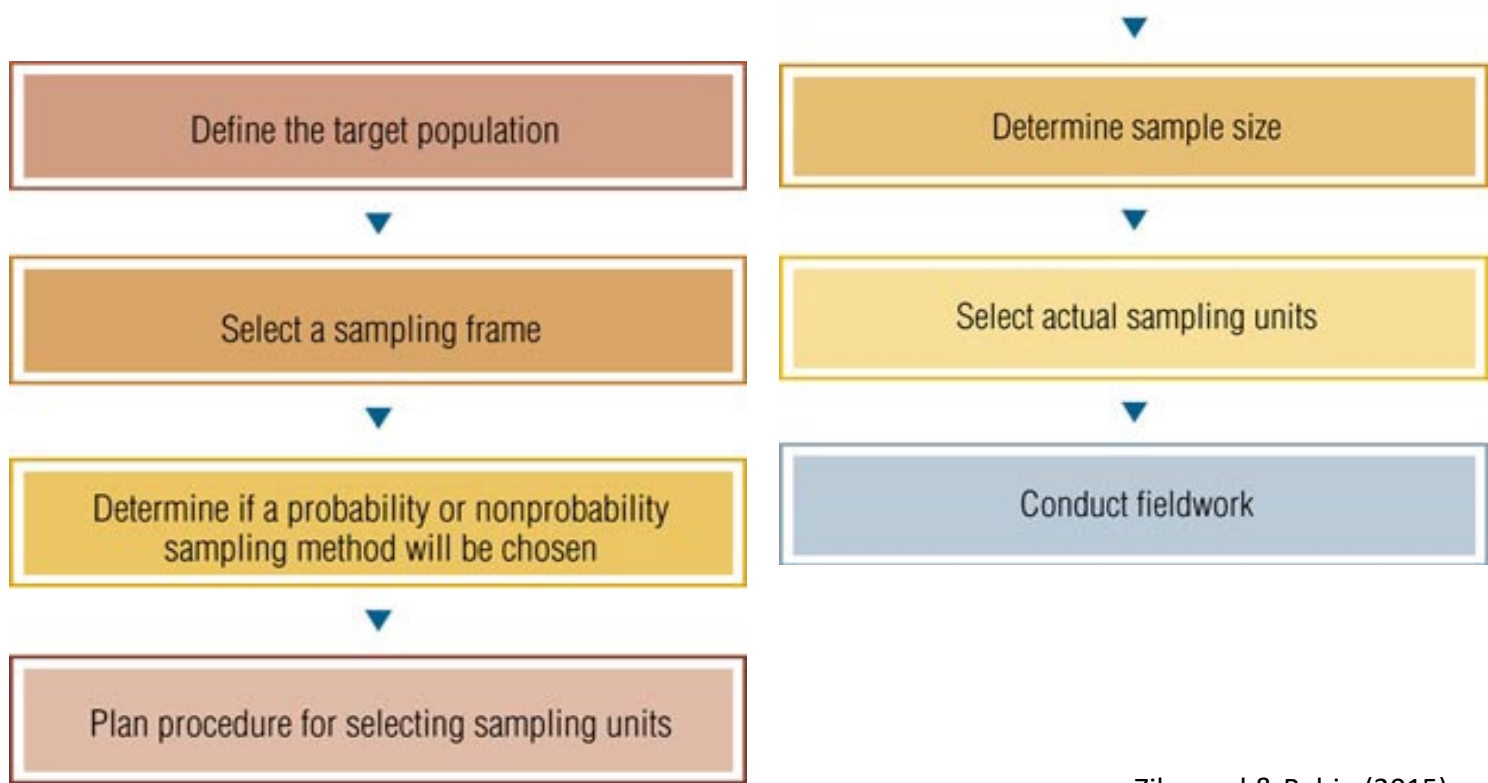
Sampling is necessary to fulfill tasks within time and budget restrictions

Why Sample?

- Pragmatic Reasons
 - Budget and time constraints.
 - Limited access to total population.
- Accurate and Reliable Results
 - Samples can yield reasonably accurate information.
 - Strong similarities in population elements makes sampling possible.
 - Sampling may be more accurate than a census.
- Destruction of Test Units
 - Sampling reduces the costs of research in finite populations.

The selection of a sample follows a clear process

Stages in the Selection of a Sample



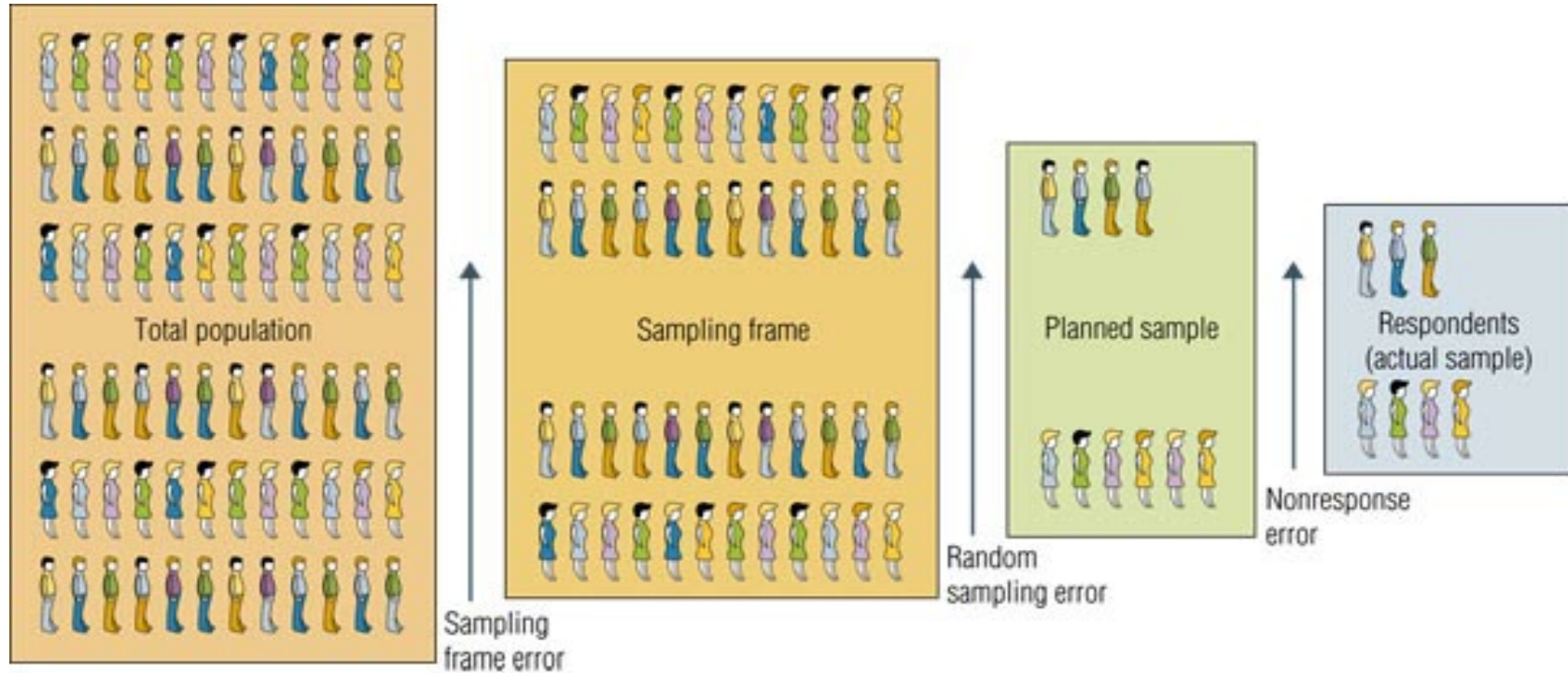
Zikmund & Babin (2015), p. 315

Sampling starts with identifying a relevant population and a sampling frame

- Defining the Target Population
 - What is the relevant population?
 - Whom do we want to talk to?
 - Population is operationally defined by specific and explicit tangible characteristics.
- The Sampling Frame
 - A list of elements from which a sample may be drawn; also called working population.
 - Sampling Frame Error
 - Occurs when certain sample elements are not listed or are not accurately represented in a sampling frame.
- Sampling Unit
 - A single element or group of elements subject to selection in the sample

Random sampling errors and systematic errors may combine to yield a sample that is less than perfectly representative

Errors Associated With Sampling



A sampling unit is one element in the sample

- **Sampling Unit**
 - A single element or group of elements subject to selection in the sample.
- **Primary Sampling Unit (PSU)**
 - A unit selected in the first stage of sampling.
- **Secondary Sampling Unit**
 - A unit selected in the second stage of sampling.
- **Tertiary Sampling Unit**
 - A unit selected in the third stage of sampling.

What is the appropriate sample design?

Criteria considered in sampling design

- Degree of accuracy
- Resources
- Time
- Advance knowledge of the population
- National versus local project

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