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# Data Analysis Using Excel-Pivot Table



#58, Street 85, Bueng Tompon, Phnom Penh  
+855 93 97 98 99 / 088 888 64 69



[narithnana@gmail.com](mailto:narithnana@gmail.com)



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## **Introduction to Data Analysis**

- What Is Data Analysis
- Importance of Data Analysis
- Data Analysis Process

## **Developing Data Analysis Plan/Framework**

## **Basis Statistic for Data Analysis**

## **Preparing Data**

- Creating a table
- Cleaning data
- Recoding value
- Creating new variable

## **Knowing Pivot Table**

- What is Pivot Table?
- When and why Pivot Table?
- Limitations of Pivot Table

## **Creating Basic Pivot Tables**

- Adding / Removing fields
- Using Filter & Slicer
- Summarizing Values
- Showing Values
- Formatting Pivot Table- Pivot Table Tool

## **Data Interpretation & Charts Selection**



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# Data Analysis Using Excel-Pivot Table

## Introduction to Data Analysis



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# Data Analysis

Process of fine-tuning, converting, and modelling data to generate meaningful and actionable insights that inform sound decisions.

Examining what has happened or what will happen before concluding.



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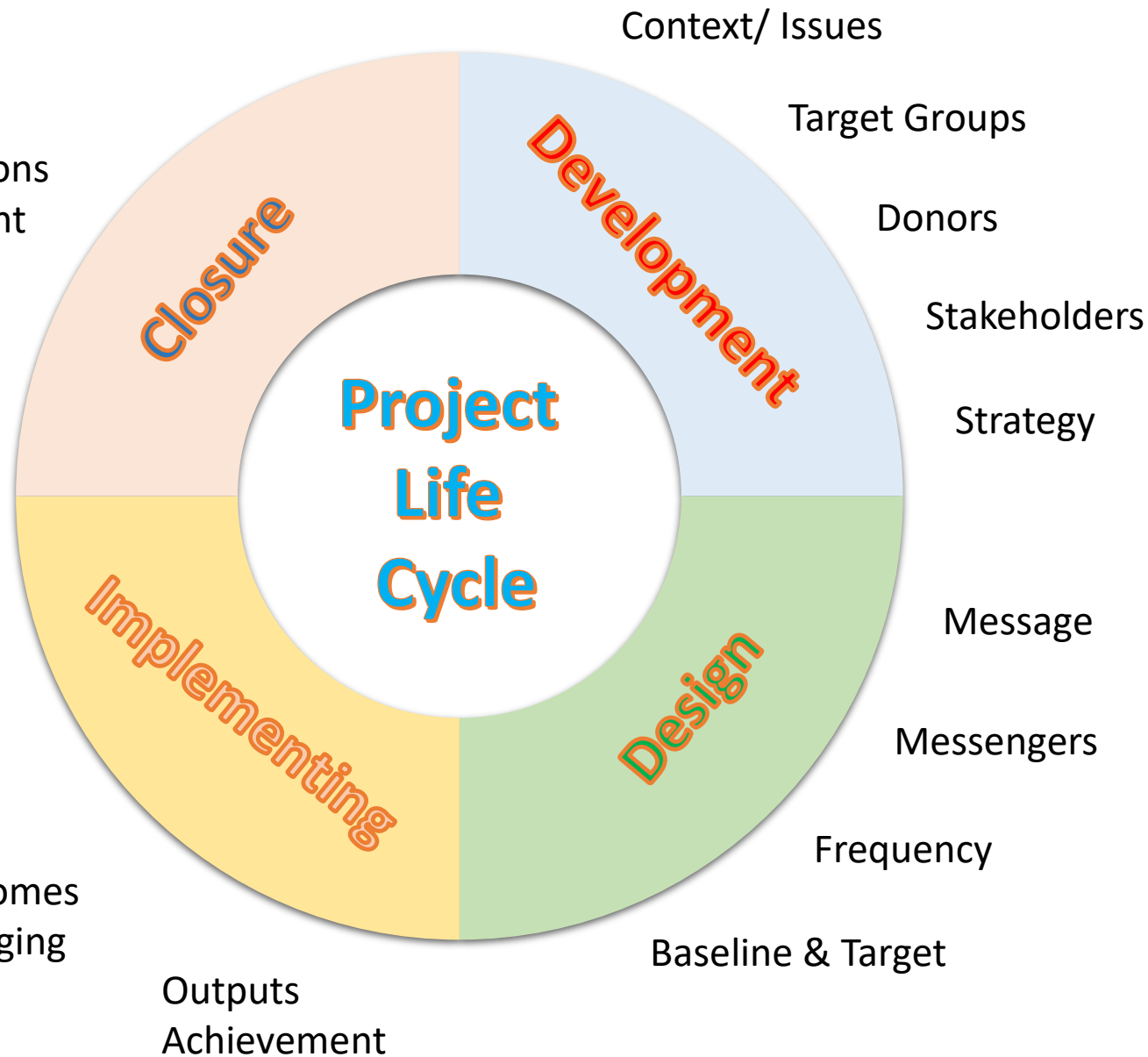
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# Why Data Analysis Is Importance?

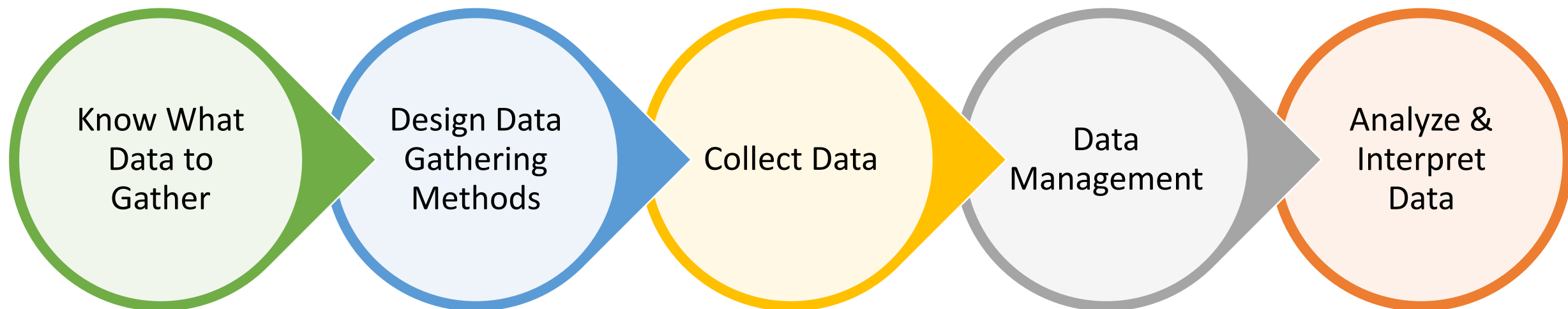




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# Data Analysis Process



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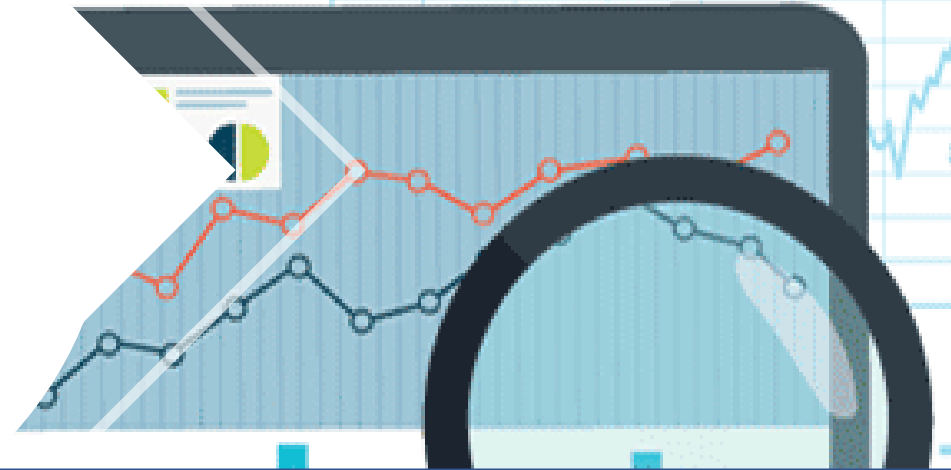
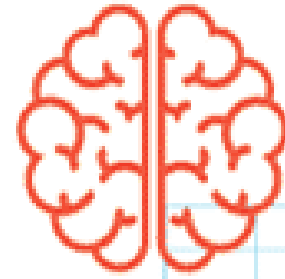
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# Data Analysis Using Excel-Pivot Table



## Data Analysis Plan



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Research Objectives

Research Questions

Research Hypothesis

Know Your Collected Data

Formulate Analysis Data Tables



Data Analysis Plan

# Research Objectives

In general, research objectives describe what we **expect to achieve** by conducting a research.



## Data Analysis Plan

- Objective:** To describe what factors farmers take into account in making such decisions as whether to adopt a new technology or what crops to grow.
- Objective:** To develop a budget for reducing pollution by a particular enterprise.
- Objective:** To describe the habitat of the giant panda in China.

# Research Questions

is a specific inquiry which the research seeks to provide a response to.

# BUT

It is not a single question in your questionnaire.



## Data Analysis Plan

Ex. To what extent do the project target groups understand about benefits of wildlife and forest conservation?

Ex. Why learning outcomes in the primary education is still low although many efforts have been in place for years.

# Research Hypothesis

A hypothesis is a statement that introduces a research question and proposes an expected result.



**Mostly it is** developed based on previous knowledge or literature review.

## Data Analysis Plan

Ex. People have low understanding of forest benefits.

Ex. Students learning outcome has strong relationship with teacher's technical knowledge.



# Know Your Collected Data



## Data Analysis Plan

### Questionnaire



### Dataset

	H	AO	AP	AQ	AR	AS	AT
	Date of Hire	Month	Year	Opening Balance	Leave accrued	Leave taken	Closing Balance
1							
2	1-May-13	January	2016	8	1		9
3	1-May-13	January	2016	8	1		9
4	1-May-13	January	2016	8	1		9
5	1-May-13	January	2016	8	1		9
6	1-May-13	January	2016	8	1		9
7	1-May-13	January	2016	7	1		8
8	1-May-13	January	2016	8	1		9
9	1-May-13	January	2016	8	1		9
10	1-May-13	January	2016	8	1		9
11	1-May-13	February	2016	7	1		8
12	1-May-13	February	2016	6	1		7
13	1-May-13	February	2016	8	1		9



# Formulate Analysis Data Table

Profile	N	Percentage	Female (xxx)	Male (xxx)
Sex				
Location-Commune				
Krangteh				
Memang				
Nangkhiloek				
Level of Education				
No Schooling				
Primary				
Lower Secondary				
Upper Secondary				
Age-Group				
10-19 Yr				
20-24 Yr				
25-29 Yr				
30+				
CPA Membership				
CPA Member				
Non-CPA Member				
Ever Attended in Environmental Education Session				



Commune	Mobile Phone Possessing*	By Sex*		By Age-Group*				Have >1 Phone in Family
		Female	Male	10-19 Yr	20-24 Yr	25-29 Yr	30+ Yr	
Krangteh								
Memang								
Nangkiloek								
Puchri								
Sokh Sant								
Srae Chhouk								
Total								



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# Formulate Analysis Data Table

Knowledge on environmental protection, biodiversity, and conservation	Knowledge Rating				
	Very Poor	Poor	Moderated	High	Very High
All Respondents					
CPA Membership					
CPA Member					
Non-CPA Member					
Age-Group					
10-19 Yr					
20-24 Yr					
25-29 Yr					
30+					
Sex-Group					
Male					
Female					
Geographic Area*					
Krangteh					
Memang					
Nangkhilok					
Puchri					
Sokh Sant					
Srae Chhouk					



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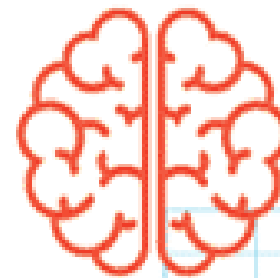
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## Basis Statistic



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# Basic Statistic- Type of Data

## Nominal Data

- Number are used simply as labels for group, classes, or Categories.

1	Male
2	Female

1	Yes
0	No

1	Car
2	Motorbike

1	Student
2	Self-Employed
3	Employee
4	Farmer
5	Other

# Basic Statistic- Type of Data

## Ordinal Data

- Ordered according to their relative size or quality

Base on your experience using telecom service in Cambodia, please rank the quality of telecom service companies below which 5 is the best and 1 is the worst

Company	Rank 1-5
Metfone	4
Mobitel	5
Smart	3
Beeline	2

# Basic Statistic- Type of Data

## Ordinal Data

- Ordered according to their relative size or quality

How much do you agree with this sentence “The higher degree a teacher got, the better lecturing quality s/he provided” 1 = not agree at all, 5 very strongly agree

Company	Rank 1-5
Not Agree at all	1
Not Agree	2
Not Sure	3
Agree	4
Very Strongly Agree	5

# Basic Statistic- Type of Data

## Scale Data

- Continuous Variable such as age, salary, weight, length

Ex. Age – 15, 17, 23, 30, 40, 42, 50, 60

Ex. Salary -- \$100, \$300, \$500, \$2000

Ex. Weight – 20Kg, 40Kg, 60kg, 70Kg

# Basic Statistic- Frequency

*Frequency, in general means the number of times a certain event has taken place. It can simply be defined as the count of certain event which has occurred.*

For example, Let us consider a person **Mr.Smith** who eats **3 times** a day then the frequency of Mr.Smith eating food daily is **3**.

Look at the below number series. Let us calculate the frequency of each of these numbers.

1, 2, 3, 2, 4, 5, 6, 2, 2, 1

*Here as you can see the number 2 has occurred 4 times in the series as shown below.*

1, 2, 3, 2, 4, 5, 6, 2, 2, 1

*Hence, frequency of the number 2 is 4.*

# Basic Statistic

## MODE

- Is the value that occurs most frequently

Ex. Age of 10 participants:

23, 25, 27, 29, 23, 25, 23, 25, 26, 25

- If there are two or more, the distribution is called Multimodal

23, 25, 23, 29, 23, 25, 23, 25, 26, 25

# Basic Statistic

## Mean

- Average of all the values in the distribution

Ex. 23, 24, 25, 26, 27, 29, 30, 31, 32, 33

Mean is = 28

$$(23+24+25+26+27+29+30+31+32+33 = 280/10=28 )$$



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# Data Analysis Using Excel-Pivot Table



## Preparing Data



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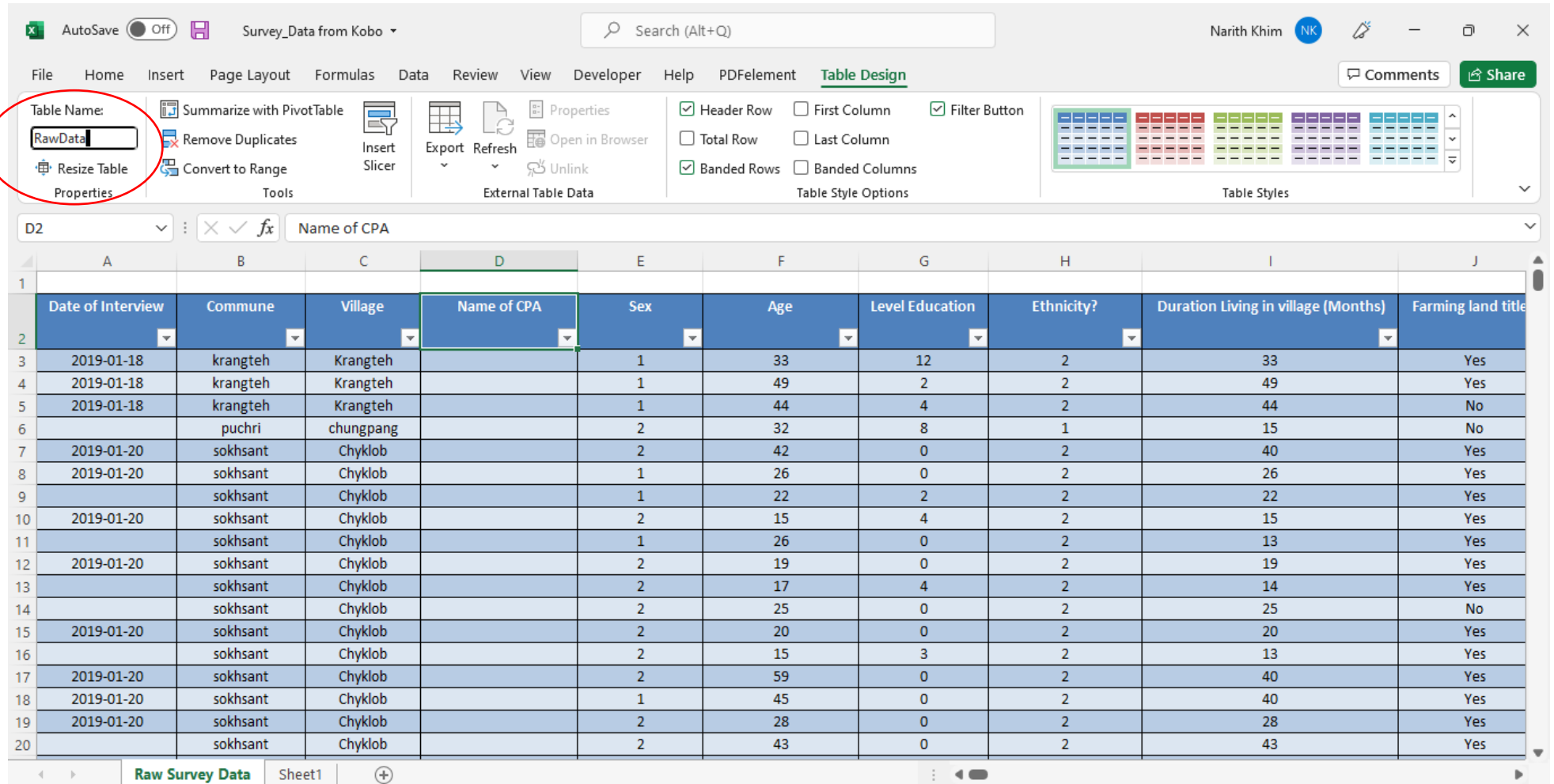
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# Creating a Table within Excel

- Open the Excel spreadsheet.
- Use your mouse to select the cells that contain the information for the table.
- Click the "Insert" tab > Locate the "Tables" group.
- Click "Table". A "Create Table" dialog box will open.
- If you have column headings, check the box "My table has headers".
- Verify that the range is correct > Click [OK].
- Resize your columns to make the headings visible.

# Creating a Table within Excel

➤ Name the Table



The screenshot shows the Microsoft Excel interface with the 'Table Design' ribbon selected. The 'Table Name' field in the Properties group is highlighted with a red circle and contains the text 'RawData'. The table below has the following data:

Date of Interview	Commune	Village	Name of CPA	Sex	Age	Level Education	Ethnicity?	Duration Living in village (Months)	Farming land title
2019-01-18	krangteh	Krangteh		1	33	12	2	33	Yes
2019-01-18	krangteh	Krangteh		1	49	2	2	49	Yes
2019-01-18	krangteh	Krangteh		1	44	4	2	44	No
	puchri	chungpang		2	32	8	1	15	No
2019-01-20	sokhsant	Chyklob		2	42	0	2	40	Yes
2019-01-20	sokhsant	Chyklob		1	26	0	2	26	Yes
	sokhsant	Chyklob		1	22	2	2	22	Yes
2019-01-20	sokhsant	Chyklob		2	15	4	2	15	Yes
	sokhsant	Chyklob		1	26	0	2	13	Yes
2019-01-20	sokhsant	Chyklob		2	19	0	2	19	Yes
	sokhsant	Chyklob		2	17	4	2	14	Yes
	sokhsant	Chyklob		2	25	0	2	25	No
2019-01-20	sokhsant	Chyklob		2	20	0	2	20	Yes
	sokhsant	Chyklob		2	15	3	2	13	Yes
2019-01-20	sokhsant	Chyklob		2	59	0	2	40	Yes
2019-01-20	sokhsant	Chyklob		1	45	0	2	40	Yes
2019-01-20	sokhsant	Chyklob		2	28	0	2	28	Yes
	sokhsant	Chyklob		2	43	0	2	43	Yes

# Cleaning Data

## Missing Value: No Empty Cell

Village	Name of CPA	Sex
Krangteh		1
Krangteh		1
Krangteh		1
chungpang		2
Chyklob		2
Chyklob		1
Chyklob		1
Chyklob		2
Chyklob		1
Chyklob		2
Chyklob		2
Chyklob		2
Chyklob		2

## Spelling: Inconsistent; typo

Date of Interview	Commune	Village
	puchri	chungpang
	puchri	chungpang
	puchry	chungpang
	puchri	chungpang
	puehri	chungpang
	puchry	chungpang
	puchri	chungpang

## Flow of Questions:

Farming land titled	If yes, how big? (ha)
No	
No	0
No	0
No	0
No	0
No	0
No	0
No	2
No	0
No	0
No	0
No	5
No	0
No	0



# Recording Data

## Record

Have you ever heard about CPA?	1	No	→ 0
	2	Yes	
	9	Don't Know	
Are you a member of the CPA?	1	No	→ 1
	2	Yes	
	9	Don't Know	

Gender	1	Male	→ Male → Female
	2	Female	

# Creating New Variable

Q. What assets do you have?

<b>A</b>	<b>TV</b>
<b>B</b>	<b>Hand Tractor</b>
<b>C</b>	<b>Generator</b>
<b>D</b>	<b>Motorbike</b>
<b>E</b>	<b>Car</b>

H. Most respondents have less than three of these assets?

Q. For what activities do you use your phone?

<b>A</b>	<b>Calling</b>
<b>B</b>	Messaging
<b>C</b>	Listening to Music or Radio
<b>D</b>	Taking Picture
<b>E</b>	Playing Facebook
<b>F</b>	Watching Youtube
<b>G</b>	Playing Games
<b>H</b>	Others:.....

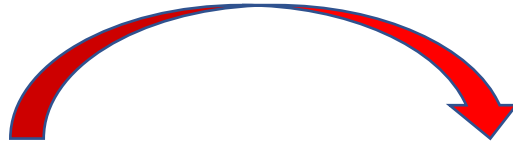
H. People don't use phone for variety things.

Q. What are the benefits of forest for human, animal, environment, and nature?

<b>A</b>	<b>Provide Non-timber forest products</b>
<b>B</b>	Provide wood for construction and others
<b>C</b>	Attract and keep water
<b>D</b>	Provide shelter and food for human and wildlife
<b>E</b>	Purify and cooler the air
<b>F</b>	Relieve flood, storm, and lightning
<b>G</b>	Stable the nature
<b>H</b>	Other:.....
<b>I</b>	Don't Know

H. People don't know much of forest's benefits.

# Creating New Variable



## Scale Data

## Nominal Data

Q2. How old are you? .....

Q3. What is your highest level of education? .....

Age-Group	
	10-19 Yr
	20-24 Yr
	25-29 Yr
	30+

Level of Education	
	No Schooling
	Primary
	Secondary School
	High School



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# Data Analysis Using Excel-Pivot Table



## Knowing Pivot Table



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# What Is Pivot Table?

## An interactive worksheet table

- It is a powerful tool to calculate, summarize, and analyze large amount of data that lets you see comparisons, patterns, and trends in your data.

## Similar to a cross-tabulation table

- It classifies numeric data in a list based on other fields in the list.

The screenshot shows a PivotTable in Excel with the following data:

Row Labels	Count of Sex
Male	200
Female	255
Grand Total	455

The PivotTable Fields task pane is open, showing the following configuration:

- Choose fields to add to report: Search
- Filters: (empty)
- Columns: (empty)
- Rows: Sex
- Values: Count of Sex
- Defer Layout: (unchecked)
- Update: (button)

The list of fields to add includes: Date of Interview, Commune, Village, Name of CPA, Sex (checked), Age, Level Education, Ethnicity?, Duration Living in vill..., Farming land titled, If yes, how big? (ha), What is your main sou..., Do you have the follo..., Do you have the follo...



# When & Why Use Pivot Table?

The screenshot shows a PivotTable in Microsoft Excel with the following data:

Row Labels	Count of Sex
Male	200
Female	255
<b>Grand Total</b>	<b>455</b>

The PivotTable Fields task pane is open, showing the following configuration:

- Choose fields to add to report:** Sex (checked)
- Filters:** (Empty)
- Columns:** (Empty)
- Rows:** Sex
- Values:** Count of Sex
- Defer Layout Update:** (unchecked)

- ❖ Quickly summarize data from a worksheet
- ❖ Calculate totals, averages, counts, etc.
- ❖ Generate charts from pivot table
- ❖ Data validation and checking
- ❖ Interactive: Easily rearrange them by moving, adding, or deleting fields
- ❖ Dynamic: Results are automatically recalculated whenever fields are added or dropped



# Limitations

Row Labels	Count of Sex
Male	200
Female	255
<b>Grand Total</b>	<b>455</b>

Choose fields to add to report:	Drag fields between areas below:
<input type="checkbox"/> Date of Interview	<b>Filters</b>
<input type="checkbox"/> Commune	
<input type="checkbox"/> Village	<b>Columns</b>
<input type="checkbox"/> Name of CPA	
<input checked="" type="checkbox"/> Sex	<b>Rows</b>
<input type="checkbox"/> Age	Sex
<input type="checkbox"/> Level Education	
<input type="checkbox"/> Ethnicity?	<b>Σ Values</b>
<input type="checkbox"/> Duration Living in vill...	Count of Sex
<input type="checkbox"/> Farming land titled	
<input type="checkbox"/> If yes, how big? (ha)	
<input type="checkbox"/> What is your main sou...	
<input type="checkbox"/> Do you have the follo...	
<input type="checkbox"/> Do you have the follo...	

**1. It can be a time-consuming venture:** The collected data must be manually calculated, or equations must be manually inputted and that takes time.

**2. Older computers can struggle to present data-** large database

**3. No statistical tests-** Any tests must be carried out separately.



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# Data Analysis Using Excel-Pivot Table



## Creating Basic Pivot Table



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# Creating Basic Pivot Table

1. Go to a table that you want to create a PivotTable from

2. Select any cell in that Table

	A	B	C	D	E	F	G	H
1								
	Date of Interview	Commune	Village	Name of CPA	Sex	Age	Level Education	Ethnicity?
3	2019-01-18	krangteh	Krangteh		Male	33	12	2
4	2019-01-18	krangteh	Krangteh		Male	49	2	2
5	2019-01-18	krangteh	Krangteh		Male	44	4	2
6		puchri	chungpang		Female	32	8	1
7	2019-01-20	sokhsant	Chyklob		Female	42	0	2
8	2019-01-20	sokhsant	Chyklob		Male	26	0	2
9		sokhsant	Chyklob		Male	22	2	2
10	2019-01-20	sokhsant	Chyklob		Female	15	4	2
11		sokhsant	Chyklob		Male	26	0	2
12	2019-01-20	sokhsant	Chyklob		Female	19	0	2
13		sokhsant	Chyklob		Female	17	4	2
14		sokhsant	Chyklob		Female	25	0	2
15	2019-01-20	sokhsant	Chyklob		Female	20	0	2
16		sokhsant	Chyklob		Female	15	3	2
17	2019-01-20	sokhsant	Chyklob		Female	59	0	2
18	2019-01-20	sokhsant	Chyklob		Male	45	0	2
19	2019-01-20	sokhsant	Chyklob		Female	28	0	2
20		sokhsant	Chyklob		Female	43	0	2



# Creating Basic Pivot Table

3. Select INSET

4. Select PivotTable

	B	C	D	E	F	G	H
1							
	Date of Interview	Commune	Village	Name of CPA	Sex	Age	Level Education
2							
3	2019-01-18	krangteh	Krangteh		Male	33	12
4	2019-01-18	krangteh	Krangteh		Male	49	2
5	2019-01-18	krangteh	Krangteh		Male	44	4
6		puchri	chungpang		Female	32	8
7	2019-01-20	sokhsant	Chyklob		Female	42	0
8	2019-01-20	sokhsant	Chyklob		Male	26	0
9		sokhsant	Chyklob		Male	22	2
10	2019-01-20	sokhsant	Chyklob		Female	15	4
11		sokhsant	Chyklob		Male	26	0
12	2019-01-20	sokhsant	Chyklob		Female	19	0
13		sokhsant	Chyklob		Female	17	4
14		sokhsant	Chyklob		Female	25	0
15	2019-01-20	sokhsant	Chyklob		Female	20	0
16		sokhsant	Chyklob		Female	15	3
17	2019-01-20	sokhsant	Chyklob		Female	59	0
18	2019-01-20	sokhsant	Chyklob		Male	45	0
19	2019-01-20	sokhsant	Chyklob		Female	28	0
20		sokhsant	Chyklob		Female	43	0





# Creating Basic Pivot Table

5. Select New Worksheet

6. Select OK

The screenshot shows the Microsoft Excel interface with the 'Table Design' ribbon active. A data table is displayed with the following columns: Date of Interview, Commune, Village, Name of CPA, Sex, Age, Level Education, and Ethnicity?. The 'PivotTable from table or range' dialog box is open, showing the following options:

- Select a table or range: Table/Range: RawData
- Choose where you want the PivotTable to be placed:
  - New Worksheet
  - Existing Worksheet
- Choose whether you want to analyze multiple tables:
  - Add this data to the Data Model

The 'OK' button is highlighted with a red arrow and the number 6, and the 'New Worksheet' radio button is highlighted with a red arrow and the number 5.





# Creating Basic Pivot Table

is a Task Pane associated with a PivotTable.

By default, the Task Pane appears at the right side of the window

Fields represent the columns in your data – range or Excel table, and will have check boxes

The selected fields are displayed in the report. Areas represent the layout of the report and the calculations included in the report.



# Creating Basic Pivot Table

In case the PivotTable Fields Task Pane is not displayed, check the Ribbon for the following –

- 1 Click the ANALYZE tab under PIVOTTABLE TOOLS on the Ribbon.
2. Check if Fields List is selected (i.e. highlighted) in the Show group. If Fields List is not selected, then click it.



# Creating Basic Pivot Table

	A	B	C	D
1	Have you ever heard about CPA?	yes		
2				
3	<b>Count of Sex</b>	<b>Column Labels</b>		
4	<b>Row Labels</b>	<b>Female</b>	<b>Male</b>	<b>Grand Total</b>
5	no	23	31	54
6	yes	15	29	44
7	(blank)	1	1	2
8	<b>Grand Total</b>	<b>39</b>	<b>61</b>	<b>100</b>
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				

### PivotTable Fields

Choose fields to add to report:

Search

- What are the benefits of fo...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- What are the benefits of fore...
- Have you ever heard ab...**
- Are you a member of the C...**
- What role as a member in CP...
- Why did you join CPA?
- What are the roles and respo...
- What are the roles and respo...

Drag fields between areas below:

**Filters**

Have you ever heard about CPA?

**Columns**

Sex

**Rows**

Are you a member of the CPA?

**Values**

Count of Sex

Defer Layout Update Update

Just drag / drop to add/remove field

# Creating Basic Pivot Table- Showing Value

PivotTable Fields

Choose fields to add to report:

Search

- What are the benefits of fores...
- What are the benefits of fores...
- What are the benefits of fores...
- What are the benefits of fores...
- What are the benefits of fores...
- What are the benefits of fores...
- Have you ever heard ab...**
- Are you a member of th...**
- What role as a member in CP...
- Why did you join CPA?
- What are the roles and respo...
- What are the roles and respo...
- What are the roles and respo...
- What are the roles and respo...

Drag fields between areas below:

**Filters**

Have you ever heard about C...

**Columns**

Sex

**Rows**

Are you a member of the CPA?

**Values**

Count of Sex

Defer Layout Upd...

Value Field Settings

Source Name: Sex

Custom Name: Count of Sex

Summarize Values By: Show Values As

**Summarize value field by**

Choose the type of calculation that you want to use to summarize data from the selected field

- Sum
- Count**
- Average
- Max
- Min
- Product

- Move to Values
- Remove Field
- Value Field Settings...
- Count of Sex**



# Creating Basic Pivot Table- Report

PivotTable report is interactive.

quickly make the necessary changes to highlight the specific results, such as data trends, data summarizations





# Creating Basic Pivot Table- Report

Count of Sex	Column			
Row Labels	Female	Male	Grand Total	
no	154	83	237	
yes	1	1	2	
<b>Grand Total</b>	<b>155</b>	<b>84</b>	<b>239</b>	

### PivotTable Fields

Choose fields to add to report: ⚙️

Search

- Date of Interview
- Commune
- Village
- Name of CPA
- Sex
- Age
- Level Education
- Ethnicity?
- Duration Living
- Farming land t...

Drag fields between areas below:

**Filters**

Have you ...

**Columns**

Sex

**Rows**

Are you a ...

**Values**

Count of ...

De... Update

PivotTable report is interactive.

quickly make the necessary changes to highlight the specific results, such as data trends, data summarizations





# Creating Basic Pivot Table- Report Layout

File Home Insert Page Layout Formulas Data Review View Developer Help PDFelement PivotTable Analyze **Design**

Subtotals Grand Totals Report Layout Blank Rows

Row Headers Column Headers Banded Rows Banded Columns

PivotTable Styles

B5 no

	A	B	C	D	E	F	G	H	I
1		Have you ever heard about CPA?	no						
2									
3		<b>Count of Sex</b>		Sex					
4		Are you a member of the CPA?		Female	Male				
5		no		154	83				
6		yes		1	1				
7		<b>Grand Total</b>		<b>155</b>	<b>84</b>				
8									
9									
10									
11									
12									
13									

**PivotTable Fields**

Choose fields to add to report:

Search

- Date of Interview
- Commune
- Village
- Name of CPA
- Sex
- Age
- Level Education

Drag fields between areas below:

Filters: Have you ever heard ab...

Columns: Sex

Rows: Are you a member of th...

Values:

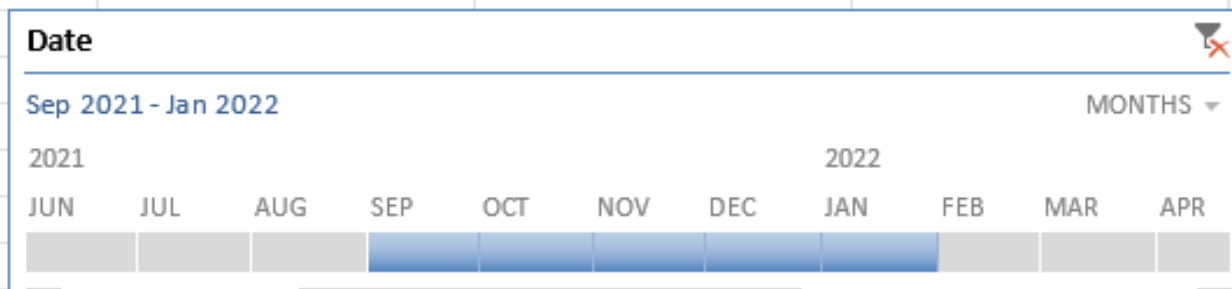


# Creating Basic Pivot Table- Report Layout

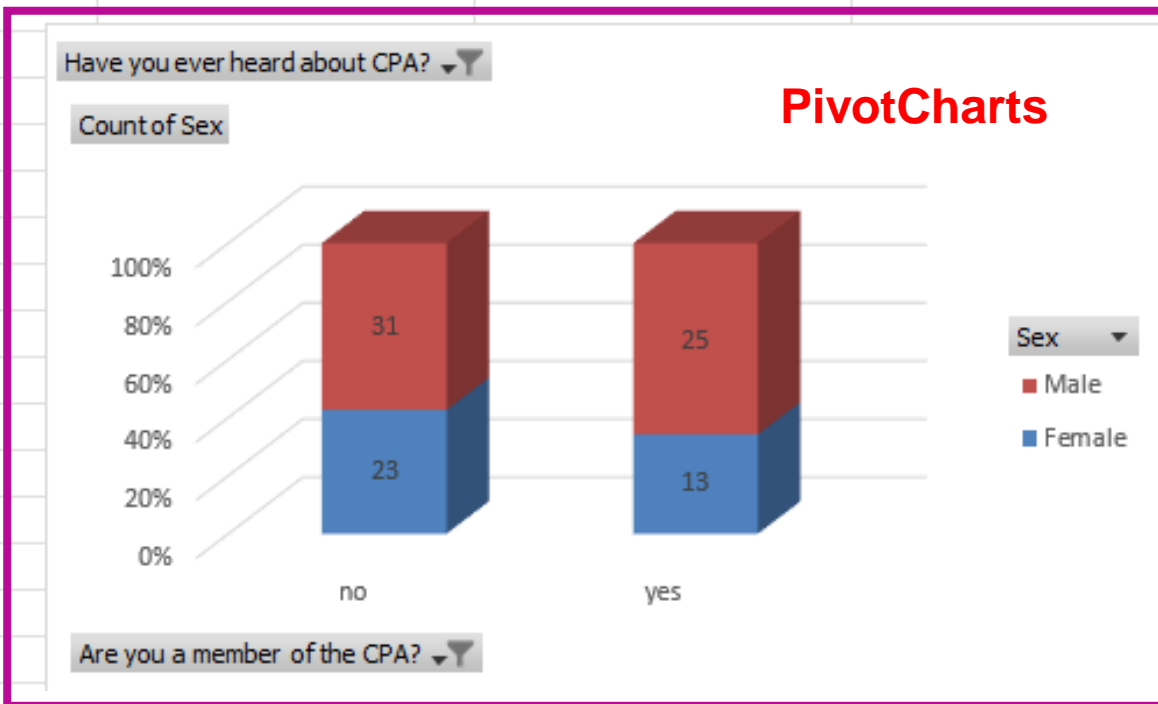
## Filters/Slicers

Have you ever heard about CPA? yes			
<b>Count of Sex</b>		Sex	
Are you a member of the CPA?		Female	Male
no	23	31	
yes	13	25	
<b>Grand Total</b>	<b>36</b>	<b>56</b>	

## Timeline



## PivotCharts

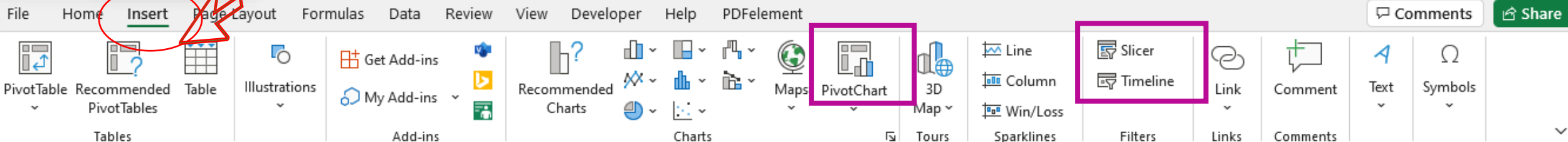


You can also provide visual cues such as report filters, slicers, timeline, PivotCharts, etc.

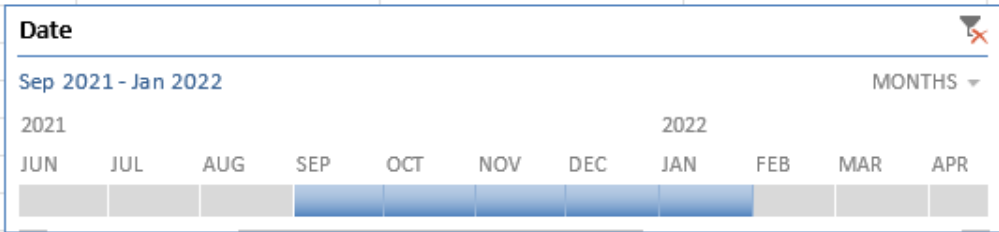




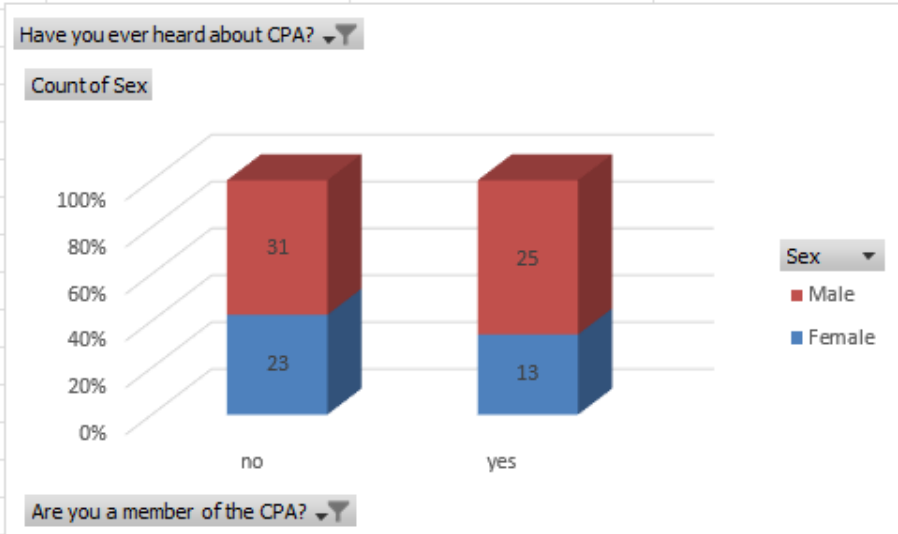
# Creating Basic Pivot Table- Report Layout



Count of Sex	Sex	
Are you a member of the CPA?	Female	Male
no	23	31
yes	13	25
<b>Grand Total</b>	<b>36</b>	<b>56</b>



You can also provide visual cues such as report filters, slicers, timeline, PivotCharts, etc.

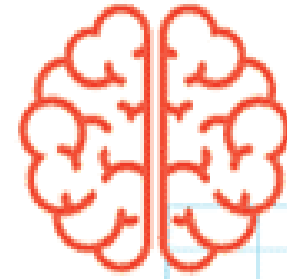




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YouTube



# Data Analysis Using Excel-Pivot Table



## Data Analysis



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+855 93 97 98 99 / 088 888 64 69



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# Practice Analyzing the Data



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# Practice Analyzing the Data



## Task 1: Formulate Your Analysis Data Tables



8 Groups



4 Groups

G1- Feasibility

G2- Knowledge

G3- Attitude

G4- Practice

## Respondent's Profile



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# Practice Analyzing the Data



## Task 2: Presenting Formulated Tables



Select 2 Groups



Select 2 Groups

G1- **Feasibility**

G2- **Knowledge**

G3- **Attitude**

G4- **Practice**

## Respondent's Profile



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# Practice Analyzing the Data



Task 3: Use Pivot Table to Analysis Data

Task 4: Complete all Your Analysis Tables



8 Groups



4 Groups

G1- Feasibility

G2- Knowledge

G3- Attitude

G4- Practice

## Respondent's Profile



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Commune	Mobile Phone Possessing*	By Sex*		By Age-Group*				Have >1 Phone in Family
		Female	Male	10-19 Yr	20-24 Yr	25-29 Yr	30+ Yr	
Krangteh								
Memang								
Nangkiloek								
Puchri								
Sokh Sant								
Srae Chhouk								
Total								



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# Interpreting the Data



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# Interpreting the Data

- The process of using diverse analytical methods to review data and arrive at relevant conclusions.
- Helps researchers to categorize, manipulate, and summarize the information in order to respond to research's objectives, questions, or hypothesize.





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# Ask the right data interpretation questions

- What are the goals and objectives from my analysis?
- What type of data interpretation method will I use?
- Who will use this data in the future?
- What general question am I trying to answer?



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# Use the right data visualization type

- Data visualizations such as charts and tables are fundamental to successfully interpreting data
- Using the wrong graph can lead to misinterpretation of your data so it's very important to carefully pick the right visual for it



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# Charts

The screenshot shows the Microsoft Excel ribbon with the **Insert** tab selected. A red arrow points to the **Insert** tab. The **Charts** group is highlighted with a purple box. The ribbon includes the following elements:

- File, Home, **Insert**, Page Layout, Formulas, Data, Review, View, Developer, Help, PDFelement, PivotChart Analyze
- Tables: PivotTable, Recommended PivotTables, Table
- Add-ins: Get Add-ins, My Add-ins
- Charts: Recommended Charts, Charts (with various chart icons), Maps, PivotChart, 3D Map
- Tours

At the bottom, the Formula Bar is visible with the text "Chart 1" and a dropdown arrow.



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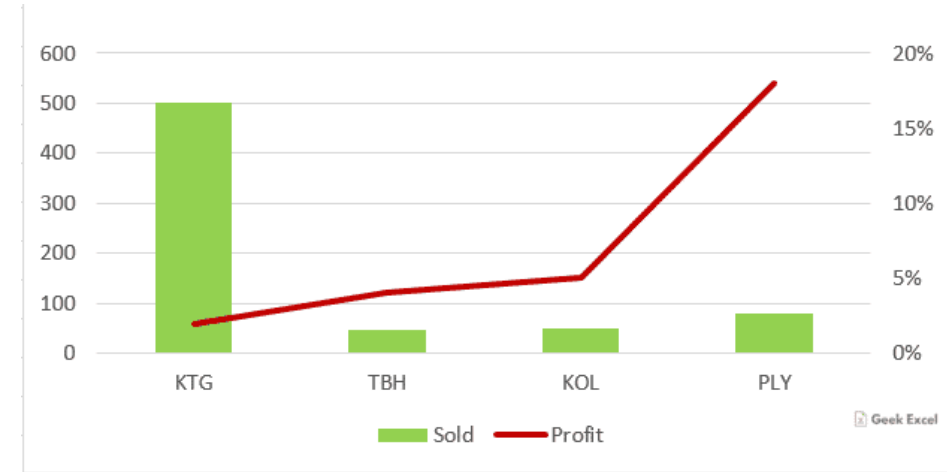
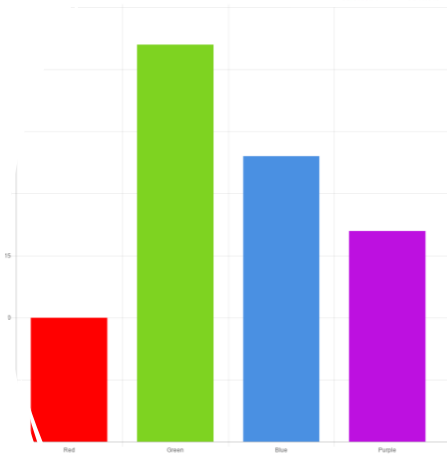
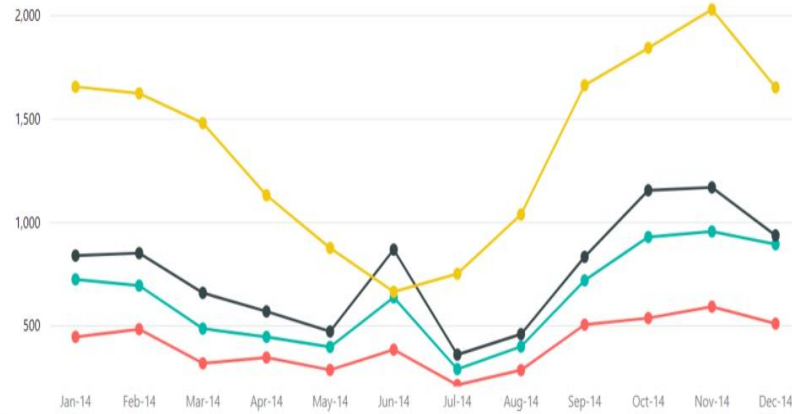
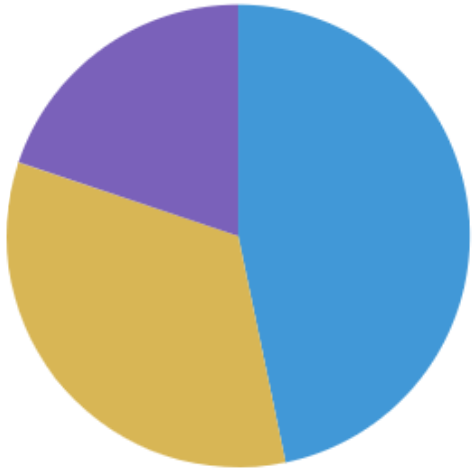
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# Popular Charts



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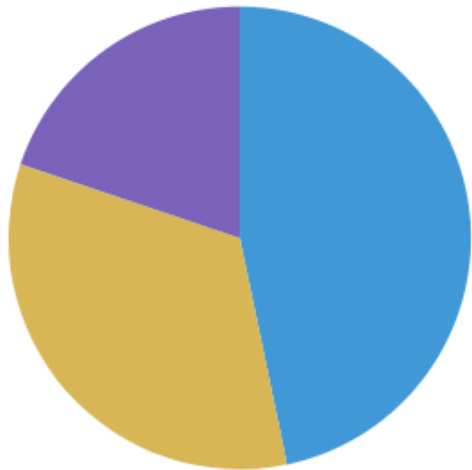
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# Pie/Doughnut Charts



- Consider the ordering of category levels

View Developer Help PDFelement PivotChart

Recommended Charts

Charts

**Insert Pie or Doughnut Chart**

Use this chart type to show proportions of a whole. Use it when the total of your numbers is 100%.

Click the arrow to see the different types of pie and doughnut charts available and pause the pointer on the icons to see a preview in your document.

Date
Sep 2021 - Ja
2021

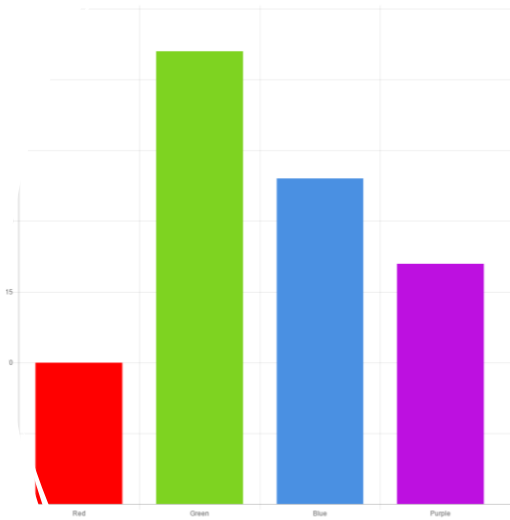




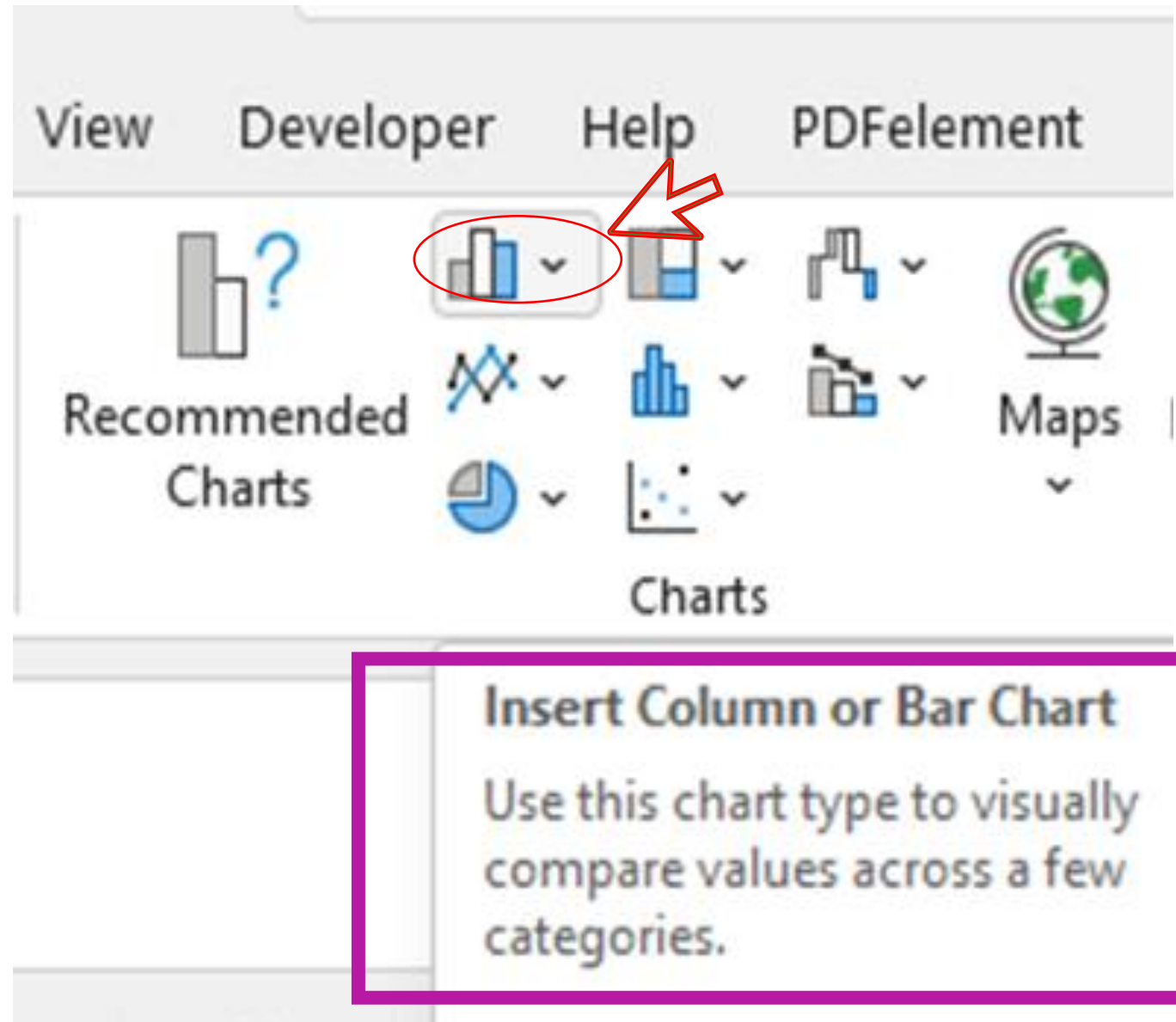
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# Bar/Column Charts



- Consider the ordering of category levels
- Make sure that all of your bars are being plotted against a zero-value



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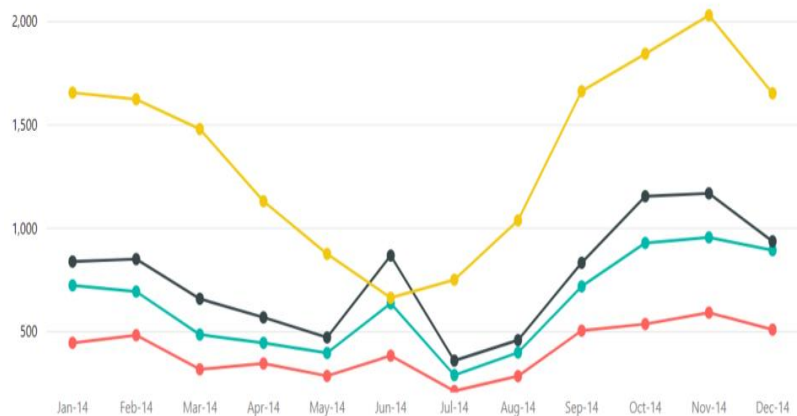
Researcher Hub



# Line/Area Charts

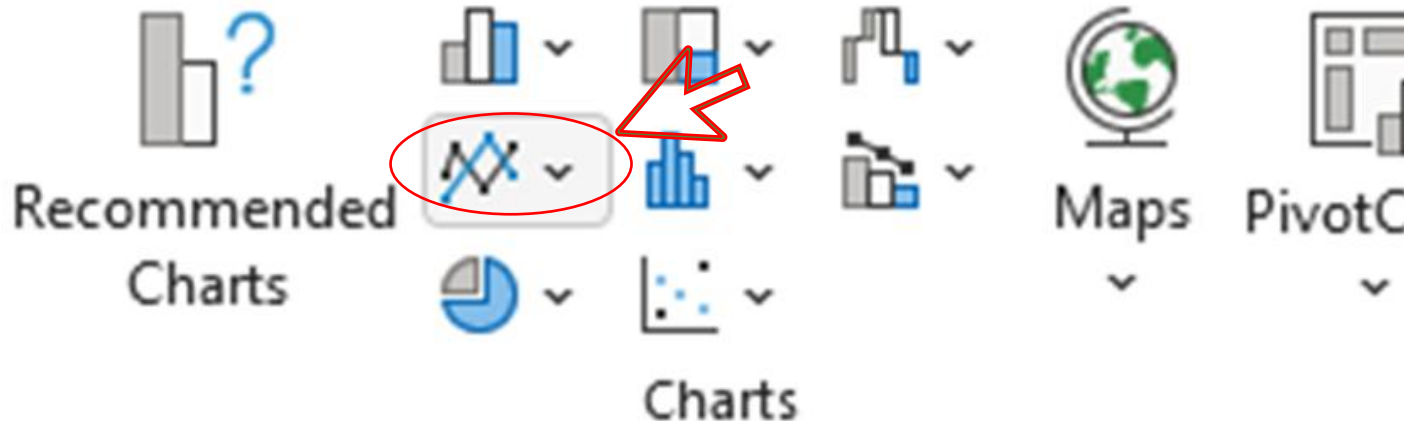
Total Units by Month and Manufacturer

Manufacturer Aliqui Natura Pirum VanArsdel



- Multiple lines could be used
- Not necessary to start with 0 value (Axis)

View Developer Help PDFelement



## Insert Line or Area Chart

Use this chart type to show trends over time (years, months, and days) or categories.



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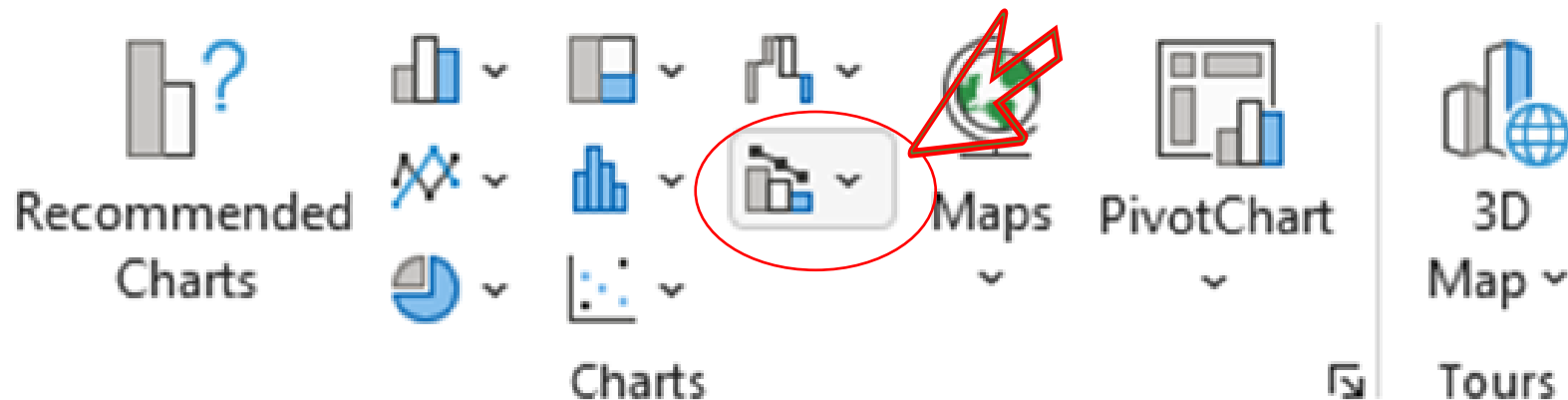
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# Combo Charts



**Insert Combo Chart**

Use this chart type to highlight different types of information. Use it when the range of values in the chart varies widely or you have mixed types of data.



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Profile	N	Percentage	Female (xxx)	Male (xxx)
Sex				
Location-Commune				
Krangteh				
Memang				
Nangkhiloe				
Level of Education				
No Schooling				
Primary				
Lower Secondary				
Upper Secondary				
Age-Group				
10-19 Yr				
20-24 Yr				
25-29 Yr				
30+				
CPA Membership				
CPA Member				
Non-CPA Member				
Ever Attended in Environmental Education Session				

# Table

- When you want to portray data in its raw format
- When data is too complicate to show in any chart





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# Data Interpretation



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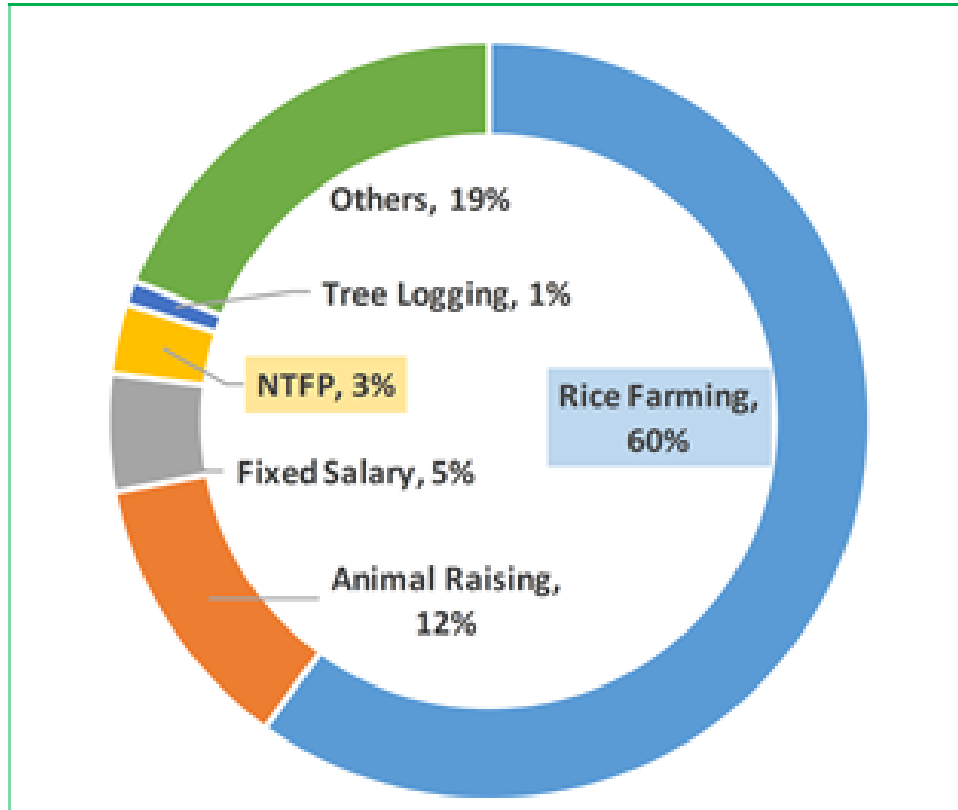


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# Data Interpretation

Figure 1: Main Source of Income



## What are your research questions and/ or hypotheses?

Ex. What does our target group mainly do for their living?

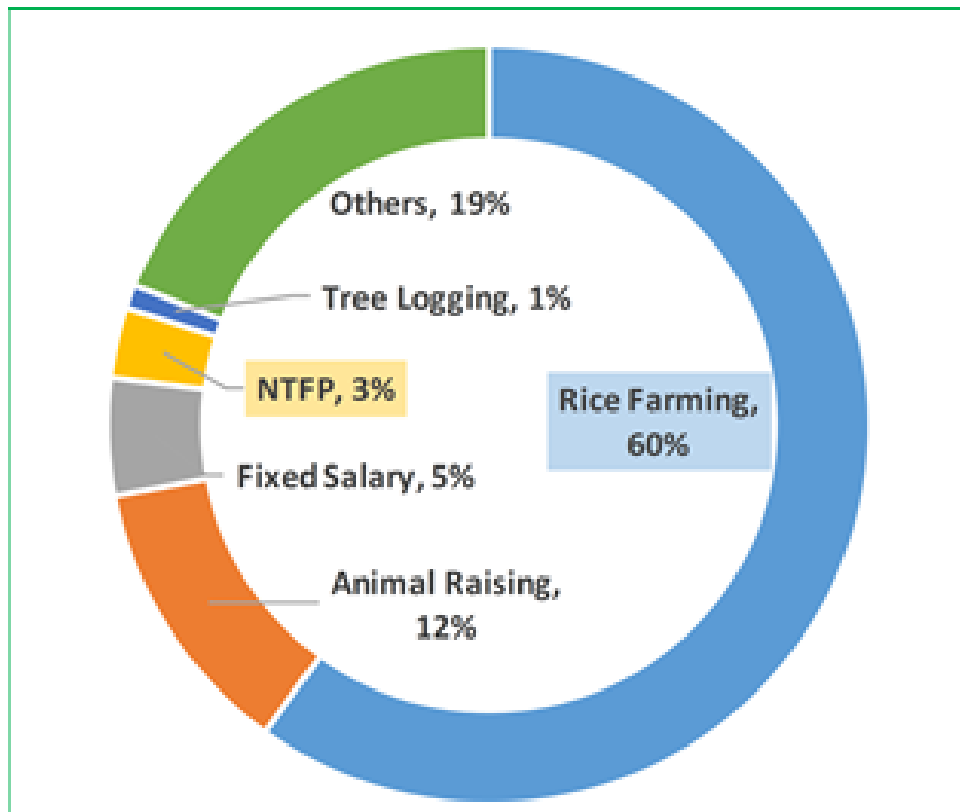
Ex. Based on ..... Many people in the target communities rely on tree logging for living.

Ex. .... study informed that majority of people (60%) in Mondokiri collecting NTFP for their living.



# Data Interpretation

Figure 1: Main Source of Income



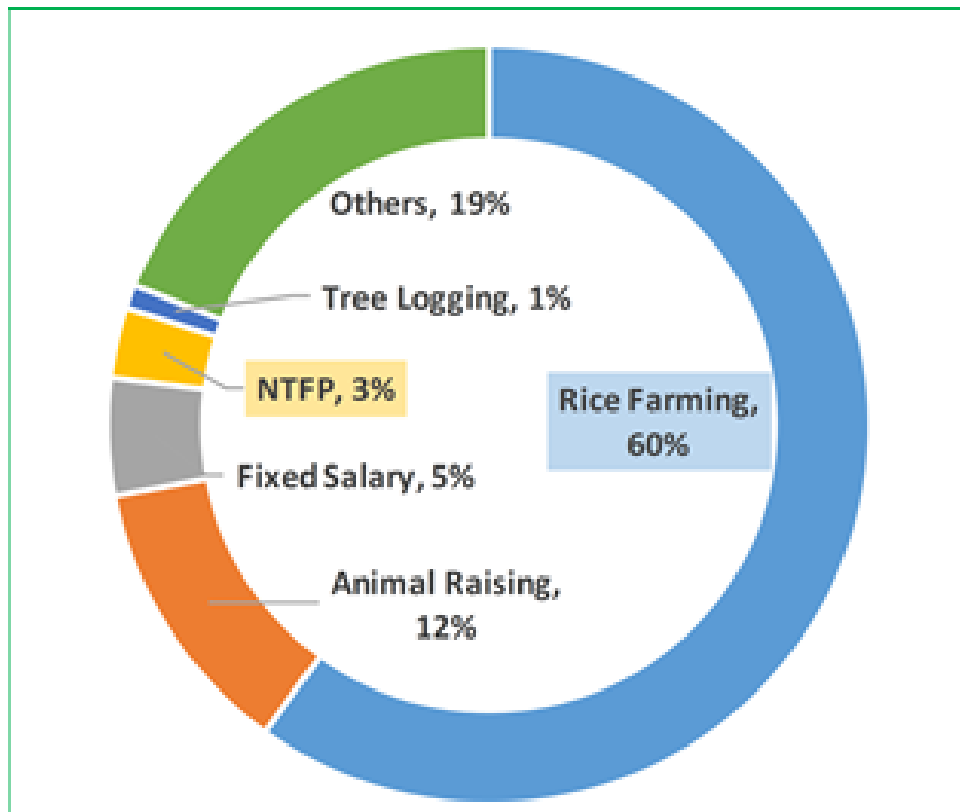
## Apply IELTS Writing Task 1 Structure

- 1- Introduction:** Explain in your own words what the graph(s), table(s), or diagram(s) is showing
- 2- Overview:** In general terms, tell what main/interesting features are. Focus on biggest or smallest proportion.
- 3- Features in detail:** Provide details and some discussions.



# Data Interpretation

Figure 1: Main Source of Income



## Apply IELTS Writing Task 1 Structure

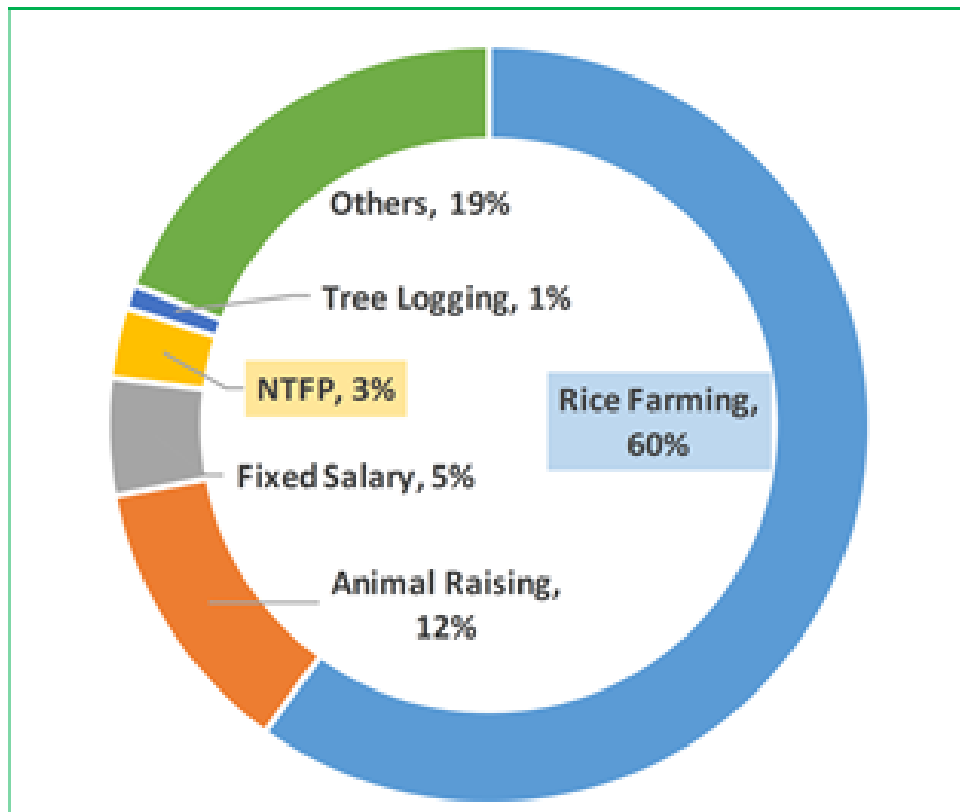
**2- Overview:** In general terms, tell what main/interesting features are. Focus on biggest or smallest proportion.

**Overview:** In overall, people in the target communities are mainly relying on rice farming.



# Data Interpretation

Figure 1: Main Source of Income



## Apply IELTS Writing Task 1 Structure

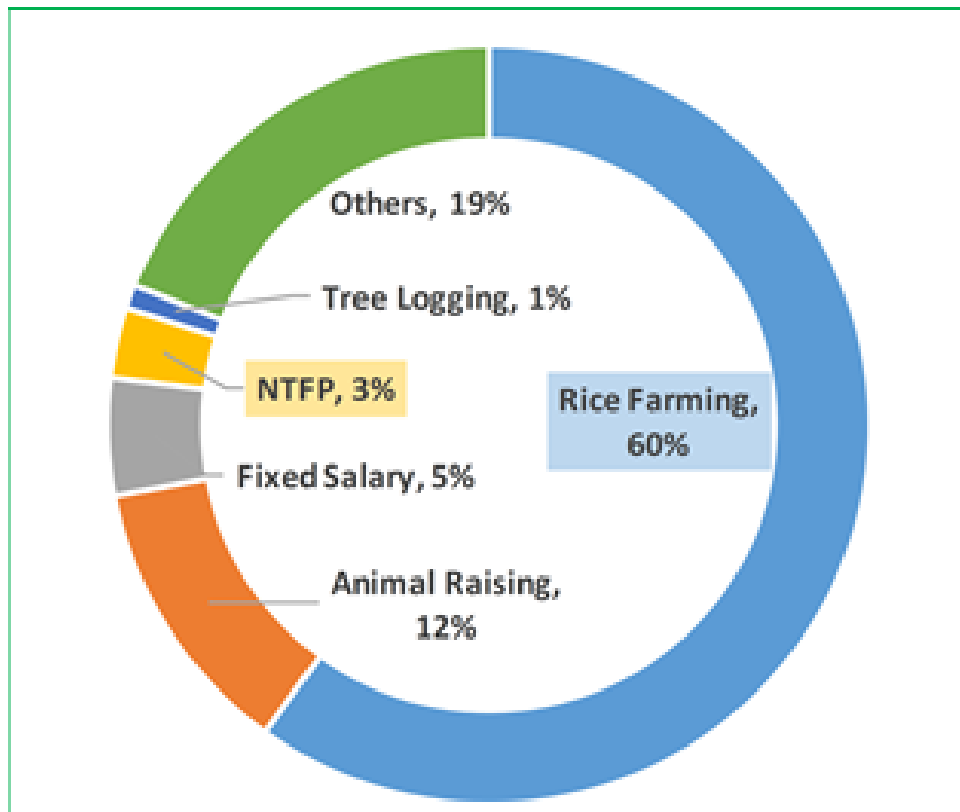
**2- Overview:** In general terms, tell what main/interesting features are. Focus on biggest or smallest proportion.

**Overview:** In overall, people in the target communities are mainly relying on rice farming.



# Data Interpretation

Figure 1: Main Source of Income



## Apply IELTS Writing Task 1 Structure

**3- Features in detail:** Provide details and some discussions.

**Features in detail:** 60% of respondents reported that they rice farming was the main source of their income. This findings is significantly contradicting to xxx study conducted in 2015 which informed that people in the target areas mainly relied on collecting NTFP and logging for their living (60% and 30%) respectively whilst this study discovered only 1% and 3%. This facts demonstrates the trend that people in target areas have shifted from collecting NTFP to performing agriculture for living which is a good indication for achievement of conservation works in this province.