



Training on Socioeconomic Monitoring (SocMon) Methodology for Evaluation of Socioeconomics and Marine Resources Utilization at Selected Coastal Communities in Myanmar

Mawlamyine University, Mon State and
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Session 23: Summarizing SocMon HHI and KII Data/Results Using Descriptive Statistics (with Hands-on Exercise)

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SocMon HHI Data Analysis

Session Goal: To enhance the capability of the participants to analyze SocMon data in order to transform such data into information useful for coastal resource planning and management.

Session Objectives

- Encode the quantitative data generated from the household interviews in the Excel and SPSS data bases;
- undertake the initial analysis of the generated quantitative data from the household surveys;
- Synthesize data results and prepare to write selected parts of the research report.

SocMon HHI Data Analysis

Univariate Analysis of SocMon Household Interview Data

Module 1

Module Objectives

- Derive frequency tables, graphs to summarize data using *frequencies*
- reverse scoring for negatively stated attitude statements using *recode* (into the *same variable*)
- group values of a variable into appropriate categories using *recode* (into a *different variable*) for purposes of having grouped frequency distributions

Module Objectives

- aggregate several variables into one composite variable using *compute*
- select subsets of data for analysis based on a given criterion using *select cases*
- characterize variable/s and derive summary indices using *descriptives* or *frequencies*

SocMon HHI Data Analysis

Part I

Access SPSS data file *Household
Demographics1*
(Data on all household members)

Variables in “Household Demographics1” Data File

- Gender
- Religion
- Age
- Educational Attainment
- Ethnicity
- Language
- Primary Occupation
- Secondary Occupation
- Membership in Stakeholder Organizations

Describing Household Demographics

- **Gender:**

a) number and percent of the population that is male/female *using frequencies*;

b) frequency bar/pie chart *using frequencies (options: graphs)*

Describing Household Demographics

- **Religion:**

- a) list all values using *frequencies*
- b) group values that are related and having small frequencies using *recode (different variable)*;
- c) determine number & percent of community members that have the various religious affiliations using *frequencies* for the recoded religion variable
- d) derive frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics

- **Age:**

- a) list all values using *frequencies*
- b) obtain the shape of the distribution of ages using frequencies (options: graphs: histogram)
- c) get summary quantitative indices such as measures of central tendency, measures of variation, skewness and kurtosis using *frequencies (options: statistics) or descriptives*

Describing Household Demographics

- **Age:**

- d) Determine number and percent of community members in the following age categories: 0-6, 7-12, 13-16, 17-21, 21-39, 40-59; and at least 60 years old by creating another variable (from age) using *recode* to regroup values and get *frequencies*;
- b) Obtain frequency histogram or pie chart of categories of age using *frequencies (options: graphs)*

Describing Household Demographics

(For individuals > 16 years old)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Educational Attainment:**
 - a) get number and percent of community members with educational attainment in the different categories by *getting frequencies*;
 - b) show frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics

(For individuals > 16 years old)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Ethnicity:**
 - a) get number and percent of community members that have the various ethnic affiliations by *getting frequencies*;
 - b) group values with small frequencies into a new category as “others” using *recode*
 - c) show frequency bar/pie chart using *frequencies (options: graphs)*

Describing Household Demographics (*For individuals > 16 years old*)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Language:**
 - a) get number and percent of community members that speak various languages as their primary language thru *frequencies*;
 - b) group values with small frequencies into a new category as “others” using *recode*
 - c) show frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics

(For individuals > 16 years old)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Primary occupation:**
 - a) get number and percent of community members who consider each occupation their primary occupation thru *frequencies*;
 - b) group related occupations having small frequencies into a new category/categories using *recode into a different variable*
 - c) show frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics

(For individuals > 16 years old)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Secondary occupation:**
 - a) get number and percent of community members who consider each occupation their secondary occupation thru *frequencies*;
 - b) group related occupations having small frequencies into a new category/categories using *recode into a different variable*
 - c) show frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics *(For individuals > 16 years old)*

Frequencies for primary and secondary occupation can be presented side by side in one table so that the numbers for a category in both primary/secondary occupation may be compared and/or aggregated to determine how many community members are engaged in a particular occupation.

Describing Household Demographics (*For individuals > 16 years old*)

- Select a subset (using *select cases if age > 16* command) of data for the next set of variables;
- **Membership in Stakeholder Organizations:**
 - a) get number and percent of community members \ who are members of at least 1 stakeholder organization using *frequencies*;
 - b) group values having small frequencies into a new category using *recode into a different variable*
 - c) show frequency bar/pie chart using *frequencies* (*options: graphs*)

Describing Household Demographics

- Note: The variables **education, ethnicity, language, primary occupation, secondary occupation**, and membership in stakeholder organizations **apply only to those community members who are above age 16**.
- Still, should we want to find out the **educational attainment of the school-age population**, then *select cases if age < 16* and apply *frequencies* for educational attainment. The same may be done to determine **ethnicity and language** of those who are 16 years old and below.

Part II

Access SPSS data file *Bongabong Household Informant1*
(Data on Individual Household Informants)

Variables in “Bongabong Household Informant1” Data File

Household Informant’s Personal Characteristics:

- Gender
- Religion
- Age
- Educational Attainment
- Ethnicity
- Language
- Primary Occupation
- Secondary occupation
- Membership in Stakeholder Organizations

Describing Household Demographics

- **Household size:**

- a) list all values using *frequencies*
- b) summary quantitative indices such as means using *frequencies (options: statistics)* or *descriptives*
- c) get number and percent of households with the following members: 1-3, 4-6, 7-9 and 10 & above *by* creating another variable (from HHsize) using *recode* (to regroup values) and *frequencies*;
- d) derive frequency histogram or pie chart using *frequencies (options: graphs)*;

Material Style of Life

Material Style of Life is a proxy variable for income/socio-economic status.

- has four (4) sub-variables – type of roof, type of outside structural walls, windows, floors - each measured at the ordinal scale, with number and percent to be determined *using frequencies*;
- Combine these four sub-variables by adding the values and creating a new variable using *compute* ($MSLComb = H28A + H28B + H28C + H28d$).

Material Style of Life

- MSLComb will range from 5 to 20, with lower values indicative of lower SES and higher values indicative of higher SES.
- Use *frequencies* to determine range and distribution.
- Values of MSLComb (ordinal level data) may be grouped into 2 categories (upper 50% and lower 50%) or 4 categories (16-20: very high, 11-15: high, 6-10: low, 1-5: very low) *using recode and frequencies*.

Variables in “Bongabong Household Informant1” Data File

SocMon-Related Data:

- Household Activities, Goods and Services, Uses, Market Orientation
- **Attitudes on Non-market and Non-use Values of Coastal Resources (8 items)**
- **Perception of Resource Conditions (9 items)**
- **Perceived Threats to Coastal Resources (9 items with 3 threats per item)**
- **Awareness of Rules and Regulations**
- Compliance
- Enforcement

Variables in “Bongabong Household Informant1” Data File

SocMon-Related Data:

- Participation in Decision Making
- Membership in Stakeholder Organizations
- **Perceived Coastal Management Problems**
- **Perceived Coastal Management Solutions**
- Perceived Community Problems
- Successes in Coastal Management
- Challenges in Coastal Management
- **Material Style of Life (4 items)**

Attitudes Toward Non-market and Non-use Values of Resources

- Get *frequencies* to determine number and percent of responses (from strongly disagree to strongly agree) for each item statement.
- Reverse scoring for the negative statements using *recode* (for same variables) so that “strongly disagree” is scored 5, 4 for disagree, ... 1 for strongly agree.
- Compute mean attitude ratings and other summary indices using *frequencies (options: statistics)* or *descriptives*

Attitudes Toward Non-market and Non-use Values of Resources

- Combine H15a, H15b, H15c (by creating a variable “attitudes on indirect non-market value of resources”) through averaging of scores on the three item statements using *compute* statements.
 - a. Compute for mean attitude scores using *frequencies* (*options: statistics*) or *descriptives*
 - b. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00; and Very Positive: 4.01-5.00.

Attitudes Toward Non-market and Non-use Values of Resources

- Combine H15d, H15f, H15h (*by creating a variable “attitudes on existence value of resources”*) through averaging of scores on the three item statements using *compute*.
 - a. Compute for mean attitude scores using *frequencies* (*options: statistics*)
 - b. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00; and Very Positive: 4.01-5.00.

Attitudes Toward Non-market and Non-use Values of Resources

- Combine H15e, H15g (by creating a variable “attitudes on bequest value of resources”) through averaging of scores on the three item statements using *compute*.
 - a. Compute for mean attitude scores using *frequencies* (*options: statistics*)
 - b. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00

Attitudes Toward Non-market and Non-use Values of Resources

- Combine all statements (H15a to H15h) by creating a summary variable “attitude on values of resources” through averaging of scores on the eight item statements using *compute*.
 - a. Compute for mean attitude scores using *frequencies* (*options: statistics*)
 - b. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00; and Very Positive: 4.01-5.00

Perceptions of Resource Conditions

- Combine H15e, H15g (by creating a variable “attitudes on bequest value of resources”) through averaging of scores on the three item statements using *compute*.
 - a. Compute for mean attitude scores using *frequencies* (*options: statistics*)
 - b. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00

Perceptions of Resource Conditions

- Get *frequencies* for each item to determine number and percent of those who describe the resources as very good (5), good (4), not good nor bad (3), bad (2) to very bad (1); *frequencies (options: graphs)* for graphical presentations; and individual item summary indices such as means using *descriptives*
 - a. For each resource, a “net” rating may be computed by subtracting the % of those who have negative ratings (1 and 2) from the % of those who have positive ratings (4 and 5)

Perceptions of Resource Conditions

- b. Combine all statements (H16a to H16i) by creating a summary variable “perception of resource conditions” through averaging of ratings on the 9 resources using *compute*.
- c. Compute for mean attitude scores using *frequencies* (*options: statistics*)
- d. Categorize this aggregate variable into intervals by creating another variable using *recode* for easier interpretation: Very Negative: 1.0-2.0; Negative: 2.01–3.00; Positive: 3.01-4.00

Perceived Threats to Resources

- Get *frequencies* of threats 1, 2 & 3 for each resource to get a listing of all perceived threats per resource
 - a. Since there is no duplication of responses to perceived threats 1, 2 & 3 for a resource, the first/second/third threats may be combined for each resource to get an idea of how many individuals consider an activity as a threat, and present these results in an appropriate table.