

Research Methodology
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**Lesson : Theoretical Framework
and Hypothesis Development**

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The need for a theoretical framework

- After conducting interviews, completing a literature survey, and defining the problem, one is ready to develop a theoretical framework. ➡
- A theoretical framework is a conceptual model of how one theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem. ➡
- Theoretical framework discusses the interrelationships among the variables that are important to the dynamics of the situation being investigated.
- **Testable hypothesis** can be developed from the theoretical framework, to examine whether the theory formulated was valid or not. ➡

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The need for a theoretical framework, cont'd

- The hypothesized relationships can thereafter be tested through appropriate statistical analysis. ➡
- The entire research rests on the basis of the theoretical framework. Even if testable hypothesis are not necessarily generated, developing a good theoretical framework is central to examining the problem under investigation.
- Theoretical framework is non other than identifying the network of relationships among the **variables** considered important to the study of any given problem situation.

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What is a variable?

- We all make judgments constantly in our lives,
 - This food is '*excellent*'
 - I could not sleep '*well*' last night
 - I think this is '*wonderful*'
- These are *judgments* based upon your *own* preferences.
- **Thus, perception or concept that is capable of measurement –hence capable of taking on differing values – is called a variable.**
- **In other words, a concept that can be measured is called a variable.**

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Variables Cont'd

- **Examples**
 - one worker in the manufacturing department may produce one unit per minute, a second may produce two per minute, a third might produce five per minute. It is also possible that the same member could produce one unit in the first minute and five in the second minute . In both cases , the number of units produced has taken on different values , and is therefore a **variable**.
 - The variable is:
Production Units

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Variables Cont'd

- **Examples**
 - The levels of motivation of members to learn in the class or in a work team might take on varying values ranging from "very low" to "very high". An individual's motivation to learn from different classes or in different work teams might also take on differing values.
 - Thus, the variable is:
Motivation

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Types of variables

- Four main types are discussed
- ✓ The dependent variable (criterion variable)
- ✓ The Independent variable (predictor variable)
- ✓ The moderating variable
- ✓ The intervening variable

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Dependent variable

- Is the variable of primary interest to the researcher .
- The researchers goal is to understand and describe the dependent variable, or to explain its variability or predict it.
- Through the analysis of the dependent variable it is possible to find answers to the problems.
- For this purpose the researcher must quantify and measure the dependent variable , as well as the other variables that influence this variable ➡
- Example:
 - A manager is concerned that the sales of a new product introduced after test marketing it do not meet with his expectations.
 - Dependent variable is: **Sales.**

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Dependent variable *cont'd*

- Example:
 - A basic researcher is interested in investigating the debt-to-equity ratio of manufacturing companies in Sri Lanka.
 - Dependent variable is: **Ratio of Debt to Equity.**
 - A vice president is concerned that the employees are not loyal to the organization, and in fact, seem to switch their loyalty to other institutions.
 - Dependent variable is: **Organizational Loyalty.**

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Independent Variable

- An independent variable is one that influences the dependent variable in either a positive or negative way.
- Example:
 - Example: research studies indicate that successful new product development has an influence on the stock market price of the company . That is , the more successful the new product turns out to be , the higher will be the stock market price of that firm.
 - Dependent Variable: **Variable and stock market price**
 - Independent variable: **The success of the new product**
 - Diagrammed relationship? ➡

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Independent Variable *Cont'd*

- Example
 - Cross-cultural research indicates that managerial values govern the power distance between superiors and subordinates.
 - Independent variable: **Managerial Values**
 - Dependent variable: **Power Distance**
 - Diagrammed relationship? ➡

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Moderating Variables

- The moderating variable is one that has a strong contingent effect on the independent- dependent variable relationship. The presence of the moderating variable modifies the original relationship between the independent and the dependent variables.
- *In a linear causal relationship in which the variable X is presumed to cause the variable Y. A moderator variable M is a variable that alters the strength of the causal relationship.*

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Moderating Variables *cont'd*

- Example
 - A prevalent theory is that the diversity of the workforce contributes more to organizational effectiveness because each group brings its own special expertise and skills to the workplace. This synergy can be exploited, however, only if managers know how to harness the special talents of the diverse work group; otherwise they will remain untapped.
 - Dependent variable:
Organizational Effectiveness
 - Independent variable:
Workforce diversity
 - Moderating variable:
Managerial expertise
 - Diagrammed relationship: ➡

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Intervening Variables

- Is one that surfaces between the time the independent variable start operating to influence the dependent variable and the time their impact is felt on it. There is a time dimension to the intervening variable.
- Intervening variable links between IV and DV.
- In some situations, relationships between IV and DV cannot be established without the intervention of another variable, (i.e. intervening variable)

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Intervening Variables *cont'd*

- Example
 - See the example in slide 13.
 - Independent variable:
Workforce diversity
 - Dependent variable:
Organizational Effectiveness
 - Intervening variable:
Creative Synergy
 - Diagrammed relationship: ➡

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Theoretical Framework

- The theoretical framework is the foundation on which the entire research project is based.
- It is a logically developed, described, and elaborated network of associations among the variables.
- After identifying the appropriate variables, the next step is to elaborate the network of associations among the variables, so that relevant hypothesis can be developed and subsequently tested. ➡
- Based on the results of hypothesis testing, the extent to which the problem can be solved would become evident.

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Theoretical Framework Cont'd

Example

- **Topic**
 - The Determinants of Entrepreneurial Intention among Academics in Sri Lanka
- **Research Problem**
 - whether entrepreneurship related course units are achieving their goal of preparing their students to be an entrepreneur?
- **Research Questions**
 - Is there a significant relationship between the study programmes and entrepreneurial intention?
 - Is there a significant relationship between the year of study programme and entrepreneurial intention?
 - Is there a significant relationship between gender and entrepreneurial intention?
 - Is there a significant relationship between family income and entrepreneurial intention

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Theoretical Framework Cont'd

- Is there a significant relationship between family business experience and entrepreneurial intention?
- **Research Objectives**
 - To examine the connection between students' entrepreneurial intention and the factors determine their intention.
- **Conceptual Model of the study**
➡

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- Next lesson: Hypothesis development
- Exercise
- Download 'research paper to analyze' and read.
(<http://srilankatalkforum.weebly.com/resources.html>)

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References..

- Kumar, R 2011, *Research Methodology: A Step by Step Guide for Beginners*, 3rd edn, Sage Publications.
- Sekaran, U & Bougie, R 2009, *Research Methods for Business: A Skill Building Approach*, 5th edn, John Wiley & Sons.

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