

Managing and initial analysis of structured and semi-structured interview data



From your research matrix, you should already have a idea of how your data relates to your research questions

1.5.4 Methodology Matrix and Interview Strategy

Table 1 : Methodology Matrix

Questions: How can hybrid governance	Data needed	Interviewee/ origin of the source	Tools
play a role in Thailand community VSPPs as relates to national energy security?			
1. What are the incentives of each actor in economic, social and environmental aspects?	<ul style="list-style-type: none"> -Interests and incentives of each actors -Internal process of decision-making to arrive at a leadership or an agreement to negotiate with the partners. -Environmental motivations that drive policymakers -The ability to access funding -Norms of management -The role of the community in participating in the organization 	<ul style="list-style-type: none"> -The organization's stakeholder (representative from each partnership) 	<ul style="list-style-type: none"> -In-depth interview -Secondary data review -Non-participatory observation

Some common contrasts between quantitative and qualitative research

Quantitative

Numbers
Point of view of researcher
Researcher distant
Theory testing
Static
Structured
Generalization
Hard, reliable data
Macro
Behaviour
Artificial settings

Qualitative

Words
Points of view of participants
Researcher close
Theory emergent
Process
Unstructured
Contextual understanding
Rich, deep data
Micro
Meaning
Natural settings

Bryman, 2012

Most of you are using **mixed methods** approaches:

- Qualitative to define questions and initial understanding;
- Quantitative to measure prevalence, and test positive and negative relationships
- Qualitative to explore the (contextual) reasons for (social) relationships

Semi-structured interviews contain both quantitative and qualitative data

Analysis of quantitative (numerical) data:

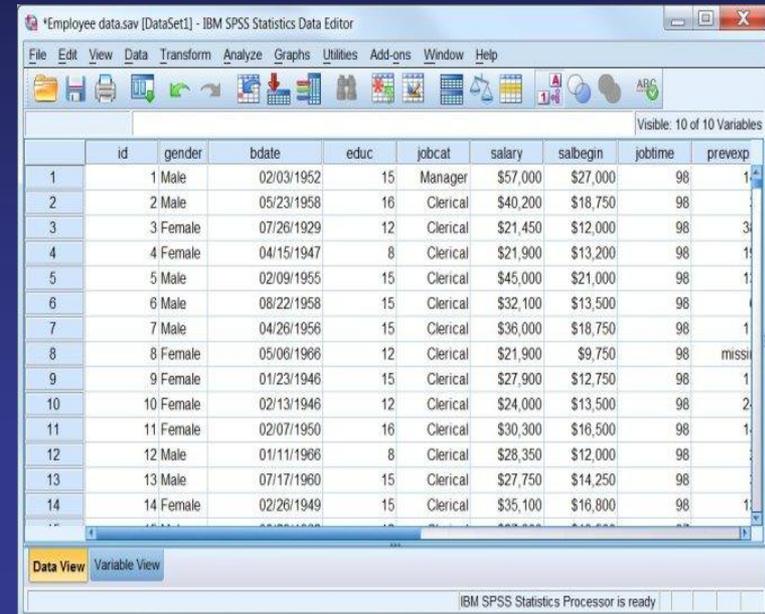
- organize and manipulate data using statistical techniques; develop charts and graphs to present condensed information.
- quantitative information is relatively easy to condense

Analysis of qualitative data:

- qualitative data can seem “unstructured” and hard to manage.
- look for patterns, themes (“coding” your data)
- organize, compile data – charts, tables, matrixes
- consider your data in relation to concepts

Quantitative Data: Data entry

- Enter your data into a statistical analysis program such as SPSS or Excel to manage and analyze it
 - All respondents should have an individual code
 - Clean your data (check numbers accurately entered; check translation/ no typos; check accurately coded; no typos etc...)
 - Consider **grouping continuous quantitative** data into discrete categories
 - Consider **coding qualitative responses** to enable descriptive quantitative data analysis



The screenshot shows the IBM SPSS Statistics Data Editor window. The title bar reads '*Employee data.sav [DataSet1] - IBM SPSS Statistics Data Editor'. The menu bar includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Add-ons, Window, and Help. The toolbar contains various icons for file operations and analysis. The main window displays a data grid with 14 rows and 10 columns. The columns are labeled: id, gender, bdate, educ, jobcat, salary, salbegin, jobtime, and prevexp. The data is as follows:

	id	gender	bdate	educ	jobcat	salary	salbegin	jobtime	prevexp
1	1	Male	02/03/1952	15	Manager	\$57,000	\$27,000	98	1
2	2	Male	05/23/1958	16	Clerical	\$40,200	\$18,750	98	
3	3	Female	07/26/1929	12	Clerical	\$21,450	\$12,000	98	3
4	4	Female	04/15/1947	8	Clerical	\$21,900	\$13,200	98	1
5	5	Male	02/09/1955	15	Clerical	\$45,000	\$21,000	98	1
6	6	Male	08/22/1958	15	Clerical	\$32,100	\$13,500	98	
7	7	Male	04/26/1956	15	Clerical	\$36,000	\$18,750	98	1
8	8	Female	05/06/1966	12	Clerical	\$21,900	\$9,750	98	missi
9	9	Female	01/23/1946	15	Clerical	\$27,900	\$12,750	98	1
10	10	Female	02/13/1946	12	Clerical	\$24,000	\$13,500	98	2
11	11	Female	02/07/1950	16	Clerical	\$30,300	\$16,500	98	1
12	12	Male	01/11/1966	8	Clerical	\$28,350	\$12,000	98	
13	13	Male	07/17/1960	15	Clerical	\$27,750	\$14,250	98	
14	14	Female	02/26/1949	15	Clerical	\$35,100	\$16,800	98	1

At the bottom of the window, there are tabs for 'Data View' and 'Variable View'. The status bar at the bottom right indicates 'IBM SPSS Statistics Processor is ready'.

Quantitative Data and Descriptive Statistics

- Descriptive statistics:
 - The **number of times** something happened (e.g. goals scored; migrated to work in a foreign country...)
 - The **percentage or ratio** of an event or phenomena (e.g. the percentage of/ ratio of boys and girls who go to secondary school)
 - **Mean** (and standard deviation), and **median**

The screenshot shows the ESPN FC website interface. At the top, there is a navigation bar with the ESPN FC logo and various menu items like 'SE Asia', 'SCORES', 'TRANSFERS', 'TEAMS', 'LEAGUES', 'CUPS', 'VIDEO', 'TABLES', and 'MORE'. On the left, a sidebar contains the Premier League logo and a list of navigation options: HOME, SCORES & FIXTURES, NEWS, CLUBS, TABLE, STATISTICS, VIDEO, BLOGS, and TRANSFERS. The main content area is divided into several sections. On the left, there are news snippets: 'Extra Time: The Steve Nicol edition' and 'Anfield might not be ready for July home matches'. In the center, there is a 'bet365' advertisement for an in-play bet offer for Chelsea vs PSG. On the right, the 'Statistics' section is active, showing a dropdown for the '2015 / 2016' season. Below this, there are tabs for 'PERFORMANCE', 'TOP SCORERS', 'TOP ASSISTS', 'DISCIPLINE', and 'FAIR PLAY'. The 'TOP SCORERS' tab is selected, displaying a table with the following data:

RANK	PLAYER	CLUB	GOALS
1	Harry Kane	Tottenham Hotspur	21
2	Jamie Vardy	Leicester City	19
3	Romelu Lukaku	Everton	18
4	Sergio Agüero	Manchester City	16
	Riyad Mahrez	Leicester City	16

Quantitative Data and Descriptive Statistics

- Frequency distribution shown in a table or bar chart
 - percentage of people in different income levels
 - percentage of people in different age ranges
 - percentage of people in different ranges of standardized test scores

<u>Category</u>	<u>Percent</u>
Under 35	9%
36-45	21
46-55	45
56-65	19
66+	6

Table 1. Frequency distribution table.

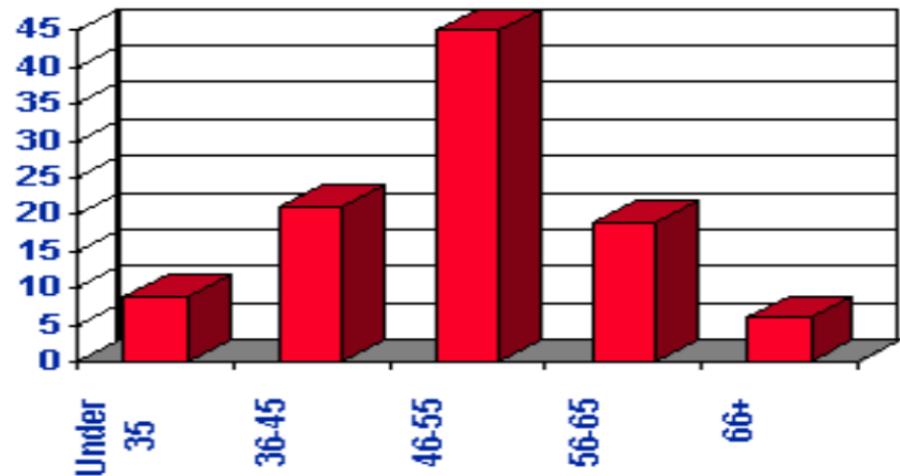
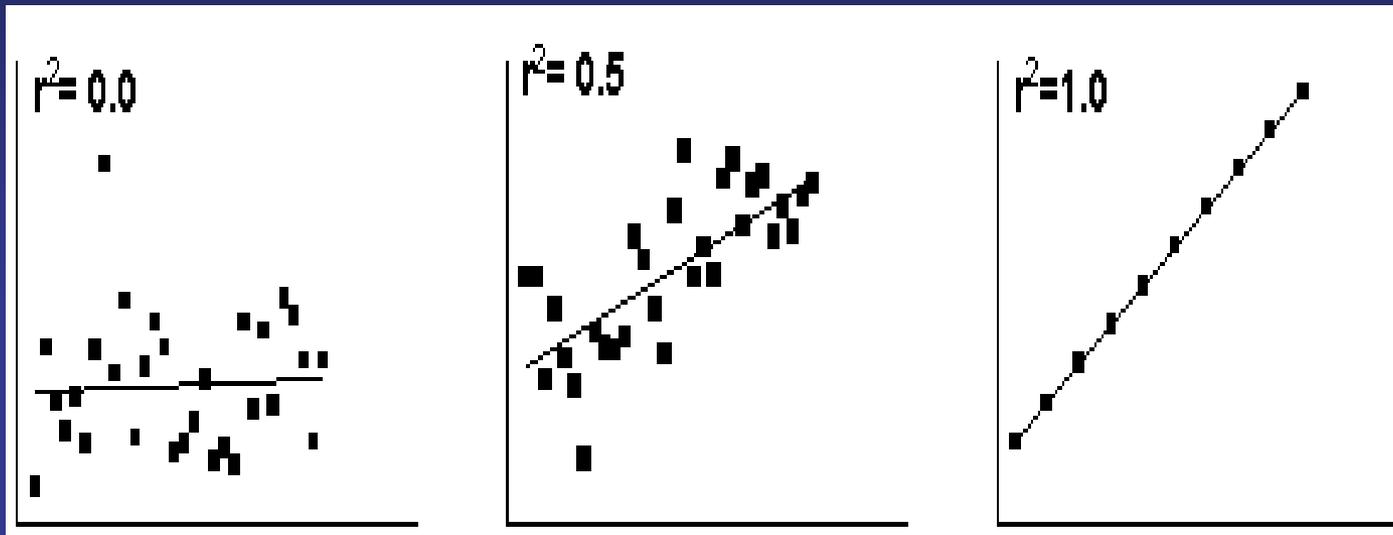


Table 2. Frequency distribution bar chart.

Quantitative Statistics to explore relationships

- Bi-variate statistics: identify the relationship between two variables
 - For example, linear regression analysis
 - R^2 provides a measure of goodness-of-fit of linear regression
- Note, just because there's a relationship, doesn't mean there's a causality – these need to be explored through open questions and indepth interviews
- Multi-variate statistics: For example, multiple regression analysis



Analysis: Qualitative data analysis

- Look at open-ended questions:
 - Identify interesting quotes and information that might help explain relationships
 - Q1: How do you think fish catch changed over the past five years?
 - Significantly increase
 - Increase a little
 - Stayed the same
 - Decrease a little
 - Significantly decrease
 - Q2: Why?
 - People come and take fish illegally
 - People in this village are using new fishing gears that catch more fish
 - Illegal fishers
 - Illegal fishing gears are being used
 - More people fish nowadays catching too many fish

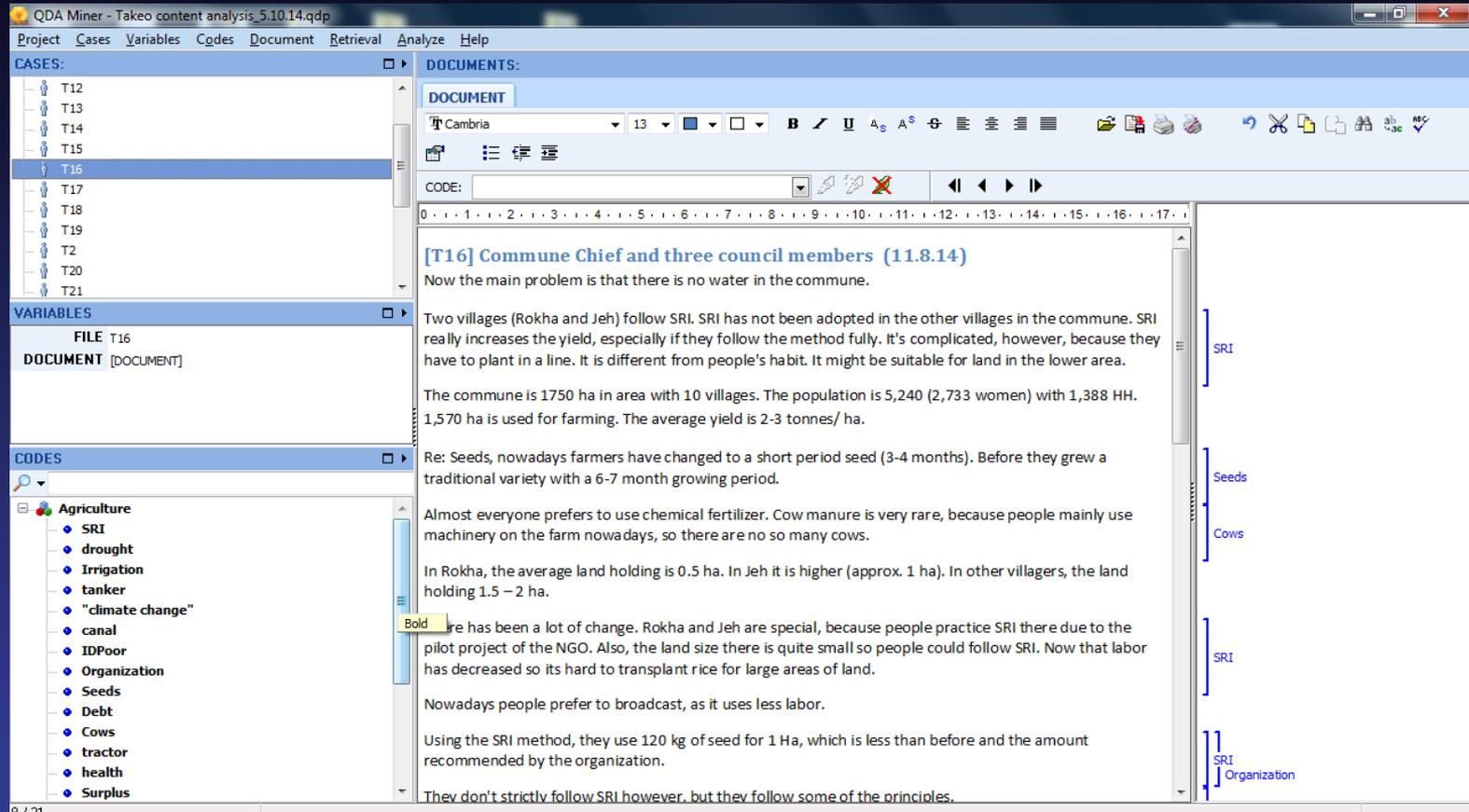
Analysis: Qualitative Data – Content Analysis

- Select an open-ended questionnaire question (e.g. Why do you think fisheries have declined?)
- Define categories and code your answers (e.g. over fishing; illegal fishing; climate change...)
- Calculate frequency of answers for each category
- Put data in a table or figure
- Summarize and interpret
 - What's interesting/ what does it mean in the context of your hypothesis?
 - Identify outliers

Data verification – Building an analysis from your data

- Supporting Evidence
- Source verification
- Triangulation
- Logical coherence
- Expert assessment

Transcribe and code open questions (depending on the length of responses)



QDA4 Miner Lite is a easy to learn, easy to use software for quickly coding your interviews... and it's free

- There are also proprietary programs, such as Nvivo.

Making sense of your findings:

DEDUCTIVE thinking (“top-down”): from abstract generalizations to specifics

- Reading academic sources and learning the theories and concepts that other scholars use to talk about... “poverty” “development” (etc.)

INDUCTIVE thinking (“bottom-up”): from specifics to abstractions

- Using details of your data – and the language and concepts of your informants – to generate new concepts. (also called “grounded theory”)