

# Business Research Process

BUS 230: Business Research and Communication

# Goals and Learning Objectives

- Goals of this chapter:
  - Learn what research is.
  - Learn why businesses want to do research to inform decisions.
  - Learn about types of research.
  - Learn the steps of the research process.
- Learning objective: LO1: Develop the ability to define a research problem. Formulate research questions and hypotheses that are measurable, well-defined, address the overall problem, are directly related, and reflect the scope of the problem.

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# Business Decision Making

- **Business decision making:** process of developing and deciding among alternative ways of,
  - resolving a business problem, or
  - taking advantage of a business opportunity.
- **Business problem:** a situation in which negative consequences are possible.
  - It may not be apparent what the problem is, or even that a problem exists.
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# Why Research?

## Ambiguous situations:

- Existence of an opportunity or problem may not be obvious.
- Precise nature of the problem or opportunity is not known.
- Alternatives for resolving a problem, or taking advantage of the opportunity are not fully clear.
- Set of symptoms to a problem are unclear or not all known.

**What a good research question / project** does is identify an *opportunity* or *problem*, as evidenced by one or more *symptoms*, and investigate *alternatives* for solutions.

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## Text-Questions

McDonald's coffee sales are down. Is this a,

- 1 problem,
- 2 opportunity,
- 3 symptom,
- 4 or alternative?

## Defining the Research Objectives

- Research objectives: what are the goals of your research project?
- *Problem / research question*: a single statement/question describing the objective of the research project.
  - Term "problem" is used more generally, what don't we know, what question are we going to answer?
  - Not about confirmation or justification.
- Research problem must be clear and focused. More Albert Einstein:
  - "A problem well defined is a problem half solved."
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## Methods for Finding Problem

- Exploratory research.
- Literature review. Often previous (published) research will motivate new questions.
- Pilot study (practice run): small-scale research project that collects data from individuals similar to those which will be used in a full study.
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# Types of Business Research

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  - This is only the first step in a business decision process.
- 2 **Descriptive research:** describes people, organizations, customers, groups, etc. that are relevant to the business decision (more ahead).
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  - How will an online training program affect workers' job performance?
  - How will an improvement in quality of a product change customer demand?
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## Text-Questions: Types of Research

- What is the relationship between alcohol consumption and students' academic performance?
- What is the ethnic, racial, and age profiles for viewers of *The Daily Show* on Comedy Central?
- Is there a difference between the amount of cheating between freshman students and senior students?
- What are the UW-L College of Business enrollment forecasts for the next year?
- A restaurant distributes a customer satisfaction survey.

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# Evidence for Causation

- Temporal sequence: cause happens first, then effect.
- Concomitant variation: simply means two variables are related.
  - *Might* be measured with a correlation coefficient.
- Non-spurious relationship: concomitant variation is evidence that one variable causes another. This one is extremely tough to establish.

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## Variable Co-movement

- Spurious relationship: data on two variables are correlated but variables are not directly related to one another.
- Example: ice cream consumption and murder rate are positive related to one another.
- Example: class size and academic performance is related to another. Do you think they are positively related or negatively related?
- Example: alcohol consumption and academic performance??
- Example: being overweight and psychologically depressed??

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## Degrees of Causality

- **Absolute causality:** cause is necessary and sufficient to bring about the effect.
- **Conditional causality:** cause is necessary, but not sufficient, to bring about an effect.
  - Close example: smoking *and* lung cancer.
  - Possible business (close) example: develop a new product *and* increasing market share??
- **Contributory causality:** cause does contribute to effect, but the cause is not necessary or sufficient to bring about the effect.
  - Weakest, and most common form of causality.
  - Multiple causes may have the same effect.
  - Causes don't always result in an effect.



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# Overview of the Research Process

- Stages of the Research Process:
  - 1 Defining the research objectives.
  - 2 Planning a research design.
    - Planning a sample.
    - Collecting the data.
  - 3 Analyzing the data.
  - 4 Formulating conclusions.
- Albert Einstein once said, “If we knew what is was we were doing, it wouldn’t be called research, would it?”
- Forward Linkage: earlier stages in the research process influence how the later stages are conducted.
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# Sampling

- Purpose of collecting a sample:
  - Make inferences about the population, based on results from the sample.
  - Objective is *not* just to describe the sample.
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  - Might be obvious: A population may be UW-L students.
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- Obtrusive methods: when gathering data requires filling out a questionnaire or interacting with an interviewer.
- Unobtrusive methods: subjects are not at all disturbed by collection of the data, or possibly even unaware.
  - Counting vehicles passing a billboard.
  - Collecting data on customer purchases.
- Treating research subjects ethically. Even simple questionnaires may pose risks:
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- Group exercises do refine research project ideas, focus on problem definition.
- Homework due Wednesday, February 1: End of Chapter 4 (pages 72-73) problems 2,3,4,5,6,7.
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