FORESTRY AND FOREST PRODUCTS RESEARCH INSTITUTE, JAPAN and FOREST RESEARCH INSTITUTE MALAYSIA



Training Workshop on REDD+ Research Project in Peninsular Malaysia 10 – 12 February 2015 Xcape Resort, Kuala Tahan, Pahang





Contents

Part I: Introduction	2
Aim of this manual	2
Part II: Undertaking socio-economic surveys Step 1 – Survey design, sampling and data requirements Step 2 – Planning and training the team Step 3 – Implementation	3 3 7 8
Part III: Using the data collected	11
Supporting Notes	
Note 1 – Sampling techniques	13
Note 2 – Format of questionnaire	14
Note 3 – Do & Don't in Conducting Socio-economic	
Interview	18
Note 4 – Conducting the survey	19
Note 5 – Guidance for community meetings	20
Note 6 - Example of questionnaire	22
Note 7 – Using SPSS software	40
Note 8 – Using R software	83



Part I:Introduction

Socio-economic survey tools are means designed to collect information on local resource management systems, resource use and the relative importance of resources for households and villages. Surveys also provide information on local interaction with the government decision-making systems and community perceptions of trends and priority issues regarding the conservation and establishment of protection forest. Knowledge about community-based institutions, which is also obtained, and their roles in the sustainable use and conservation of natural resources.

Aims of this manual

This manual aims to provide practical steps for researchers conducting socio-economic studies among households in communities and villages. The techniques involved are rapid rural appraisal, survey research and field research.

This manual is accompanied by three supporting notes which are essential tools as a basis for gathering socio-economic information. The results can be used as input to management and decision-making.

Part II: Undertaking socio-economic surveys

There are three (3) main steps in developing and **imp**lementing the socio-economic survey.

The first step is designing the survey, which includes survey design, sampling techniques and sample size, data requirement (types of data and data collection), target sample and questionnaire design. The next step is planning the survey. It involves scheduling the survey and training the enumerators. Enumerators must be trained to ensure that they fully understand and able to pose the questions to the respondents. The last step is implementation stage. This crucial stage involves key informant interviews, household surveys and focus group discussions.

Step 1:

•Designing the survey •Design •Sampling

- •Sample size
- •Baseline data

Step 2:

- Planning
- Scheduled survey
- Training enumerators

Step 3:

Implementation
 Rapid rural appraisal

 interview informant
 group discussion

 Households survey

Step 1 – Survey design, sampling and data requirements

When conducting a survey, the first step is to determine the objective and purpose of the survey. This will provide the framework for the content and scope of the survey work. It is used to help identify the types of stakeholders and communities to be surveyed.

Data requirements and survey design

Types of data: There are two types of data to be collected, namely primary data and secondary data. Primary data collection involved rapid rural appraisal, individual and group discussion, as well as household survey. Secondary data comprises information gathered from published media such as books, articles, journal, and reports.

Data to be collected: The data required from the study area may be discussed with informants and communities. The discussion helps in planning the actual survey, improving the questions asked, formulating questionnaire design, determining sampling techniques and conducting the survey.



The data gathered through the survey process will need to reflect the purpose of the study. In developing the survey, other considerations are budget available, the length of time for the interview, availability of human resources needed to effectively conduct the surveys, entering the data and analyzing the results.

Introduction of the project to local people: A researcher must create good rapport with relevant government agencies and local people during initial site visit.

The first step to meet related local government officers to explain the nature of the study.

This is followed by meeting village headmen, village representatives and villagers living in the surrounding area. In many cases, it will be necessary to contact the local community leaders before visiting. An introductory meeting may also be organized.

Researchers must briefly introduce and explain the aim of the visit and study. It is important to ensure that both local people and the researchers/study team understand which area will be studied. The aim of research/study must also be clearly introduced to avoid misunderstandings or raise false expectations. Cooperation and support from local people are essential to ensure successful implementation of the study. It is easier to achieve this support if the first impression is good. Nevertheless, it must be stressed that the fieldwork consists only in data collection and does not promise something such as local development project.





Who should be included in the survey(s)?

The individuals and communities to be surveyed should be decided when considering the objectives and purpose of the survey. Different individuals or groups of individuals will be interviewed depending on the data needed. For a householdlevel survey, a representative of the household should be interviewed, but the village head or traditional local leader will be interviewed in a key informant interview. Usually key informants involved are from Village Development and Security Committee or Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK). Focus group discussions will include members of the community.

Sample size and sampling technique

Sample size: Determining the size of sample is important to ensure the data reliability. The sample size needs to be sufficient to ensure that the survey results will be statistically relevant. However, in many cases, the sample size also has to be balanced with the available resources – financial, human and time.

The bigger sample size require more enumerators and high cost, however the correct techniques to estimate the sample size will give more reliable results. In general, Roscoe (1992) proposed rule for determining the sample size is "greater than 30 and less than 500" as sufficient for most research. Further guidelines specified by Calia and Strazzera (1998) in their studies of bias and efficiency evaluation model, he defines "small sample size" as a sample of 100 or less; sample sizes 250-400 as "moderate sample size", and more than 1000 as "large sample size". They concluded that even for moderate sample size, most of the evaluation model provides good performance and adequate for the estimation of the parameters to be measured. This socio-economic study applied formula from Yamano (1985) in **Supporting Note 1**.



Sampling technique: Random sampling is used to ensure that the sample is representative of the study area, while avoiding bias in the results and ensuring that all elements of the population have an equal chance of being interviewed. There are a number of approaches to determining a random sample, e.g. simple random sample, systematic, stratified and clusters.

Types of questions

For all interview types (household interviews, focus groups and key informants), questions can be structured and asked as open, closed or partially open questions. The type of question used will depend on the information required. There are advantages and disadvantages of all question types (**Supporting Note 2**).

Through an open question, such as 'Does the existence of national parks have an impact on your daily life; either positive or negative effects'? The interviewer can uncover the meaning behind an answer, allowing respondents to provide examples and explain their answers. These types of questions are more time-consuming to recode and analyze. Open questions can be difficult to ask and interpreting the responses could be complex, so training enumerators is essential.

A partially open question requires the respondent to elaborate on any answer given. The advantages of these questions are that they are quicker and easier to ask and to analyze than open questions, but the interviewer may miss some information because of the lack of an appropriate category or the level of detail in the response. To avoid these problems, the respondents' answers should be recorded in full, and the interview should repeat the question if the respondent has not answered sufficiently. Closed questions, such as multiple choices or yes/no answers are used when key information is required, without the need for further explanation or in-depth understanding of the answer or issue. These questions are quick to ask and to analyse; however, the answers may result in a lack of depth and clarity. The example of closed question 'Are you aware with the existence of national park at the adjecent of your village?'.

Step 2 – Planning and training the team

A well-trained and experienced team is essential for the success of any socioeconomic survey. Previous practical experience is a great asset to the team, with relevant technical knowledge in socioeconomics, forestry and natural resources. For purpose of this study, the research team appointed enumerators which have at least diploma certificate and preferably graduates. All members of the team will require rigorous and robust training in all types of survey (household, focus groups, and key informant interviews) to be conducted. They should have a thorough understanding of the aims of the work and the meaning of every question to be asked. A combination of workshop and practically field-based training will provide the best understanding of survey methods and procedures. During workshop, the objectives and research background are introduced to the enumerators. Basic information and knowledge about research is also explained in the workshop. This will enhance the communication skills and ability of enumerators to interview during data collection or survey. Other than that, some basic soft skill and techniques such as communication are also taught in the workshop. In addition, field training is very useful for checking the survey questions and means of data collection, thus providing an opportunity to make any necessary revision to the survey, interview questions and procedures. **(Supporting Note 3)**



Consideration should also be given to the division of tasks between team members – team leader and interviewers. Preparation (designing the survey work, training the team, etc.) and scheduling the survey work are essential for a successful survey **(Supporting Note 4)**. Preparation of the survey team and agreeing on the work plan and time frame for completing the surveys should be finalized in advance. Villages should be given due notification prior to survey work and permission to conduct interviews should be sought and granted.

Step 3 - Implementation

Survey approaches vary. Different approaches are used for different purposes. For the purpose of the socio-economic study, three survey methods are used:

- Rapid Rural Appraisal includes
 - -Community meeting
 - -Key informant interview
 - -Group discussion
- Household survey
- Field research

Rapid Rural Appraisal

The methods used include group discussion, community meetings, key informant interviews, mapping, ethno-histories, stories and taking-note. This RRA technique is a tool that enables a quick assessment of the existing environment and the possible impacts of the forest resource utilization and the other environmental services to the local socio-economic livelihood. Information collected during the RRA includes population size, socio-economic activities, household dependency on the forest resources and related issues faced by the community. This technique can be applied as a preliminary stage of the study, which will provide basic information, and ethno-histories of the study site for baseline in questionnaire design.

Community meeting

A community meeting is a valuable and useful way for the survey team to meet up with the villagers, explain the survey work – its aims and approach – and ensure that all members of the community understand the expected outcomes of the survey work **(Supporting Note 5)**. A decision to conduct a community meeting should be made only after meeting the community or village head. If possible, the village head could then help set up and conduct the community meeting. Information related to the community such as village profile could be obtained through District Office.





Key informant interviews

Key informants are individuals who are deemed to have knowledge of particular issues. Key informants will provide the interview team with detailed information and, importantly, interpretation of key issues that other members of the community might not be able to provide. Potential key informants should be selected, in consultation with the village head, 9 traditional local leader, for an in-depth interview with the survey team.

Group discussion

Group discussion involves selecting a small knowledgeable individuals from the community. In this study, the group discussion is conducted by researchers to explain the study and obtain comments or reactions of the respondents. The contribution of focus group is to design and assist questionnaire preparation. Focus group analysis is used to identify the issues to be raised in the questionnaire such as land use and forest dependency.

The draft questionnaire prepared could be tested in the focus group. Focus group thus helps to formulate the questions in simple language and easily understood.





Field research

Household survey

Village and household survey is used predominantly to collect quantitative and qualitative data, through structured interviews with the head of the household, using both closed and open questions. Survey forms for both household- and village-level surveys are designed to gather specific information, relevant to the survey objective, as discussed above.

Field research includes methods of research sometimes referred to as participant observation, direction observation and case studies. This technique provides qualitative data: observations not easily reduced to number. It enables better understanding on the socio-economic conditions and activities of villagers such as paddy farming, harvesting and marketing of forest resources. Case studies involved the narration of typical experience of villagers in relation to the utilisation of forest resources. The data gathered are used to cross-check information collected from the10 survey.

The questionnaire

In conducting this study, the formation of the questionnaire is the most important component. Formation of the questionnaire is based on the initial survey (Rapid Rural Appraisal) to the study area and also by the results of the initial questionnaire test in focus group. Formation of the questionnaire usually is categorized based on types of questions to gather basic information such as demographic background, perceptions and level of involvement. Example of questionnaire is attached in **Supporting Note 6**.

Part III: Using the data collected

Analysis and use of the collected data should reflect the objectives of the survey.

Data analysis

The choice of method for data analysis will depend on the volume of data collected, the expected use of the findings and the availability of the analysis software.

Analysis of the data is usually done in a statistical package such as SPSS (Statistical Package for the Social Sciences) software. SPSS is a widely used program for statistical analysis in social science. It is also used by market researchers. health researchers. survey companies. government, education researchers. marketing organizations, data miners and others. Using such packages also allows the data to be entered and cleaned before analysis. Data may be exported to other software packages such as Microsoft Excel for further analysis and for preparation of tables and graphs. Some of the analysis that could be used are Descriptive analysis; Regression; Correlation; Anova and etc. (Supporting Note 7)

11

R-software: The new well-known statistical software available free online is R. R is a language and environment for statistical computing and graphics. R provides a wide variety of statistical (linear and nonlinear modelling, classical statistical tests, time-series analysis, classification, and clustering) and graphical techniques, and is highly extensible. One of R's strengths is the ease with which well-designed publication-quality plots can be produced, including mathematical symbols and formulae where needed. **(Supporting Note 8)**



The final analysis will need to reflect the original aims and objectives of the survey. To help structure the analysis, research questions could be developed, such as:

- How important is access to forest resources for the livelihoods of communities?
- To what extent, the communities depend on forest resources for the economic activities?
- Are the poorest communities more dependent on forest resources than other groups?
- How does the establishment of protected area affect the livelihoods of communities?
- What are the dependent communities' perceptions of ecotourism at the protected area (National park)?
- What is the relationship between communities and natural resources?
- What is the distribution of socio-economic impacts at the area, and what are the sources of leakage?
- What benefits have been foregone to surrounding communities with the establishment of protected area (National Park)?
- What are the social implications, particularly for indigenous people & local communities, associated with the management system of protected area?
- What strategies could be used to strengthen the ecotourism-environment-12 community relationships at the area that was gazetted as protected area?

Note 1 – Sampling techniques

Determining a sample size

The appropriate sample size ultimately depends on the purpose of the study. For example, a population census will require 100% participation, and hence the sample size must equal 100%. Factors such as the available resources (time, budget, human) will affect the sample size but care should be taken not to jeopardize the statistical relevance of the sample.

Determination of sample size is important in determining the accuracy of the estimated value of the findings. A larger sample size implies more enumerators and involves high costs, but at the same time the sample size was chosen correctly, will give greater accuracy estimates.

Example of sample size determination by Yamano (1985) is as follows:

$$h = N
1+N (e)2
= 1136
1+1136 (0.05)2$$

= 400 respondents

Where,

n = Sample SizeN = Population Size (No. of households)e = level of precision

From the above example of sample size, taken at the level of precision of 5% or 0.05. The results showed that the sample size of 400 respondents is the reliable sample size.

Note 2 – Format of questionnaire

When designing a survey and conducting an interview, it is important to consider how a question can be structured, that is, whether it should be open or closed, or a mixture of both. The type of question and way that it is asked will affect the answer provided.

In general, questions can be either open or closed. The main difference between these two types of question is that open questions allow respondents to explain their answers, whereas closed questions do not. With closed questions, respondents do not have the freedom to give an answer other than those provided in the list of questions. Partially open questions can also be used when conducting socio-economic surveys.

A survey/questionnaire will use a range of question types to ensure that the information is obtained in the most appropriate manner.

Open questions

Open questions – example from socio-economic study in 2014

"Does the existence of national parks have an impact on your daily life?"

"In your opinion, is the conservation of forest/natural resources important?"

Open questions provide no options for possible prompts or answers and the respondent is able to answer completely freely. However, respondent answer might be long and enumerators must be well-trained to capture and get the points. Open-ended questions have both advantages and disadvantages (**Table 1**).

Table 1. Advantages and disadvantages of open questions

Advantages	Disadvantages
• The interviewer can elicit more	• The interviewer needs to have
information and possibly uncover	experience to build discussion of
new information that had not	particular topics and record the
been previously considered.	findings.
• The interview records can be used	• Data analysis requires expertise
in the report as interesting	and a lot of time.
illustrations.	
• The responses provide additional	
scope for analysis and allow a new	
interpretation of the conclusions.	

To mitigate the disadvantages of open questions, those conducting the survey or interview can:

- Train interviewers and provide direction for ongoing tasks to improve the quality of the data collected.
- Prepare a list of questions that allow interviewers to systematically explore the respondents' answers.
- Use open questions in training sessions with the team members.

Partially open questions

Partially open question – example from socio-economics study in 2014

"In your point of view, the existence of protection forest (National Park) is something good or vice versa" a) Good, because.....

b) Not good, because.....

In a partially open question, the answer is available as part of s category. Hence, the respondent is given a choice of responses: in the example above, the response is either 'increased' or 'decreased' (closed), "good" or "not good", and "yes" or "no" but the respondent is given the opportunity to explain his or her answer provided using 'because ...' (open). This type of question also has advantages and disadvantages, as set out in **Table 2**.

Advantages	Disadvantages		
 Easy answers and quick note-taking Easy analysis 	 Important answers could be missed if there is no appropriate category provided. Some information may be forced into existing categories and other information might be lost. If respondents hesitate and the interviewer helps with grid answers, the results are potentially biased. 		

Table 2. Advantages and disadvantages of partially open questions

To mitigate the disadvantages of partially open questions, those conducting the survey or interview can:

- Record all answers by taking notes or using a voice recorder.
- If respondents do not give an answer, repeat the question in a different way but without leading the respondent to an answer.

Closed questions

Closed questions –example from socio-economic study in 2014

View on the effects of Land	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Development Planning	(1)	(2)	(3)	(4)	(5)
toward:					
There is an increase of					
social problems in the local					
community					
Development project					
generates income					
households					
Development project helps					
participants / households					
out of the poverty situation					

With closed questions, respondents must choose one of the available answers, and no room is provided for further explanation or elaboration. Using closed questions is useful when time is short and very specific information is required. Usually in this type of question use Likert Scale as baseline for questionnaire.

Again, this type of question has advantages and disadvantages, as detailed in **Table 3**.

Table 3. Advantages and disadvantages of closed questions

Advantages	Disadvantages
 Answers can be quickly gathered, thus saving time. Comparison of respondents' and groups' answers over time is easy. 	• Further analysis of closed questions can be difficult because of the lack of supplementary questions for respondents to elaborate on the reasons for their answer.

To avoid the disadvantages of this type of question, the interviewer could ask further questions to explore respondents' answers in more depth.

Note 3 – Do & Don't in Conducting Socio-Economic Interviews

Do

- 1. Understand the projects background and objectives
- 2. Aware of questionnaire contents
- 3. Beware of languages
- 4. Proper attire or dress code (Formal, casual but most important neat, and clean)
- 5. Always SMILE
- 6. Use suitable, understandable and simpler words (layman terms)
- 7. When asking a question:
 - a. Speak when respondent ready
 - b. Control volume of voice
 - c. Greet sincerely
 - d. Introduce yourself, show name tag with organization logo
 - e. Explain the purpose of the survey
 - f. Explain the importance of study
 - g. Inform respondent that information given is confidential
 - h. Ask only related question
- 8. Use supporting tools such as Likert Scale Card, Pictures, etc.
- 9. Be a good listener
- 10. Ask for permission before taking photo
- 11. Give a door gift as token of appreciation
- 12. End interview session with THANK YOU

Don't

- 1. Don't ask question if the respondent is not ready
- 2. Don't ask respondent's full name, to avoid respondent feeling uncomfortable
- 3. Don't force if people do not want to be interviewed, especially in household survey
- 4. Don't take an advantage to look around respondent's house
- 5. Don't force respondent to get an answer, especially on income. Ask politely, instead.
- 6. Don't ask for hand phone number, if not necessary.

Note 4 – Conducting the survey

Before undertaking a survey, the following key steps should be followed. *Step 1: Preparation and scheduling of the survey work*

- Preparation and scheduling of the survey work is essential for a successful survey
- The work plan and time frame for completing the surveys should be agreed with the team in advance.
- The roles and responsibilities of each team member should be clearly defined.
- Data sheets and questionnaires must be prepared
- The team trained

Step 2: Ask permission and inform about the survey work

- Ask permission from the village head prior to carrying out any survey
- Ensure that the village has been informed and permission from the village head has been obtained sufficiently in advance of the survey
- If necessary, write letter to Local Authority (JAKOA, District Office, etc.), and Head of Villages

Step 3: Meeting with community

- If possible, a meeting with the community or at least the head of the village should take place at the start of the survey
- Introduce the survey team members
- Clearly and fully explain the survey, its purpose and how it will be conducted

Note 5 – Guidance for community meetings

Community meetings are vital to the success of surveys and it is important to engage communities/villagers. Building community engagement takes time and should not be forced or rushed. Socio-economic surveys and group discussions, if done correctly, can be a good way to begin building a relationship with the community. Often information collected during socioeconomic surveys is personal in nature and even confidential, and it should always be handled sensitively.

The guidance below will help to ensure that the community meeting gets off to the best possible start.

- 1. Set the village hall as the meeting place, and **schedule the meeting with village leaders**.
- 2. Start the meeting by:
 - Introducing all the team members
 - Explain the purpose and background of the study
 - The role of the organization undertaking the survey work
 - Ensure that the outputs of the survey work are clearly explained and expectations are realistic
 - Avoid making promises
- 3. Describe the activities and what will be achieved from this study.
 - What will be provided to the community?
 - How can the community participate?
 - How can the community assist and advise the team during the study?
- 4. Explain to the community
 - The importance of the study's schedule and activities
 - Check whether there are potential problems or conflicts with local activities. Determine an acceptable schedule for major activities.
- 5. Villages participation
 - Invite the villagers to introduce themselves or their village.

- Find out if villagers have time to participate in the survey as needed, and when they have time to do it.
- 6. Recognize key informant
 - Informal discussions may guide the survey team to recognize key informants, especially those who have knowledge related to the study.
- 7. Check whether any community members feel unhappy about the proposed activities. If so, explain any specific aspects that they find unacceptable. Be willing to accept specific bans and modify the approach accordingly.
- 8. Close the meeting. **Start planning survey activities based on the available options.**

Note 6 - Questionnaire



Institut Penyelidikan Perhutanan Malaysia (FRIM) 52109, Kepong, Selangor

Dan



Forestry and Forest Products Research Institute (FFPRI), Japan

KAJIAN KEPENTINGAN SOSIO-EKONOMI PENDUDUK TEMPATAN SEKITAR KAWASAN HUTAN SIMPAN DAN HUTAN PERLINDUNGAN TAMAN NEGARA, MELALUI KEPENGGUNAAN HUTAN SECARA LESTARI DAN KONSERVASI

Socio-economic Study of The Local that Live Near The Adjecent of Forest Reserve and National Park Protection Forest Through Sustainable Use of Forest and Conservation

Institut Penyelidikan Perhutanan Malaysia (FRIM) bersama Forestry and Forest Products Research Institute (FFPRI) Japan sedang menjalankan survei 'Kajian Kepentingan Sosio-Ekonomi Penduduk Tempatan Sekitar Perlindungan Taman Negara Melalui Kepenggunaan Hutan Secara Lestari dan Konservasi'. Survei ini adalah sebahagian daripada kajian 'Research on Development of Forest Carbon Monitoring Methodologies for REDD+ in Peninsular Malaysia'. Tujuan survei ini dijalankan adalah untuk mengumpul maklumat impak sosio-ekonomi penduduk tempatan terhadap kepenggunaan kawasan hutan perlindungan Taman Negara. Segala kerjasama di dahului dengan ucapan terima kasih. Segala kerjasama di dahului dengan ucapan terima kasih.

> Sebarang pertanyaan mengenai kajian ini, sila berhubung dengan Program Ekonomi & Analisa Strategik, Institut Penyelidikan Perhutanan Malaysia (FRIM), 52109 Kepong, Selangor, Malaysia. Tel: 03-62797547/62797000

RES -					
-------	--	--	--	--	--

1. No sampel/ <i>No of sample</i>	Penemuramah/Interviewer:
2. Nama Kampung/ <i>Name of village</i>	
a. Kg. K. Tahan	f. Kg. Gusai
b. Kg. Pagi	g. Kg. K. Koh
c. Kg. Bantal	h. Kg. Merapoh
d. Kg. K.Sat	i. Kg. Gol
e. Kg. Merting	
j. Lain-lain/ (others)	(nyatakan)/(please state)

Penggunaan sumber-sumber dan tanah hutan oleh ahli-ahli keluarga anda? A) The usage of natural resources and forest land by you and your family?

1)	Tanah untuk bercucuk tanam/ Agriculture	1 = Ya / Yes	2 = Tidak/ No
2)	Menangkap ikan/ Fishing	1 = Ya / Yes	2 = Tidak/ No
3)	Memburu binatang / Hunting animal	1 = Ya / Yes	2 = Tidak/ No
4)	Penghasilan pokok herba untuk perubatan	1 = Ya / Yes	2 = Tidak / No
	Medicinal plants/herbs for medicine		
5)	Penghasilan rotan/ <i>Rattan harvesting</i> 1 = Ya	/ Yes 2 = Tid	lak/ No
6)	Sumber air untuk pertanian/ Water for agriculture	1 = Ya/ Yes	2 = Tidak/ No
7)	Sumber bahan-bahan kraftangan/ Handcraft	1 = Ya/ Yes	2 = Tidak/ No
8)	Penghasilan buah-buahan hutan/ Wild fruits	1 = Ya / Yes	2 = Tidak / No
9)	Penghasilan buluh/ Bamboo harvesting	1 = Ya/ Yes	2 = Tidak/ No
10)	Penghasilan madu lebah/ Honey	1 = Ya / Yes	2 = Tidak / No
10)	Lain-Lain / Others		

Sebagai penduduk tempatan, adakah masalah-masalah yang berikut B) dihadapi oleh keluarga anda? As local people, do the following problems faced by your family?

1)	Masalah hasil hutan yg. Berkurangan/ Decrease in forest products	1 = Ya / Yes	2 = Tidak/ No
2)	Masalah kekurangan tanah bercucuk tanam Shortage of farming land	1 = Ya / Yes	2 = Tidak/ No
3)	Kekurangan tenaga pekerja/ Shortage of manpower	1 = Ya / Yes	2 = Tidak/ No
4)	Masalah penyakit tanaman/ Crop diseases	1 = Ya / Yes	2 = Tidak / No
5)	Hasil tanaman susah untuk dipasarkan	1 = Ya / Yes	2 = Tidak / No
	Crop difficult to be marketed		
6)	Masalah sistem pengairan untuk tanaman	1 = Ya / Yes	2 = Tidak/ No
	Problem in crop irrigation system		
7)	Larangan menjalankan aktiviti pemungutan		
	hasil hutan	1 = Ya / Yes	2 = Tidak/ No
	Prohibiton on collecting forest products		
8)	Lain-Lain / Others		

- C) Pandangan terhadap projek konservasi/pemuliharaan Hutan Perlindungan Taman Negara / Views on conservation projects/ Conservation of National Park Protection Forest
 - 1. Adakah saudara sedar akan kewujudan persekitaran taman negara bersempadanan penempatan saudara?/ *Are you aware with the existence of National Parks?*
 - a. Ya/ yes b. Tidak/ No
 - 2. Adakah kewujudan persekitaran taman negara memberi kesan ke atas kehidupan seharian saudara; samada kesan positif atau negatif? / *Does the existence of national parks have an impact on your daily life; either positive or negative effects?*

Kesan-Kesan Pembangunan/ Impact of development	Sila tanda bahagian yang sesuai/ Please tick the suitable part	Sila catatkan keterangan/ ulasan yang diberikan semasa temubual/ <i>Comments</i>
C21. Kesan-kesan positif/ <i>Positive</i> <i>impacts</i>	 a. Tambah pendapatan/ Increase income b. Tambah pekerjaan/ Employement c. Pembangunan tempatan/ Local development d. Tempat pelancongan/ Tourism e. Kemahiran berkomunikasi/ Communication skills f. Kemahiran berniaga & berurusniaga/ Business skill g. Meningkatkan kemahiran kaum wanita – menceburi industri kecil/ Women skill- Small industry h. Merperkenalkan kebudayaan setempat/ Cultural i. Lain-lain (nyatakan) / Others 	
C22. Kesan-kesan negative/ Negative impacts	 a. Gangguan masyarakat luar/ Disturbance from the outsider b. Kekurangan sumber pendapatan/ lack of income resources c. Kekurangan tanah untuk pertanian / land shortage for agricultural purposes d. Kekurangan ruang mencari hasil hutan / prohibition in collecting forest products e. Lain-lain (nyatakan)/ others: 	

2. Secara umumnya, apakah pandangan/perasaan saudara mengenai kewujudan persekitaran taman negara bersempadanan dengan penempatan saudara; adakah ianya sesuatu yang baik atau sebaliknya? *Generally, what is your views on the existence of a national park environment adjacent to your housing areas, is it a good thing or not?*

- 3. Apakah pandangan saudara mengenai pelancongan/pelancong; dan kemungkinan industri ini akan lebih berkembang pada masa hadapan khususnya dipersekitaran taman negara ini? *What is your opinion on travel / tourist; and the industry will be more likely to grow in the future, especially on the area nearby the park?*
- 5. Adakah aktiviti pemuliharaan sumber hutan/sumber semulajadi sesuatu yang penting bagi saudara? Nyatakan: *Does forest conservation / natural resources is crucial for you?Please state:*

6. Pada pandangan saudara, dengan berkembangnya industri/aktiviti pelancongan setempat; adakah ia akan memberi pulangan/keuntungan atau sebaliknya kepada diri saudara sendiri dan juga komuniti secara umum? In your point of view, is the development of industry / local tourist activities will provide a return / profit or otherwise, to your own self and the community in general?

Individu/ Individual

Positif/Positive	Negatif/Negative
Komuniti/ Community	
Positif/ Positive	Negatif/ Negative

7. Adakah pihak berkuasa taman negara melibatkan saudara atau komuniti setempat secara langsung dalam pembangunan taman negara diperingkat-peringkat tertentu (perancangan, pendidikan, maklumat/informasi & sebagainya?

Does the national park authorities involve you or local communities directly in park development on specific stages (planning, education, information / information & others?

D) Pandangan terhadap penggunaan kawasan Hutan Perlindungan Taman Negara dengan bijaksana mengikut keutamaan bagi setiap penggunaan seperti yang berikut:

Views on the usage of Protection Forest National Park according to priority as follows:

	Pilihan mengikut keutamaan/			
	Choice of	f priority		
1. Pemeliharaan (Dibiarkan secara semulajadi)/	1	2	3	4
<i>Conservation (Left naturally)</i>				
2. Pembangunan eko-pelancongan/ Development of	1	2	3	4
eco-tourism				
3. Pembalakan dan menanam semula dgn sistemetik/	1	2	3	4
Logging and replanting with systematic				
4. Dibuka semula utk pembangunan pertanian/	1	2	3	4
Reopened for agricultural development				

E) Kedudukan ahli-ahli isi rumah (iaitu ahli keluarga yang tinggal bersama) di kampung ini/ *The members of the households (ie family members living together) in the village.*

- 1. Jumlah ahli keluarga yang tinggal bersama/ *Number of family members living together* ______
- 2. Bilangan ahli keluarga yang bekerja/ *Number of family members working*
- 3. Bilangan ahli keluarga yang bergantung kepada ahli lain/ *Number of dependent family member to other members* ______
- 4. Bilangan ahli keluarga yang mengganggur/ *The number of jobless family members*
- 5. Bilangan ahli keluarga berhijrah/ *Number of family members migrated*
- 6. Bangsa (Sila nyatakan)/Race (please state) _____
- 7. Kawasan tanah pertanian dimiliki oleh keluarga/ *The area of agricultural land owned by the family* :
 - a. Luas tanah asal yang dimiliki / *Land area owned* ______ ekar/ *acres*
 - b. Jenis tanaman yang diusahakan (Mengikut keutamaan) / *Types of crops cultivated (by priority)*

1. Padi/Paddy	2. Getah /	Rubber	3. Dusun/0	Garden
4. Tnm. Kontan/ Cash (nyatakan)/Others (please state	crops	5. K. Sawit,	/ Oil palm	6. Lain-lain

8. Maklumat tanaman di atas:/ *Information on the crop above*:

Bil. <i>Bil</i>	Jenis tanaman <i>Type of crop</i>	Luas (ekar) Area (acre)	Umur tanaman sekarang Age of crop
1.	Padi / Paddy		
2.	Getah/ Rubber		
3.	Dusun/ Garden		
4.	Tanaman kontan/ Cash crops		
5.	Kelapa sawit/ <i>Oil palm</i>		
6.	Lain-lain (nyatakan)/ Others		
	(please state)		
	Jumlah luas/Total area		

F) Status pekerjaan ahli-ahli Isirumah yang bekerja Employment status of working household member

(F1)	(F2)	(F3)	(F4)	(F5)	(F6)	(F7)	(F8)
Ahli/	Umur	Jantina/	Pencapaian	Taraf	Pekerjaan	Status	Pekerjaan
Membe	/	Sex	Pendidikan	Perkahwina	Utama	Pekerjaan	Sekunder
r	Age		/	n	/Main job	/Employment	/Secondary
	_	1 = L/M	Education	/Status	1= Pencari hasil	status	employment
		2 = P/F	achievement		hutan/Seekers	1=Majikan/	(sambilan)
				1=Bujang/Sin	of forest	Employer	(part time)
			0=Tiada/Non	gle	2= Penanam	2=Pekerja/	
			е	2=Berkahwin	farmer	Employee	
			1=Sek.	/Married	3= Bertani	3=Kerja	
			Ren(Primary	3=Duda/jand	dusun/Garden	sdr/Freelance	
			2=Sek	a/Divorceu	farmer		
			Men(Secondar		4= Penoreh getah	4=Pekerja	
			y school)		/Rubber tapper	keluarga	
			3=Tkt 6(Form		5= Penanam sayur	tanpa upah	
			6)		/ Farmer	/ Employee	
			4=Kolej &		6– rekerja kontrak/Contract	family	
			U/Collegue &		workers	without	
			U)		7=	wages	
					Berniaga/Business		
					8.=		
					Kerajaan/Govern		
					ment		
					9= Swasta/Private		

			10= Pesara/Retired 11= Suri rumah/Housewife 12= Lain- lain/Others	
Beker				
ja/W				
orkin				
8				
1				
(Ketu				
a)(Le ader)				
2				
3				
4				
5				
6				
Tak				
Kerja				
, Joble				
SS				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				
101				
102				

PENGGUNAAN SUMBER-SUMBER EKOSISTEM HUTAN SIMPAN DAN KAWASAN SEKITAR & HUTAN PERLINDUNGAN TAMAN NEGARA, 2013 USE OF FOREST RESERVED ECOSYSTEM RESOURCES AND RESPECTIVE AREAS & FORESTS PRESERVED NATIONAL PARK, 2013

G) Penghasilan sumber bukan kayu (Non-timber Forest Products)

- 1. Jenis hasil / *Type of product* 1=rotan/*Rattan* 2=buluh/*Bamboo* 3=bahan kraftangan/*Crafts materials* 4= Keranji / *Black velvet* 5=petai / *Bitter beans* 6=ubatan/*Medicines* 7=madu/*Honey* 8= Lain- lain/*others*:
- Tahun berapa terlibat/ Year involved:_____ 2. Kekerapan masuk hutan (2013)/ Frequency enter forest: 4. _(trip/bulan)/(trip/month) _____(bulan/setahun) / (month/years) Jenis spesis yang diambil/ Type of species taken 5. 1. Rotan/ Rattan _ ____ _____ 4. Keranji/ Black velvet _____ 5. Petai / Bitter beans _____ _____ 6. Ubatan/ *Medicines* ______ _____ 7. Madu / honey ______ _____ _____ 8._____
- 6. Maklumat pungutan hasil untuk semua spesis/ Information on revenue of collection for all species

Bil/	Jenis spesies	Kekerapan	Jumlah hasil	Lokasi/	Jarak
Bil	dipungut/	dipungut	dipungut per trip	Location	(km)/
	Species collected	sebulan/	(nyatakan unit sama		Distance
		Frequency	ada dalam kg,		(km)
		collected in	bilangan, batang,		
		the month	dll)/		
			Total revenue collected		
			per trip		
			(indicate whether units		
			in kg, number, trunk,		
			etc.		
1.	Rotan/ Rattan				
2.	Buluh/Bamboo				
3.	Bahan				
	kraftangan/				
	Crafts materials				
4.	Keranji/ Black				

	velvet		
5.	Petai/ Bitter		
	beans		
6.	Pokok ubatan/		
	Medicine plants		
7.	Madu/Honey		

7. Nyatakan alatan yang dibawa/digunakan (kos tetap)/ *Specify tools brought/used (fixed costs)*

(a)	(b)	(c)	(d)
Jenis alatan/	Bilangan	Harga beli	Jangkahayat
Type of equipment	Unit	(RM)	(tahun)
		Price(RM)	Lifespan (years)
1			
2			
3			
4.			

- 8. Lain-lain kos terlibat (makanan, kos luar jangka): RM ______ Other related costs (food, contingency cost): RM ______
- 9. Jumlah pengambilan hasil/trip/bulan (unit)/ *Total revenue intake / trip / month (units)* 1. Rotan/ Rattan _____ 2. Buluh/ Bamboo _____ 3. Bhn. Kraftangan/ Crafts materials 4. Keranji/ Black velvet _____ 5. Petai/ Bitter beans _____ 6. Ubatan/ Medicine _____ ____ 7. Madu/Honey ______ 8. ____ 9._____ Jenis kenderaan yang digunakan :/ *Types of vehicles used* 10. Lokasi pengambilan hasil/ Location of sample taken 11. (a) (b) Tempat Jarak dr tempat (Htn. Simpan, Tnh. Kerajaan, tempat tinggal (km) T. Negara atau Hakmilik) Place (Conserved Forest, Government Land Distance from residence (km) Country Land or Preseved Land)

- 1. Rotan/ Rattan
- 2. Buluh/ Bamboo
- 3. Bhn. Kraftangan/ Crafts materials

6. Ubatan/ Medicine	5. Petai / Bitter	beans		
7. Madu/Honey	6. Ubatan/ Me	dicine		
8	7. Madu/Hone	у		
9	8	,		
Bilangan pekerja yang terlibat untuk satu-satu trip/ The number of employees involved for a trip 1. Ahli keluarga/ Family members orang/per 2. Bukan ahli keluarga/Non Family members orang/per 2. Bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip:RM / gerson Jika bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip:RM / person Jangkamasa kerja ketika pengambilan hasil (untuk setiap trip)/ / person Jangkamasa kerja ketika pengambilan hasil (untuk setiap trip)/ Duration of work during sample collecion (per trip) 1. Masuk hutan (jam) / In forest (hours)	9			
1. Ahli keluarga / Family members orang / per 2. Bukan ahli keluarga / Non Family members orang / per Jika bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip:RM / seorang Wages paid if not family members per trip : RM / person Jangkamasa kerja ketika pengambilan hasil (untuk setiap trip) / Duration of work during sample collecion (per trip) 1. Masuk hutan (jam) / In forest (hours)	Bilangan peker involved for a tra	ja yang terlibat untuk satu- ip	satu trip/ The num	ber of employees
2. Bukan ahli keluarga/Non Family members orang/ pe Jika bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip:RM / seorang Wages paid if not family members per trip : RM / person Jangkamasa kerja ketika pengambilan hasil (untuk setiap trip)/ Duration of work during sample collecion (per trip) 1. Masuk hutan (jam) / In forest (hours) 2. Keluar hutan (jam) Out forest (hours) 1=Ya/Yes 2=Tidak/ Adakah anda memproses sendiri hasil yang diambil: Do you process the result taken by yourself: Jika 'tidak' dimanakah ianya dijual dan purata harga jualan (ex-farm) If 'no' where is it sold and the average selling price (ex-farm) (a) (b) (c) (a) (b) (c) (d) Jenis NTFP Lokasi jualan dan jarak Harga jualan Cara (Nama syarikat) (RM)/unit jualan Type of NTFP Location of sale and distance Price Method of sale	1. Ahli keluarg	a/ Family members		orang/pers
Jika bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip:RM / seorang Wages paid if not family members per trip : RM / person Jangkamasa kerja ketika pengambilan hasil (untuk setiap trip)/ Duration of work during sample collecion (per trip) 1. Masuk hutan (jam) / In forest (hours) 2. Keluar hutan (jam) Out forest (hours) 1=Ya/Yes 2=Tidak/ Adakah anda memproses sendiri hasil yang diambil: Do you process the result taken by yourself: Jika 'tidak' dimanakah ianya dijual dan purata harga jualan (ex-farm) If 'no' where is it sold and the average selling price (ex-farm) (a) (b) (c) (d) Jenis NTFP Lokasi jualan dan jarak Harga jualan Cara (Nama syarikat) (RM)/unit jualan Type of NTFP Location of sale and distance Price Method of sale (Name of company) (RM)/Unit	2. Bukan ahli k	eluarga/Non Family member	<i>'S</i>	orang/ pers
Jangkamasa Kerja Kerika pengambhan hash (untuk sedap trip)/ Duration of work during sample collecion (per trip) 1. Masuk hutan (jam) / In forest (hours) 2. Keluar hutan (jam) Out forest (hours) 1=Ya/Yes 2=Tidak/ Adakah anda memproses sendiri hasil yang diambil: Do you process the result taken by yourself: Jika 'tidak' dimanakah ianya dijual dan purata harga jualan (ex-farm) If 'no' where is it sold and the average selling price (ex-farm) (a) (b) (c) (d) Jenis NTFP Lokasi jualan dan jarak Harga jualan Cara (Nama syarikat) (RM)/unit jualan Type of NTFP Location of sale and distance Price Method of sale	trip:RM Wages paid if n	/ seorang ot family members per trip : R. ria kotika pongambilan bagi	M	/ person
Duration of work during sample collection (per trip)1. Masuk hutan (jam) / In forest (hours)	Jangkamasa ke	rja ketika pengambilan hasi	ll (untuk setiap trip	<i>)</i> //
1. Masuk nutan (jam) / In forest (nours) 2. Keluar hutan (jam) Out forest (hours) 1=Ya/Yes 2=Tidak/ Adakah anda memproses sendiri hasil yang diambil: Do you process the result taken by yourself: Jika 'tidak' dimanakah ianya dijual dan purata harga jualan (ex-farm) If 'no' where is it sold and the average selling price (ex-farm) (a) (b) (c) (d) Jenis NTFP Lokasi jualan dan jarak Harga jualan Cara (Nama syarikat) (RM)/unit jualan Type of NTFP Location of sale and distance Price Method of sale	Duration of wor	K auring sample collecton (per	r trip)	
2. Keidal fidtal (jail) Out forest (nours) 1=Ya/Yes 2=Tidak/ Adakah anda memproses sendiri hasil yang diambil:	1. Masuk nutar	(jam) / In forest (hours)		_
Adakah anda memproses sendiri hasil yang diambil:	2. Keluai Ilulai	(Jani) Our jorest (nours)	1=V_2	- /Vec 2=Tidak/N
Jika 'tidak' dimanakah ianya dijual dan purata harga jualan (ex-farm)If 'no' where is it sold and the average selling price (ex-farm)(a)(b)(c)(d)Jenis NTFPLokasi jualan dan jarakHarga jualanCara(Nama syarikat)(RM)/unitType of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit	Adakah anda r Do you process i	nemproses sendiri hasil yar the result taken by yourself:	ng diambil:	
If 'no' where is it sold and the average selling price (ex-farm)(a)(b)(c)(d)Jenis NTFPLokasi jualan dan jarakHarga jualanCara(Nama syarikat)(RM)/ unitjualanType of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit(RM)/Unit	Jika 'tidak' din	anakah ianya dijual dan pu	ırata harga jualan (ex-farm)
(a)(b)(c)(d)Jenis NTFPLokasi jualan dan jarakHarga jualanCara(Nama syarikat)(RM)/unitjualanType of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit(RM)/Unit	If 'no' where is	it sold and the average selli	ng price (ex-farm)	
Jenis NTFPLokasi jualan dan jarakHarga jualanCara(Nama syarikat)(RM)/unitjualanType of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit(RM)/UnitImage: Cara	(a)	(b)	(c)	(d)
(Nama syarikat)(RM)/unitjualanType of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit(RM)/UnitMethod of sale	Jenis NTFP	Lokasi jualan dan jarak	Harga jualan	Cara
Type of NTFPLocation of sale and distancePriceMethod of sale(Name of company)(RM)/Unit		(Nama syarikat)	(RM)/unit	jualan
(Name of company) (RM)/Unit	Type of NTFP	Location of sale and distant	ce Price	Method of sale
		(Name of company)	(RM)/Unit	

17. Jika dihantar sendiri, nyatakan jenis kenderaan yang digunakan dan jumlah pekerja yang terlibat (16d):/ *If delivered by hand, specify type of vehicle used and no. of worker involved:*

a. Jenis kenderaan/ *Type of Vehicle*: _____b. ____b. _____b.

18. Jika ianya diproses sendiri, apakah nama produk yang dikeluarkan:/*If it is processed itself, named the products*

(a)	(b)	(c)
Nama produk/	Lokasi jualan/ Location	Harga jualan/ Price
Name of Products	(Pasar malam, pasar tanı,)	(RM/unit)
l		
<u>2</u>		
3		
4		
(d)	(e)	(f)
Kekerapan menjual	Jumlah pengeluaran	Jumlah jualan/bulan
hari/minggu	unit/bulan	(unit)
Selling Frequency	Total production	Total sales/ month
(α)		
(g) Kos nombustan/ <i>Manu</i>	facturing cost	
(DM/unit)	Jaciuring cosi	
(KIVI/UIIII)		
Penglibatan pendudu	k dalam aktiviti eko-pelancong	an
Local involvement in ec	otourism activities	
Adakah saudara atau a	ahli keluarga terlibat dalam akti	viti pelancongan
Do you or a family meml	ber are involved in tourism activitie	S
a) Restoran	b) Chalet c)]	Homestav
d) Kedai runcit/Grocer	ry e)Pemandu bot/ Boatman	1
f) Pemandu pelancong	f tourouide	•
g) Lain-lain (nyatakan)) Others	
g) Lant-lant (nyatakan)	Journal	
Adakah terdapat perh	ezaan dari segi pendapatan isiru	mah nada tahun 80
an horbanding solverer	of Is there a difference in terms of	household income in the
than it is now	ig 15 intere a difference in terms of	nousenoiu income in the
al nendanatan menin	okat Income increase %	
ar. perioapatan mening	g_{α}	
az. penuapatan menur	fun, income uecrease %	
a3. pendapatan tidak t	berubah, no changes	
	1 111 1 1 1	1 1.
Adakah berhasrat mer	ceburi bidang yang bersangkuta	an dengan sektor
sokongan kepada sekt	or pelancongan (spt: berniaga ke	ecilan, mengusahakan
homestay, pemandu p	elancong & pembekal)/ Do inter	id to venture into the field

H)

1.

2.

3.

related to the support for the tourism sector (eg: business scale, doing homestays, guides & suppliers)a) Ya/ Yesb) Tidak/ No

- Faktor penghalang (jika berkaitan)/ *Restraining factors* a1. masalah modal/ *capital problems* a2. masalah peluang/ *Chances* a3. Lain-lain (nyatakan)Others ______
- 5. Komen dan cadangan: Kaedah untuk membantu meningkatkan sosio-ekonomi penduduk melalui pembangunan eko-pelancongan sekitar Taman Negara. *Comments and suggestions: Methods to help improve the socio-economic population through the development of eco-tourism around National Park.*

I) Pengusaha Tanaman Kontan/ Cash crop/agriculture/ Farming

- 1. Tahun mulai menjadi peladang / Since when become farmer= 19___
- 2. Jenis Tanaman/ type of crops 1= Lada/ Chili 2=Jagung/corn 3=Terong / eggplants 4= Lain-lain/others:_____
- 3. Purata keluaran sehari / Average products per day (kg)=_
- 4. Purata harga keluaran sehari/*Av. product price per day* (RM) 1Kg =_____
- 5. Purata hari kerja sebulan/ *Average working days per month* =_____
- 6. Kos tetap/ *Fixed cost*
 - a1. (Water pump) Harga dibeli(Price) RM____
 - a2.Jangka umur/life span___tahun/Year
 - b1. (Power spray) Harga dibeli(Price) RM____
 - b2.Jangka umur/life span___tahun/Year
 - c1. (Pam galas) Harga dibeli(Price) RM____
 - c2.Jangka umur/life span___tahun/Year
 - d1. (Kayu 'penyokong)Harga dibeli(Price) RM____
 - d2.Jangka umur/life span___tahun/Year
 - e1. (Lain -lain) Harga dibeli(Price) RM____
 - e2.Jangka umur/life span____tahun/Year
- 7. Kos semasa / Current cost
 - a. (Upah membajak) Belanja/musimRM_____ (Plowing)
 - b. (Petrol) Belanja sehari RM_____ (Petrol)
 - b. (Upah pekerja) Belanja sehari RM_____ (workers wages)
 - c. (Racun) Belanja sebulan RM_____ (pesticides)
 - d. (Benih) RM_____(Seeds)
 - e. (Lain-lain) RM____ (Others)

J) Pesawah Padi / Paddy farmer

1.	Jenis pesawah/ <i>Type of farmer</i> 1a=Tanah sendiri/ <i>Own land</i> 1b=Tanah sewa/pajakan/ <i>Rented land</i>					
2	Luss kawasan dikoriakan / Total area of land = okar / acro					
2.	Borana tahun sudah horsawah / Horn manu yars inzulza = tahun					
J. 4	Subsidi ditarima 2012 / Subsidias recreized=					
4. E	Subsidi diterinia 2013/ Subsidies recreibed—					
5.	Keluaran musim 2013/ Production per seuson– kg/ tan					
6.	Kos operasi satu musim/ Operation cost per season					
	a. Sewa/Pajak / rent or lease per season RM					
	b. Upah membajak/ plower wages (mesin-3 kali) RM					
	c. Beli benih/seeds/ bag xbag RM					
	d. Beli racun rumput/herbacideRM/liter x liter RM					
	e. Beli racun serangga/ <i>pesticides</i> RM					
	f. Beli baja (tambahan)/ fertilizer RM					
	g. Upah menuai/ harvester wages per day RM					
	h. Lain-lain/ Others RM					
7.	Anggaran pendapatan/ Estimated income					
	a. Harga jualan / <i>Sales price</i> RM/tan					
K)	Penoreh getah/ Rubber tapper					
1.	Jenis pesawah/Type of farmer					
1a=Tai	nah sendiri/ Own land1b=Tanah sewa/pajakan/ Rented land					
2.	Luas kawasan dikerjakan/ Total area of land =ekar/ acre					
3.	Berapa tahun sudah bersawah/ How many years involve =tahun					
4.	Subsidi diterima 2013/ Subsidies recreived=					
5.	Keluaran musim 2013/ Production per season= kg/tan					
6.	Kos operasi satu musim/ Operation cost per season					
	a. Sewa/Pajak / rent or lease per season RM					
	b. Upah membajak/ plower wages (mesin-3 kali) RM					
	c. Beli benih/seeds/bag xbag RM					
	d. Beli racun rumput/herbacideRM/liter x liter RM					
	e. Beli racun serangga/pesticides RM					
	t. Beli baja (tambahan)/ tertilizer RM					
	g. Upah menuai/ harvester wages per day RM					
	h. Lain-lain/ Others RM					
7						

Harga jualan / Sales price RM____/tan

L) Pengusaha Ladang Kelapa Sawit

- 1. Luas kawasan dikerjakan/ *Total area of land* = _____ekar/ *acre*
- 2. Berapa tahun sudah bersawah/ *How many years involve* =____tahun/*Years*
- 3. Hasil keluaran2013 / *Production* 2013=_____tan/bulan
- 4. Hasil diterima 2013/ revenue 2013 =RM____/tan
- 6. a. Kos penanaman (penyediaan tanah & anak pokok) = RM_____ Cultivation cost (Land preparations and seedling)
 - b. Tahun ditanam/ *planted year*
- 7. Kos operasi purata 2013/ Operation cost 2013
 - Merumput/*weeding* RM_____ a. Beli racun/ pesticides b. RM_____ c. Meracun/ cost positioning RM Beli baja/ fertilizer d. RM Membaja/ cost fertilizing RM e. Memetik buah / Picking fruit f. RM Mengangkut hasil/ Transportation of fruit RM g. Lain-lain/ others h. RM Subsidi diterima 2013/ subsidies received 2013 = RM_

M) Pengusaha dusun/ Orchard

8.

- (i) Dalam kawasan hutan simpan/ Forest reserve land
- (ii) Luar kawasan hutan simpan/ Outside forest reserve
- 1. Jenis spesis tanaman & harga jual (RM/kg)- *Type of species and sales price*

		RM	kg ,	RM	kg
		RM	kg ,	RM	kg
		RM	kg,	RM	kg
		RM	kg,	RM	kg
		RM	kg,	RM	kg
2.	Kos operas	si satu musim/ Operation	cost per season		
	a. Ba	yaran permit/ <i>permit fee</i>		RM/	musim
	b. Al	atan kerja/ Tools		RM	
	c. Be	li racun rumput / Herbed	cides RM/liter x	liter RM	
	d. Beli racun serangga/ Pesticides			RM	
	e. Beli baja (tambahan)/ Fertilizer			RM	
	g. La	in-lain/ Others		RM	
3.	Anggaran	pendapatan/ Estimated	income		

- a. Harga jualan RM _____/kg (*Price sales*)
- b. Anggaran hasil_____/kg semusim (*Estimated Product per season*)
| Λ | Ionic kondoraan | yang digunakan | time of richicle . |
|----|-----------------|----------------|------------------------|
| 4. | Jerns Kenueraan | yang ugunakan/ | <i>iype of venicle</i> |

- 5. Lokasi pengambilan hasil/ Location
 - *a)* Tempat (nyatakan):______ (*Specify name of place*)
 - b) Jarak dari tempat tinggal _____ km (*Distance from home*)
- 6. Pekerja yang terlibat untuk satu-satu trip/ No. Of workers per trips _____orang/person a. Ahli keluarga/family members b. Bukan ahli keluarga/non-family members______orang/person
- 7. Jika bukan ahli keluarga berapakah upah yang dibayar untuk satu-satu trip: If non-family members, how much is their wages per trip RM _____ / seorang/person

N) Nelayan Tasik/Sungai

- 1. Jenis spesis tangkapan & harga jual (RM/kg) /Species of catches and Price if sell ______ RM _____ kg , _____ RM _____ kg ______ RM _____ kg , _____ RM _____ kg _____ RM _____ kg , _____ RM ____ kg ______ RM _____ kg , ______ RM _____ kg ______ RM _____ kg , _____ RM _____ kg ______RM _____ kg , ______RM _____ kg _____ RM _____ kg , _____ RM _____ kg 2. Jenis alat tangkapan yang digunakan/ *Type of tools used*

a) Selambau b). Pukat, jenis (nyatakan)_____ d). Pancing c.) Jala e) Lain-lain _____ (nyatakan)

3. Kos alatan / Cost of tools

a.	Selambau termasuk rumah	/ pondok (selambau include floating hunt)
	a1. harga bina RM	a2. jangka umur thn
	(Building cost)	(Lifespan)
b.	Pukat/ <i>trawl</i> b1. harga beli	(Price) RM

b2. Jangka umur (*Lifespan*)_____ bulan @ tahun c1. harga beli (*Price*)RM _____ Jala/*net* c. c2. jangka umur (*Lifespan*) ______ bulan @ tahun

		d. Pancin (Fishing ro	ng od)	d1. harga beli(<i>price</i>) RM d2. jangka umur(<i>Lifespan</i>)	bulan @ tahun
	4.	Jumlah peng (Number of ca	ambila atches)	n hasil kg/tri	p/bulan
	5. 6.	Jenis kender (<i>Mode of tran</i> Lokasi penga a. Tempat (<i>Location</i> (aan ya sportati ambila Htn. Si PRF/St	ng digunakan : ion) n hasil (Fishing location) mpan, Tnh. Kerajaan atau Hakmi ateland/Alienated land)	 lik):
		b. Jarak dar (Distance	i tempa from ho	at tinggal km buse)	L
	7. E	Bilangan peke 1. Ahli kelua 2. Bukan ahl	rja yan Irga (Fa i kelua	g terlibat untuk satu trip (Number mily) rga (Non-family)	of workers per trip) orang orang
8.	Jik (If	a bukan ahli l <i>non-family, ho</i> RM	keluarg w much	ga berapakah upah yang dibayar u 1 the wages per trip) / seorang (person)	ıntuk satu-satu trip:
9.	Jar (Fi	ngkamasa ker <i>shing duration</i> 1. Keluar me 2. Balik (<i>Tim</i>	ja ketik 1 <i>per trij</i> 2 nangka 2 end) (ta pengambilan hasil (untuk setiaj v) ap ikan (<i>Time start)</i> (jam) jam)	o trip)
O))	SUMBER- SEMUA A AHLI-AHI (Average h	SUMI HLI LI YA ouseh	BER PENDAPATAN PUR ISIRUMAH (IAITU SEMU) NG TINGGAL BERSAMA S old monthly income sources	ATA BULANAN A PENDAPATAN SAHAJA).)
		Pendapatan (Cash incom	Tunai e)	Purata Pendapat (Average monthly	an Sebulan Bagi 2013 1 income for 2013)
1.		Makan gaji (Received Salary)	(a) (b) (c) (d) (e) (f)	Kerja resort (<i>Resort</i>) RM Pekerja kilang lain (<i>Factory</i>)RM Kakitangan kerajaan (<i>Gov</i>)RM Kakitangan swasta (<i>Private</i>)RM_ Pekerja kontrak (<i>Contract</i>) RM Lain-lain (<i>Others</i>) RM	_Sebulan/month Sebulan Sebulan Sebulan Sebulan
2.		Hasil jualan/ kerja sendiri	/ (a) (b)	Mencari hasil hutan (forest resour Jualan hasil kraftangan (handcraf	<i>ces)</i> RMSebulan t)RMSebulan

Bussines

- *les* (c) Pengusaha chalet (*Chalet operator*) RM _____sebulan
 - (d) Pengusaha homestay (homestay operator RM___sebulan
 - (e) Pemandu bot(Boatman) RM _____sebulan
 - (f) Pemandu pelancong (tourguide)RM_____sebulan
 - (g) Kedai runcit/makan(grocery/restaurant)RM___sebulan
 - (h) Berniaga (bussines) RM_____sebulan
 - (i) Lain-lain (others) RM_____Sebulan
- 3. Hasil Pertanian (setelah tolak kos)

Agriculture (a) Penanam tanaman kontan (*cashcrop*)RM____Sebulan

- (b) Tanaman padi (*paddy*)RM_____Sebulan
- (c) Penoreh getah (*rubber tapper*)RM_____Sebulan
- (d) Pengusaha kelapa sawit (*oilpalm*)RM_____Sebulan
- (e) Hasil dusun(orchard) RM_____Sebulan
- (f) Menghasil ikan (fisherman)RM_____Sebulan
- (g) Hasil ternakan(*cattles*)RM_____Sebulan
- (h) Lain-lain(others) RM_____Sebulan
- 4. Kiriman wang oleh ahli keluarga yang bekerja di tempat lain. (*Remittances from family members*) RM_____Sebulan/*Month*
- Lain-lain pendapatan (berniaga, bonus, sewa, faedah dan lain-lain) (Others income sources (bussiness, bonus, rent, interest, etc.) RM_____Sebulan/Month

Pendapatan Bukan Tunai. (Inkind income)

- 6. Makanan ikan / udang / ketam yang dihasilkanRM ______ *Food catches (fish, shrimp, crab)*(Nilai wang jika beli di pasar tolak kos) / *Price if we sale, deducted cost*
- 7. Makanan dari hasil tanaman / ternakan RM ______
 (*Food from rearing/ own farm*)
 (Nilai wang jika beli di pasar tolak kos) / *Price if we sale, deducted cost*
- 8. Tinggal di rumah sendiri (*Live own house*) RM ______ (Nilai bulanan jika di sewa)/*Value if rented*
- Guna air bukit/perigi (*well/hill water supply*) RM _____
 (Nilai wang jika guna saluran paip kerajaan)/price if piped
 (2-4 orang =RM10, 5-8=RM15, >8=RM20)

10. Lain-lain(*others*)

P) Pemilikan Harta Isirumah (household property ownership)

- (1) Kereta/Car
- (2) Motorsikal/*Motocycle*
- (3) Radio
- (4) T.V
- (5) Video
- (6) Astro
- (7) Peti sejuk/*Referigerator*
- (8) Mesin basuh/ washing machine
- (9) Telefon/*telephone*
- (10) Telefon bimbit/ *handphone*
- (11) Kipas eletrik/electric fan
- (12) Bot/boat

- 1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No 1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No
- 1 = Ada/Yes 0 = Tiada/No1 = Ada/Yes 0 = Tiada/No

39 | P a g e

Note 7 – Using SPSS software 1.0 GETTING STARTED WITH SPSS

The SPSS package is a powerful and user-friendly statistical analysis tool. It provides a simple point and click or drag interface for statistical analysis. It has a DATA EDITOR, which is a spreadsheet that allows you to enter data easily. Statistical analysis results are displayed in the OUTPUT window and tables and charts can be copied and paste easily into other programs such as Word or Power-point for documents and presentations.

To start SPSS, left click on the **Star**t button (at the lower left corner), select **Programs**, **SPSS for Windows** and **SPSS 18.0 for Windows**.

The SPSS windows dialogue appears and provides a list of tasks that you can do.By default, the task is set as "Opening an existing data source".



Click on the **OK** button and the Open Data dialogue box appears and provides a list of available SPSS data sets in the SPSS folder.

Select required data example the "TRAINING " from the list of SPSS files and click on the **Open** button. If the data is save in SPSS format, it will appear extension ".sav".

Untitled2 [DataSet2] - PA	SW Statistics [Data Editor														
<u>File</u> dit	e Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help																
		I . r				. 👬	2	s 🛛	 		ABG						
																Visible: 0	of 0 Variable
	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var
1																	4
2	1			_)						X)				
3	1				Open D	/ata							-				
4					Look in:	퉬 DATA		T	🛍 🔯 🗄	Ξ			-				
6]				TRAI	NING.sav											
7																	
8	İ				1												
9]																
10																	
11																	
12													·				
13					File nam	e: TRAINI	NG.sav					<u>O</u> pen	-				
14					Files of ty	pe: PASW	Statistics (*.sa	av)			~	Paste					
16						imine attine u	uddha haaad a	n channed up	luce			Cancel					
17	j					imize string v	nduns based o	in observed va	liues			Help					
18							Retrieve	File From Rep	ository								
19													J				
20					_								-				
21																	
22]																
	1																•
Data Mirror	Variable View								33. 								
Data View	variable view																

The **DATA EDITOR** and the **OUTPUT** windows will appear. Select the **DATA**

EDITOR window.

	i.sav [DataSet3] - PA	SW Statistics Data	Editor																0 X
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata <u>T</u> r	ansform <u>A</u> nalyz	e Direct <u>M</u> arket	ing <u>G</u> raphs	<u>U</u> tilities Ad	d- <u>o</u> ns	Window	Help											
2			i		* 5	2	4				A								
1 : Penemur	amah Neen:	3															Visible	405 of 4	05 Variable
	Penemuramah	Sampel	Kampung	A1	A2	A3		A4	A5	T	A6	A7	A8		A9	A10	A11		B1
1	Neena	1	10	2	2		2	2		2	2		2	2	2		2 0		2 1
2	Neena	2	10	2	2		2	2		2	2		2	2	2		2 0		2
3	Neena	3	10	2	2		1	Dutput1 [Do	cument1] -	PASV	V Statistics View	ver							J X
4	Neena	4	10	2	2		File	<u>E</u> dit <u>V</u> ie	w <u>D</u> ata	Tran	isform <u>I</u> nsert	Format	Analyze Dir	ect <u>M</u> arke	eting <u>G</u> rap	hs <u>U</u> tilities	Add- <u>o</u> ns	Window	v <u>H</u> elp
5	Saufi	5	10	1	2				<u> </u>				- E		5 J -			Æ.	
6	Saufi	6	10	1	2					5	<u> </u>		1 📕 🛃			- 1		-	
7	Saufi	7	10	1	2				1.0	-			= 🚮 🔒						
8	Saufi	8	10	1	1				-	_				-					
9	MA	9	10	2	2		•	Cutput			GET								
10	MA	10	10	2	2			Log			F	ILE='H:	\2014\FFPR	I\Comb	oineAllTr	y.sav'.			
11	MA	11	10	2	1						DAT	ASET NA	ME DataSet	1 WIND	OW=FRONT				
12	MA	12	10	2	2														
13	Maziela	13	10	1	2						SAV	E OUTFI	LE='H:\201	4\FFPR	RI\TRAINI	NG.sav'			
14	Maziela	14	10	1	2						/	COMPRES	SED.						
15	Maziela	15	10	2	1						NEW	FILE.	WE D	0 147110					
16	Suzila	16	10	1	1						DAL	ASEI NA	ME Dalabet TIVATE Dat	2 WIND aSat2	JOW-FROMI	•			
17	Suzila	17	10	1	2						DAT	ASET CL	OSE DataSe	t1.					
18	Suzila	18	10	1	2						GET								
19	Suzila	19	10	1	2						F	ILE='H:	\2015\FFPR	I\WORK	(SHOP\thi	ngs\DATA	TRAINING	.sav'.	.
20	Suzila	20	10	1	1						DAT	ASET NA	ME DataSet	3 WIND	OW=FRONT				
21	Suzila	21	10	1	1														
22	Ridzuan	1	6	0	1														
23	Ridzuan	2	6	1	1														
Data View	Variable View														PAS	W Statistics	Processori	ready	
							-												

At the top right corner of the DATA EDITOR window, there are three buttons for the following tasks:

Minimize	Left button with a dash (-)
Maximize	Middle button with a square (\Box)
Close	Right button with a cross (x)

Maximize the data window by clicking on the middle button with a square.



You can now get a full view of the data in the Employee data file.

SPSS data files are saved with the extension ".sav'

TRAINING.sav [DataSet3] - PASW Statistics Data Editor														- 0 - X	
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata <u>T</u> r	ansform <u>A</u> naly	ze Direct <u>M</u> arke	eting <u>G</u> raphs	Utilities Add	d- <u>o</u> ns <u>W</u> indow	Help								
🔁 E															
1 : Penemura	amah Neen:	a												Visible: 405	of 405 Variables
	Penemuramah	Sampel	Kampung	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	B1
1	Neena	1	10	2	2	2	2	2	2	2	2	2	2 0		2 📥
2	Neena	2	10	2	2	2	2	2	2	2	2	2	2 0		2
3	Neena	3	10	2	2	2	2	2	2	2	2	2	2 0		2
4	Neena	4	10	2	2	2	2	2	2	2	2	2	2 0		1
5	Saufi	5	10	1	2	2	2	2	2	2	2	2	2 0		2
6	Saufi	6	10	1	2	2	2	2	2	2	2	2	2 0		2
7	Saufi	7	10	1	2	2	2	2	2	2	2	2	2 0		2
8	Saufi	8	10	1	1	2	1	2	2	2	2	2	2 0		2
9	MA	9	10	2	2	2	2	2	2	2	2	2	2 0		2
10	MA	10	10	2	2	2	2	2	2	2	2	2	2 0		2
11	MA	11	10	2	1	2	2	2	2	2	1	2	2 0		2
12	MA	12	10	2	2	2	2	2	2	2	2	2	2 0		2
13	Maziela	13	10	1	2	2	2	2	2	1	1	1	2 0		1
14	Maziela	14	10	1	2	2	2	2	1	1	2	2	2 0		1
15	Maziela	15	10	2	1	2	1	1	1	1	2	1	1 0		1
16	Suzila	16	10	1	1	2	2	2	2	2	2	2	2 0		2
17	Suzila	17	10	1	2	2	2	2	1	2	1	2	2 0		1
18	Suzila	18	10	1	2	2	2	2	1	2	2	2	2 0		2
19	Suzila	19	10	1	2	2	2	2	2	2	2	2	2 0		1
20	Suzila	20	10	1	1	2	2	2	1	2	2	2	2 0		2
21	Suzila	21	10	1	1	1	2	2	2	2	2	2	2 0		1
22	Ridzuan	1	6	0	1	2	2	2	2	2	2	2	2 0		1
23	Ridzuan	2	6	1	1	2	2	2	2	2	2	2	2 0		1+
	4							_							E
Data View	Variable View														
											D	CW/ Otatiation	Drococcor in roc	du	

The SPSS main windows are listed below:

Data Editor	A spreadsheet for defining variables, entering and editing
	data.
Output Viewer	Displays statistical results, tables and charts.
	Output can be saved as an output file for later use.
	Output can be copied and paste into other programs such as
	Word and Power-point.
Pivot Table Editor	Output displayed in tables can be edited. Rows and column
	can be interchanged.
Chart Editor	Charts can be edited. Allows changes such as colour, font and
	chart types.
Text Output Editor	Allows text in output viewer to be edited.
Syntax Editor	Allows saving SPSS syntax and running syntax commands
-)	during an SPSS session.
Script Editor	Allows advanced users to customize and automate SPSS tasks
1	by creating and modifying scripts within the program.

The DATA EDITOR allows you to define variables, enter or edit data easily.

At the left bottom corner of the **DATA EDITOR** window, there are the **Data View** and the **Variable View** tabs.

RAINING.	sav [DataSet3] - View Data	PASW Statisti Transform	ics Data Editor	oct Marketing	Granhs Litilities	Add-one V	Vindow Help					
<u>-</u> un										ABG		
	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role	
1	Penemuram	String	25	0	Penemuramah	None	None	10	≣E Left	\delta Nominal	S Input	
2	Sampel	Numeric	8	0	ID Sampel	None	None	8	≡ Right	🛷 Scale	🔪 Input	
3	Kampung	Numeric	8	0	Nama Kampung	{1, Kg Kual	None	10	≡ Right	💑 Nominal	🔪 Input	
4	A1	Numeric	8	0	Tanah Cucuk T	{1, Ya}	None	8	≡ Right	💑 Nominal	🔪 Input	
5	A2	Numeric	8	0	Tangkap Ikan	{1, Ya}	None	8	≡ Right	💑 Nominal	🔪 Input	
6	A3	Numeric	8	0	Memburu	{1, Ya}	None	8	·≡ Right	\delta Nominal	🔪 Input	
7	A4	Numeric	8	0	Herba	{1, Ya}	None	8	≡ Right	\delta Nominal	🔪 Input	
8	A5	Numeric	8	0	Rotan	{1, Ya}	None	8	■ Right	\delta Nominal	🔪 Input	
9	A6	Numeric	8	0	Air Pertanian	{1, Ya}	None	8	·≡ Right	\delta Nominal	🔪 Input	
10	A7	Numeric	8	0	Krafttangan	{1, Ya}	None	8	■ Right	\delta Nominal	S Input	
11	A8	Numeric	8	0	Buah Hutan	{1, Ya}	None	8	■ Right	\delta Nominal	🔪 Input	
12	A9	Numeric	8	0	Buluh	{1, Ya}	None	8	■ Right	\delta Nominal	S Input	
13	A10	Numeric	8	0	Madu	{1, Ya}	None	8	■ Right	\delta Nominal	🔪 Input	
14	A11	String	50	0	Lain-lain	None	None	8	≣E Left	\delta Nominal	S Input	
15	B1	Numeric	8	0	Hasil Hutan Kur	{1, Ya}	None	8	·≡ Right	🗞 Nominal	S Input	
16	B2	Numeric	8	0	Kurang Tanah	{1, Ya}	None	8	I Right	\delta Nominal	S Input	
17	B3	Numeric	8	0	Kurang Pekerja	{1, Ya}	None	8	≡ Right	🗞 Nominal	S Input	
	<u></u>	Numeric	8	0	Penyakit Tana	{1, Ya}	None	8	≡ Right	\delta Nominal	S Input	
		Numeric	8	0	Hasil Susah Di	{1, Ya}	None	8	ा Right	\delta Nominal	S Input	
VI	W	Numeric	8	0	Masalah Penga	{1, Ya}	None	8	· ■ Right	뤚 Nominal	🔪 Input	
lote		Numeric	8	0	Larangan Pung	{1, Ya}	None	8	■ Right	\delta Nominal	S Input	
Ialà		String	50	0	Lain-lain	None	None	8	≣ Left	♣ Nominal	🔪 Input	
		Numeric	8	0	Kousiudan Ta	(f. Val	None	8	·≡ Right	💰 Nominal	S Input	
L,	C21a	Numeric	8	m. •			ne	8	= Right	Nominal	S Input	
	C21h	Numorio	0	10 VI	ew mforn	nation		•	= Diale	Nominal	S. Innut	
ta View	Variable View			0	on variabl	es						

Click on the **Variable View** tab and information such as variable name, type, label and declaration of missing values are displayed.

Edit	<u>V</u> iew <u>D</u> ata	Transform A	Analyze Dire	ct <u>M</u> arketing	Graphs Utilities	s Add- <u>o</u> ns	Window Help					
			∽ 📱	1 📥 =			- 42		ð 🌑 🔺	ABS		
	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role	
1	Penemuram	String	25	0	Penemuramah	None	None	10	≣ Left	\delta Nominal	🔪 Ingut	
2	Sarel	Numeric	8	0	ID Sampel	None	None	8	·≡ Right	🛷 Scale	💊 ly 🔐	
3	K: ung	Numeric	8	0	Nama Kampung	{1, Kg Kua	None	10	≡ Right	🚓 Nominal	s at	
4	4	Numeric	8	0	Tanah Cucuk T	{1, Ya}	lone	8	·≡ Right	🚓 Nominal	Jut Jut	
5		Numeric	9	0	Tangkap Ikan	{1, Ya}	ne	8	≡ Right	🚓 Nominal	J ut	
6		Numeric		0	Memburu	/1 Val		8	·≡ Right	& Nominal		
Zaria	bla	Numerie			Herba	Varie	blo	8	· ■ Right	Vari	able	
alla	DIC	Nume	Variat	le	Rotan	v al la	idie	8	電 Right	a van	able	
Nan	1e	Nume			Air Pertanian	Val	ue	8	· ਂ Right	Mea	sure	
		Nume	Type		Krafttangan			8	端 Right	2		
11	A8	Numeric		0	Buah Hutan	{1, Ya}	None	8	· i Right	\delta Nominal	🔪 Input	
12	A9	Numeric	8	0	Buluh	{1, Ya}	None	8	I Right	\delta Nominal	🦒 Input	
13	A10	Numeric	8	0	Madu	{1, Ya}	None	8	·≡ Right	🚓 Nominal	🖒 Input	
14	A11	String	50	0	Lain-lain	None	None	8	≣ Left	🗞 Nominal	🖒 Input	
15	B1	Numeric	8	0	Hasil Hutan Kur	. {1, Ya}	None	8	·≡ Right	🚓 Nominal	🦒 Input	
16	B2	Numeric	8	0	Kurang Tanah	{1, Ya}	None	8	理 Right	\delta Nominal	🖒 Input	
17	B3	Numeric	8	0	Kurang Pekerja	{1, Ya}	None	8	ः≣ Right	🚓 Nominal	🦒 Input	
18	B4	Numeric	8	0	Penyakit Tana	{1, Ya}	None	8	≡ Right	💑 Nominal	🔪 Input	
19	B5	Numeric	8	0	Hasil Susah Di	{1, Ya}	None	8	≡ Right	Nominal	🦒 Input	
20	B6	Numeric	8	0	Masalah Penga	{1, Ya}	None	8	≡ Right	💑 Nominal	🔪 Input	
21	B7	Numeric	8	0	Larangan Pung	{1, Ya}	None	8	≡ Right	🚓 Nominal	🦒 Input	
22	B8	String	50	0	Lain-lain	None	None	8	≣E Left	🚓 Nominal	🔪 Input	
23	C1	Numeric	8	0	Kewujudan Ta	{1, Ya}	None	8	≡ Right	🚓 Nominal	🦒 Input	
24	C21a	Numeric	8	0	Tambah Penda	{1, Ya}	None	8	≡ Right	🚓 Nominal	🔪 Input	
25	C216	Numaria	0	0	Tombob Dokori	(1. Va)	None	0	20 Dialst	Nominal	. Innut	

Click on the **Data View** tab to return to the **DATA EDITOR** Window.

The File menu in DATA EDITOR has a list of tasks such as creating New (Data, Syntax, Output or Script), Open (Data, Syntax, Output or Script), Close, Save, Save As (to different location), Export to Database (dBase, Excel or MS Access), and listing of Recently Used Data or Recently Used Files.

TRAINING.	sav [DataSet1]	PASW Statisti	cs Data Ed	tor								
<u>File</u> Edit	<u>View</u> <u>D</u> ata	Transform	Analyze	Direct <u>M</u> arketing	Graphs Utilities	Add- <u>o</u> ns <u>V</u>	<u>V</u> indow <u>H</u> elp					
<u>N</u> ew			•	Data	£13 🖉		- 43		۵ 🌑 🎸	86		
Open D	atahasa			E. Syntax	Label	Values	Missing	Columns	Align	Measure	Role	
Road To	att Data			Cutput	enemuramah	None	None	10	≣≣ Left	💰 Nominal	S Input	×
ge Reagine	an Data			🧧 Script) Sampel	None	None	8	≡ Right	Scale 8	S Input	
<u>C</u> lose		Ctrl+F4		0	Nama Kampung	{1, Kg Kual	None	10	I Right	\delta Nominal	> Input	
Save		Ctrl+S		0	Tanah Cucuk T	{1, Ya}	None	8	≡ Right	🚓 Nominal	S Input	
S <u>a</u> ve As				0	Tangkap Ikan	{1, Ya}	None	8	I Right	\delta Nominal	S Input	
🔚 Save All	Data			0	Memburu	{1, Ya}	None	8	≡ Right	🚓 Nominal	🔪 Input	
🗞 Export to	Database			0	Herba	{1, Ya}	None	8	I Right	\delta Nominal	S Input	
Nark File	e Read Only			0	Rotan	{1, Ya}	None	8	≡ Right	🚓 Nominal	🔪 Input	
Rename	notocot			0	Air Pertanian	{1, Ya}	None	8	Right	\delta Nominal	🔪 Input	
Diaplay	Data Eila Inform	nation		0	Krafttangan	{1, Ya}	None	8	≡ Right	🚓 Nominal	🔪 Input	
Display	Data File Inion	nauon	r	0	Buah Hutan	{1, Ya}	None	8	I Right	🚓 Nominal	🔪 Input	
Cac <u>n</u> e L	Jata			0	Buluh	{1, Ya}	None	8	≡ Right	🚓 Nominal	🔪 Input	
Stop Pro	ocessor	Ctrl+Pe	riod	0	Madu	{1, Ya}	None	8	Right	\delta Nominal	🔪 Input	
Rest Switch S	Server			0	Lain-lain	None	None	8	≣ Left	🚓 Nominal	🔪 Input	
<u>R</u> eposit	ory		•	0	Hasil Hutan Kur	{1, Ya}	None	8	Right	🙈 Nominal	🔪 Input	
🙇 Print Pre	eview			0	Kurang Tanah	{1, Ya}	None	8	·≡ Right	🗞 Nominal	🔪 Input	
Ӓ Print		Ctrl+P		0	Kurang Pekerja	{1, Ya}	None	8	Right	\delta Nominal	🔪 Input	
Recently	v Used Data		+	0	Penyakit Tana	{1, Ya}	None	8	·≡ Right	🗞 Nominal	🔪 Input	
Recently	v Used Files			0	Hasil Susah Di	{1, Ya}	None	8	I Right	🙈 Nominal	🔪 Input	
Evit	, <u>-</u>			0	Masalah Penga	{1, Ya}	None	8	I Right	\delta Nominal	🔪 Input	
LVI	,			0	Larangan Pung	{1, Ya}	None	8	I Right	\delta Nominal	ゝ Input	
22	B8	String	50	0	Lain-lain	None	None	8	≣≣ Left	\delta Nominal	🔪 Input	
23	C1	Numeric	8	0	Kewujudan Ta	{1, Ya}	None	8	≡ Right	🚓 Nominal	💊 Input	
24	C21a	Numeric	8	0	Tambah Penda	{1, Ya}	None	8	I Right	🚴 Nominal	🔪 Input	
75	1	Numorio	0	0	Tomboh Dokori	(1 Va)	Mana	0	I Diaht	Nominal	. Innut	4
Data View	Variable View											
New											PAS	W Statistics Processor is ready

The Edit menu provides tasks such as Cut, Copy, Paste, Clear, Insert Cases, Insert Variable, Find (to find data for a particular variable), Go to Case (to locate certain Case Numbers or observations) and Options (to change default settings)

TRAI	NING.sav [Data	Set1] -	PASW Statistic	s Data Ec	ditor				-					
File	Edit <u>V</u> iew [<u>D</u> ata	Transform /	Analyze	Direct Marketing	Graphs Utilities	s Add- <u>o</u> ns	<u>W</u> indow <u>H</u> elp						1
	Undo		Ctrl+Z		🜃 🚣 🚍			- 41 -			MBC			
	📬 Redo		Ctrl+Y	100	inthe Desired					Aller		D-I-		-
	🗶 Cut		Ctrl+X	25	Idth Decimais	Label	Values	Nene	Loiumns	Align	Neminal	Role		4
_	🐴 <u>С</u> ору		Ctrl+C	20	0	Penemuraman	None	None	0	E Leit		s input		C.
	Paste		Ctrl+V	0	0	Neme Kempung	Mulle M. Ke Kuel	None	10	-= Right	Neminal	s input	· · · · · · · · · · · · · · · · · · ·	1
	Paste Vari	ables		0	0	Tanah Cusuk T	{1, Ky Kuai	None	0	= Right	Nominal	s input		
	A Class		Delete	0	0	Tanahan Cucuk 1	{1, 1 dj	None	0	-= Right	Neminal	s input		
			Delete	0	0	Momburu	{1, Taj	None	0	= Right	Nominal	s input		
	Mari V <u>a</u> ri	able		0	0	Herborn	{1, 1 d}	None	0	-= Right	Nominal	s input		
	Insert Cas	es		0	0	Deten	(1, 1 aj	None	0	= Right	Nominal	s input		
	Find		Ctrl+F	8	0	Air Portonian	{1, 1 d}	None	9	-= Right	Nominal	s input		
-	🐴 Find Next		F3	8	0	Kraftangan	(1, 1 aj (1, Va)	None	8	= Right	Nominal	> Input		
	😤 Replace		Ctrl+H	0	0	Ruah Hutan	(1, 1 aj	None	9	-E Right	Nominal	> Input		
	Go to Cas	۵		8	0	Bulub	(1, 1 aj (1, Va)	None	8	= Right	Nominal	> Input		
		ablo		8	0	Madu	(1, 1 aj /1 Val	None	8	-= Right	Nominal	> Input		
		aute		50	0	l ain-lain	None	None	8	≕ Left	& Nominal	> Input		
	Go to Impl			8	0	Hasil Hutan Kur	{1 Ya}	None	8	= Right	Nominal	> Input		1
	🥑 Optio <u>n</u> s			8	0	Kurang Tanah	/1 Yal	None	8	= Right	& Nominal	> Input		1
17	B3		Numeric	8	0	Kurang Pekeria	{1 Ya}	None	8	= Right	Nominal	> Input		1
18	B4		Numeric	8	0	Penyakit Tana	{1 Ya}	None	8	= Right	& Nominal	> Input		1
19	85		Numeric	8	0	Hasil Susah Di	{1 Ya}	None	8	I Right	Nominal	> Input		1
20	B6		Numeric	8	0	Masalah Penga	{1. Ya}	None	8	I Right	& Nominal	> Input		1
21	B7		Numeric	8	0	Larangan Pung	{1. Ya}	None	8	≡ Right	Nominal	> Input		1
22	B8		String	50	0	Lain-lain	None	None	8	≣≣ Left	Nominal	> Input		1
23	C1		Numeric	8	0	Kewujudan Ta	{1. Ya}	None	8	≡ Right	Nominal	> Input		1
24	C21a		Numeric	8	0	Tambah Penda	{1. Ya}	None	8	≡ Right	Nominal	> Input		1
20	C216		Numaria	0	0	Tambah Dakari	(1 Va)	Nana	0	I Dialat	Nominal	. Innut		Ŧ
Data	/iew Variable	View												
Edit												PAS	W Statistics Processor is ready	1

The **View** menu allows changing the **font** style, remove grid lines and display **variables** or **value labels** for coded variables (such as f = Female, m = Male).

TRAININ	G.sav (Da	ataSet1] -	PASW Statist	tics Data Edit	tor									
ile <u>E</u> dit	View	<u>D</u> ata	Transform	<u>A</u> nalyze	Direc	t <u>M</u> arketing	<u>G</u> raphs <u>U</u> tilities	s Add- <u>o</u> ns	Window Help					
		<u>S</u> tatus B	ar			J =						ABC		
		Toolbars	3		•	V Data E	ditor							
	_	Menu Ed	litor			Custon	l I	Values	Missing	Columns	Align	Measure	Role	
1		Fonts				00000	nah	None	None	10	≣ Left	💑 Nominal	> Input	
2		- Grid Line				0	ID Sampel	None	None	8	≔≣ Right	Scale	S Input	
3		A Velue Le	in a la			0	Nama Kampung	{1, Kg Kual	. None	10	≔ Right	Nominal	S Input	
4	11	<u>v</u> alue La	ideis			0	Tanah Cucuk T	{1, Ya}	None	8	≡ Right	Nominal	S Input	
5		Mar <u>k</u> Imp	outed Data			0	Tangkap Ikan	{1, Ya}	None	8	≡ Right	Nominal	S Input	
6	2	Customi	ze Variable \	view		0	Memburu	{1, Ya}	None	8	= Right	Nominal	> Input	
7	業	D <u>a</u> ta		Ctrl+T		0	Herba	{1, Ya}	None	8	≡ Right	Nominal	S Input	
8	~~		Numeric	v	_	0	Rotan	{1, Ya}	None	8	:≣ Right	💑 Nominal	S Input	
9	A6		Numeric	8		0	Air Pertanian	{1, Ya}	None	8	·≣ Right	💑 Nominal	> Input	
10	A7		Numeric	8		0	Krafttangan	{1, Ya}	None	8	:≣ Right	💑 Nominal	S Input	
11	A8		Numeric	8		0	Buah Hutan	{1, Ya}	None	8	·≣ Right	💑 Nominal	S Input	
12	A9		Numeric	8		0	Buluh	{1, Ya}	None	8	I Right	💑 Nominal	S Input	
13	A10		Numeric	8		0	Madu	{1, Ya}	None	8	·圖 Right	🗞 Nominal	> Input	
14	A11		String	50		0	Lain-lain	None	None	8	≣E Left	💑 Nominal	S Input	
15	B1		Numeric	8		0	Hasil Hutan Kur	. {1, Ya}	None	8	·圖 Right	🗞 Nominal	💊 Input	
16	B2		Numeric	8		0	Kurang Tanah	{1, Ya}	None	8	I Right	🗞 Nominal	S Input	
17	B3		Numeric	8		0	Kurang Pekerja	{1, Ya}	None	8) I Right	🙈 Nominal	S Input	
18	B4		Numeric	8		0	Penyakit Tana	{1, Ya}	None	8	IIII Right	🙈 Nominal	🔪 Input	
19	B5		Numeric	8		0	Hasil Susah Di	{1, Ya}	None	8	·圖 Right	🙈 Nominal	ゝ Input	
20	B6		Numeric	8		0	Masalah Penga	{1, Ya}	None	8	III Right	\delta Nominal	🔪 Input	
21	B7		Numeric	8		0	Larangan Pung	{1, Ya}	None	8	·圖 Right	\delta Nominal	🔪 Input	
22	B8		String	50		0	Lain-lain	None	None	8	≣≣ Left	\delta Nominal	🔪 Input	
23	C1		Numeric	8		0	Kewujudan Ta	{1, Ya}	None	8	·≣ Right	\delta Nominal	💊 Input	
24	C21a		Numeric	8		0	Tambah Penda	{1, Ya}	None	8	ः≣ Right	💑 Nominal	🦒 Input	
25	1	·	Numorio	0		0	Tambah Dakari	M Val	Mono	0	I Dialst	Nominal	S. Innut	
Data View	Variat	ble View												
Toolbars													PA	SW Statistics Processor is ready

The **Data** menu provides a list of tasks such as **Copy Data Properties** (copy selected variable and data from other data sets), **Sort Cases**, **Merge Files**, **Split File** and **Select** Cases.

TRAINING	.sav [Dat	aSet1] -	PASW Statistics	Data Editor			and the second second								i x
<u>File</u> Edit	View	Data	Transform Ar	nalyze Dii	rect <u>M</u> arke	ting	Graphs Utilities	s Add- <u>o</u> ns	Window Help						
		😡 De	efine <u>V</u> ariable Pr	operties			111		- 4	(ð 🌒 🤞	ABC			
	N		ow Custom Attrik	huto		als	Label	Values	Missing	Columns	Align	Measure	Role		
1	Pener		ew custom Aung				Penemuramah	None	None	10	≣≣ Left	\delta Nominal	🔪 Input		-
2	Samp		enne Dates				ID Sampel	None	None	8	III Right	🛷 Scale	ゝ Input		
3	Kamp	E De	efine <u>M</u> ultiple Re	sponse Se	ts		Nama Kampung	{1, Kg Kual	. None	10	🗏 Right	\delta Nominal	🔪 Input		
4	A1	Va	alidation		•		Tanah Cucuk T	{1, Ya}	None	8	III Right	\delta Nominal	ゝ Input		
5	A2	🔡 Id	entify Duplicate (Cases			Tangkap Ikan	{1, Ya}	None	8	🗏 Right	\delta Nominal	🔪 Input		
6	A3	🛄 [d	entify Unusual C	ases			Memburu	{1, Ya}	None	8	III Right	\delta Nominal	ゝ Input		
7	A4	🔊 So	ort Cases				Herba	{1, Ya}	None	8	🗐 Right	🙈 Nominal	🔪 Input		
8	A5		- nt Variables				Rotan	{1, Ya}	None	8	III Right	\delta Nominal	ゝ Input		
9	A6	T					Air Pertanian	{1, Ya}	None	8	🗐 Right	\delta Nominal	🔪 Input		
10	A7		Tra <u>n</u> spose <u>R</u> estructure				Krafttangan	{1, Ya}	None	8	·圖 Right	🙈 Nominal	🔪 Input		
11	A8	R	estructure				Buah Hutan	{1. Ya}	None	8	🗐 Right	\delta Nominal	🔪 Input		
12	A9	Me	estructure erge Files		•		Add <u>C</u> ases	'a}	None	8	≡ Right	🙈 Nominal	🔪 Input		
13	A10		gregate				Add <u>V</u> ariables	'a}	None	8	🗐 Right	\delta Nominal	🔪 Input		
14	A11	Or	rt <u>h</u> ogonal Desigr	n	•		Lain-lain	None	None	8	≣≓ Left	\delta Nominal	ゝ Input		
15	B1	🔣 Co	opy <u>D</u> ataset				Hasil Hutan Kur	. {1, Ya}	None	8	🗐 Right	\delta Nominal	🔪 Input		
16	B2	Sr	olit File				Kurang Tanah	{1, Ya}	None	8	III Right	\delta Nominal	ゝ Input		
17	B3		alact Cases				Kurang Pekerja	{1, Ya}	None	8	🗐 Right	\delta Nominal	🔪 Input		
18	B4	ath un					Penyakit Tana	{1, Ya}	None	8	III Right	\delta Nominal	ゝ Input		
19	B5	• • <u>vv</u>	eight Cases				Hasil Susah Di	{1, Ya}	None	8	🗐 Right	\delta Nominal	🔪 Input		
20	B6		Numeric	8	0		Masalah Penga	. {1, Ya}	None	8	I Right	\delta Nominal	ゝ Input		
21	87		Numeric	8	0		Larangan Pung	{1, Ya}	None	8	I Right	\delta Nominal	🔪 Input		
22	B8		String	50	0		Lain-lain	None	None	8	≣≣ Left	\delta Nominal	ゝ Input		
23	C1		Numeric	8	0		Kewujudan Ta	{1, Ya}	None	8	I Right	\delta Nominal	🔪 Input		
24	C21a		Numeric	8	0		Tambah Penda	{1, Ya}	None	8	I Right	\delta Nominal	ゝ Input		
75	1		Numorio	0	0	-	Tambah Dakari	(1 Val	Mana	0	= Diaht	Nominal	S. Innut		
Data View	Mariahi														
Data view	variab	e view													
Merge Files													PAS	3W Statistics Processor is ready	

The **Transform** menu allows you to **Compute** (create new variables such as sum, ratio or log), **Recode**, **Automatic Recode** (recode several variables at once), **Visual Binning** (create bins for interval variables), **Rank Cases and Replace Missing Values**.

TRAINING	.sav [DataSet1] -	PASW Statistic	s Data Edito	or					-				
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata	Transform	Analyze D	irect <u>M</u> arketin	g <u>G</u> raphs	Utilities	Add- <u>o</u> ns <u>\</u>	<u>N</u> indow <u>H</u> elp					
		Compute	Variable					🗖 📩 🧮			BS		
		Count Va	lues within	Cases		•					<u> </u>		
	Name	Shift Valu	Ies			bel	Values	Missing	Columns	Align	Measure	Role	
1	Penemuram.	- Recode i	into Same V	ariables		amah	None	None	10	≣E Left	💑 Nominal	> Input	
2	Sampel	- Recorde i	nto Differen	t\/orightee		əl	None	None	8	I Right	Scale Scale	> Input	
3	Kampung	Recode i	nto Dilleren	it variables		mpung	{1, Kg Kual	None	10	I Right	Nominal	> Input	
4	A1	Automati	c Recode			cuk T	{1, Ya}	None	8	·圖 Right	Nominal	> Input	
5	A2	🕨 Visual <u>B</u> i	nning			lkan	{1, Ya}	None	8	I Right	\delta Nominal	🔪 Input	
6	A3	🔀 Optimal B	Binning				{1, Ya}	None	8	III Right	🗞 Nominal	🔪 Input	
7	A4	Prepare I	Data for Mo	deling	•	S Inte	ractive		8	I Right	🗞 Nominal	🔪 Input	
8	A5	Rank Ca	ses			0 Aut	- matie		8	ः≣ Right	🙈 Nominal	ゝ Input	
9	A6					- <u></u>	ornauc		8	I Right	🙈 Nominal	ゝ Input	
10	A7	Date and	i rime wiza	ra		<u>₽</u> <u>B</u> ac	cktransform Sco	res	8	I Right	🙈 Nominal	ゝ Input	
11	A8	Create Ti	i <u>m</u> e Series.			an	{1, Ya}	None	8	≔ Right	\delta Nominal	🔪 Input	
12	A9	🐫 Replace	Missing <u>V</u> a	lues			{1, Ya}	None	8	ः≣ Right	💑 Nominal	🔪 Input	
13	A10	🍘 Random	Number G	enerators			{1, Ya}	None	8	≔ Right	\delta Nominal	🔪 Input	
14	A11	Run Pen	ding Transf	orms	Ctrl+G		None	None	8	≣≣ Left	💑 Nominal	🔪 Input	
15	B1	ivumeric	8	U	Hasii Hu	tan Kur	{1, Ya}	None	8	≔ Right	\delta Nominal	🔪 Input	
16	B2	Numeric	8	0	Kurang T	anah	{1, Ya}	None	8	ः≣ Right	💑 Nominal	🔪 Input	
17	B3	Numeric	8	0	Kurang F	Pekerja	{1, Ya}	None	8	·≣ Right	뤚 Nominal	🔪 Input	
18	B4	Numeric	8	0	Penyakit	Tana	{1, Ya}	None	8	ः≣ Right	\delta Nominal	🔪 Input	
19	B5	Numeric	8	0	Hasil Su	sah Di	{1, Ya}	None	8	:圖 Right	뤚 Nominal	🔪 Input	
20	B6	Numeric	8	0	Masalah	Penga	{1, Ya}	None	8	ः≣ Right	💑 Nominal	🔪 Input	
21	B7	Numeric	8	0	Larangar	Pung	{1, Ya}	None	8	≡ Right	뤚 Nominal	🔪 Input	
22	B8	String	50	0	Lain-lain		None	None	8	≣≣ Left	🙈 Nominal	🔪 Input	
23	C1	Numeric	8	0	Kewujud	an Ta	{1, Ya}	None	8	≡ Right	뤚 Nominal	🔪 Input	
24	C21a	Numeric	8	0	Tambah	Penda	{1, Ya}	None	8	🗐 Right	🙈 Nominal	🔪 Input	
25	C216	Numorio	0	0	Tambah	Dakari	(1 Va)	Mana	0	I Dialet	Nominal	S. Innut	18
Data Micro													
Data View	Variable View												
Prepare Dat	a for Modeling											PA	SW Statistics Processor is ready

The **Analyze** menu provides a list of statistical analysis such as **Descriptive Statistics** (frequencies and cross-tabulations), **Compare Means** (Independent-Samples T-test, Paired-Samples T-test, ANOVA), **General Linear Model**, **Correlation**, **Regression** and **Non-parametric Tests**.

TRAINING	.sav [DataSet1] - I	PASW Statis	tics Data Editor									x
<u>File</u> Edit	View Data	Transform	Analyze Direct Marketing	Graphs	<u>U</u> tilitie:	s Add- <u>o</u> ns <u>V</u>	indow <u>H</u> elp					
			Reports	•			🛯 🗠 🎬			ABC.		
			Descriptive Statistics	- F	123 Free	quencies						
	Name	Туре	Tables	•	Des	criptives	Missing	Columns	Align	Measure	Role	
1	Penemuram	String	Compare Means	•	A Evo	lore	None	10	≣E Left	🗞 Nominal	S Input	-
2	Sampel	Numeric	General Linear Model	•			None	8	III Right	I Scale	S Input	
3	Kampung	Numeric	Generalized Linear Mod	iels 🕨		sstabs	None	10	I Right	🗞 Nominal	S Input	
4	A1	Numeric	Mixed Models		w Rat	io	None	8	III Right	🗞 Nominal	S Input	
5	A2	Numeric	Correlate		<u>р</u> -Р	Plots	None	8	I Right	🗞 Nominal	S Input	
6	A3	Numeric	Regression		🛃 <u>Q</u> -C	Plots	None	8	≔ Right	🗞 Nominal	S Input	
7	A4	Numeric	Loglinear			{1, Ya}	None	8	I Right	🗞 Nominal	S Input	
8	A5	Numeric	Nourol Notworko	ĺ.		{1, Ya}	None	8	≔ Right	🗞 Nominal	🦒 Input	
9	A6	Numeric	Closeife	Ľ.	inian	{1, Ya}	None	8	≔≣ Right	🗞 Nominal	S Input	
10	A7	Numeric	Classily Disconsist Deduction		gan	{1, Ya}	None	8	≔ Right	🗞 Nominal	🦒 Input	
11	A8	Numeric	Dimension Reduction		ıtan	{1, Ya}	None	8	≡ Right	🙈 Nominal	🖒 Input	
12	A9	Numeric	Scale			{1, Ya}	None	8	ः≣ Right	🙈 Nominal	🦒 Input	
13	A10	Numeric	Nonparametric Tests			{1, Ya}	None	8	≔≣ Right	🙈 Nominal	🦒 Input	
14	A11	String	Forecasting	•		None	None	8	≣≓ Left	🚓 Nominal	ゝ Input	
15	B1	Numeric	Survival	•	tan Kur	. {1, Ya}	None	8	≔≣ Right	🙈 Nominal	🦒 Input	
16	B2	Numeric	Multiple Response	•	Fanah	{1, Ya}	None	8	≡ Right	🚓 Nominal	🦒 Input	
17	B3	Numeric	💹 Missing Value Analysis.		Pekerja	{1, Ya}	None	8	≔≣ Right	🙈 Nominal	🦒 Input	
18	B4	Numeric	Multiple Imputation	•	t Tana	{1, Ya}	None	8	I Right	🗞 Nominal	🦒 Input	
19	B5	Numeric	Complex Samples		sah Di	{1, Ya}	None	8	≔ Right	🙈 Nominal	ゝ Input	
20	B6	Numeric	Quality Control	•	Penga	{1, Ya}	None	8	🗏 Right	🗞 Nominal	🦒 Input	
21	B7	Numeric	ROC Curve		n Pung	{1, Ya}	None	8	≔ Right	\delta Nominal	🔪 Input	
22	B8	String	50 0	Lamian	ł	None	None	8	≣E Left	🗞 Nominal	🔪 Input	
23	C1	Numeric	8 0	Kewuju	dan Ta	{1, Ya}	None	8	≔ Right	\delta Nominal	🖒 Input	
24	C21a	Numeric	8 0	Tambah	Penda	{1, Ya}	None	8	I Right	🗞 Nominal	🔪 Input	
75	(1) (1)	Numorio	0 0	Tombob	Dakari	H Val	Mono	0	I Dialet	Nominal	. Innut	
Data View	Maniahla Minus											_
Data view	variable view											
-												

The **Graph** menu enables you to create bar charts, pie charts, line charts, boxplots and histogram using **Chart Builder**, **Interactive** or **Legacy Dialogs**.

TRAINING	.sav [DataSet1] - I	PASW Statist	ics Data Editor											- 0 ×
<u>File Edit</u>	View Data	Transform	Analyze Direct Marketing	Graphs	<u>U</u> tilities	Add- <u>o</u> ns <u>V</u>	indow <u>H</u> elp							
E)	Reports	•			· 🗠 🎞			BC.				
			Descriptive Statistics	E.	Freq	uencies		14		~				
	Name	Туре	Tables	۰.	Dee	crintives	Missing	Columns	Align		Measure	Role		
1	Penemuram	String	Compare Means	•	A Curl		None	10	≣≕ Left	a	Nominal	S Input		<u></u>
2	Sampel	Numeric	General Linear Model	•	A Exbi	ore	None	8	I Right	ø	Scale	ゝ Input		
3	Kampung	Numeric	Generalized Linear Mo	dels ▶	M Cros	sstabs	None	10	I Right	a	Nominal	S Input		
4	A1	Numeric	- Mixed Models		🗾 <u>R</u> ati	0	None	8	III Right	•	Nominal	ゝ Input		
5	A2	Numeric	Correlate		🙍 <u>Р</u> -Р	Plots	None	8	III Right		Nominal	ゝ Input		
6	A3	Numeric	Begraggion	<u> </u>	🛃 Q-Q	Plots	None	8	I Right	*	Nominal	ゝ Input		
7	A4	Numeric	Legiession			{1, Ya}	None	8	I Right		Nominal	🔪 Input		
8	A5	Numeric	L <u>o</u> ginear			{1, Ya}	None	8	≡ Right	s.	Nominal	ゝ Input		
9	A6	Numeric	Neural Networks		anian	{1, Ya}	None	8	I Right		Nominal	🔪 Input		
10	A7	Numeric	Classity	•	gan	{1, Ya}	None	8	≡ Right	*	Nominal	🔪 Input		
11	A8	Numeric	Dimension Reduction	•	ıtan	{1, Ya}	None	8	≔ Right		Nominal	🔪 Input		
12	A9	Numeric	Scale	•		{1, Ya}	None	8	≡ Right	*	Nominal	🔪 Input		
13	A10	Numeric	Nonparametric Tests	•		{1, Ya}	None	8	≔ Right		Nominal	🔪 Input		
14	A11	String	Forecasting	•		None	None	8	≣= Left	*	Nominal	S Input		
15	B1	Numeric	Survival	۰.	tan Kur	{1, Ya}	None	8	I Right		Nominal	S Input		
16	B2	Numeric	Multiple Response	۰.	Fanah	{1, Ya}	None	8	I Right	*	Nominal	🔪 Input		
17	B3	Numeric	🔣 Missing Value Analysis	s	Pekerja	{1, Ya}	None	8	I Right		Nominal	S Input		
18	B4	Numeric	Multiple Imputation	•	t Tana	{1, Ya}	None	8	I Right	*	Nominal	S Input		
19	B5	Numeric	Complex Samples	*	sah Di	{1, Ya}	None	8	≡ Right		Nominal	S Input		
20	B6	Numeric	Quality Control		Penga	{1, Ya}	None	8	I Right	*	Nominal	S Input		
21	B7	Numeric	ROC Curve		n Pung	{1, Ya}	None	8	I Right		Nominal	S Input		
22	B8	String	00 00 0	Lamian		None	None	8	≣E Left		Nominal	S Input		
23	C1	Numeric	8 0	Kewujuo	dan Ta	{1, Ya}	None	8	■ Right		Nominal	🔪 Input		
24	C21a	Numeric	8 0	Tambah	Penda	{1, Ya}	None	8	I Right		Nominal	> Input		
75	C21b	Numaria	o n	Tambah	Dakari	n va	Mana	0	= Diakt	0	Nominal	N. Innut	1	T
				_						_				
Data View	Variable View													
Descriptive	Statistics											PA	SW Statistics Processor is ready	

The **Help** menu allows you to search information under **Topics**, learn more on how to use SPSS using **Tutorial**, **Case Studies** or **Statistics Coach**.

TRAINING.	.sav [DataSet1] -	PASW Statist	tics Data Edito	or	and the second second			-						
<u>File</u> Edit	<u>V</u> iew <u>D</u> ata	Transform	Analyze D	irect <u>M</u> arketing	<u>G</u> raphs <u>U</u> tilitie	s Add- <u>o</u> ns	Window	Help						
				📸 上 😑	- AA III			Optics						
				= = =				Tutorial						
	Name	Туре	Widt	h Decimals	Label	Values	Mis	Case Stu	dies	N	leasure	Role		
1	Penemuram	String	25	0	Penemuramah	None	None	Working	uith D	No	minal	🦒 Input		A
2	Sampel	Numeric	8	0	ID Sampel	None	None	working t	with R	Sc	ale	S Input		
3	Kampung	Numeric	8	0	Nama Kampung	{1, Kg Kual.	None	Statistics	Coach	No	minal	🦒 Input		
4	A1	Numeric	8	0	Tanah Cucuk T	{1, Ya}	None	Comman	d Syntax Reference	No	minal	💊 Input		
5	A2	Numeric	8	0	Tangkap Ikan	{1, Ya}	None	Develope	r Central	No	minal	🦒 Input		
6	A3	Numeric	8	0	Memburu	{1, Ya}	None	About		No	minal	🦒 Input		
7	A4	Numeric	8	0	Herba	{1, Ya}	None	Algorithm	s	No	minal	🔪 Input		
8	A5	Numeric	8	0	Rotan	{1, Ya}	None	SPSS Inc	Home	No	minal	🔪 Input		
9	A6	Numeric	8	0	Air Pertanian	{1, Ya}	None	Chaokfor	Undetee	No	minal	🔪 Input		
10	A7	Numeric	8	0	Krafttangan	{1, Ya}	None	Checkion	Opuales	No	minal	🦒 Input		
11	A8	Numeric	8	0	Buah Hutan	{1, Ya}	None	Product H	egistration	No	minal	🔪 Input		
12	A9	Numeric	8	0	Buluh	{1, Ya}	None	8	III Right	🚴 No	minal	🦒 Input		
13	A10	Numeric	8	0	Madu	{1, Ya}	None	8	·圖 Right	💦 No	minal	🔪 Input		
14	A11	String	50	0	Lain-lain	None	None	8	≣E Left	💰 No	minal	🔪 Input		
15	B1	Numeric	8	0	Hasil Hutan Kur	. {1, Ya}	None	8) I Right	💑 No	minal	🔪 Input		
16	B2	Numeric	8	0	Kurang Tanah	{1, Ya}	None	8	器 Right	💰 No	minal	🔪 Input		
17	B3	Numeric	8	0	Kurang Pekerja	{1, Ya}	None	8) I Right	💑 No	minal	🔪 Input		
18	B4	Numeric	8	0	Penyakit Tana	{1, Ya}	None	8	I Right	💰 No	minal	🔪 Input		
19	B5	Numeric	8	0	Hasil Susah Di	{1, Ya}	None	8) I Right	💑 No	minal	🔪 Input		
20	B6	Numeric	8	0	Masalah Penga	. {1, Ya}	None	8	·≡ Right	💰 No	minal	🔪 Input		
21	B7	Numeric	8	0	Larangan Pung	{1, Ya}	None	8) I Right	💑 No	minal	🔪 Input		
22	B8	String	50	0	Lain-lain	None	None	8	≣E Left	💰 No	minal	🔪 Input		
23	C1	Numeric	8	0	Kewujudan Ta	{1, Ya}	None	8	I Right	🙈 No	minal	🔪 Input		
24	C21a	Numeric	8	0	Tambah Penda	{1, Ya}	None	8	·■ Right	💰 No	minal	🔪 Input		
25	1	Numorio	0	0	Tambah Dakari	(1 Va)	Mana	0	I Dialat	O No	minal	. Innut	1	
Data View	Variable View											PAS	SIM Staticfics Prospensor is ready	
Tutorial												PAS	SW Statistics Processof is ready	

2.0 CREATING SPSS DATA FILES

The **SPSS DATA EDITOR** is a spreadsheet that allows you to enter data easily. Click on the **File** menu, select **New** and **Data** and the **SPSS DATA EDITOR** window appears. The **Untitled1[DataSet]** at the top left corner indicates that this is a new file and no filename has been given.

Cdit View Date Tra	notorm Ar	oluza	Direct Marketing	Cropho Litiliti	o Window	Liele		_			
		Talyze							100		
Onen			Data				<u>।</u>				
Open Database			Syntax	Label	Values	Missing	Columns	Align	Measure	Role	
Read Text Data			Output								
Close	Ctrl+F4		Im Script								
Save	Ctrl+S										
Save As											
Save All Data											
Export to Database											
Mark File Read Only											
Rename Dataset											
Display Data File Informatio	on										
Cache Data											
Stop Processor	Ctrl+Perio	d									
Switch Server											
Repository		•									
Print Preview											
Print	Ctrl+P										
Recently Used Data		•									
Recently Used Files		•									
Exit											
22			-								
23											
24											
1		_									
ta View Variable View											
										DAG	W Statistics Processor is ready
										170	on one of the operation of the day

Click on **Variable View** tab to define the variables.

To define the first variable (*i.e.* gender), left click on the first column in the first row under the **Name** column and type in *gender*.

*Untit	led [DataSe	t2] - SPSS Data	Editor				
e Edit	View Data	Transform Analy	/ze Graph	ns Utilities Ad	d-ons Window Help		
> 🖪 c	🖴 🖭 🦘	🐡 🐜 📴	神一種目	ita 🖽 🖽 🖡	₩ 👒 🎯		
	Name	Туре	Width	Decimals	Label	Values	Missing
1	gender	String	8	0	gender	{1, male}	None
2	age	Numeric	8	0	age	{1, 21-30 yrs}	None
3	education	Numeric	8	0	education attainment	{1, PhD}	None
4	Q1	Numeric	8	0	When you have a problem, the bank shows a sincere interest in solving it.	{1, very dissatisfied}	None
5	Q2	Numeric	8	0	Employees of bank solve your problems when they promise to do so.	{1, very dissatisfied}	None
6	Q3	Numeric	8	0	Employees of bank give you prompt service.	{1, very dissatisfied}	None
7	Q4	Numeric	8	0	Employees of bank are willing to help you.	{1, very dissatisfied}	None
8	Q5	Numeric	8	0	Employees of bank are never too busy to respond to your request.	{1, very dissatisfied}	None
9	Q6	Numeric	8	0	Banks give you individual and personal attention.	{1, very dissatisfied}	None
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
22							

49 | P a g e

Move the cursor using the left arrow \rightarrow on the keyboard to the **Type** column.

Since gender is coded as "1" and "2", it can be declared as *Numeric*. If gender is coded as "m' and "f" then you will need to select **String**. Use the default *Numeric* type and click on **OK**.

*Untitled1	"Unitided 1 (DataSet0) - PASW Statistics Data Editor												
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata	Transform	<u>A</u> nalyze Di	rect <u>M</u> arketi	ing <u>G</u> raphs <u>U</u> ti	lities <u>W</u> indow	<u>H</u> elp						
😑 🔓			¥ 📕				- A			8			
	Name	Туре	Width	Decimals	s Label	Values	Missing	Columns	Align	Measure	Role		
1	Gender	Numeric	8	2		None	None	8	I Right	🛷 Scale	🖒 Input	A	
2				(Y						
3					Variable Type								
4					Numeric								
5				0) Comma	Width	•						
6				0	Dot	<u></u>	• • • • • • • • • • • • • • • • • • •						
7				C	Scientific notation	Decimal Places	0						
8				0	D <u>a</u> te								
9				0) Dollar								
10				0	Custom currency								
11				0) String								
12				-									
14							_						
14					ОК	Cancel Hel	p						
16					_								
17								-					
18													
19													
20													
21													
22													
23													
24													
05	1												
Data View	Variable View												
	Variable VIEW												
											PAS	W Statistics Processor is ready	

We will use the default setting for **Width**.

In the **Decimals** columns, the default decimal place is 2. Decrease the decimal to **zero** as gender is a categorical variable and not measured on a continuous scale. Move the cursor using the left arrow \rightarrow on the keyboard to the **Label** column and type **gender**. Next, move the cursor using the left arrow \rightarrow on the keyboard to the **Values** column. Click on the small grey square button and the Value Labels dialogue window appears. Type *1* in the **Value** box. Next, type *male* in the **Label** box and click on **Add** button.

T *Untitled1	[DataSet0] - PAS	W Statistics Da	ata Editor					and the second second							o X
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata	Transform	<u>A</u> nalyze D	irect <u>M</u> arketin) <u>G</u> raphs	<u>U</u> tilities <u>W</u> ind	w <u>H</u> elp								
🖹 🔚		. 🗠	א	📥 🗐			- A			ABC	h				
	Name	Туре	Width	Decimals	Label	Values	Mis	1. Rig	ht Clic	k l	ure	Role			
1	Gender	Numeric	8	0	Gender	None	Hone	Volue				💊 Input			
2								value	s colur	nn					
3															
4															
5			T	((1 99 0			_				D				
6		Z .	1 ype	"I" ð	ζ 🚦	Value Labels				~					
7		La	bel as	s Mal		Value Labels									
8				, 11 141		Value: 1				Snelling					
9										Spennig					
10						Label. Male									
10			~												
12		- 3.0	Click	Add		Add									
1/						Change									
15					- 1	Remove									
16					- 1										
17															
18							ОК	Cancel H	.lp						
19					C		_			-	9				
20															
21															
22															
23															
24															
05	4														• •
Data View	Variable View														
												PASV	/ Statistics Processor is	eady	

Repeat and Type **2** in the Value box.

Then, type *female* in the Label box and click on Add and OK

1 *Untitled	[DataSet0] - PAS	W Statistics Da	ta Editor										- 0 ×
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata	Transform	<u>A</u> nalyze Di	irect <u>M</u> arketing	<u>G</u> raphs	<u>U</u> tiliti	es <u>W</u> indow	<u>H</u> elp					
				↓ =	<u>An</u>	×.		🔤 🖧 🎬			BG		
		<u> </u>		-									
	Name	Туре	Width	Decimals	Labe	el	Values	Missing	Columns	Align	Measure	Role	
1	Gender	Numeric	8	0	Gender		None	None	8	■ Right	🖋 Scale	S Input	-
2													
3													
4													
5					6	Value	Labels				x		
6						H value	Labers						
					-	_[Value	Labels						
<u></u>					- 1	Valu	e:			S	pelling		
9					-	Lahe	P						
11					- 1	East							
12					- 1	6	1:	= "Male" - "Formolo"					
12					- 1	ļ	Add	- Feilidie					
14					- 1		<u>C</u> hange						
15					- 1		<u>R</u> emove						
16					- 1								
17					- 1								
18					_			ОКС	ancel He	p			
19					C	_							
20													
21									Don	6 A dd			
22								. Alter	Don	e Auu			
23]							/alues,	Clic	k OK			
24													
25	1												
Data View	Variable View												
	Variable view												
												PAS	W Statistics Processor is ready

Name	Туре	Label	Values
gender	numeric	Gender	1=male
0			2=female
			1=21-30
age	numeric	Age	2=31-40
0		0	3=41-50
			4=above 50
			0=Tiada
1			1=Sek Ren
education	numeric	Education attainment	2=Sek Men
			3=Tgkt 6
			4=Kolej &U
A1	numeric	Land for agriculture	
A2	numeric	Fishing	
A3	numeric	Animal hunting	
A4	numeric	Herbs for medicine	1=Yes
A5	numeric	Rattan harvesting	0=No
A6	numeric	Water supply for agriculture	
A7	numeric	Forest resources for handcraft	
A8	numeric	Wildfruit harvesting	
A9	numeric	Bamboo harvesting	
A10	numeric	Honey harvesting	

Continue defining the other variables as listed below.

2.1 Defining Variables Rules

- Must begin with a letter
- Cannot end with a full stop or underscore
- Blanks, space and special characters (such as ?. ".!, *) cannot be used.
- Duplication of variable names is not allowed.

*Untitled	1 [DataSet0] - PAS	W Statistics D	ata Editor	_				-	1 0			
<u>File</u> Edit	<u>V</u> iew <u>D</u> ata	Transform	<u>A</u> nalyze Di	rect <u>M</u> arketin	g <u>G</u> raphs <u>U</u> tilities <u>V</u>	indow <u>H</u> elp						
😑 l:		,		*	🛾 👬 🗾 👱	2			ABG			
	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role	
1	Gender	Numeric	8	0	Gender	{1, Male}	None	8	I Right	🛷 Scale	🔪 Input	A
2	Age	Numeric	8	0	Age	{1, 21-30}	None	8	ा = Right	🛷 Scale	🖒 Input	
3	Education	Numeric	8	0	Education attainment	{0, Tiada}	None	8	≔ Right	I Scale	🔪 Input	
4	A1	Numeric	8	0	Land for agriculture	{0, No}	None	8	·≡ Right	🛷 Scale	🔪 Input	
5	A2	Numeric	8	0	Fishing	{0, No}	None	8	· i Right	🛷 Scale	💊 Input	
6	A3	Numeric	8	0	Animal hunting	{0, No}	None	8	理 Right	🛷 Scale	🔪 Input	
7	A4	Numeric	8	0	Herbs for medicine	{0, No}	None	8	≡ Right	🛷 Scale	🖒 Input	
8	A5	Numeric	8	0	Rattan harvesting	{0, No}	None	8	· i Right	🛷 Scale	🔪 Input	
9	A6	Numeric	8	0	Water supply for agricu	{0, No}	None	8	·≡ Right	🛷 Scale	🔪 Input	
10	A7	Numeric	8	0	Forest resources for ha	{0, No}	None	8	≡ Right	🛷 Scale	🖒 Input	
11	A8	Numeric	8	0	Wildfruit harvesting	{0, No}	None	8	理 Right	🛷 Scale	🔪 Input	
12	A9	Numeric	8	0	Bamboo harvesting	{0, No}	None	8	≡ Right	🛷 Scale	🖒 Input	
13	A10	Numeric	8	0	Honey harvesting	{0, No}	None	8	≔ Right	I Scale	🔪 Input	
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25	1											×
Data View	Variable View											
1											PASW Statis	stics Processor is ready

The **Variable View** window with all variables defined is shown below:

Click on the **Data View** button at the lower left corner to get back to **the DATA EDITOR** window.

Enter the data for the first five respondents as shown below:

1 *Untitled	1 [DataSet0	- PASW	V Statistics D	ata Editor			_					_	_	_			
<u>F</u> ile <u>E</u> dit	View	<u>D</u> ata	Transform	<u>A</u> nalyze Di	irect <u>M</u> arketing	<u>G</u> raphs <u>U</u> f	tilities <u>W</u> indo	w <u>H</u> elp									
🔁 l				~		#1 🕺	j 🔛 🛛	4	A 14		AB6						
																Visible: 13 of 1	3 Variables
	Gend	er	Age	Education	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	var	var	var
1		1	2	2	1 2	2	2 2	2	2 2		2	2 2	2	1	2		4
2		1		1	3 2	2 :	2 2	2	2 2		2	2 2	2	:	2		
3		2	2	2	1 2	2 :	2 2	2 3	2 2		2	2 2	2	:	2		
4		2	:	2	2 2	2 :	2 2	2 3	2 2		2	2 2	2	:	2		
5		1	:	3	0 1	I :	2 2	2 :	2 2		2	2 2	2	:	2		
6	_	2		3	0 1	:	2 2	2	2 2		2	2 2	2	:	2		
7	_	1		1	2 1	1 :	2 2	2	2 2		2	2 2	2	1	2		
8	_	2	:	2	2 1		1 2	2	1 2		2	2 2	2	:	2		
9		2	:	3	1 2	2 3	2 2	2	2 2		2	2 2	2	:	2		
10	_	1	1	2	2 2	2 :	2 2	2	2 2		2	2 2	2		2		
11	_																
12	_																
13	_																
14	_																
15	_																
16	_																
1/	_																
10	-																
13	-																
20	_																
21	_																
22	-																
23	4																-
Data View	Variable	lew															
													PASW St	atistics Proces	sor is ready		

Click on the File menu and select Save As.

The Save Data As dialogue window appears

Under Save in, select the location (or folder) where you want to save your file by

	0 -					\mathbf{n}											
*Untitled1 File Edit	[DataSet0] - PA: View Data	SW Statistics D	lata Editor Analyze Dire	ect Marketing	<u>G</u> raphs <u>U</u> tili	ties <u>W</u> indov	w Help	-		-	_		_	-			o x
		, e		!	N 🐐					Alle						Visible: 13 of	13 Variables
1 2 3 4 5 6 7 8 9 10 11 11	Gender 1 1 2 2 1 1 2 2 1 1 2 2 2 1	Age	Education 2 1 1 2 1 2 2 2 3 0 1 2 2 2 2 3 1 2 2 2 2 2 3 1 2 2 2 2 2 3 1 2 2 2 2	A1	A2 2 2 2 2 Save Data As Look in: F TRAINING.	A3 2 2 2 2 RIM	A4 2 2 2	A5 2 2 2 2	A6	A7 2 2	2 2 2 2	A8 2 2 2 ×	A9	A10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 Var 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Var	var
13 14 15 16 17 18 19 20 21 22 23					File name: Save as type:	Keeping 13 of WORKSHOP PASW Statisti Cernie varial Save value Save value	13 variables. (*.sav) ble names to sp labels where de labels into a .sa Store <u>F</u> ile To Re	readsheet fined instead of is file epository	data values	7		ables cave aste ancel telp					×
Data View Save As	Variable View												PASW	Statistics Pr	ocessor is rea	dv	

clicking on the down arrow \checkmark .

Type in *survey* in the **File name** box below the list of SPSS data files.

By default, the **Save As** type is SPSS (*.sav) for SPSS data file.

In this example, the *survey.sav* data is saved in the **FRIM** folder.

2.2 Importing Excel Files

This section illustrates how to import Excel data files into SPSS.

🔢 Untitled2 [DataSet2] - PASW St	tatistics Data Editor													D X
<u>File Edit View Data Tra</u>	nsform <u>A</u> nalyze	Direct Marketing G	raphs <u>U</u> tilities A	dd- <u>o</u> ns <u>W</u> ind	low <u>H</u> elp									
New	*					A		ABC						
<u>O</u> pen	×.	🔎 D <u>a</u> ta		<u> </u>	~ ⊖	14 1								
Open Data <u>b</u> ase	۲.	避 Syntax											Visible: 0	of 0 Variables
🚺 Rea <u>d</u> Text Data		🖉 Output	var var	var	var	var	var	var	var	var	var	var	var	var
🔊 <u>C</u> lose	Ctrl+F4	P Script												^
Save	Ctrl+S													
Save As														
🖷 Save All Data														
b Export to Database														
Mark File Read Only														
Rename Dataset														
Display Data File Informatio	n ►													
🤯 Cache Data														
Stop Processor	Ctrl+Period													
🐺 Switch Server														
Repository	۰.													
Rrint Preview														
Print	Ctrl+P													
Recently Used Data	۰.													
Recently Used Files	*													
Exit														
20		-												
22														
23														
4														• • •
Data View Variable View						••								
(Data										DACIAL	Etatiotica Dree	accords roads		

Go to the File menu, select Open and Data.

From the **Open Data** dialogue window, under **Look in**, click on the down arrow **▼** and select the folder **FRIM**.

Next, under **File of type**, click on the down arrow **▼** and select Excel (.*xls).

Untitled2	[DataSet2] - PA	SW Statistics D	ata Editor		_					_			_				
<u>File</u> Edit	<u>V</u> iew <u>D</u> ata	Transform	Analyze	Direct Marketin	g <u>G</u> raphs <u>U</u> tili	ies Ad	d- <u>o</u> ns <u>W</u> ine	dow <u>H</u> elp									
(<u>)</u>						*,	2		 		ABS						
																Visible: 0	of 0 Variables
	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var	var
1																	-
2					(T a a)												
3					Open Data												
4					Look in: 🌗	FRIM		× 1	🙆 🔯 🔠	Ξ							
5						sav							-				
7					WORKSH	OP.sav							-				
8	1																
9																	
10																	
11	1																
12]																
13					File name:							Onen					
14												Deate					
15					Files of type:	PASWS	Statistics (*.sa	av)			T	Paste	_				
16	-				📃 📄 Minimize	Portable Excel (*	e (*.por) xls. * xlsx. * x	lsm)			-	Cancel					
1/						Lotus ('.W*)					Help	-				
10	-					Sylk (*.s	sik)										
20	1					SAS (*.s	(*.001) sas7bdat.*.s	d7.*sd2.*ss	101.*ssd04.	*.xpt)	-		-				
21						Stata (*	.dta)										
22	1					Text (*.t	xt, *.dat)				*						
23]																
	•							· · · · · · · · · · · · · · · · · · ·			1	1			1	1	•
Data View	Variable View																
Data													PASW	Statistics Pro	cessor is read	y T	

Select the WORKSHOP.xls data in Excel format and click Open.

	DP.sav (DataSet0] - PASW Statis	stics Data Edito	or												-	a x
<u>F</u> ile <u>E</u> dit	<u>V</u> iew <u>D</u> ata	Transform	<u>A</u> nalyze D	irect <u>M</u> arketing	<u>G</u> raphs <u>U</u>	tilities <u>W</u> indov	w <u>H</u> elp										
		, m	~	* 📥 🗐	#	j 🔛 🚦	4	A 	0	-							
											-					Visible: 13 of 1	3 Variables
	Gender	Age	Education	A1	A2	A3	A4	A5	A6		A7	A8	A9	A10	var	var	var
1	1	2	2	1	2 2	2 2		2	2	2	2	2	2	2			-
2	1	1	1	3	2 2	2 2		2	2	2	2	2	2	2			
3	2	2	2	1	2 2	2 2		2	2	2	2	2	2	2			
4	2	2	2	2	🔢 Open Data			1				X	2	2			
5	1	3	3	0	Lookin:	EDIM		- 63 M	te te				2	2			
6	2	3	3	0	LUOKIII.	TIXIM			1000 022				2	2			
7	1	1	1	2	WORKSI	HOP.xls							2	2			
8	2	2	2	2									2	2			
9	2	3	3	1									2	2			
10	1	2	2	2									2	2			
10				-													
12	1																
14	1				File name:	WORKSHOP:	xls					Open					
15	1			- 1	Files of time:	Enclosed and a star					-	Paste					
16	1				Files of type.	Excel (n.xis, n.	xisx, ^.xism)				•						
17	1			- 1	📃 Minimiz	e string widths t	based on ob	served values				Cancel					
18	i			1		6	and some Pilling					Help					
19]					R	eureve Filê I	-rom kepository									
20																	
21																	
22																	
23																	-
	4							***									N
Data View	Variable View																
Open data d	ocument												PASW S	tatistics Proces	ssor is read	ty	

	DP.sav [DataSet0] - PASW Statis	tics Data Editor		-							-	_				o x
<u>F</u> ile <u>E</u> dit	View Data	Transform	Analyze Dir	ect <u>M</u> arketing	<u>G</u> raphs <u>U</u>	tilities <u>W</u> indo	w <u>H</u> elp										
		, in 1	- 1		#	ş 🔛 🛛	- 42	A		ABC							
																Visible: 13 of	13 Variables
	Gender	Age	Education	A1	A2	A3	A4	A5	A6	A7		A8	A9	A10	var	var	var
1	1	2	2 1	2		2 2	2 2	2	:	2	2	2	2	2			
2	1	1	3	2		2 2	2 2	2		2	2	2	2	2			
3	2	2	2 1	2		2 2	2 2	2	:	2	2	2	2	2			
4	2	2	2 2	2		2 2	2 2	2		2	2	2	2	2			
5	1	3	8 0	1	C	2 2	2 2	2		2	2	2	2	2			
6	2	3	8 0	1	E	Opening Exce	I Data Source			×		2	2	2			
7	1	1	2	1		U-12015/EED		things/EDIM////				2	2	2			
8	2	2	2 2	1	_	11.12013111	NINFORMOTION	anings i Kiwiwi	JILILOI IOI .XIS			2	2	2			
9	2	3	3 1	2		📝 Read var	able names fro	m the first row o	f data			2	2	2			
10	1	2	2 2	2		Worksheet:	WORKSHO	P 1 (A1:M11)		T		2	2	2			
11						Dongo:	WORKSHO	P 1 [A1:M11]									
12						Range.	WORKSHO	P 2 [A1:M11]									
13						Maximum wi	dth for string col	umns: 327	67								
14							OK	Cancel	In								
10									- P								
17					_	_		_	_	_							
18	1										-						
19	1					-					-						
20	1									-	-						
21	1																
22	1																
23	1																_
	4															1	•
Data View	Variable View																
Open data d	ocument												PASW St	atistics Proces	sor is read	ty	

Click **OK** and the data appears in the **SPSS DATA EDITOR** window.

Click on the **File** menu, select **Save As**. In the **Save As In** dialogue window, under File name, type in *WORKSHOP1* and click **Save**.

*Untitled5	[DataSet5] - PASW Stat	istics Data Editor		_											- 0 X
<u>File Edit</u>	<u>V</u> iew <u>D</u> ata <u>T</u> ransf	orm <u>A</u> nalyze E	Direct Marketing	<u>G</u> raphs <u>U</u> tilitie	s Add- <u>o</u> n:	s <u>W</u> indow	Help								
😂 H	🖨 🛄 🖿	r 71 🛛	ř 📥 🗐	11 🕺	¥	- A			AB6						
1: Gender	1													Visible:	13 of 13 Variables
	Gender	Age	Education	A1		A2	A3	A	.4	A5	A6		A7	A8	A9
1	1	2	1	1	2	2		2	2	2		2	2		2 🚔
2	1	1	3	3	2	2		2	2	2		2	2		2
3	2	2		1	2	2		2	2	2		2	2		2
4	2	2		🄢 Save Data As							x	2	2		2
5	1	3		Look in: 🎴 F	RIM		- 🖬 🔯					2	2		2
6	2	3										2	2		2
- /	1	1		WORKSH	sav)Psav							2	2		2
9	2	2										2	2		2
10		2										2	2		2
11		_	- 1									_	_		-
12			- 1												
13			- 1												
14					Keeping 1:	s of 13 variable	es.			Variables	s				
15				File name:	WORKSHO	DP1				Save					
16				Save as type:	PASW Stat	istics (*.sav)			~	Paste					
17					Write va	riable names	to spreadsheet			Cance					
18					S <u>a</u> ve va	lue labels wh	ere defined instea	ad of data va	lues	Ulala					
19					Sav <u>e</u> va	lue labels into	o a .sas file			Help					
20						(]								
22						Store File	To Repository								
23					_		_		_						
-	4														
Data View	Variable View						***								
Jun view															
Save this doc	ument										PAS	SW Statistic	cs Processor	is ready	

Repeat the whole process and import in the second Excel worksheet and save it as *WORKSHOP2*.

*Untitled6	[DataSet6] - PASW S	tatistics Data Ed	itor		_		_	_		-		_	_	_			- 0 X	
<u>F</u> ile <u>E</u> dit	⊻iew <u>D</u> ata <u>T</u> ra	nsform <u>A</u> nalyz	e Direct <u>M</u> arke	eting g	<u>G</u> raphs <u>U</u> tilitie	s Add-g	ons <u>W</u> indow	<u>H</u> elp										
		5	iii 🕌					A 14	0	ABC								
3 : A1	2															Visible: 13	of 13 Variabl	les
	Gender	Age	Educa	ation	A1		A2	A3	A4		A5		A6	Aī	7	A8	A9	
1	1		2	1		2	2		2	2		2		2	2	2	2	
2	1		1	3		2	2		2	2		2	:	2	2	2	2	
3	2		2	Ĝ	E Save Data A		2		2	2				2	2	2	2	
4	2		2		Jave Data A									2	2	2	2	
5	1		3	_	Look in: 🌗 I	RIM		🗾 🔛 🔯	HE E					2	2	2	2	
6	2		3	-		.sav								2	2	2	2	
- /	7 1 1 1 1 1 2																	
0	i i i i i i 8 2 2 2 2 2 9 2 3 2 2 2 10 1 2 2 2																	
10	8 2 2 2 2 9 2 3 2 2 2 2 10 1 2 2 2 2 2																	
11	9 2 3 10 1 2 11 2																	
12	10 1 2 2 2 11 12 11 1 1																	
13						Keeping	13 of 13 variable	es.			Varia	ables						
14					File name:	WORKS	HOP2											
15					Save as type:	DADWO						ave						
16				_	Gave as type.	PASW S	tatistics (~.sav)			_		aste						
17				-		Write	variable names	to spreadsheet			Ca	ancel						
18				-		Save Save	value labels wh	ere defined instea	id of data valu	es	E	lelp						
19				-		- Oave		7 a .5 a 5 inc										
20				-			Store File	To Repository										
21]					
23																		
	1		-												-		•	-
Data View	Variable View																	
Data view																		
Save this doo	ument												PASW	Statistics Pr	ocessor is re-	adv		

This section illustrates how to merge three SPSS data file into one file.

Open the *WORKSHOP1* SPSS data file using File, Open Data. From the **Data** menu, select **Merge files** and **Add Cases**. In the dialogue window **Add cases to** *WORKSHOP1*, under **An Open data set**, select *WORKSHOP2* and click **Continue**. Note that you will have to click on the **An External SPSS data file** button and **Browse** to locate *WORKSHOP2* if it is not an open data set.

🔢 Untitled2 [DataSet	2] - PASW Statistics	Data Editor		-	_		_									
<u>File</u> <u>E</u> dit	View	Data Transform	<u>A</u> nalyze D	irect <u>M</u> arke	ting <u>G</u> raph:	s <u>U</u> tilities Ad	dd- <u>o</u> ns <u>W</u> ine	dow <u>H</u> elp									
	1.6	🧔 Define <u>V</u> ariabl	e Properties		= 1		2	▲\			ABC						
		🔚 Copy Data Pro	perties								•						
	_	New Custom	Attri <u>b</u> ute			1	1	1			1	1	Y	1		Visible: 0	of 0 Variables
	v	🔒 D <u>e</u> fine Dates			var	var	var	var	var	var	var	var	var	var	var	var	var
2		🔠 Define <u>M</u> ultiple	e Response S	ets													
3		Validation		•													
4		🔡 Identify Duplic	ate Cases		-												
5	1	🏹 Identify Unusu	al Cases														
6	6 Soft Cases 7 Soft Variagles																
7	7 Image: Soft Variables 8 Image: Soft Variables 8 Image: Soft Variables																
8	Image: Section of the sectio																
9	8 Image: Constraint of the second of the s																
10	Image: Page Files Image: Page Files																
12		Aggregate			Add Va	riables											
13		Orthogonal De	esign	•]										
14	İ	🔁 Copy <u>D</u> ataset															
15		E Split File															
16		🔢 Select Cases.															
17		4 Weight Cases			L												
18																	
19	ļ																
20	1				_												
22	1				_												
23	í																Ļ
	4		1			1	:				:		:				•
Data View	Variabl	e View															
Add Cases													PASW	Statistics Proc	essor is read	/	

	P1.sav	DataSet9] - P	PASW Statistics Data	Editor												
<u>File</u> Edit	View	Data Tra	nsform <u>A</u> nalyze	Direct <u>M</u> arke	ting G	araphs <u>U</u> tilities	Add- <u>o</u>	ns <u>W</u> indow	Help							
		溕 Define	Variable Properties		=	H 👬					ABC					
	12	🔚 <u>C</u> opy E	Data Properties) <u> </u>							
1 : Gender		New C	Custom Attri <u>b</u> ute					1			1			()	Visible: 13	of 13 Variables
		🔒 D <u>e</u> fine	Dates		on 🖌	A1	0	A2	A3	A4		A5	A6	A7	A8	A9
2		🔡 Define	Multiple Response	Sets	3		2	2	2		2	2	2	2	2	
3		Validat	tion	+	1		2	2	2		2	2	2	2	2	
4	1	🔡 Identify	y D <u>u</u> plicate Cases		2		2	2	2		2	2	2	2	2	
5	İ	🌅 Identify	y Unusual Cases		0		1	2	2		2	2	2	2	2	
6	6 Sgrt Cases 0 1 2 <															
7	7 Softwarden. 2 1 2 2 2 2 2 8 Transpose. 2 1 1 2 1 2 2 2															
8	Image: Second second															
9	2 1 2 1 2 2 2 2 9 9 1 1 2 2 2 2 2 2 10 1 2 2 2 2 2 2 2															
10	Image Restructure Image Res															
12		Aggreg	gate			dd Variables										
13	1	Orthog	jonal Design	+		-	_									
14	1	🔣 Copy E	Dataset													
15	j	📰 Split Fi	ile													
16		E Select	Cases													
17		4 Weight	t Cases													
18																
19	ļ															
20	ļ															
21	1															
23	1															
	1											0.000				•
Data Minur	Variabl	e View							***							
Data View	variau	e view														
Add Conno													DAOM O	tation Descension		

	P1.sav [DataSet9] - F	ASW Statistics	Data Ed	litor								_					o X
<u>File</u> Edit	⊻iew <u>D</u> ata <u>T</u> rai	nsform <u>A</u> naly	/ze Di	rect <u>M</u> arketing <u>(</u>	<u>Graphs</u> <u>U</u> tilities	Add- <u>o</u> n	s <u>W</u> indow	<u>H</u> elp									
(<u>)</u>		5 3	1	ä 📥 重	11 🕺		- S	1 🕂 🕂	0	A86							
1: Gender	1															Visible: 13 o	f 13 Variables
	Gender	Age		Education	A1		A2	A3	A4		A5		A6	A7		A8	A9
1	1		2	1		2	2	2		2		2	:	2	2	2	
2	1		1	3		2	2	2		2		2		2	2	2	
3	2		2	1		2	2	2		2		2	:	2	2	2	
4	4 2																
5	5 1 3 Add Cases to WORKSH0P1.sav[DataSet9] 2																
6	6 2 3 7 1 1 Select a dataset from the list of open datasets or from a file to merge with the active dataset 2 2 2 2 2																
7	7 1 1 8 2 2																
8	1 1 2																
9	8 2 2 3 2																
10	0 2 2 2 2 2 9 2 3 2 2 2 10 1 2 2 2 2																
11																	
12				0 <u>A</u>	n external PASW	Statistics	data file										
13												Browse					
14				Non-	PASW Statistics	data files r	must be open	ed in PASW Statist	cs before the	ey can be use	d as part o	of a merge.					
10							Contin	ue Cancel	Help								
10																	
18				_													
19																	
20																	
21																	
22																	
23																	Ţ
	4													-			•
Data View	Variable View							***									
													PASW S	tatistics Proce	essor is rea	dy	

In the **Add Cases** from *WORKSHOP2* dialogue window, make sure that all the variables are listed in the **Variables in Active data set** box. Click **OK** and the 73 observations in *WORKSHOP2* will be included into the WORKSHOP1 SPSS data set.

WORKSHO	P1.sav [DataSet9] - P	ASW Statistics Data	Editor												o x
<u>File</u> <u>E</u> dit	⊻iew <u>D</u> ata <u>T</u> rar	nsform <u>A</u> nalyze (Direct <u>M</u> arketing <u>G</u>	raphs <u>U</u> tili	ties Add-g	ons <u>W</u> indow	Help								
2			🖹 📥 🗐	81	5	- S) 🛄 🔒		ABC						
1: Gender	1													Visible: 13 c	f 13 Variables
	Gender	Age	Education	A1		A2	A3	A4		A5	A6		A7	A8	A9
1	1	2	1		2	2	2		2	2		2	2	2	<u> </u>
2	1	1	3	G	2	2	2		2	2		2	2	2	
3	2	2	1		Add Cases	From Untitled2	[DataSet2]	1		2		2	2	2	
4	2	2	2	U	Inpaired Var	iables:	Variab	es in New Activ	/e Dataset:	2		2	2	2	
5	1	3	0				A1(*)		4	2		2	2	2	
6	2	3	0	_			A10(*)			2		2	2	2	
/	1	1	2	_			A2(^)			2		2	2	2	
0	2	2	2				A4(*)			2		2	2	2	
10		2	2	_			P <u>a</u> ir A5(*)			2		2	2	2	
10	· · · ·	2	2				A6(*)					2	2	2	
12							A8(*)								
13							🔲 Indi	cate case sour	ce as variabl	e:					
14					Re	name	so	irce01							
15															
16				(*)=Active dat	aset (DataSet2)									
17				, in the second s)-01111002	[Duidooin]									
18						<u>Ок</u> <u>Р</u> а	iste <u>R</u> eset Ca	ncel Help							
19					_				_						
20										_					
21															
22															
23															
	Mariable Marin						***								
Data View	variable view														
											PAS	W Statistics	Processor is rea	ady	

WORKSH	OP1.sav [DataSet1] - P	ASW Statistics Data	Editor									o x			
<u>File</u> Edit	View Data Trans	sform <u>A</u> nalyze I	Direct <u>M</u> arketing <u>G</u>	raphs <u>U</u> tilities Ado	d- <u>o</u> ns <u>W</u> indow	<u>H</u> elp									
😂 H	🖨 🛄	n 7		#1 👫 🖬			🍋 🌑 🍕	5							
1: Gender	1										Visible: 13 d	of 13 Variables			
	Gender	Age	Education	A1	A2	A3	A4	A5	A6	A7	A8	A9			
1	1	2	1	2	2	2	2	2 2	2	2	2	4			
2	1	1	3	2	2	2	2	2 2	2	2	2				
3	2	2	1	2	2	2	2	2 2	2	2	2				
4	2	2	2	2	2	2	2	2 2	2	2	2				
5	1	3	0	1	2	2	2	2 2	2	2	2				
6	2	3	0	1	2	2	2	2 2	2	2	2				
7	1	1	2	1	2	2	2	2 2	2	2	2				
8	f 1 1 2 1 2														
9	8 2 2 2 1 1 2 1 2														
10	1	2	2	2	2	2	2	2 2	2	2	2				
11	1	2	1	2	2	2	2	2 2	2	2	2				
12	1	1	3	2	2	2	2	2 2	2	2	2				
13	2	2	1	2	2	2	2	2 2	2	2	2				
14	2	2	2	2	2	2	4	2 2	2	2	2				
10	2	3	0	1	2	2		2	2	2	2				
17		J 1	2	1	2	2	2	2	2	2	2				
18	2	2	2	1	1	2	1	. 2	2	2	2				
19	2	3	- 1	2	2	2	2	2	2	2	2				
20	1	2	2	2	2	2	2	2 2	2	2	2				
21															
22															
23												Ļ			
	4											•			
Data View	Variable View														
Data view															
									PASW SI	atistics Processor is	ready				

Click on **File**, select **Save As** and and type *WORKSHOP_merge* in the **File Name** box. This SPSS data set contains observations from all three data sets.

3.0 DESCRIPTIVE STATISTICS AND CREATING CHARTS

Quantitative analysis should always start with some descriptive statistics and charts before moving on to inferential statistics which involves modeling and hypothesis testing. Simple descriptive statistics involve reporting the mean or median and standard deviation of continuous variables, and the frequency distribution and percentages for categorical variables. Charts are informative visual aids for summarizing results and makes report looks interesting.

3.1 Descriptive Statistics

This section illutrates obtaining frequency distribution for catregorical variables and descriptive statistics for continuous variables using SPSS.

3.1.1 Obtaining frequency distribution

Open the *orangasli.sav* file

Click on Analyze and select Descriptive Statistics and then Frequencies.

📴 orangasti.sav [DataSet1] - SPSS Data Editor													- 8 ×
File Edit View Data Transfo	rm Analyze Graphs Utilities W	Andow Help												
	Reports													
	Descriptive Statistics	Frequencies	L											
1 : Kg	Tables	 Descriptives 										Visible:	16 of 16 Vari	ables
Kg Sar	n Compare Means	 Explore 		k5	k6	k7	k8	r1	r2	r3	r4	k10	k11	var 🔺
1 1	General Linear Model	 Crosstabs 	2	1	1	1	0	0	0	0	0	0	2	
2 1	Generalized Linear Models	Ratio	2	1	1	1	0	0	0	0	0	0	2	
3 1	Mixed Models	P-P Plots	2	1	1	1	1	0	0	0	0	5	2	
4 1	Correlate	Q-Q Plots	2	1	1	1	1	0	Π	Π	Π	5	2	
5 1	Regression	12	2	1	1	1	1	-	0	-	-	5	2	
6 1	Classify	15	2	1	1	1	2	- 1	0	0	0	- 4	2	
7 1	Data Reduction	17	1	1	1	1	- 2	1	0	0	0	4	2	
8 1	Scale	36	2	1	2	1	0	1	0	0	0	4	2	
9 1	Nonparametric Tests	37	1	1	2	1	1	1	4	3	0	3	1	
10 1	Time Series	2	2	1	1	1	0	0	0	0	0	0	2	
11 1	Survival	3	2	1	1	1	0	0	0	0	0	0	2	
12 1	Multiple Response	6	1	1	1	1	0	0	0	0	0	0	2	
13 1	Quality Control	19	2	1	2	1	1	0	0	0	0	6	2	
14 1	KOC COIVE	32	1	1	2	1	1	1	4	0	0	3	2	
15 1	Amos 7	1	2	1	1	1	0	0	0	0	0	0	2	
16 1	3 11 5	2	1	1	1	1	0	0	0	0	0	0	2	
17 1	3 8 5	5	1	1	1	1	0	0	0	0	0	0	2	
18 1	3 7 5	6	1	1	1	1	0	0	0	0	0	0	2	
19 1	3 5 3	16	1	1	1	1	2	1	0	0	0	4	1	
20 1	3 4 3	18	1	1	1	1	2	1	0	0	0	4	2	
21 1	3 3 3	20	1	1	1	1	2	1	0	0	0	4	1	
22 1	3 9 5	20	1	1	1	1	2	1	0	0	0	3	1	
23 1	3 10 2	20	2	1	2	1	2	1	0	0	0	4	2	
24 1	3 6 3	23	1	1	2	1	2	1	0	0	0	4	2	
25 1	3 2 2	52	2	1	2	1	0	0	0	0	0	6	2	
26 1	3 1 1	53	1	1	2	1	1	1	0	0	0	3	2	
27 1	4 4 3	1	2	1	1	4	0	0	0	0	0	0	2	
28 1	4 3 3	4	1	1	1	4	0	0	0	0	0	0	2	
29 1	4 2 2	20	2	1	2	4	0	1	0	0	0	4	2	
30 1	4 1 1	30	1	1	2	4	0	4	0	0	0	3	2	
31 1	5 7 3	1	1	1	1	1	0	0	0	0	0	0	2	
32 1	5 6 3	2	1	1	1	1	0	0	0	0	0	0	2	
A Data View (Variable)	/iew /		=î∙			*	0		0	0	0	0	2	
Frequencies						SPSS	Processor is re-	ady						

The **Frequencies** dialogue box appears. Select the variable *"Name of Village"* and click on the middle button ▶ to move it to the **Variable(s)** box.

🔛 orang	gasli.sav [Da	ataSet1] - SP	SS Data Editor	r														- 8 ×
File Edit	View Data	Transform Ar	nalyze Graphs	Utilities Wi	indow Help													
	a 🖬 🔶	🔿 🔚 🖟	A TT	🖽 🖽	🖬 😼 🍳													
1 : Ka			1													Visible:	16 of 16 Var	iables
	Ka	Sam	k1	6	k3	k4	k5	k6	1	k7	k8	r1	0	6	r4	k10 [k11	var .
1	1	1	9	3	1	2		1	1	1	0	0	0	0	0	0	2	
2	1	1	-		~	-			1	1	0	0	0	0	0	0	2	
3	1	1	Frequenc	ies				×	1	1	1	0	0	0	0	5	2	
4	1	1	Comula ma	mher IC +	Va	riable(s):		OK	1	1	1	0	0	0	0	5	2	
5	1	1	A Hd membe	r lk11	1	Name of villa	ge (Kg)		1	1	1	0	0	0	0	5	2	
6	1	1	Relationshi	ip [k2]				Paste	1	1	2	1	0	0	0	4	2	
7	1	1	Nge [k3]					Reset	1	1	2	1	0	0	0	4	2	
8	1	1	Gender [k4	4]				Cancel	2	1	0	1	0	0	0	4	2	
9	1	1	Sub-ethnic	[k5]				Gandor	2	1	1	1	4	3	0	3	1	
10	1	2	Marital stat	US [K6]				Help	1	1	0	0	0	0	0	0	2	
11	1	2	A rational	·					1	1	U	U	U	0	U	U	2	
12	1	2	Display frequ	uency tables					1	1	0	U	U	U	U	U	2	
1.5	1	2							2	1	1	0	0	0	0	0	2	
14	1	2			Statistics	Charts	Format.		1	1			4	0	0		2	
16	1	3	11	5	2	1		1	1	1	0	0	0	0	0	0	2	
17	1	3	8	5	5	1		1	1	1	0	0	0	0	0	0	2	
18	1	3	7	5	6	. 1		1	1	1	0	0	0	0	0	0	2	
19	1	3	5	3	16	1		1	1	1	2	1	0	0	0	4	1	
20	1	3	4	3	18	1		1	1	1	2	1	0	0	0	4	2	
21	1	3	3	3	20	1		1	1	1	2	1	0	0	0	4	1	
22	1	3	9	5	20	1		1	1	1	2	1	0	0	0	3	1	
23	1	3	10	2	20	2		1	2	1	2	1	0	0	0	4	2	
24	1	3	6	3	23	1		1	2	1	2	1	0	0	0	4	2	
25	1	3	2	2	52	2		1	2	1	0	0	0	0	0	6	2	
26	1	3	1	1	53	1		1	2	1	1	1	0	0	0	3	2	
27	1	4	4	3	1	2		1	1	4	0	0	0	0	0	0	2	
28	1	4	3	3	4	1		1	1	4	0	0	0	0	0	0	2	
29	1	4	2	2	20	2		1	2	4	0	1	U	0	U	4	2	
30	1	4	1	1	30	1		1	2	4	U	4	U	U	U	3	2	
31	1	5	/	5	1	1		1	1	1	0	U	U	0	U	U	2	
32		5	6		2	2		1			0	U	0	0	0	U	2	
<u>∢</u> }\Da	ta View 🖌 Va	ariable View /				Ŀ	•			-								<u> </u>
										SPSS	rocessor is rea	idy						

The SPSS output is shown below:

Statistics

Name of village

N	Valid	239
	Missing	0

			Kg		
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Sg Raba	78	32.6	32.6	32.6
	2 Sg Banun	39	16.3	16.3	49.0
	4 Desa Permai	52	21.8	21.8	70.7
	5 Desa Damai	42	17.6	17.6	88.3
	6 Ria	28	11.7	11.7	100.0
	Total	239	100.0	100.0	

Note that since there are no missing values the Percent and Valid Percent values are the same.

3.1.2 Descriptive statistics

Open the Employee Data.sav file

Click on Analyze and select Descriptive Statistics and then Descriptives.

In the **Descriptives** window, select teh variable '*salary*' and '*salbegin*' and move them into the **Variable(s)** box.

🔛 *Employe	e data.sav [D	ataSet4] - Si	PSS Data E	ditor													
<u>F</u> ile <u>E</u> dit ⊻	(jew <u>D</u> ata]	ransform <u>A</u>	nalyze <u>G</u> ra	aphs <u>U</u> t	lities	Add-ons	Window <u>H</u> e	p									
🕞 🔜 👜	📴 👆 👼	<u>*</u> 📭 📭	M + 🛛	t 🗄	1	📑 💊 🍳	•										
1 : id	1														v	isible: 10 of	10 Variables
	id	gender	h	date		educ	inhcat	salary	salbegin	inhtime	prevexp	minority	var	var	var	var	
1	1	Male		02/03/19	952	16	5 Manac	er \$57,0	00 \$27,000	98	144	No					-
2	2	Male		05/23/19	958	16	6 Clerio	al \$40,2	00 \$18,750	98	36	No	i				
3	3	Female		07/26/19	929	12	2 Cleric	al \$21,4	50 \$12,000	98	381	No					
4	4	Female		04/15/19	947	-		1 004.0	00 #40.000		190	No	Descript	ives: Optio	ns		
5	6	i Male		02/09/19	955	Descript	ives				38	No					
6	6	i Male		08/22/19	958			⊻a	riable(s):			No	✓ Mean	<u>S</u> ur	n		
7	7	Male		04/26/19	956	🛷 id		4	salary		14	No	Dispersion	n			
8	8	Female		05/06/19	966	odate 🗸		4	salbegin		ing	No	Std. dev	/iation 🗹 Mi	nimum		
9	9	Female		01/23/19	946	equc					15	No	Varianc	e 🗸 M	aximum		
10	10	l Female		02/13/19	946	jobtime		*			44	No	Range		– E mean		
11	11	Female		02/07/19	950	nevexp 🖉					43	No					
12	12	! Male		01/11/19	966	minority					26	Yes	Distributio	m			
13	13	l Male		07/17/19	960						34	Yes	<u>K</u> urtosis	s 🗌 Sk	e <u>w</u> ness		
14	14	Female		02/26/19	949						37	Yes	-Display Or	dor			
15	15	i Male		08/29/19	962	Save sta	ndardi <u>z</u> ed valu	es as variables			66	No					
16	16	i Male		11/17/19	964		ок	Paste R	eset Cancel	Help	24	No	Variable	e list			
17	17	Male		07/18/19	962	1.		ar oro jo	00		48	No	() <u>A</u> lphabe	etic			
18	18	l Male		03/20/19	956	16	6 Manag	er \$103,7	50 \$27,510	97	70	No	O Ascend	ling means			
19	19	l Male		08/19/19	962	12	2 Cleric	al \$42,3	00 \$14,250	97	103	No	O <u>D</u> escen	ding means			
20	20	l Female		01/23/19	940	12	2 Cleric	al \$26,2	50 \$11,550	97	48	No					
21	21	Female		02/19/19	963	16	6 Cleric	al \$38,8	50 \$15,000	97	17	No	Continue	Canc	el He	lp di	
22	22	! Male		09/24/19	940	12	2 Cleric	al \$21,7	50 \$12,750	97	315	Yes					
23	23	l Female		03/15/19	965	15	5 Cleric	al \$24,0	00 \$11,100	97	75	Yes					
24	24	Female		03/27/19	933	12	2 Cleric	al \$16,9	50 \$9,000	97	124	Yes					
25	25	i Female		07/01/19	942	15	5 Cleric	al \$21,1	50 \$9,000	97	171	Yes					
26	26	i Male		11/08/19	966	16	5 Cleric	al \$31,0	50 \$12,600	96	14	No					-
	4						-										•
Data View	Variable View																
													SP	SS Processo	or is ready		
🐉 start	🗀 2 Win	dows 👻 🛛	CHAPTER	4	(월) C	HAPTER 3	cars_/	Americ	orangasli.sa	Employee	ed 🙀 *0	utput5 [D	📊 Chart Editor		licrosoft Po		

Click on the **Options** tab and the **Descritive:Options** dialogue window appears.

By default the boxes for Mean, Std. Deviation, Minimum and Maximum are already

checked. Under **Distribution**, click on the **Skewness** and **Kurtosis** boxes.

Then, click **Continue** and **OK**.

The descriptive statistics results will appear in the OUTPUT window.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skew	/ness	Kurt	osis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Current Salary	474	\$15,750	\$135,000	\$34,419.57	\$17,075.661	2.125	.112	5.378	.224
Beginning Salary	474	\$9,000	\$79,980	\$17,016.09	\$7,870.638	2.853	.112	12.390	.224
Valid N (listwise)	474								

3.2 Creating Pie Charts

Click on the **Charts** button. Select **Pie Chart**. Under Chart Value, then select *Percentage*.

🔛 orangas	sli.sav [Dat	aSet1] - SPSS	Data Editor														- 8 ×
File Edit Vi	iew Data	Fransform Analys	e Graphs Utilitie	es Window H	telp												
🔒 🖃 📥	📴 👳	🥏 🏪 📴 🕯	🕯 🚹 🛅 🔠	4 🖪 🔌													
1 : Kg			1												Visible:	16 of 16 Vari	iables
í – E	Kg	Sam	k1 k2	k3	k4	1	k5	kб	k7	k8	r1	r2	r3	r4	k10	k11	var 🔺
1		x î	-		a l		1	1	1	0	0	0	0	0	0	2	
2	E Freq	uencies					1	1	1	0	0	0	0	0	0	2	
3	Same	ole number [S. 🔺	Variable	=[s]:	ОК		1	1	1	1	0	0	0	0	5	2	
4	🥜 Hd m	iember [k1]	💞 Na	me of village (Kg) Reals		1	1	1	1	0	0	0	0	5	2	
5	Rela	tionship [k2]			Faste		1	1	1	1	U	U	0	0	5	2	
7	Age	[k3]			Rese	et	1	1	1	2	1	0	0	0	4	2	
	- Sub-	ter (K4) ethnic [k5]			Cance	el	1	2	1	2	1	0	0	0	4	2	
9	- 🔗 Marit	al status [k6]			Help		1	2	1	1	1	4	3	0	3	1	
10	nelig 🤣 Relig	ion [k7]					1	- 1	1	O	0	0	0	0	0	2	
11	- 1 <i>1</i> 9 mail						1	1	1	0	0	0	0	0	0	2	
12	🔽 Displa	y frequency tables					1	1	1	0	0	0	0	0	0	2	
13			Statistics	hate Ec	uma (1	2	1	1	0	0	0	0	6	2	
14			Statistics		anna		1	2	1	1	1	4	0	0	3	2	
15	1	3	12	5	1	2	1	1	1	0	0	0	0	0	0	2	
16	1	3	11	5	2	1	1	1	1	0	0	0	0	0	0	2	
17	1	3	Frequenci	es: Charts		×		1	1	U	U	U	U	0	U	2	
18	1	3				_		1	1	0	U	U	U	U	0	2	
20	1	3	Chart Type	e	Conti	inue	1	1	1	2	1	0	0	0	4	1	
20	1	3	C None		Can	cel	1	1	1	2	1	0	0	0	4	2	
22	1	3	C Barch	naits	Hel	in l	1	1	1	2	1	0	0	0	3	1	
23	1	3	 Pie ch 	iarts		ap	1	2	. 1	2	. 1	0	0	0	4	2	
24	1	3	C Histog	irams:			1	2	1	2	1	0	0	0	4	2	
25	1	3		ith normal curve			1	2	1	0	0	0	0	0	6	2	
26	1	3					1	2	1	1	1	0	0	0	3	2	
27	1	4	Chart Valu	ies			1	1	4	0	0	0	0	0	0	2	
28	1	4	C Freque	encies 📀	Percentages		1	1	4	0	0	0	0	0	0	2	
29	1	4					1	2	4	0	1	0	0	0	4	2	
30	1	4	1	1	30	1	1	2	4	0	4	0	0	0	3	2	
31	1	5	/	3	1	1	1	1	1	0	0	0	0	0	0	2	
32	1	5	0	3	2	1	1	1	1	0	U	0	U	0	0	2	
<u>∢</u>	View 🖌 Var	iable View /				4											<u> </u>

Click on **Continue** and then **OK**.

The pie chart will appear in the **OUTPUT** window.

Double click on the pie-chart to activate the Chart editor



Double click again on the pie chart in the **Chart Editor** window and the **Properties** dialogue box appears. Click **on Depth & Angle.**



Click on the **3-D** radio button. Then, click on **Apply** and **Close**.



Double click on the 3-D pie-chart. From the **Elements** menu select **Data Label Mode** and click on each slice of the pie-chart to put in the percentage value.



Click on Elements and Data Label Mode again to switch off the Data Label Mode.

Click on the **Minimize** button to return to the Output window. You have now created a 3-D pie-chart with percentage values for each segment.



3.3 Creating Bar Charts

Click on Graphs, select Legacy Dialogs and Bar.

🔛 orang	gasli.sav [Dat	aSet1] - SPSS	6 Data Edit	or													- 8 ×
File Edit	View Data T	ransform Anal	lyze Graphs	Utilities Wi	indow Help												
00	🖹 🖬 👘	م الم	A Char	rt Builder	i 😼 🚳 🔍	5											
1 : Kg			Inte	ractive 🕨 🕨			1								Visible:	16 of 16 Vari	ables
, - T	Ka	Sam	k Loga	icy Dialogs 🔸	Bar		k5 [k6	k7 [k8	r1	12	13	r4	k10	k11	var 🔸
1	1	1	9	3	Jine		1	1	1	0	0	0	0	0	0	2	
2	1	1	8	3	Area		1	1	1	0	0	0	0	0	0	2	
3	1	1	7	3	Pie		1	1	1	1	0	0	0	0	5	2	
4	1	1	6	3	High-Low		1	1	1	1	0	0	0	0	5	2	
5	1	1	5	3	Boxplot		1	1	1	1	0	0	0	0	5	2	
6	1	1	4	3	Error Bar		1	1	1	2	1	0	0	0	4	2	
7	1	1	3	3	Population Py	ramid	1	1	1	2	1	0	0	0	4	2	
8	1	1	2	2	Scatter/Dot		1	2	1	0	1	0	0	0	4	2	
9	1	1	1	1	Histogram		1	2	1	1	1	4	3	0	3	1	
10	1	2	5	3	2	2	1	1	1	0	0	0	0	0	0	2	
11	1	2	4	3	3	2	1	1	1	0	0	0	0	0	0	2	
12	1	2	3	3	6	1	1	1	1	0	0	0	0	0	0	2	
13	1	2	2	2	19	2	1	2	1	1	0	0	0	0	6	2	
14	1	2	1	1	32	1	1	2	1	1	1	4	U	U	3	2	
15	1	3	12	6	1	2	1	1	1	U	U	U	U	U	U	2	
16		3	11	5	2	1	1	1	1	U	0	U	U	U	U	2	
17	1	3	8	5	5	1	1	1	1	U	U	U	U	U	U	2	
10	-	3	1	0	10		1	1	1	0	0	0	U	0	0	2	
20	1	3	5	3	10	1	1	1	1	2	1	0	U	U	4	2	
20	1	3	4	3	10	1	1	1	1	2	1	0	U	0	4	2	
21	1	3	3	5	20	1	1	1	1	2	1	0	0	0		1	
22	1	3	9	2	20	2	1	2	1	2	1	0	0	0	3		
23	1	3	10	2	20		1	2	1	2	1	0	0	0	4	2	
24	1	3	2	2	52	2	1	2	1	2	0	0	0	0	4	2	
25	1	3	1	- 1	53	1	1	2	1	1	1	0	0	0	3	2	
27	1	4	4	3	1	2	1	1	. 4	Ú	, D	0	0	0	0	2	
28	1	4	3	3	4	1	1	1	4	- 0	0	0	0	0	-	2	
29	1	4	2	2	20	2	1	2	4	0	- 1	0	0	0	4	2	
30	1	4	1	- 1	30	1	1	2	4	0	4	0	0	0	3	2	
31	1	5	7	3	1	1	1	1	1	0	0	0	0	0	0	2	
32	1	5	6	3	2	1	1	1	1	0	0	0	0	0	0	2	
1 E NDa	ta View (Vari	able View /			-	Î.				-	10	0	-	-	-	-	
Bar	or view V vali	abie 18W /							SPSS	Processor is rea	vdv						
									101 00								

The **Bar Charts** dialogue window appears. Click on **Simple** and under *Data in Chart* use the default *"Summaries for groups of cases"*. Click on **Define**.

🔛 orang	gasli.sav [Da	itaSet1] - SP	SS Data Edi	tor														- 8 ×
File Edit	View Data	Transform An	alyze Graph	is Utilities W	indow Help													
و 🖂 🗠	🐴 📴 🧄	er 🐜 🖗	44 📲	1 🗉 🗗	rs 😼 🍳													
1 : Kg			1													Visible:	16 of 16 Va	iables
Í	Kg	Sam	k1	k2	k3	k4	k5	k6	k7		k8	r1	r2	r3	r4	k10	k11	var 🔺
1	1	1	9	3	1	1	2 1		1	1	0	0	0	0	0	0	2	
2	1	1	8	3	6		2 1		1	1	0	0	0	0	0	0	2	
3	1	1	7	3	7		Bar Charts		×	1	1	0	0	0	0	5	2	
4	1	1	6	3	9			-		1	1	0	0	0	0	5	2	
5	1	1	5	3	12		Simple	L	Define	1	1	0	0	0	0	5	2	
6	1	1	4	3	15				Cancel	1	2	1	0	0	0	4	2	
7	1	1	3	3	17		Clustered		Hala	1	2	1	0	0	0	4	2	
8	1	1	2	2	36			_	нар	1	0	1	0	0	0	4	2	
9	1	1	1	1	37		Stacked			1	1	1	4	3	0	3	1	
10	1	2	5	3	2					1	0	0	0	0	0	0	2	
11	1	2	4	3	3		🗆 Data in Chart A	re		1	0	0	0	0	0	0	2	
12	1	2	3	3	6		·			1	U	U	U	U	U	U	2	
13	1	2	2	2	19		• Summaries	or groups or	cases	1	1	0	0	0	0	6	2	
14	1	2	1	1	32		Summaries	of separate	variables	1	1	1	4	0	0	3	2	
15	1	3	12	5	1		O Values of in	dividual cas	es	1	0	0	0	0	0	0	2	
16	1	3	11	5	2					1	0	0	0	0	0	0	2	
17	1	3	8	5	5		1 1		1	1	0	0	0	0	0	0	2	
18	1	3	/	5	6		1 1		1	1	U	U	U	U	U	U	2	
19	1	3	5	3	16		1 1		1	1	2	1	U	U	U	4	1	
20	1	3	4	3	18		1 1		1	1	2	1	0	0	0	4	2	
21	1	3	3	3	20		1 1		1	1	2	1	0	0	0	4	1	
22	1	3	9	5	20		1 1		1	1	2	1	U	U	U	3	1	
23	1	3	10	2	20	-	2 1		2	1	2	1	0	0	0	4	2	
24	1	3	6	3	23		1 1		2	1	2	1	0	U	U	4	2	
25	1	3	2	2	52		2 1		2	1	U	U	0	U	U	ь	2	
26	1	3	1	1	- 53		1 1		2	1	1	1	U	U	U	3	2	
27	1	4	4	3	1		2 1		1	4	0	U	0	U	U	U	2	
28	1	4	3	3	4		1 1		1	4	U	U	0	U	U	0	2	
29	1	4	2	2	20	-	2 1		2	4	U	1	U	U	U	4	2	
30	1	4	1	1	30		1		2	4	0	4	0	0	0	3	2	
31	1	5	7	3	1		1 1		1	1	0	0	0	0	0	0	2	
32	1	5	6	3	2		1 1		1	1	U	U	U	U	U	U	2	
∢ ▶\Da	ta View 🔏 Va	riable View /					•			ence r		41						<u> </u>
										ISMSS F	rouessor is read	1y						

In the **Define Simple Bar:Summaries for Groups of Cases**, select **Gender** and move it to the **Category Axis** box. Click on the % **of cases** radio button and then click **OK**.

🔛 orangasli.sav [D	ataSet1] - SPS	S Data Ed	itor								_ 5	×
File Edit View Data	Transform Ana	lyze Grapl	hs Utilities Wi	ndow Help								
) 🔿 🔚 🗗	画用	اله 🖪 📊	5 😒 G)							
Name	Type	Width	Decimals	Labe	el Values	Missing	Columns	Align	Measure			-
1 Kg	Numeric	11	0	Name of v	village {1, Sg Raba} N	ne	8	Right	Scale			
2 Sam	Numeric	11	0	Sample	T INI INI		0	(C		-	1	
3 k1	Numeric	11	0	Hd mer	Derine Simple Dar: :	oummaries i	or Groups o	I Cases				
4 k2	Numeric	11	0	Relatio	Name of village [Kg]	Bars Represe	nt					
5 k3	Numeric	11	0	Age	Sample number [Sam]	O N of cases		% of case				
6 k4	Numeric	11	0	Gender	Hd member [k1]	C Cum. N		C Dum. %	Pas	te		
7 k5	Numeric	11	0	Sub-etł	🔗 Relationship [k2]	Other stati:	stic (e.g., mean)	l i	Re	set		
8 k6	Numeric	11	0	Marital	Age [k3]	Va	riable:		Can	cel		
9 k7	Numeric	11	0	Religio	Sub-ethnic [k5]							
10 k8	Numeric	11	U	Edu att	Pakrion (k7)			istic	He	ip		
11 11	Numeric	11	0	Occ 1	Fidu attainment [k8]							
12 r2	Numeric	11	U	Occ 2	Ø 0cc 1 [r1]	Cate	aory Axis:					
13 r3	Numeric	11	U	Ucc 3	P Occ 2 [r2]		Gender [k4]					
14 14	Numeric	11	U	Ucc 4	🔗 Occ 3 [r3]							
15 k10	Numeric	11	U	Status	🔗 Occ 4 [r4]	Panel by Bow	<i>,</i> ,					
16 K11	Numeric	11	U	VVorker	Status of occ 1 (k10)							
17		_			Worked outside village							
18						EN						
19							icer valiables (i					_
20							nns:					
21												
22												
23		-		I		LN						
24				— ,	Template				Titles			
20					Use chart specifications	from:						
20					File				Option	\$		
28												
20												
30		-										
31		-	-	-				-				
32		-	-									
33												
() Doto Mary) Ma	viable \/iew /	1	1	-					-			-
 I hata Alew VVa 	anable view /						SDS	S Processor i	ic ready	_		1
							Jr.		orougy .			

The simple bar chart for gender will appear in the **OUTPUT** window.



To create a 3-D simple bar chart, double click on the bar chart and the **Chart Editor** window appears. Double click on one of the bars and from the **Properties** dialogue box, click on **Depth & Angle.** Click on the **3-D** radio button and then click **Apply.**



The 2-D simple bar chart changes to a 3-D chart. Click on **Elements** and select **Data Label Mode**.



Click on each of the bar and the percentage value will appear.



Close the **Chart Editor** window by clicking on the **Minimize** button. to view the 3-D bar chart in the **OUTPUT** window.



You can click on the bar chart in the Output window to select it.

Then, click on the **Edit m**enu, select **Copy** and **Paste** the bar chart into a Word document or power-point slide.

3.4 Creating Clustered Bar Charts

Click on Graphs, select Legacy Dialogs and Bar.

The **Bar Charts** dialogue window appears. Click on **Clustered** and under Data in Chart use the default *"Summaries for groups of cases"*. Click on **Define**.


In the **Define Clustered Bar:Summaries for Groups of Cases**, select *Marital Status* and move it to the **Category Axis** box. Then, select *Gender* and move it to the **Define Clusters by** box. Click on the % **of cases** radio button and then click **OK**.

🔛 oranj	gasli.sav [Da	itaSet1] - SPS	6 Data Edito	or													- 8 ×
File Edit	View Data	Transform Ana	lyze Graphs	Utilities Wi	ndow Help												
	🖲 🖬 📥	ي الله 🗧	M 1		5 😼 🤇)											
1 : Kg			1												Visible:	16 of 16 Vari	ables
	Kg	Sam	k1	k2	k3	k4 k5	k6	k7	k8	r1	r2		r3	r4	k10	k11	var 🔺
1	1	1	9	3		Define Clustered F	Bar: Summarie	s for Groups	of Cases		×	0	0	0	0	2	
2	1	1	8	3			- Deve Deersee					0	0	0	0	2	
3	1	1	7	3		Name of village [Kg]	- bars nepreser	× _		0	К	0	0	0	5	2	
4	1	1	6	3		Sample number [Sam]	O N of cases		% of cases	-	20	0	0	0	5	2	
5	1	1	5	3		Hd member [k1]	C Cum. N		Cum. %		510	0	0	0	5	2	
6	1	1	4	3		Relationship [k2]	C Uther statis	tic (e.g., mean)		Re	set	0	0	0	4	2	
7	1	1	3	3		Age [K3]		aute.		Car	ncel	0	0	0	4	2	
8	1	1	2	2		Befraion [k7]			- 1			0	0	0	4	2	
9	1	1	1	1		Edu attainment [k8]		Unange Statis	1C	H	NP	4	3	0	3	1	
10	1	2	5	3		P Occ 1 [r1]	Cated	IOTV Axis:				0	0	0	0	2	
11	1	2	4	3		P Occ 2 [r2]		Marital status [k6	1	_		0	0	0	0	2	
12	1	2	3	3		🖉 Occ 3 [r3]	Defin	e Clusters bur				0	0	0	0	2	
13	1	2	2	2		🖉 Occ 4 [r4]		Gender (k4)		_		0	0	0	6	2	
14	1	2	1	1		Status of occ 1 [k10]	- Deniel burger					4	0	0	3	2	
15	1	3	12	5		Worked outside villag	e Fariel by Bows					0	0	0	0	2	
16	1	3	11	5					_			0	0	0	0	2	
17	1	3	8	5								0	0	0	0	2	
18	1	3	7	5								0	0	0	0	2	
19	1	3	5	3								0	0	0	4	1	
20	1	3	4	3			Lolun	ins:	_			0	0	0	4	2	
21	1	3	3	3								0	0	0	4	1	
22	1	3	9	5								0	0	0	3	1	
23	1	3	10	2								0	0	0	4	2	
24	1	3	6	3		Template				Tillor	1	0	0	0	4	2	
25	1	3	2	2		Use chart specificatio	ns from:				····	U	U	U	6	2	
26	1	3	1	1		174				Option	18	U	U	U	3	2	
27	1	4	4	3		110					_	U	U	U	U	2	
28	1	4	3	3	_							U	U	U	U	2	
29	1	4	2	2	2	0 2	1 4	4	U	1		U	U	U	4	2	
30	1	4	1	1	3	U 1	1 2	4	U	4		U	U	U	3	2	
31	1	5	/	3		1 1	1 1	1	U	U		U	U	U	U	2	
32	1	6	6	3		2 1	1 1	1	U	U		U	U	U	U	- 2	
< ► \Da	ita View 🖌 Va	riable View /				•											
								SPSS	Processor is rea	ady							

The clustered bar chart for *gender* clustered *by marital status* appears in the **OUTPUT** window.



To create a 3-D clustered bar chart, double click on the bar chart and the **Chart Editor** window appears. Double click on one of the bars and from the **Properties** dialogue box, click on **Depth & Angle.** Click on the **3-D** radio button and then click **Apply**.



The 2-D simple bar chart changes to a 3-D chart. Click on **Elements** and select **Data Label Mode**.



Click on each of the bar and the percentage value will appear.



Close the Chart Editor window by clicking on the **Minimize** button to view the 3-D bar chart in the **OUTPUT** window



3.5 Creating Stacked Bar Charts

Click on Graphs, select Legacy Dialogs and Bar.

The **Bar Charts** dialogue window appears. Click on **Stacked** and use the default *"Summaries for groups of cases"*. Click on **Define**.

🔛 orang	🖪 orangasli.sav [DataSet1] - SPSS Data Editor 🔹 🧔 🛪																	
File Edit	View Data	Transform Ar	nalyze Graphs	s Utilities Wi	ndow Help													
😕 🖬 (a 🖬 🕤	🔿 🔚 🖟	MI	1 - -	T 😒 🧟													
1 : Kg			1													Visible:	16 of 16 ∀ari	ables
	Kg	Sam	k1	k2	k3	k4	k5	k6	k7	k8		r1	r2	r3	r4	k10	k11	var 🔺
1	1	1	9	3	1	2	1	1	1		0	0	0	0	0	0	2	
2	1	1	8	3	6	2	1	1	1		0	0	0	0	0	0	2	
3	1	1	7	3	7	2	1	1	1		1	0	0	0	0	5	2	
4	1	1	6	3	9	2	1	1	1		1	0	0	0	0	5	2	
5	1	1	5	3	12	2	1	1	1		1	0	0	0	0	5	2	
6	1	1	4	3	15	2	1	1	1		2	1	0	0	0	4	2	
/	1	1	3	3	17	1	1	1	1	_	2	1	U	U	U	4	2	
8	1	1	2	2	36	2	Ba	Charts		×	U	1	U	U	U	4	2	
9	1	1	1	1	3/	1					1	1	4	5	U	3	1	
10	1	2	5	3	2	2		Simple	D	sfine	U	U	U	U	U	U	2	
42	1	2	4	3	3	2			Ca	ncel	0	0	U	0	0	U	2	
12		2	3	3	10	1		Clustered	-	lelp	1	0	0	0	0	U	2	
13	1	2	2	2	33	2	#	-			1	1	0	0	0	0	2	
14	1	2	12	5	32			Stacked			0	0	4	0	0	3	2	
10	1	3	12	5	2		8				0	0	0	0	0	0	2	
17	1	3		5	2	1		ata in Chart Ar	e		0	0	0	0	0	0	2	
18	1	3	7	5	6	1		Summariae f	or moune of car		0	0	0	0	0	0	2	
19	1	3	5	3	16	1		Summarian	d groups or co	Was	2	1	0	0	0	4	1	
20	1	3	4	3	18	1		Values of in	fixidual cases		2	1	0	0	0	4	2	
20	1	3	3	3	20	. 1		values or m			2	1	0	0	0	4	1	
22	1	3	9	5	20	. 1	1	1	1		2	1	0	0	0	3	1	
23	1	3	10	2	20	2	1	2	1		2	1	0	0	0	4	2	
24	1	3	6	3	23	1	1	2	1		2	1	-	0	- 0	4	2	
25	1	3	2	2	52	2	1	2	1		0	0	0	0	0	6	2	
26	1	3	1	1	53	1	1	2	1		1	1	0	0	0	3	2	
27	1	4	4	3	1	2	1	1	4		0	0	0	0	0	0	2	
28	1	4	3	3	4	1	1	1	4		0	0	0	0	0	0	2	
29	1	4	2	2	20	2	1	2	4		0	1	0	0	0	4	2	
30	1	4	1	1	30	1	1	2	4		0	4	0	0	0	3	2	
31	1	5	7	3	1	1	1	1	1		0	0	0	0	0	0	2	
32	1	5	6	3	2	1	1	1	1		0	0	0	0	0	0	2	
+ ⊨\Da	ta View 🔏 🔽	ariable View /	· · · ·	2	C.	Î.	1		1 4	-	0		0	0		0	2	<u> </u>
									SPSS	Processo	r is read	dy .						

In the **Define Stacked Bar:Summaries for Groups of Cases**, select *Gender* and move it to the **Category Axis** box. Then, select *Marital Status* and move it to the **Define Stacks by** box. Click on the % **of cases** radio button and then click **OK**.

🔛 orang	asli.sav [Da	taSet1] - SPS	S Data Edit	ог														- 8 ×	¢
File Edit	View Data	Transform Ana	alyze Graphs	Utilities Wi	ndow Help)													
👝 💷 d	3 🖬 🗉	ي الله الح	A	1 🗉 💷	5 🛛	0													
1 : Kg			1													Visible:	16 of 16 ∀ari	iables	
	Kg	Sam	k1	k2	k3	k4	k5	k6	k7	k8	r1	f.	2	r3	r4	k10	k11	var	
1	1	1	9	3		Define St	acked Bar	: Summaries	for Groups o	f Cases		×	0	0	0	0	2		Ĩ
2	1	1	8	3	_			- Para Ropros					0	0	0	0	2		
3	1	1	7	3		Name of v	ilage [Kg]	C N (, in 1997			эк 📗	0	0	0	5	2		
4	1	1	6	3		Sample nu	mber [Sam]	C N or cases		• < or cases	P	arte	0	0	0	5	2		-
5	1	1	5	3		Hd membe	s (k1)	C Cum N		Lum. %			0	0	0	5	2		
6	1	1	4	3		Relationsh	ip (k2)	Uther stati	tic (e.g., mean) righter		R	eset	0	0	0	4	2		
7	1	1	3	3		Age [K3]	JLE1	l D č	naure.		Ca	ncel	0	0	0	4	2		
8	1	1	2	2		Beligion fk	71			tintia.			0	0	0	4	2		
9	1	1	1	1		Sedu attain	ment (k8)		Unange sta	usuls		ieth	4	3	0	3	1		
10	1	2	5	3		P Occ 1 [r1]		Cate	101V Axis:				0	0	0	0	2		
11	1	2	4	3		🔗 Occ 2 [r2]			Gender [k4]				0	0	0	0	2		
12	1	2	3	3		🖉 0 cc 3 [r3]		Defi	e Stacks bir				0	0	0	0	2		
13	1	2	2	2		🖉 Occ 4 [r4]			Marital status [kF	3			0	0	0	6	2		
14	1	2	1	1		Status of c	cc 1 [k10]	- Damed Du	indinal oracity free	4			4	0	0	3	2		
15	1	3	12	5		Worked or	utside village	Farlet by Bow					0	0	0	0	2		
16	1	3	11	5					4				0	0	0	0	2		
17	1	3	8	5									0	0	0	0	2		
18	1	3	7	5									0	0	0	0	2		
19	1	3	5	3				Colu	Gat vulturita (He				0	0	0	4	1		
20	1	3	4	3					ins.				0	0	0	4	2		
21	1	3	3	3									0	0	0	4	1		
22	1	3	9	5									0	0	0	3	1		
23	1	3	10	2									0	0	0	4	2		
24	1	3	6	3		Template					Title	s	0	0	0	4	2		
25	1	3	2	2		Use chart	specifications	s from:					0	0	0	6	2		
26	1	3	1	1		File					Upto	ins	0	0	0	3	2		
27	1	4	4	3									0	0	0	0	2		
28	1	4	3	3	_		1		1			_	0	0	0	0	2		
29	1	4	2	2	2	0 2		1	2 4	0	1		0	0	0	4	2		
30	1	4	1	1	3	0 1		1	2 4	0	4	-	0	0	0	3	2		
31	1	5	7	3		1 1		1	1 1	0	0		0	0	0	0	2		
32	1	5	6	3		2 1		1	1 1	0	0		0	0	0	0	2	,	
< ► \Dat	ta View 🖌 Va	riable View /	<i>r</i>	2		Î	4	41					0	0	0		-		
									SPSS	Processor is rea	idy								

The bar chart for *gender* stacked by *marital status* appears in the **OUTPUT** window.



To create a 3-D clustered bar chart, double click on the bar chart and the **Chart Editor** window appears. Double click on one of the bars and from the **Properties** dialogue box, click on **Depth & Angle.** Click on the **3-D** radio button and then click **Apply.**



The 2-D simple bar chart changes to a 3-D chart. Click on **Elements** and select **Data Label Mode**.





Click on each of the bar and the percentage value will appear.

Close the **Chart Editor** window by clicking on the **Minimize** button to view the 3-D bar chart in the **OUTPUT** window.



3.6 Creating Simple Boxplots

🔛 oran	gasli.sav [D	ataSet1] - SPSS	Data Editor															- 8 ×
File Edit	View Data	Transform Analy	ze Graphs Uti	ilities Wir	ndow Help													
e 🗆	👜 🖭 🗠	🔿 🐜 🕼 🖌	Chart Bui	ider	I 🥸 🔕 👟													
1 : Ka			Interactiv	ve 🕨												Visible:	16 of 16 ∀ari	ables
	Ka	Sam	Legacy Di	Halogs 🕨	Bar		45	46	k7	1 18	1 11		2	3	r4	k10	k11	VPr .
1	1	1	9	3	3-D Bar		1	1		1	0	0	0	0		0	2	-
2	1	1	8	3	Area		1	1		1	0	0	0	0	0	0	2	
3	1	1	7	3	Pie		1	1		1	1	0	0	0	0	5	2	
4	1	1	6	3	High-Low		1	1		1	1	0	0	0	0	5	2	
5	1	1	5	3	Boxplot		1	1		1	1	0	0	0	0	5	2	
6	1	1	4	3	Error Bar		1	1		1	2	1	0	0	0	4	2	
7	1	1	3	3	Population Pyra	nid	1	1		1	2	1	0	0	0	4	2	
8	1	1	2	2	Scatter/Dot		1	2		1	0	1	0	0	0	4	2	
9	1	1	1	1	Histogram		1	2		1	1	1	4	3	0	3	1	
10	1	2	5	3	- 2	2	1	1		1	0	0	0	0	0	0	2	
11	1	2	4	3	3	2	1	1		1	0	0	0	0	0	0	2	
12	1	2	3	3	6	1	1	1		1	0	0	0	0	0	0	2	
13	1	2	2	2	19	2	1	2		1	1	0	0	0	0	6	2	
14	1	2	1	1	32	1	1	2		1	1	1	4	0	0	3	2	
15	1	3	12	6	1	2	1	1		1	0	0	0	0	0	0	2	
16	1	3	11	- 5	2	1	1	1		1	0	0	0	0	0	0	2	
17	1	3	8	5	5	1	1	1		1	0	0	0	0	0	0	2	
18	1	3	7	6	6	1	1	1		1	0	0	0	0	0	0	2	
19	1	3	5	3	16	1	1	1		1	2	1	0	0	0	4	1	
20	1	3	4	3	18	1	1	1		1	2	1	0	0	0	4	2	
21	1	3	3	3	20	1	1	1		1	2	1	0	0	0	4	1	
22	1	3	9	6	20	1	1	1		1	2	1	0	0	0	3	1	
23	1	3	10	2	20	2	1	2		1	2	1	0	0	0	4	2	
24	1	3	6	3	23	1	1	2		1	2	1	0	0	0	4	2	
25	1	3	2	2	52	2	1	2		1	0	0	0	U	0	6	2	
20	1	3	1	1	53	1	1	2			1	1	0	0	0	3	2	
27	1	4	4	3	1	2	1	1		4	0	0	0	U	U	U	2	
20	1	4	3	3	4		1	1		4	0	0	0	0	0	0	2	
29	1	4	2	2	20	2	1	2		4	0	1	0	U	U	4	2	
21	1	4	7	2	30	1	1	2		ə 1	0	4	0	0	0	3	2	
32	1	5	6	3	2	1	1	1		1	0	0	0	0	0	0	2	
32			6	5	2	2	1	4			0		0	0	0	0	2	
	ata View 🖌 Va	ariable View /				•			(mar)			1						•
Box-Plot									SP:	3 Processor	is ready							_

Click on **Graphs**, select **Legacy Dialogs** and **Boxplot**.

The **Boxplot** dialogue window appears. Click on **Simple** and use the default *"Summaries for groups of cases"*. Click on **Define**.



In the **Define Simple Boxplot:Summaries for Groups of Cases**, select *Age* and move it to the **Variable** box. Then, select *Gender* and move it to the **Category Axis** box. Then, click **OK**.

🔛 oran	gasli.sav [Da	utaSet1] - SPS	6S Data Edit	or													- 🗗 X
File Edit	View Data	Transform An	alyze Graphs	; Utilities W	indow Help												
۵	🖴 🛄 📥	🔿 🔚 🕼	MII		🖪 😼 🤅												
1 : Kg			1												Visible:	16 of 16 ∀ari	ables
	Kg	Sam	k1	k2	k3	k4	k5	kб	k7	k8	r1	r2	r3	r4	k10	k11	Var 🔺
1	1	1	9	3	1	2		1 '	1	0	0	0	0	0	0	2	
2	1	1	8	3	6	2		1	1	0	0	0	0	0	0	2	
3	1	1	/	3		2		1	1	1	U	U	U	U	5	2	
4	1	1	6	3		2		1	1	1	U		U	U	5	2	
c	1	1	0	3		Define Si	mple Boxp	lot: Summar	ies for Grou	os of Cases		×	0	0	0	2	
7	1	1	4	3		A North Co	W	Vari	ihler		OK		0	0	4	2	
	1	1	2	2	-	Sample n	mber (Sam)	- 🕞 🧭	Age [k3]		UK	0	0	0	4	2	
9	1	1	1	1		Hd membe	er [k1]				Paste	4	3	0	3	- 1	
10	1	2	5	3		A Relationsh	nip [k2]		gory Axis:		Reset		0	0	0	2	
11	1	2	4	3		Sub-ethnii	c (k5)		Gender [k4]		Cancel	0	0	0	0	2	
12	1	2	3	3		Marital sta	tus [k6]	Labe	d Cases hv			0	0	0	0	2	
13	1	2	2	2	1	Feligion (F	ment (k 81				Help	0	0	0	6	2	
14	1	2	1	1	3	Occ 1 [r1]	ment [ko]					4	0	0	3	2	
15	1	3	12	5		P Occ 2 [12]		Panel by			Dotions	1 0	0	0	0	2	
16	1	3	11	5		🖉 0 cc 3 [r3]		HOW	s:			0	0	0	0	2	
17	1	3	8	5		Ø Occ 4 [r4]						0	0	0	0	2	
18	1	3	7	5		Status of a	occ 1 (k10) utsida uillaga					0	0	0	0	2	
19	1	3	5	3	1	W WOIKED U	uiside vilage	Colu	rest variables (ri			0	0	0	4	1	
20	1	3	4	3	1				11110.			0	0	0	4	2	
21	1	3	3	3								U	U	U	4	1	
22	1	t c	9	5				E I				0	0	0	3	1	
23	1	3	10	2	4	1						0	0	0	4	2	
24	1	3	2	2	4			1 1	1	0	0	0	0	0	4	2	
25	1	3	1		52	1		1 3	2 1	1	1	0	0	0	3	2	
27	1	4	4	3	1	2		1	4	0	0	0	0	0	0	2	
28	1	4	3	3	4	1		1	4	0	0	0	0	0	0	2	
29	1	4	2	2	20	2		1 3	2 4	0	1	0	0	0	4	2	
30	1	4	1	1	30	1		1 3	2 4	0	4	0	0	0	3	2	
31	1	5	7	3	1	1		1	1	0	0	0	0	0	0	2	
32	1	5	6	3	2	1		1	1	0	0	0	0	0	0	2	
< ► \Da	ita View 🔏 🔽	riable View /	-	2		Î	•	a 1				-				-	- FI
									SP55	Processor is rea	dy						

The simple boxplot for **Age** appears in the **OUTPUT** window.



The dark horizontal line in the box, represents the median of age for each gender. The boxplots show that the median age for male is higher than female. The long whiskers indicate that the distribution of age is skewed to the right for each gender. The small white circle indicates there is an outlier in the female group.

3.7 Creating Clustered Boxplots

Click on **Graphs**, select **Legacy Dialogs** and **Boxplot**.

The **Boxplot** dialogue window appears. Click on **Clustered** and use the default *"Summaries for groups of cases"*. Click on **Define**.



In the **Define Clustered Boxplot:Summaries for Groups of Cases**, select *Age* and move it to the **Variable** box. Then, select *Name of Village* and move it to the **Category Axis** box. Then, select *Gender* and move it to the **Define Clusters by** box and click **OK**.

🔛 oranga	usli.sav [De	utaSet1] - SF	PSS Data Edit	lor															- 8 ×
File Edit V	/iew Data	Transform A	nalyze Graphs	s Utilities V	/indow Help														
ے ا	1 🖬 👳	🔿 🔚 🛛	M 📲 i	h 84	F 🛐 🤇	<u>)</u>													
1 : Kg			1														Visible:	16 of 16 Var	iables
	Kg	Sam	k1	k2	k3	k4	k5	k6	k	7	k8	r1	1	2	r3	r4	k10	k11	var 🔺
1	1	1	9	3		1 2	1		1	1	0	0		0	0	0	0	2	
2	1	1	8	3		5 2			1	1	0	U		U	U	U	U	2	
3	1	1	/	3		2			1		1	0		0	0	0	с С	2	
	1	1	5	3	1	Define C	lustered Bo	xplot: Su	mmaries f	or Group	os of Cases		×	0	0	0	5	2	
6	1	1	4	3		Sample n	mber [Sam]	v	ariable:			ПК		0	0	0	4	2	
7	1	1	3	3	1	Hd memb	er [k1]		🔗 Age [k3]		_		- 1	0	0	0	4	2	
8	1	1	2	2		A Relations	nip (k.2)					Past	e	0	0	0	4	2	
9	1	1	1	1		🔗 Sub-ethni	c (k5)	L T L	ategory Axis	i Villens (K.a.	-	Rese	et 🛛	4	3	0	3	- 1	
10	1	2	5	3		Marital sta	itus (k6)		Manie u	vilage (Ng		Cano	el	0	0	0	0	2	
11	1	2	4	3		Fichu attair	<td></td> <td>efine Cluster</td> <td>rs by:</td> <td></td> <td>11-1</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>2</td> <td></td>		efine Cluster	rs by:		11-1		0	0	0	0	2	
12	1	2	3	3		Dec 1 fr1	inen (koj		🔗 Gender [k4]		Heip	의 [0	0	0	0	2	
13	1	2	2	2	1	Ø 0cc 2 [12]			abol Casos b					0	0	0	6	2	
14	1	2	1	1	3	🖉 Occ 3 [r3]		Ðİ	abei cases c	ay.	_			4	0	0	3	2	
15	1	3	12	5		🖉 Occ 4 [r4]								0	0	0	0	2	
16	1	3	11	5		Status of	occ 1 (k10)	Panel by				Option	s	0	0	0	0	2	
17	1	3	8	5		Worked o	utside village	loni	UWS.		_		-	0	0	0	0	2	
18	1	3	7	5										0	0	0	0	2	
19	1	3	5	3	1									0	0	0	4	1	
20	1	3	4	3	1				okenne:					0	0	0	4	2	
21	1	3	3	3	2			l n č	oloninio.		_			0	0	0	4	1	
22	1	3	9	5	2									U	U	U	3	1	
23	1	5	10	2	4				Nest varia					U	U	U	4	2	
24	1	3	b 2	3		1								U	0	U	4	2	
25	1	3	2	2	5 5	2 1			2	1	1	1		0	0	0	0	2	
20	1	4	4	3		1 2			1	4	0	0		0	0	0	0	2	
28	1	4	3	3		4 1			1	4	0	0		0	0	0	0	2	
29	1	4	2	2	2	1 2			2	4	0	1		0	0	0	4	2	
30	1	4	1	1	3	1			2	4	0	4		0	0	0	3	2	
31	1	5	7	3		1 1			1	1	0	0	-	0	0	0	0	2	
32	1	5	6	3		2 1	1	1	1	1	0	0		0	0	0	0	2	
< ► \Data	a View 🔏 🗸	riable View ,	/	2		ĺ	•		4	4	0			0	0	0	0	-	<u> </u>
•																			
						 The 	e basi	cRs	vste	m. a	nd cc	ontril	out	ed i	packa	ges. a	are av	ailable	e trom

The basic R system, and contributed packages, are available from the Comprehensive R
Home page for R: http://www.R-project.org/

The clustered boxplot of **Age** for every village will appear in the **OUTPUT** window.



Note 8 – Using R software

Outline

- What is R and Why use R
- Installation of R
- Start R
- How to use R
- Some of my applications
- Try using R now

What is R and Why use R

- R is a language and environment for statistical computing and graphics. It is superior to many other graphics and analysis packages commonly used, and has a very wide range of statistical analysis and data plotting functions.
- R is free.
- R is used in academia, business & industry
- It was said that there are at least 2 million users.
- R is effective and an independent platform. R can run in Windows, Mac, Linux. This is very important for communicating with different system users.
- Open source. Bugs found, reported and corrected. You can write your own packages.
- Highly extensible, with over 3500 user-contributed packages available and still growing.

- R has many help resources. That is absolutely unique. There are many online help resources both from r-project.org and from many specific lists and interest groups, even though sometimes it seems difficult to choose.
- R makes excellent graphics.
- The command-line interface is much better for using, learning and teaching. Users can post, reproduce and save the commands exactly.
- R is command-oriented. Users normally type commands, and the R responds interactively to these commands. And many packages are developed by about 20 core team members and many other contributors.
- Unlimited possibilities.
- The basic R system, and contributed packages, are available from the Comprehensive R Archive Network (CRAN) at <u>http://cran.r-project.org/</u>
- Home page for R: <u>http://www.R-project.org/</u>

Installation of R

P 🖹

e

WebMailer x @ The Comprehensive R / x	And the second s	
← → C C cran.r-project.org	48 80 ULT 40 I	
Ⅲ アプリ (※) Firefox を使ってみ… //// 最新ニュース (□ インポートしたブ… (🗋 検索 🕝 glexa Glexa 🛛 Google Scholar 🎜 WebMailer 💿 サイボウズ 🎒 地球人ネットワーク 🗀 LCA 🕺 / - AFFRIT 共有フー	こ その他のブックマーク
← → C C cran.r-project.org III アブリ ● Firefox を使ってみ… 函 最新ニュース ○ インポートしたブ… ()	 はま G gieva Gieva Gieva Google Scholar 、 WebMailer の サイガウズ の おおんネットワーク こ レス M / - AFFRIT 共有フー・ The Comprehensive R Archive Network Download and Install R Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R: <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Linux</u> <u>Download R for Windows</u> 	☆ ■ こ その他のブックマーク
	What are R and CRAN?	
R is 'GNU S', a f time series analys	reely available language and environment for statistical computing and graphics which provides a wide variety of statistical and graphical techniques: linear and nonlinear m is, classification, clustering, etc. Please consult the <u>R project homeoage</u> for further information.	odelling, statistical tests,
CRAN is a networ	k of ftp and web servers around the world that store identical, up-to-date, versions of code and documentation for R. Please use the CRAN mirror nearest to you to minir	nize network load.
	Submitting to CRAN	
To "submit" a pa	ckage to CRAN, check that your submission meets the CRAN Repository Policy and then use the web form.	
If this fails, upload half a dozen peop	I to ftp://CRANR-project.org/incoming/ and send an email to CRAN@R-project.org following the policy. Please do not attach submissions to emails, because this will clut le.	ter up the mailboxes of
Note that we gen	erally do not accept submissions of precompiled binaries due to security reasons. All binary distribution listed above are compiled by selected maintainers, who are in charg	ge for all binaries of their

This server is hosted by the Institute for Statistics and Mathematics of WU (Wirtschaftsuniversität Wien).

S WebMailer	× @ The R Project for Sta	tatis ×		
← → C h	www.r-project.org			
III アプリ () Firef	fox を使ってみ… 🌆 最新ニュース 🍋	インポートしたブ… 🎦 検索 🔓 glexa Glexa 🦕	🛛 Google Scholar 🛛 💃 WebMailer 👩 サイボウズ 🌮 地球人ネットワーク 🍋 LCA 🛛 M / - AFFRIT 共有フ…	
		http://mirror.lau.edu.lb/	Lebanese American University, Byblos	
		Mexico		
		http://cran.itam.mx/	Instituto Tecnologico Autonomo de Mexico	
		http://www.est.colpos.mx/R-mirror/	Colegio de Postgraduados, Texcoco	
		Netherlands	XI-Data Amotoriam	
		http://cran-mirror.cs.uu.nl/	Litrecht University	
About R		New Zealand		
What is R?		http://cran.stat.auckland.ac.nz/	University of Auckland	
Contributors		Norway		
What's new?		http://cran.uib.no/	University of Bergen	
		Philippines	University of the Dhilipping and DECONET	
Download, Packal CRAN	ges	Poland	University of the Philippines and Preditive I	
010.04		http://r.meteo.uni.wroc.pl/	University of Wroclaw	
R Project		Portugal		
Members & Dono	rs	http://cran.dcc.fc.up.pt/	University of Porto	
Mailing Lists		Russia		
Bug Tracking		http://cran.gis=lab.info/	GIS-Lab.info	
Conferences		http://cranistatinus.edu.sg/	National University of Singanore	
Search		Slovakia		
Documentation		http://cran.fvxm.net/	FYXM.net, Bratislava	
Manuals		South Africa		
FAUS The B Journal		http://radu.org.za/	University of Cape Town	
Wiki		http://cran.mirror.ac.za/	TENET, Johannesburg	
Books		http://ftp.cixug.es/CRAN/	Oficina de software libre (CIXUG)	
Other		http://cran.es.r-project.org/	Spanish National Research Network, Madrid	
		Sweden		
<i>Misc</i> Bioconductor		http://ftp.sunet.se/pub/lang/CRAN/	🖉 Swedish University Computer Network, Uppsala	
Related Projects		Switzerland	FT 112	
User Groups		http://stat.etnz.ch/URAN/	ETH Zuench	
LIIKS		http://ftp.yzu.edu.tw/CRAN/	Department of Computer Science and Engineering, Yuan Ze University	
		http://cran.csie.ntu.edu.tw/	National Taiwan University, Taipei	
		Thailand		
		http://mirrors.psu.ac.th/pub/cran/	Prince of Songkla University, Hatyai	
		lurkey	Demukkale University Deniali	
		UK	Pantukkale Oniversity, Denizir	
		http://www.stats.bris.ac.uk/R/	University of Bristol	
		http://mirrors.ebi.ac.uk/CRAN/	EMBL-EBI (European Bioinformatics Institute)	
		http://cran.ma.imperial.ac.uk/	Imperial College London	
		http://mirror.mdx.ac.uk/R/	Middlesex University London	
		http://star-www.st-andrews.ac.uk/c	<u>sran/</u> St Andrews University	
		uoa http://cran.cor.Barkalay.adu/	University of California, Berkeley, CA	
cran.r-project.org/m	hirrors.html		University of California, Los Angeles, CA	
A =				JP 🤐 🗛 🙀 🥸 🥥 💿 CAPS d
				Кана



Start R

- Go to cran.r-project.org;
- Under "Download and Install R", click on the "Download R for Windows" link;
- Under "Subdirectories", click on the "base" link;
- Save R file somewhere and start it;
- To Install R by clicking "next".....;
- When asked 32-bit or 64-bit, you need check your computer operating system (os);
- After finishing the installation, check if there is an "R" icon on the desktop of the computer. If so, start it by double-clicking;
- Or, start it from the start menu of programs.

R		RGui (64-	bit)
File Edit Vie	w Misc Packages Windows Help		
🗲 🚰 🖬 🗉	a 🖪 😔 🥌		
R	R Console		
R version Copyright Platform: R is free You are we Type 'lice Natural R is a col Type 'cont 'citation(Type 'demo 'help.star Type 'q()'	<pre>3.1.2 (2014-10-31) "Pumpkin Helmet" (C) 2014 The R Foundation for Statistical Computing x86_64-w64-mingw32/x64 (64-bit) software and comes with ABSOLUTELY NO WARRANTY. lcome to redistribute it under certain conditions. nse()' or 'licence()' for distribution details. language support but running in an English locale laborative project with many contributors. ributors()' for more information and)' on how to cite R or R packages in publications. ()' for some demos, 'help()' for on-line help, or t()' for an HTML browser interface to help. to quit R.</pre>		
>			
		~	
<		>	

How to use R

- We can write commands and calculate directly at R Console, but editing "script" is convenient.
- Simple output is prefixed by [1].
- <- is the assignment operator; in the illustration, c <-1:3, the vector of integers from 1 to 3 is assigned to a variable named x.
- lower- and upper-case letters are different.
- To download and install a package: install.packages("")
- Packages are introduced by *library(""")*, and this introduction needs to be done every time before using.



Value

Objects

- All variables (scalars, vectors, matrices, etc.) created by R are called objects. In R, we assign values to variables using an arrow "less than" + "minus": "<-".
- There are several possible different types of objects in R, including scalars, vectors, matrices, arrays, data frames, tables, and lists.
- List objects: ls()
- Remove objects: rm("object")
- Object, function, arguments

Help for R

- help(package="base") # List package contents
- ?data.frame # help on a specific task
- ?Syntax # help on a general topic
- news(package="ggplot2") # details of recent changes
- demo("graphics") # demonstrate graphics
- browseVignettes() # view index of vignettes in web browser
- See documentation links at http://www.r-project.org for manuals,
- wiki, R journal, books etc.
- CRAN task views: http://cran.r-project.org/web/views/
- Many R bloggers, aggregated at http://www.rbloggers.com/

Some applications of R

- Wherever there is a calculation, data analysis, graphics.....
- Some of our experiences:

Panel data analysis

Cluster analysis

Mixed model estimations

Dealing with demand elasticities of GDP and price on forest products, drivers of deforestation, forecasts of forest areas and forest carbon stock, etc.

Let's TRY NOW!

Thanks for the great contributions from R developers and all other contributors!