

# IDEAS

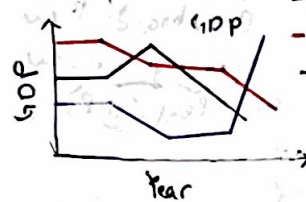
## ① Choropleth map



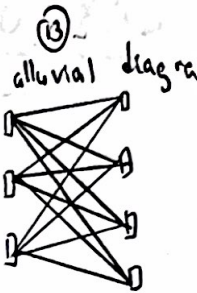
## ② Proportional symbol map



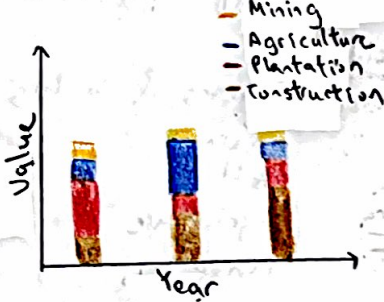
## ③ Line chart



- Selangor  
- Perak  
- Johor



## ④ Stacked bar chart



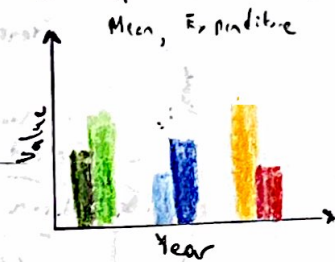
## ⑤ Pie Chart



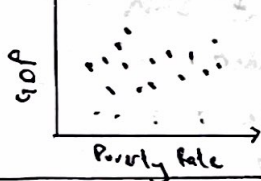
## ⑥ Tree Map



## ⑦ Grouped Bar Chart



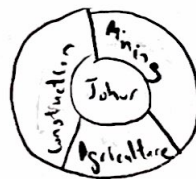
## ⑧ Scatter Plot



## ⑨ Bubble Chart



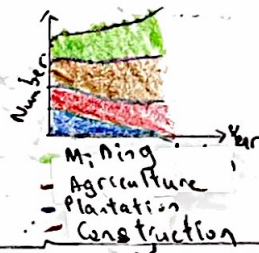
## ⑩ Sunburst Chart



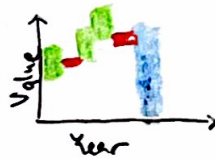
## ⑪ Radial Plot



## ⑫ Stacked area chart



## ⑬ Waterfall chart



## CATEGORIZE

①, ② Map	③ Time Series	④, ⑤, ⑥, ⑦, ⑩, ⑪ Proportional	⑧, ⑨ Relationship
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## QUESTION

1. Is the visualisation is clear & doable using Vega-lite?

2. What info can we bring to audience?

3. How can we create a dashboard with suitable visualisations?

## FILTER

### ⑫ Stacked area chart



Not suitable because knowing the cumulative sum won't bring any info to us

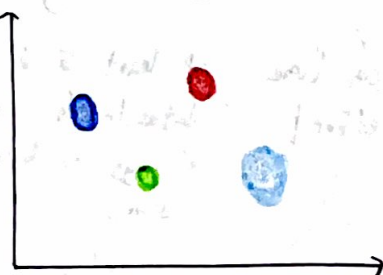
### ② Proportional chart



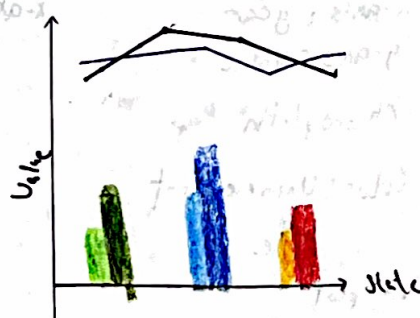
Not suitable as we are interested to see the trend from low to high

## COMBINE & REFINE

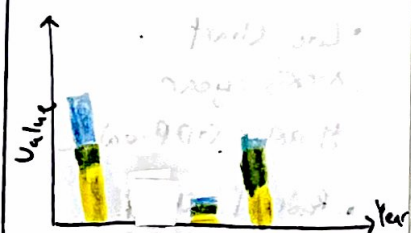
② & ⑧ can be combine to show the relationships between variables



③ & ⑦ can be combine to show the trend of the data



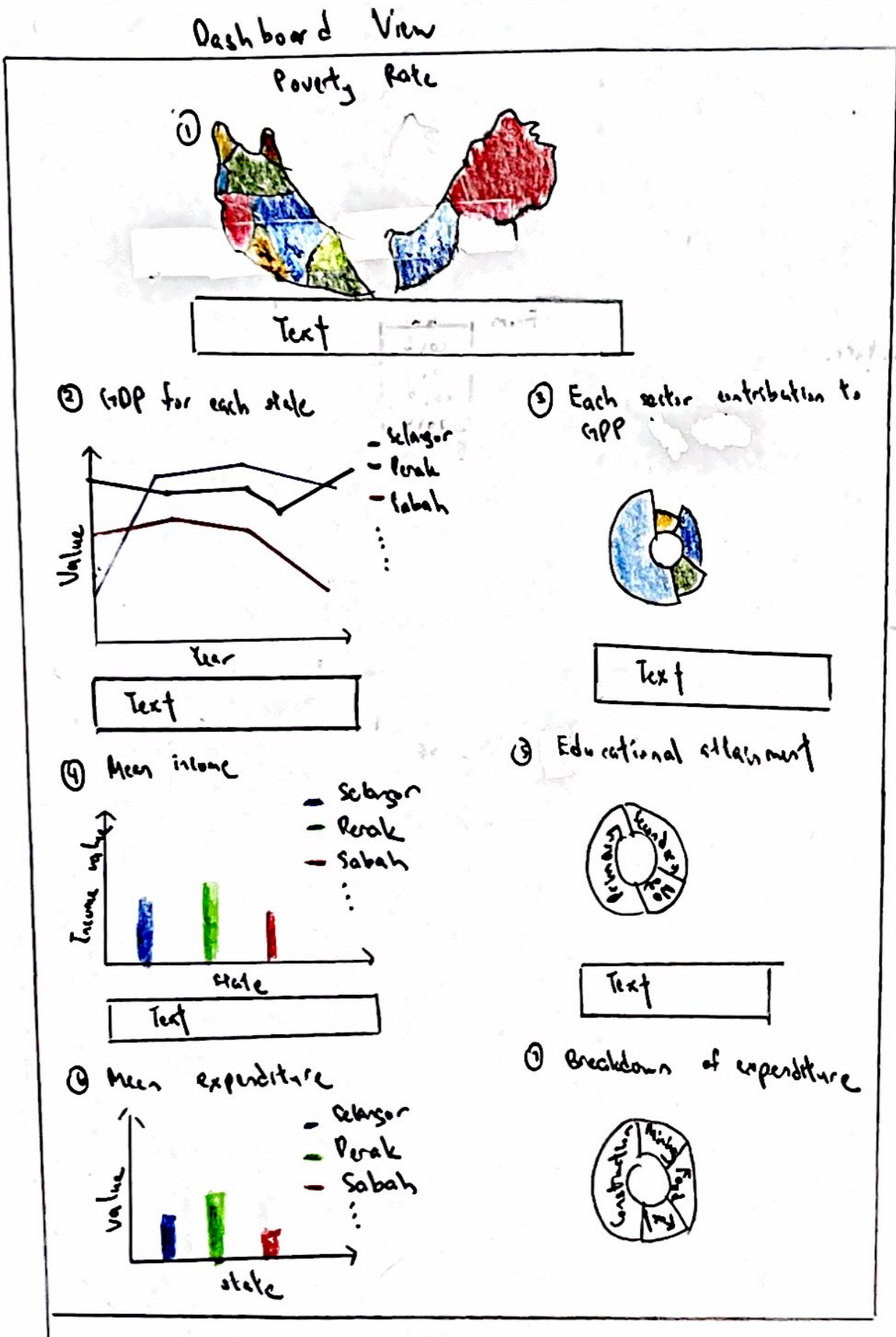
### ④ Stacked bar chart



Not suitable as we have a year consists of many small value groups



# LAYOUT



## FOCUS

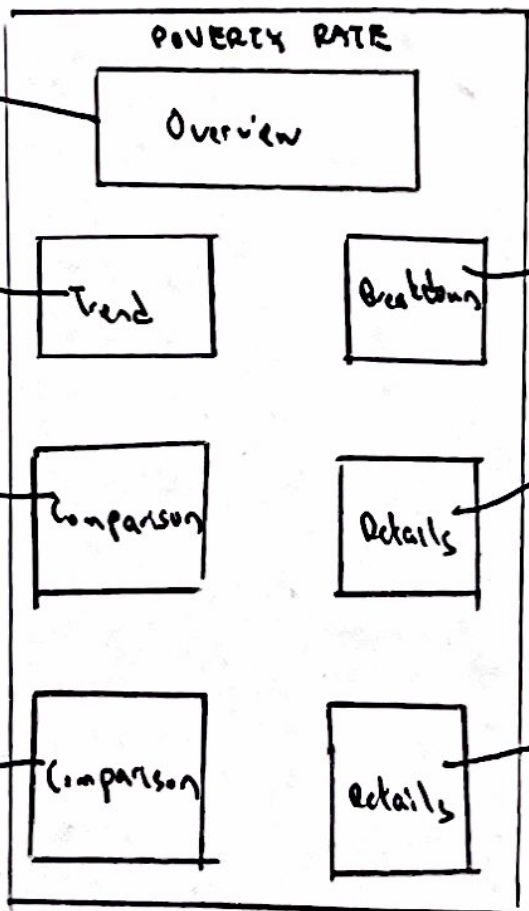
- No main focus, all graphs are important
- But some graphs are larger to allow clearer analysis

An overview look of the poverty rate across Malaysia

showing us the trend for GDP

Allow us to make comparisons between mean income

Allow us to make comparisons between mean expenditure



A breakdown of the GDP into sectors

A detail view of the contribution of mean income

A detail view of the contribution of the expenditure

Title : Economy Overview

Author: Gan Ming Fei

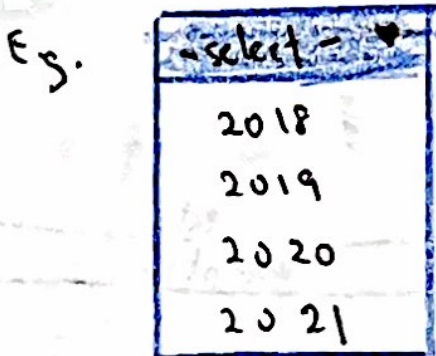
Date: 26/9/2024

Sheet : 2

Task : Dashboard View

## OPERATIONS

Potentially have a drop-down menu to filter based on years



### Tooltip

→ when users hover a point for example the choropleth map, details such as state name & the poverty rate will be shown.

## DISCUSSION

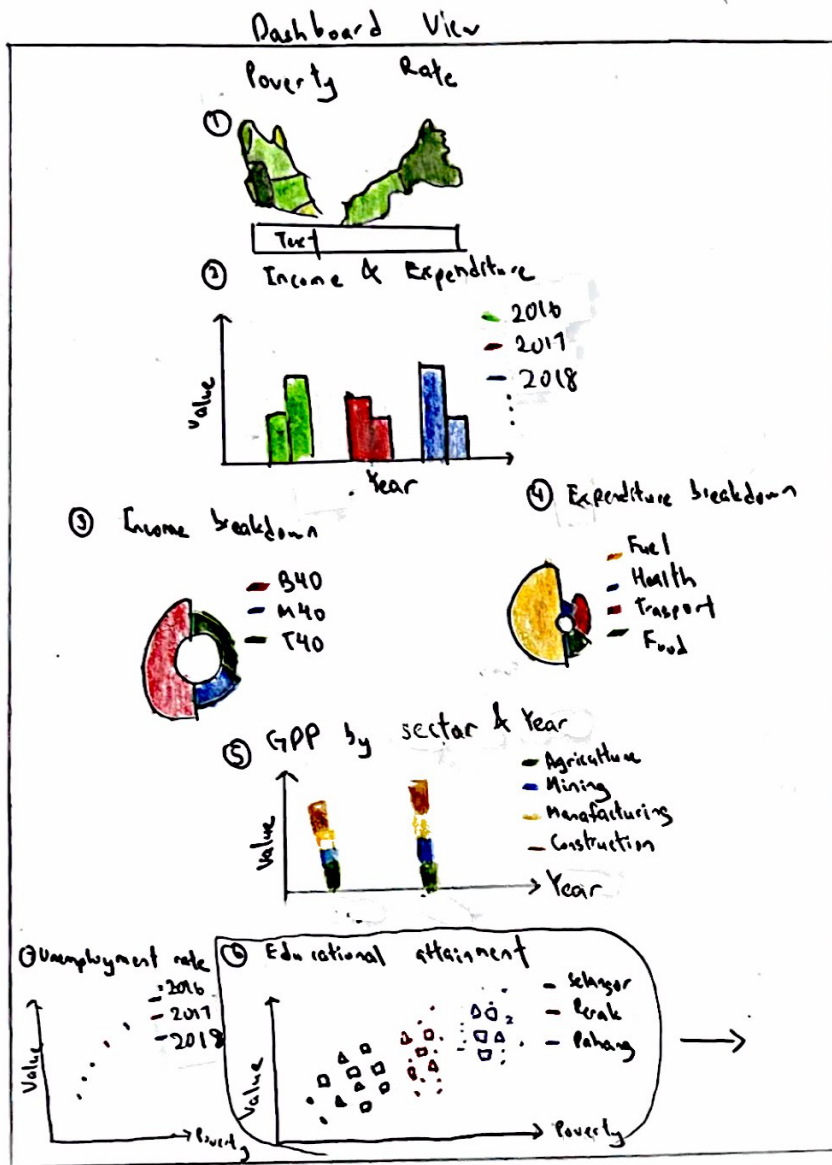
### Advantages

- well segmented into clear sections
- Reader is easy to use and operate

### Disadvantages

- might be too simple
- Users may not get the information they want
- what if users are only interested to interpret data based on years?





## FOCUS

5 focuses: one for each section

- ① Choropleth map  
→ color = poverty rate
- ② Grouped bar chart  
x-axis = Year  
y-axis = value  
color = mean income & mean expenditure
- ③ Radial chart  
Size = Proportion  
Color = Sectors
- ④ Stacked bar chart  
x-axis = Year  
y-axis = value  
color = Sectors
- ⑤ Scatter plot  
x-axis = poverty rate  
y-axis = value  
shape = educational attainment  
color = Year

Title: Economy Overview

Author: Gan Ming Feng

Date: 26/9/2024

Sheet: 3

Task: Dashboard View 2

## OPERATION

- Add a drop-down bar based on years for ①, ②, ③, ④

E.g.

- Year -
2016
2017
2018
2019

- Bar to filter based on states

E.g. Selangor Perak Pahang

- click to filter, graph change accordingly

Tooltip:

- state names, poverty rate, mean income & expenditure
- potentially showing % of change compared to last year

## DISCUSSIONS

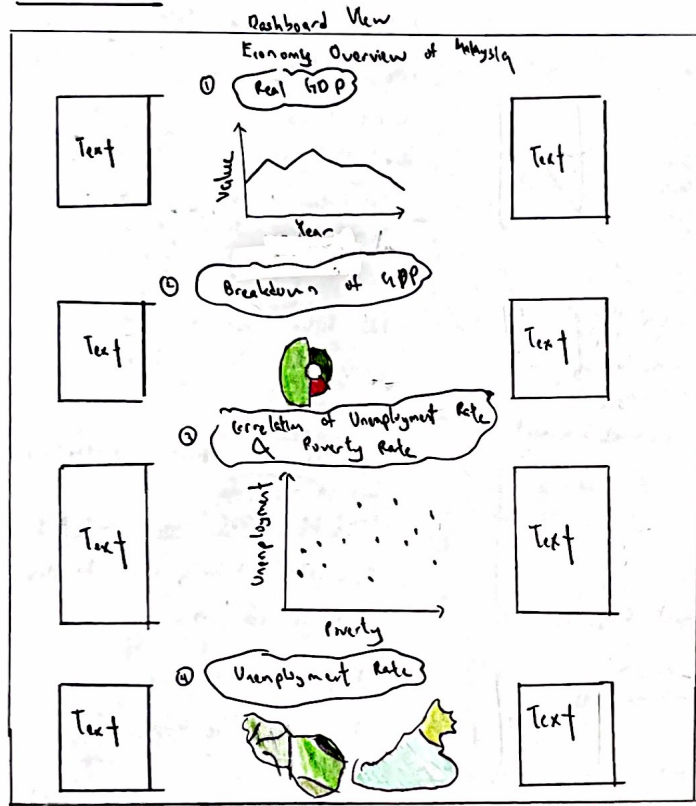
### Advantage

- creates a strong with sections well defined
- good user interactions
- allow users to get info they want

### Disadvantages

- layouts need to be well-arranged
- Spacing need to be ~~very~~ careful

# LAYOUT



Title: Economy Overview

Author: Gan Ming Fung

Date: 27/9/2024

Sheet: 4

Task: Dashboard View 3

## OPERATION

- For line graph, maybe can add a smaller line chart at bottom



- can be used as brushing effect so that users can zoom in specific years.

- Users can also easily see the overview data

- For radical plot, add a drop-down bar based on sectors

Sector -
All
Agriculture
Mining
Fishing

- Maybe can add a highlight on hover and click to select effects

Tooltips:

- Year, GDP value, Sectors, State, unemployment rate

## FOCUS

① Line Chart

→ x-axis: year

→ y-axis: value

② Radical Plot

→ Size: Proportion

→ Color: Sectors

③ Scatter plot

x-axis: Poverty Rate

y-axis: Unemployment Rate

Maybe label each dot with specific year (?)

④ Choropleth Map

→ color: unemployment Rate

## DISCUSSIONS

### Advantage

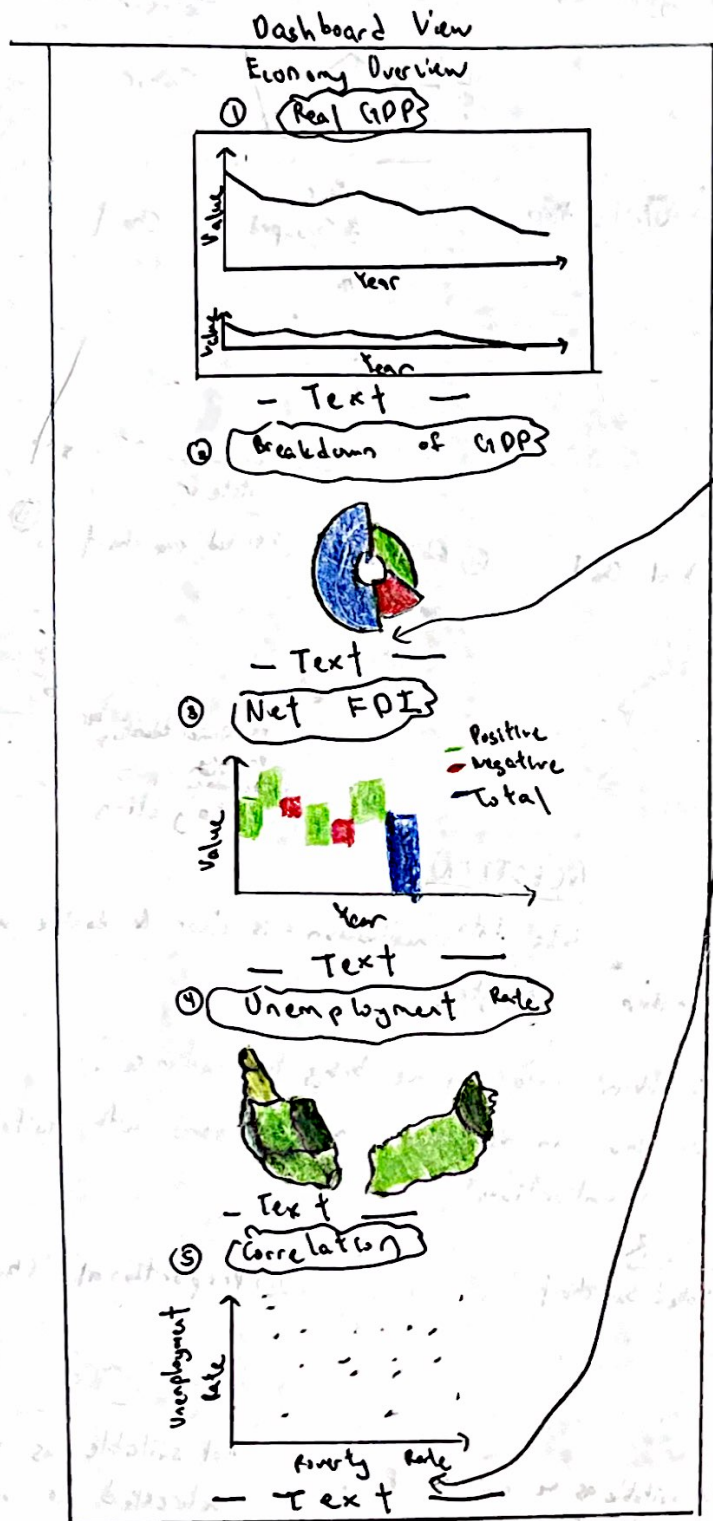
- Clean dashboard
- Users can easily navigate around
- Some user interactions (Filtering, Highlighting, Selecting...)

### Disadvantage

- Probably too many texts
- Not very informative for users (too few graphs & datasets used)



# LAYOUT (Based on Sheet 4)



Title: Economic Overview

Author: Gan Ming Feng

Date: 28/9/2024

Sheet: 5

Task: Final Dashboard View

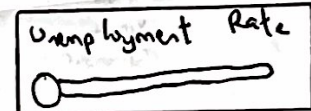
## OPERATIONS

Filter based on years & sectors

- Year -
2016
2017
2018

- Sector -
All
Agriculture
Mining

Filter based on Unemployment rate so that we can see the specific point data  
Can use a slider



For line chart, can add point markers  
Each point represent the specific year and its GDP value

### Tooltips:

Use for all charts

Line Chart

Year
GDP value

Radical Plot

Sector
Year
GDP value

Waterfall Chart

Year
Inflow
Outflow
Net

Choropleth Map

State
Unemployment Rate

Scatter Plot

Year
Unemployment Rate
Poverty Rate

## FOCUS

5 focus: ONE for each section

• Line Chart

x-axis: year

y-axis: GDP value

• Radical Plot

Size: Proportion

Color: Sector

• Waterfall Chart

x-axis: year

y-axis: Value of FDI

• Choropleth Map

Color: Unemployment rate

• Scatter plot

x-axis: poverty rate

y-axis: unemployment rate

## DETAILS

• Dependencies: Vega lite & R for data clearing

• Estimated time: at least 5 days to find and effort datasets & clean and 3 days to build all idioms

• Specific requirements: larger visualisation on smaller screen device?