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Textbook: Quinlan, Christina, Babin, Barry J., Carr, John C., Griffin, Mitch, Zikmund, William G. (2015), Business Research Methods.1st Edition. South-Western Cengage Learning. ISBN978-1-4737-0485-5

Module 1: The Research Process

Business research: a systematic inquiry aimed at providing info. to make decisions & solve problems

- Business
    → linked to consumers, customers, stakeholders, regulatory bodies, the public via info.
    → need info. for making decisions & designing strategies that can achieve their strategic objectives

Applied VS. Pure research

Applied research	Pure research
• Practical problem-solving is the focus. Studies are closely related to action / policy needs • has an inherent value to the extent that it can assist management in making decisions	• is also problem solving, but is aimed at solving complex questions of a theoretical nature • is a large part of what we do here at UQ • Once info. is known about a phenomenon, it can then be applied • Find sth. we don't know before • Extend human knowledge • E.g. HR → cost-benefit analysis

Applied research
- Can be used at each of the 4 stages of designing & implementing business strategy to
    → Identify problems & opportunities
    → Diagnose & assess problems / opportunities
    → Select & implement courses of action
    → Evaluate courses of action

When research goes wrong
- Incorrect research problem
- Incorrect / incomplete research method
- Incorrect analysis an interpretation of the data
- Inexecutable solutions

Building blocks of research

(a) Theory	"thinking" about a problem
(b) Concepts & constructs	building blocks of our theories

(c) Variables	measures of our concepts / constructs
(d) Hypotheses	relationships among variables
(e) Models	representations of our theories

(a) Theory

Theory: a set of systematically interrelated concepts, definitions, and propositions that are advanced to explain & predict phenomena (facts)

- often used erroneously to express the opposite of fact. This is an incorrect picture of the relationship between fact & theory
- When you are too theoretical, it means that your basis of explanation is NOT sufficiently attuned to specific empirical conditions
- Theory is thinking
- we have many theories & use them continually to explain / predict what goes on around us

- A theory:
  - → summarises what is known about an object of study
  - → narrows the range of facts we need to study
  - → may suggest a system for the researcher to impose on data in order to classify them meaningfully
  - → used to predict further facts which should be found

- **theoretical framework**: how certain phenomena (or variables or concepts) are related to each other (a model) & an explanation of why you believe that these variables are associated with each other (a theory)

(b) Concepts

Concept: a bundle of meanings / characteristics associated with certain events, objects, conditions, and situations

- created by classifying & categorizing objects / events that have common characteristics beyond the single observation
- is an idea
- is abstract
- help us express our ideas & direct our measurement
- can combine concept to create other concepts
- importance:
  - → We design hypotheses using concepts
  - → We devise measurement concepts by which to test these hypothetical statements
  - → We gather data using these measurement concepts
  - → We change / invent new concepts to express ideas
- **conceptual definition**: a statement in words of the meaning of a concept
  - → should not be too narrow / too broad
    - e.g. chair
  - → should not contain ambiguous, obscure or figurative language
  - → goal is to eliminate vagueness (e.g. how many metres exactly is a "tall" person?) and ambiguity (e.g. "I purchased a bat" could have many meanings)
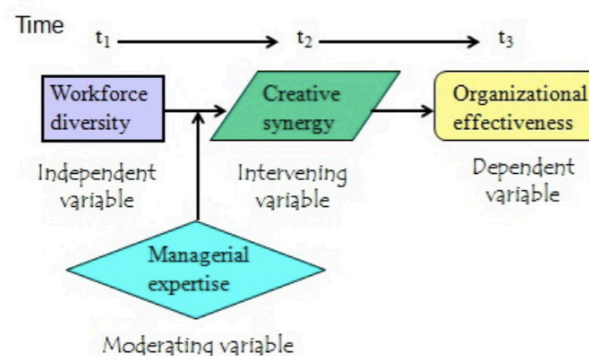 1.

(c) Variables

Variable: an attribute (characteristics/property) of an object/person that can change from person to person / from an object to object (e.g. length, height, sex and weight)

- can be observed & measured
- A person/object/org. can be described by a number of variables
- We are interested in understanding the relationship between & among variables

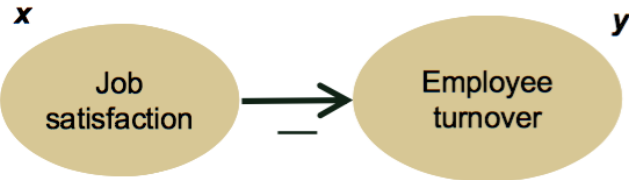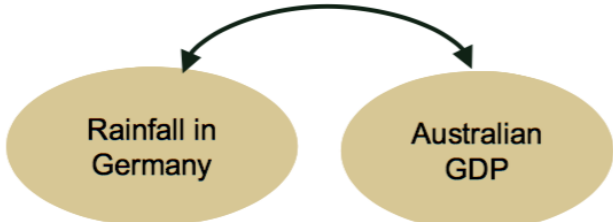| Independent Variables (IV)	Dependent Variables (DV)
• = explanatory variable • is thought to influence / explain variance in a DV • IV can be measured / systematically manipulated to reveal its effect on the DV	• = criterion variable • represents the outcome in which a researcher is interested • its value is 'dependent' to some extent on the IV • DV is expected to change systematically in response to changes in the IV • Measure DV, not changing it

Moderating Variables	Mediating Variables
• has a strong contingent effect on an IV-DV relationship • Changes the form, direction or strength of the original relationship	• = intervening variable • is one through which an IV might influence a DV • This variable surfaces as a function of the IV operating in a situation, & helps conceptualise & explain the influence of the IV on the DV • Like mediator, sit in between IV & DV

An example of all variable types:

- IV → no arrows into it
- Intervening variable (mediating) → between IV & DV
- Moderating variable → affecting relationship, not variable directly

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(d) Hypotheses

Causal Relationships	Correlational Relationships
• = explanatory relationships • an implication that the existence of, or a change in, one variable causes / leads to an effect on the other variable *x* *y* Job satisfaction → Employee turnover	• merely that the variables occur together in some specified manner without implying that one causes the other Rainfall in Germany ⟷ Australian GDP • data for some reason moves tgt • not causation • e.g. rainfall do NOT cause GDP

Proposition
- is a statement about concepts which may be judged as true / false if it refers to observable phenomena
- When a proposition is formulated for empirical testing, it is called a hypothesis

Hypotheses
- is of a tentative & conjectural nature, and is a declarative statement. A hypothesis is a claim.
- can be constructed from:
  - → deduction (from theory) or
  - → induction (from a set of observations)

A good hypothesis should
- predict sth
- be stated clearly & unambiguously
- be testable

Descriptive Hypotheses	Relational Hypotheses
- statements that typically state the existence, size, form, or distribution of some variable - particular value	statements that describe a relationship between 2 variables with respect to some case

(e) models

> **Model**: a representation of a system which is constructed for the purpose of studying an aspect of the system / the system as a whole

- differ from theories in that a theory's role is explanation, whereas a model's role is representation
- might represent a diagram of a theory, linking concepts tgt.
- may be a visual representation of theory / form of equations

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Descriptive Statistics

> **Descriptive statistics**: An elementary transformation of raw data in a way that describes the basic characteristics of the variable

- used to summarise & describe each variable included in the summary
- used to describe the distribution of scores in the data
- must examine the descriptive statistics before conducting further analysis of the data

Frequency Distribution

> **Frequency distribution**: a mathematical distribution containing a count of the number of responses associated with different values of one variable, expressed as a %

Score value: any possible value on a scale of numbers, ordered from the lowest to the highest
- Gives number of (frequency) subjects for each score value