

# IDEAS

## ① Comparative Analysis

### (a) Bump Chart



### (b)

States

Butterfly Chart



### (c) Choropleth Map



## FILTER

### ① (b) Butterfly Chart

→ Butterfly Chart is too simple to analyse the Malaysia Economics

→ This Chart has been used before

### ② (b) Chord Diagram

→ Migration Data for Malaysia Migration Rate is available

→ Difficult to visualize quantitative value

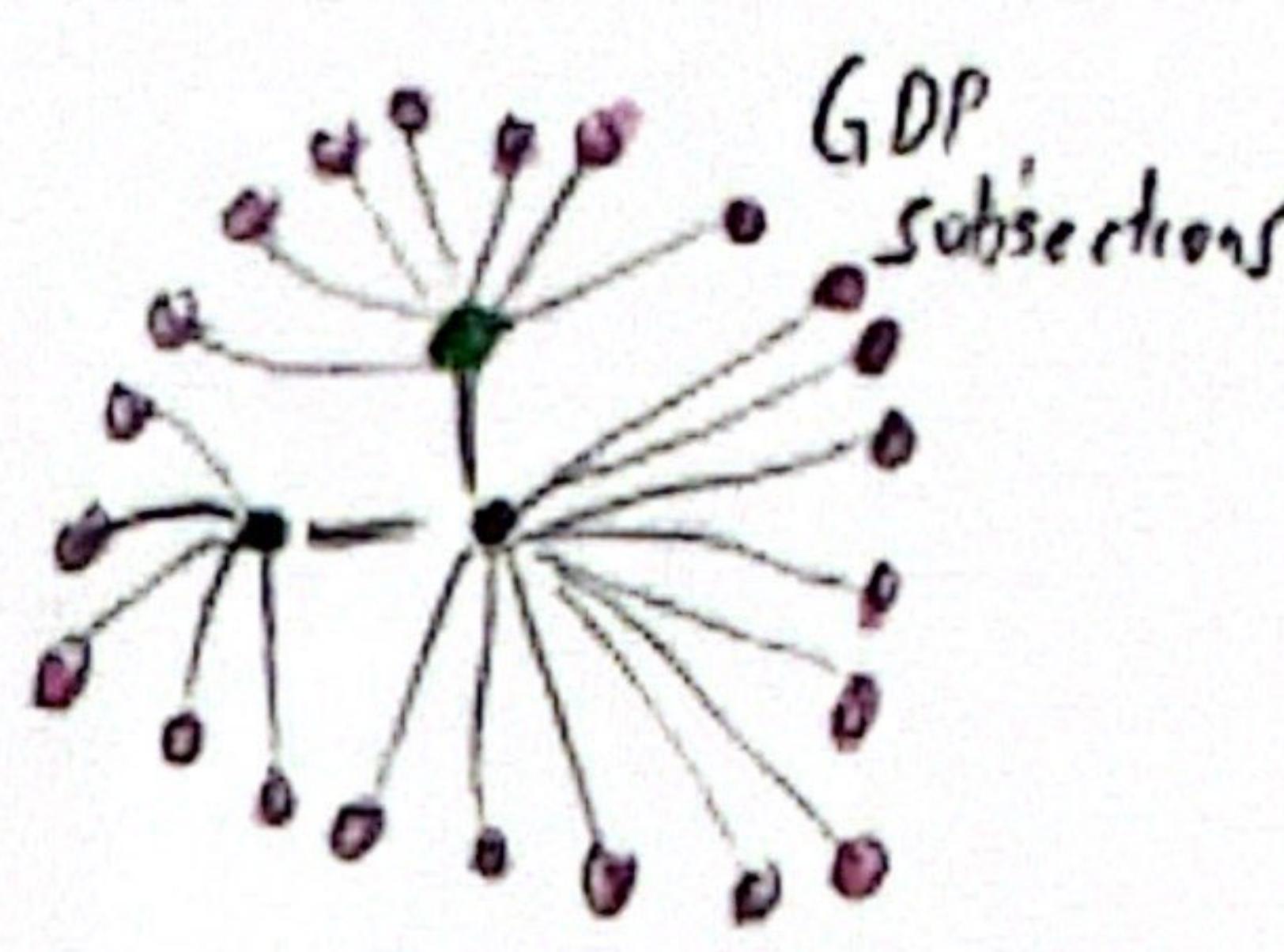
### ③ (c) Multiple Line Chart

→ This Chart is conflict with other two charts

→ This chart is no enough complexity to

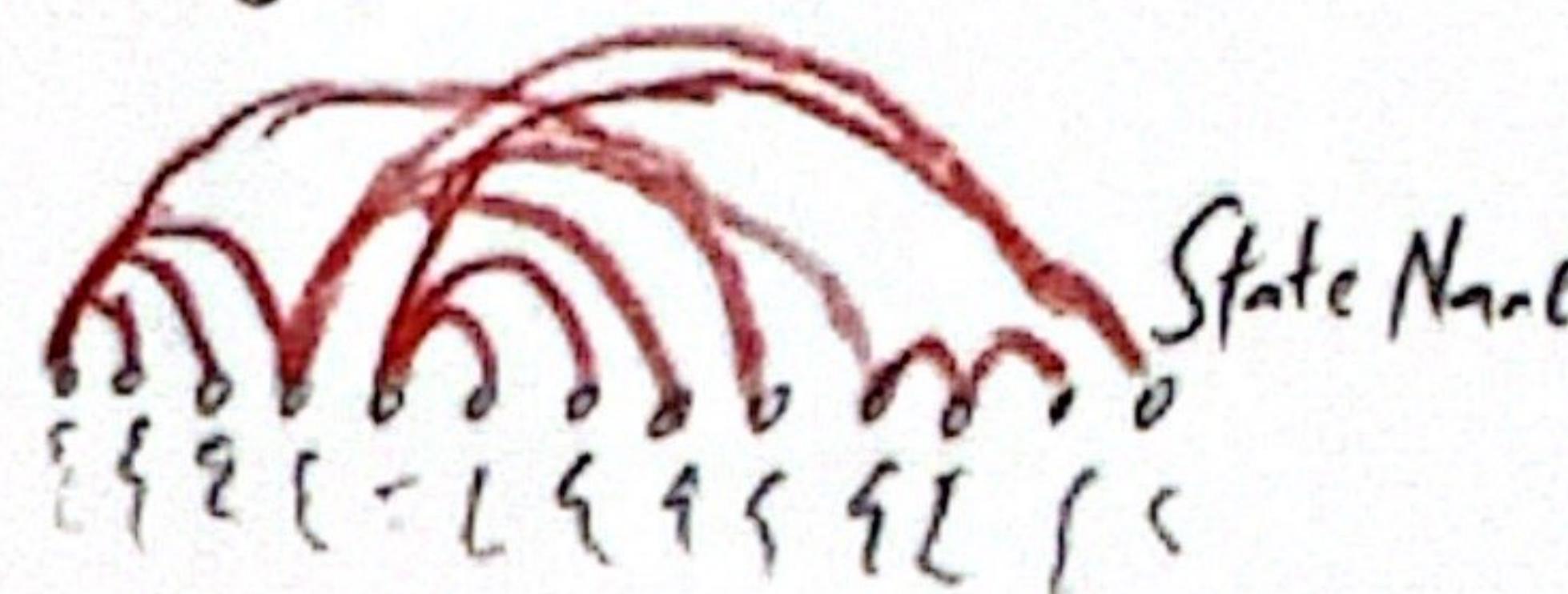
## ② Multivariate Representation

### (a) Radial Tree



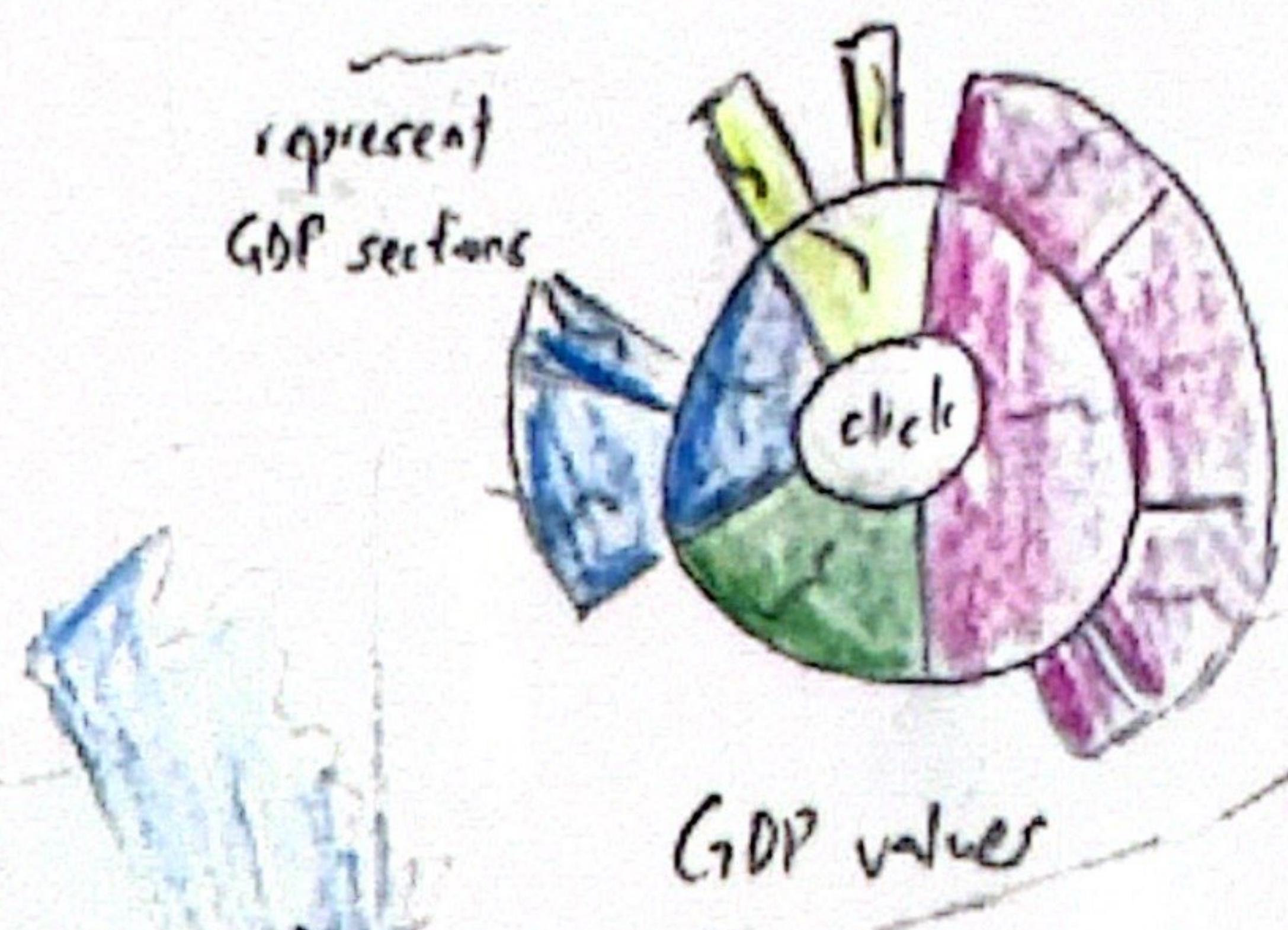
### (b) Chord Diagram

Migration Values



### (c) Zoomable Sunburst Chart

represent GDP sectors



- Comparative Analysis
- Bump Chart
- Butterfly Chart
- Choropleth Map

## COMBINE & REFINING

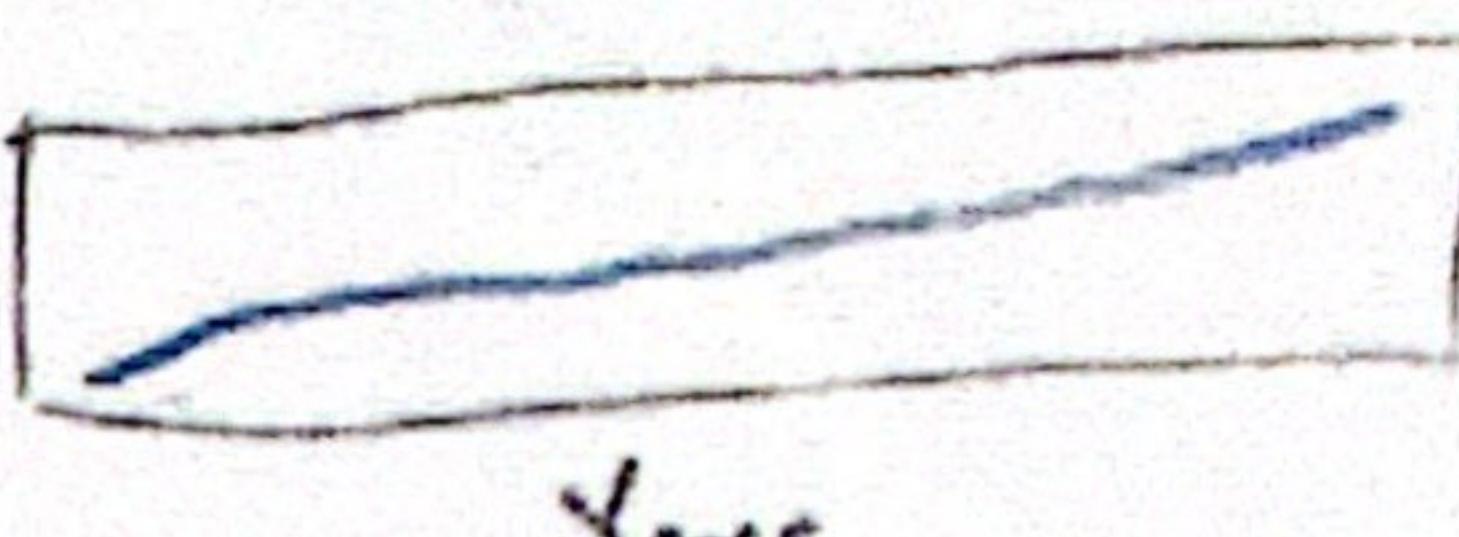
Stacked Area Chart  
selected year



Bubble Chart  
selected year

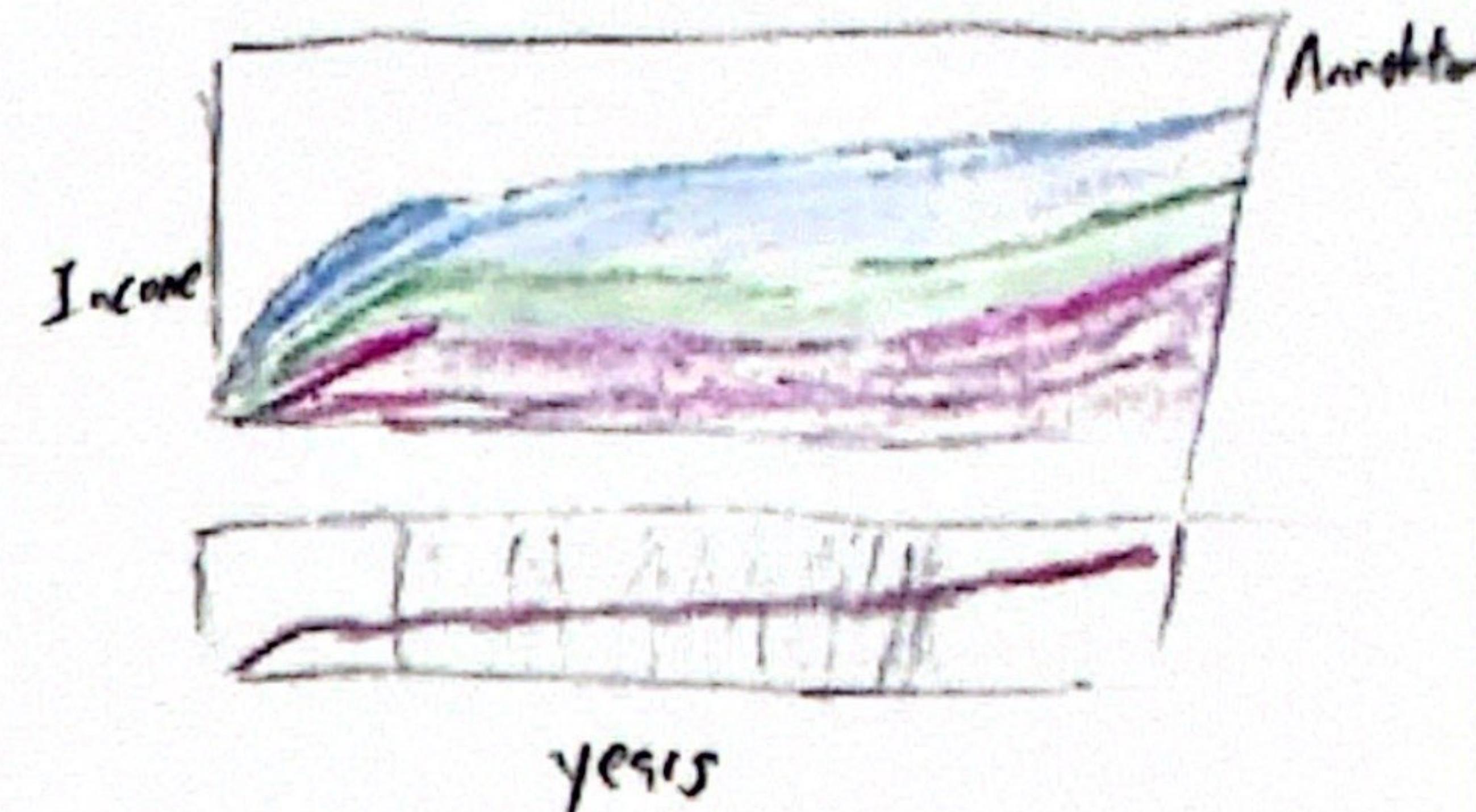


Dynamically show two diagrams

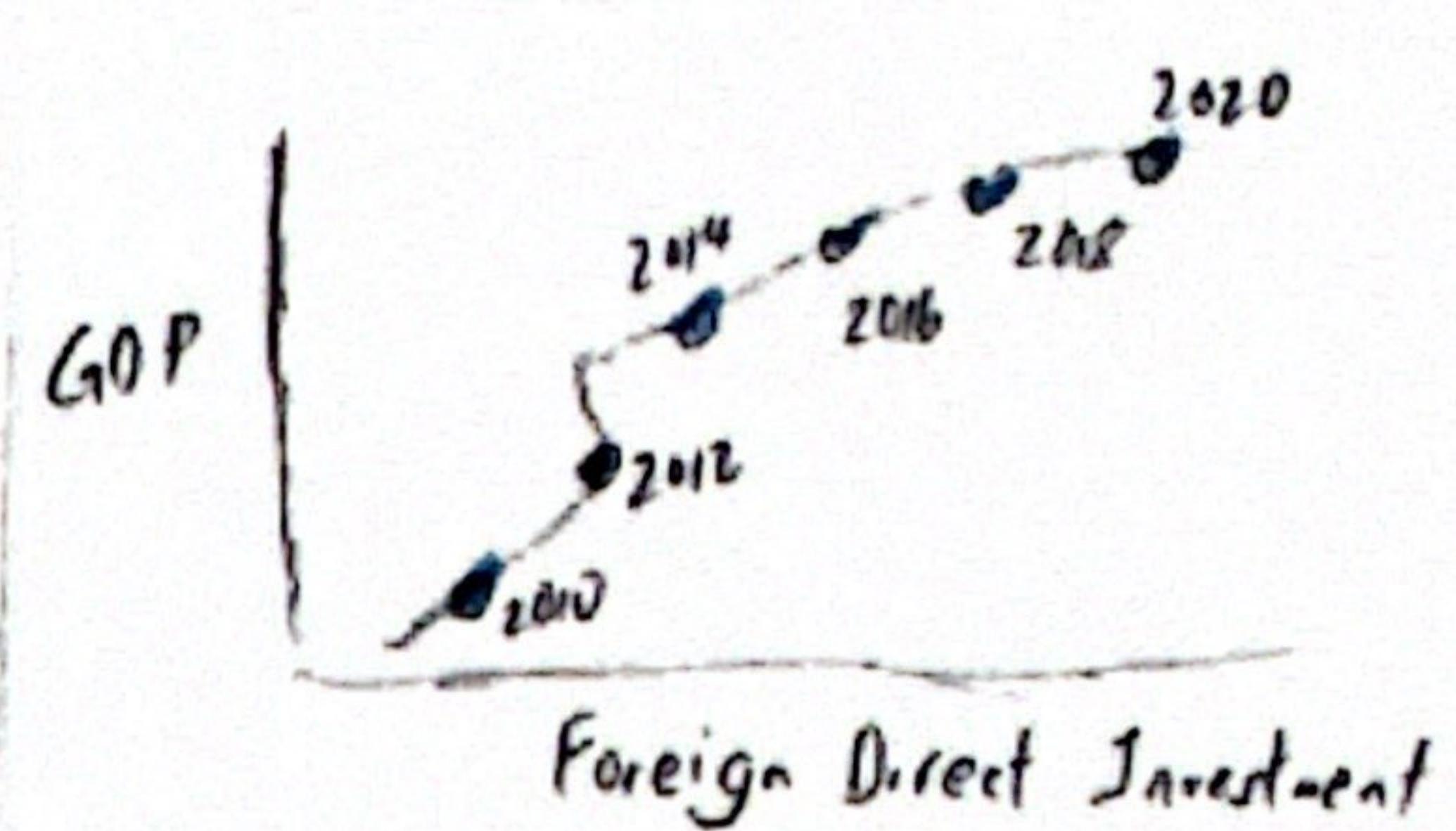


## ③ Time Series and Dynamic Data

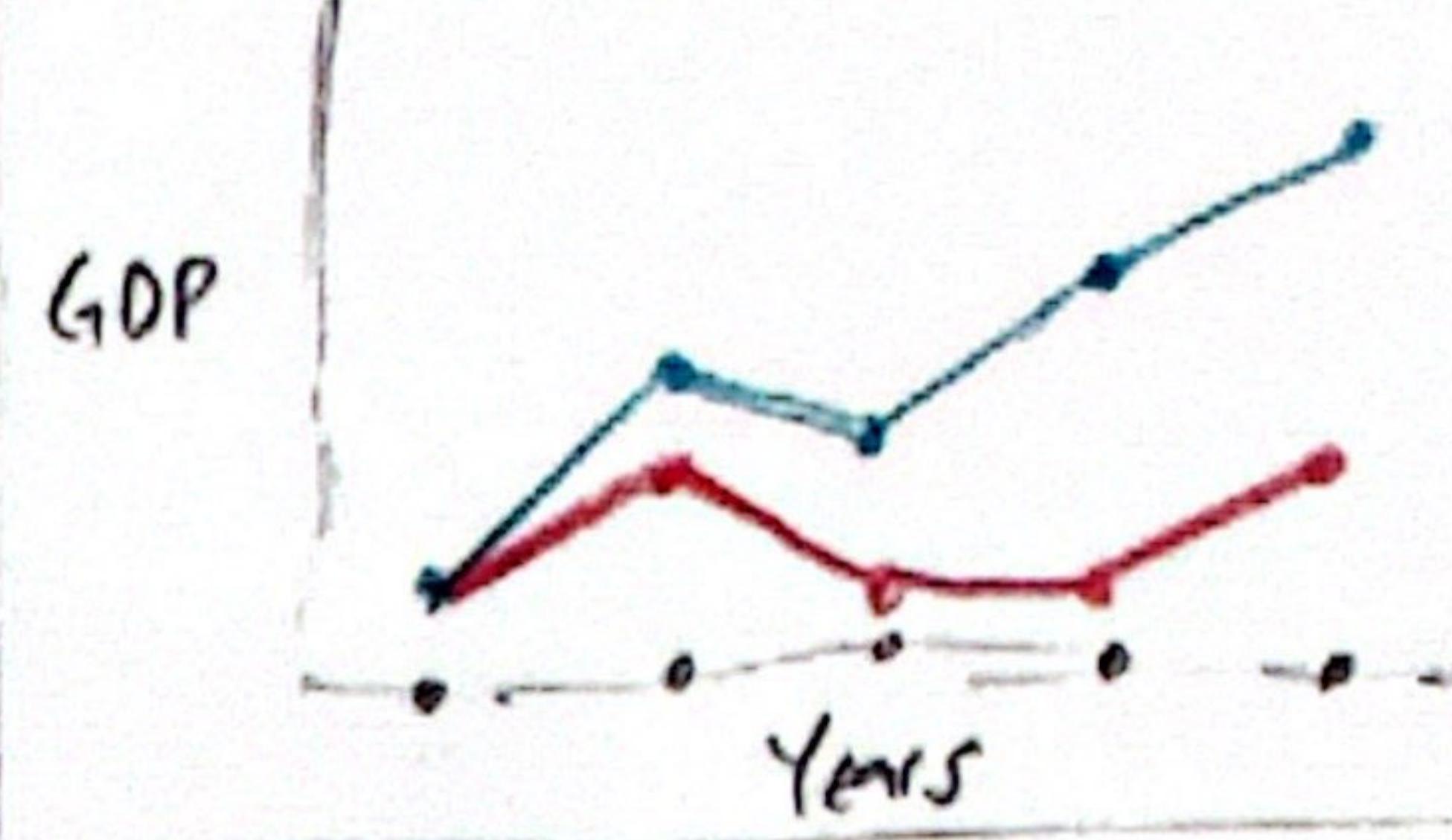
### (a) Line Chart with Stacked Area Chart



### (b) Connected Scatterplot



### (c) Multiple Line Charts



## CATEGORISE

### Malaysia Economics

- |                             |                                      |
|-----------------------------|--------------------------------------|
| Multivariate Representation | Time Series and Dynamic Data         |
| • Radial Tree               | • Line Chart with Stacked Area Chart |
| • Chord Diagram             | • Connected Scatterplot              |
| • Zoomable Sunburst         | • Multiple Line Chart                |

## QUESTIONS

→ Is there any other libraries that are better than Vega and VegaMobile library?

→ Can I use Vega to plot Sanburst and Connected Scatterplot?

→ Is the other better alternative charts better than selected charts.

Author : Tan Jun Koon

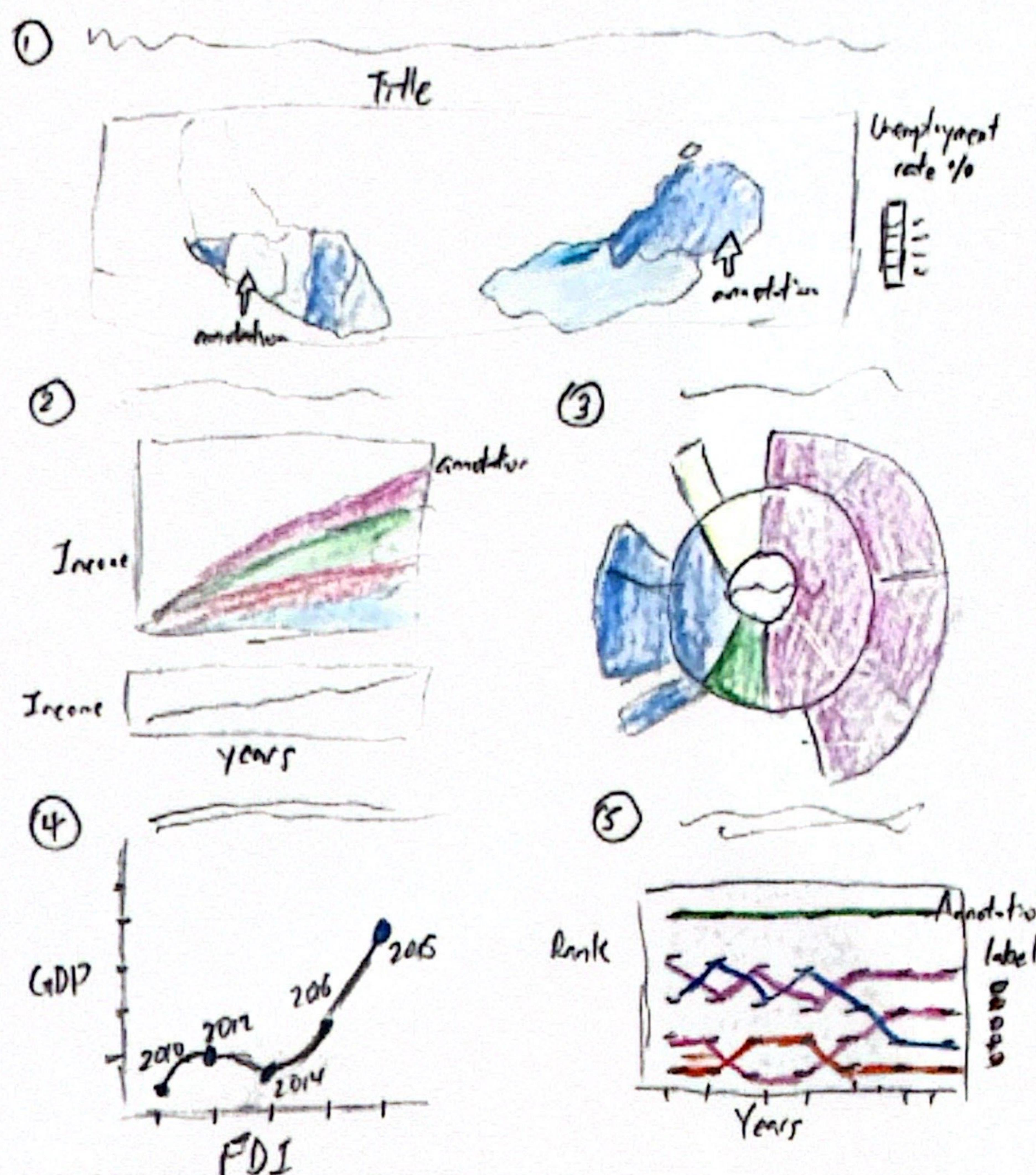
Date : 6/11/2024

Sheet : 1

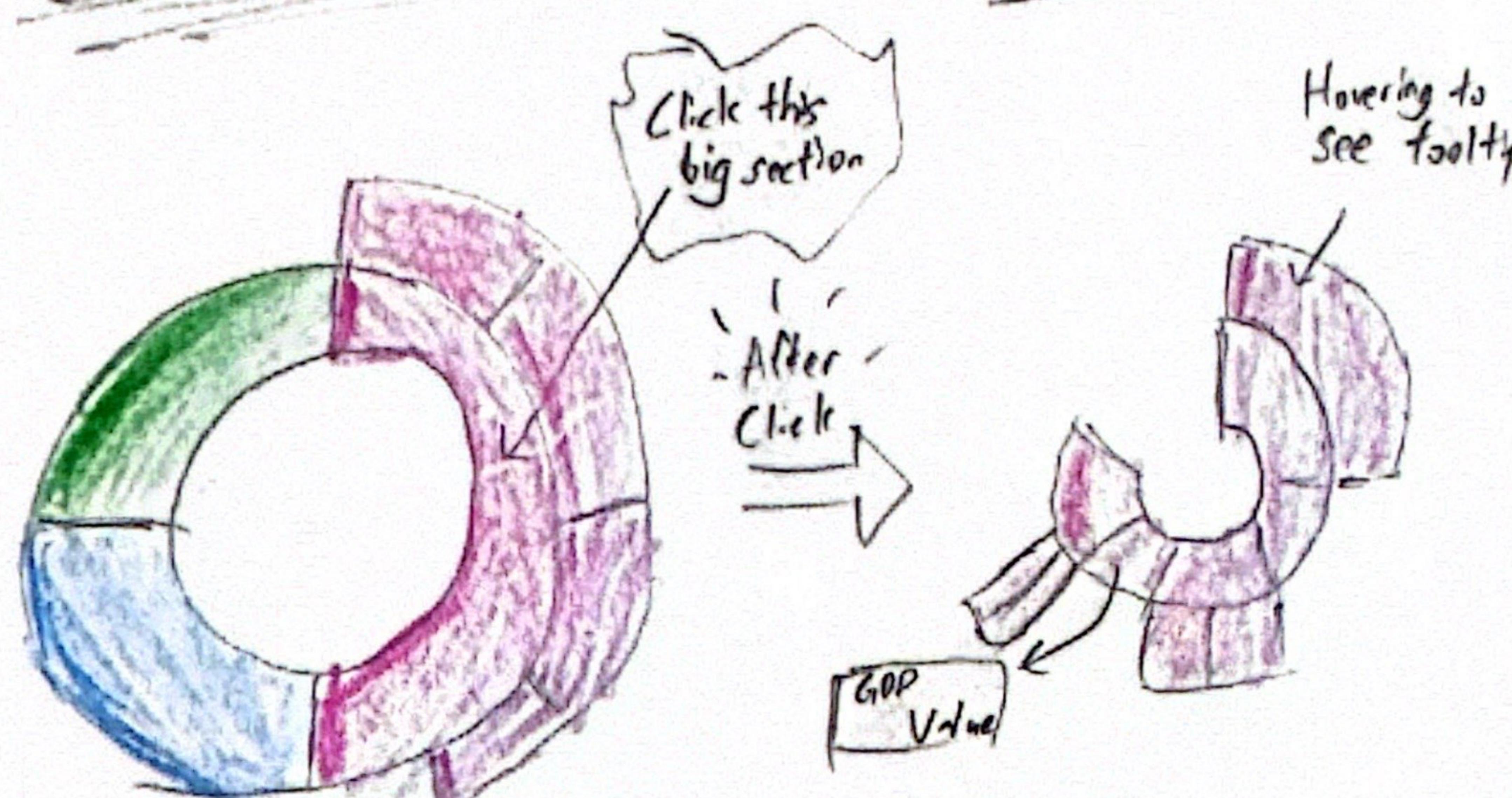
Task : Brain Storming Visualizat

# AYOUT

## MALAYSEA ECONOMICS



## FOCUS



- Big Sunburst chart show the overview of GDP distribution
- Clicking the big section will zoom in the detailed information.

Title : Story Telling #1

Author: Tan Jun Koen

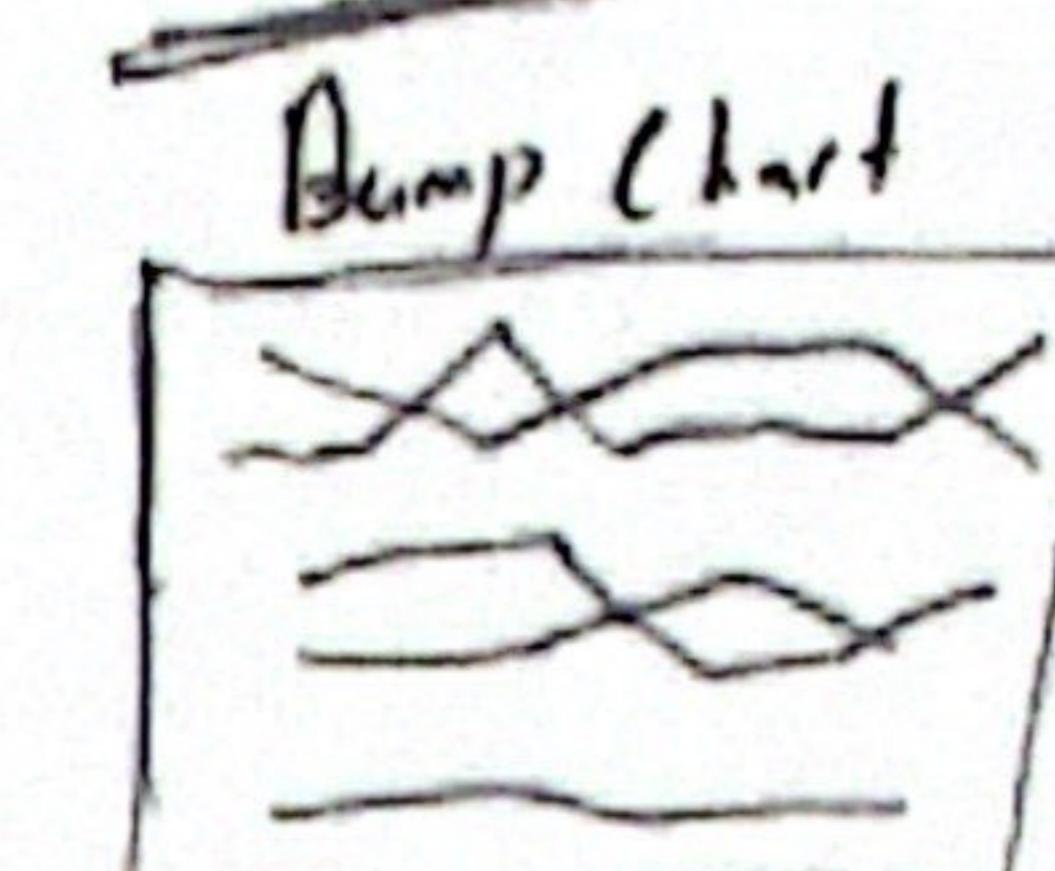
Date: 9/11/2024

Sheet : 2

Task : Design a scrollable dashboard telling a narration

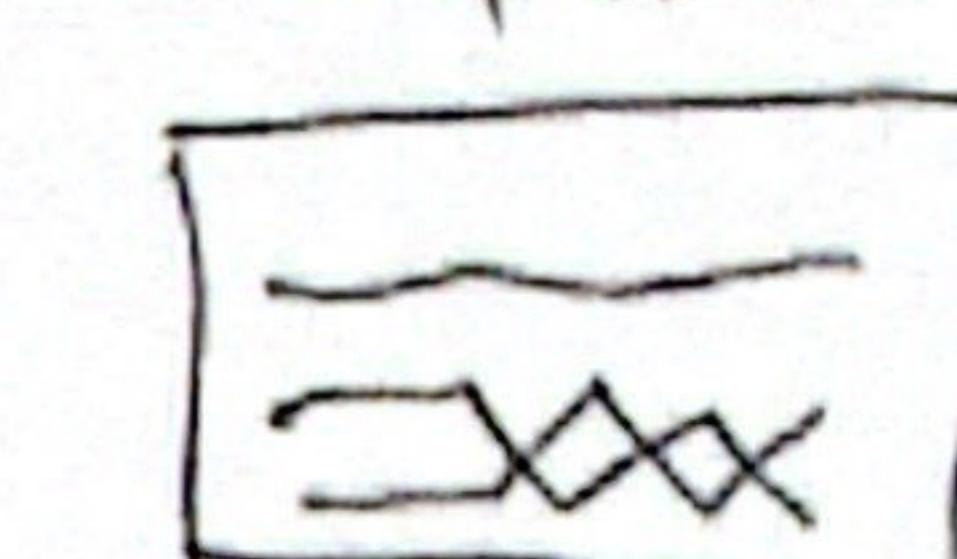
## OPERATION

Slider



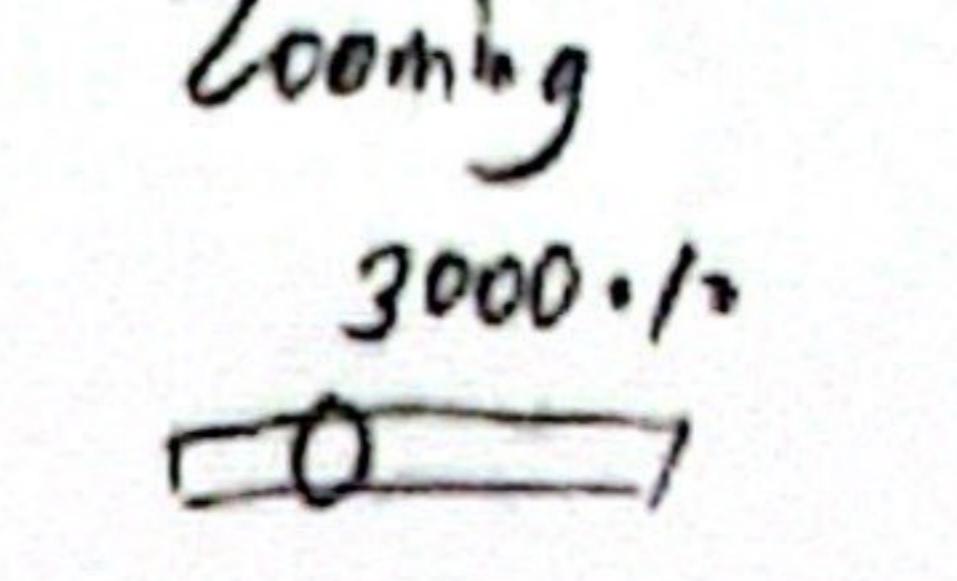
Top States Displayed  
5

Date



Top States Displayed  
3

Date



3000.1%

Selection  
2012

2022

## DISCUSSION

### \* Advantages :

→ suitable for interactivity since covering more white space for scrollable dashboard

→ These charts can be visualized in more detailed way.

### \* Disadvantages :

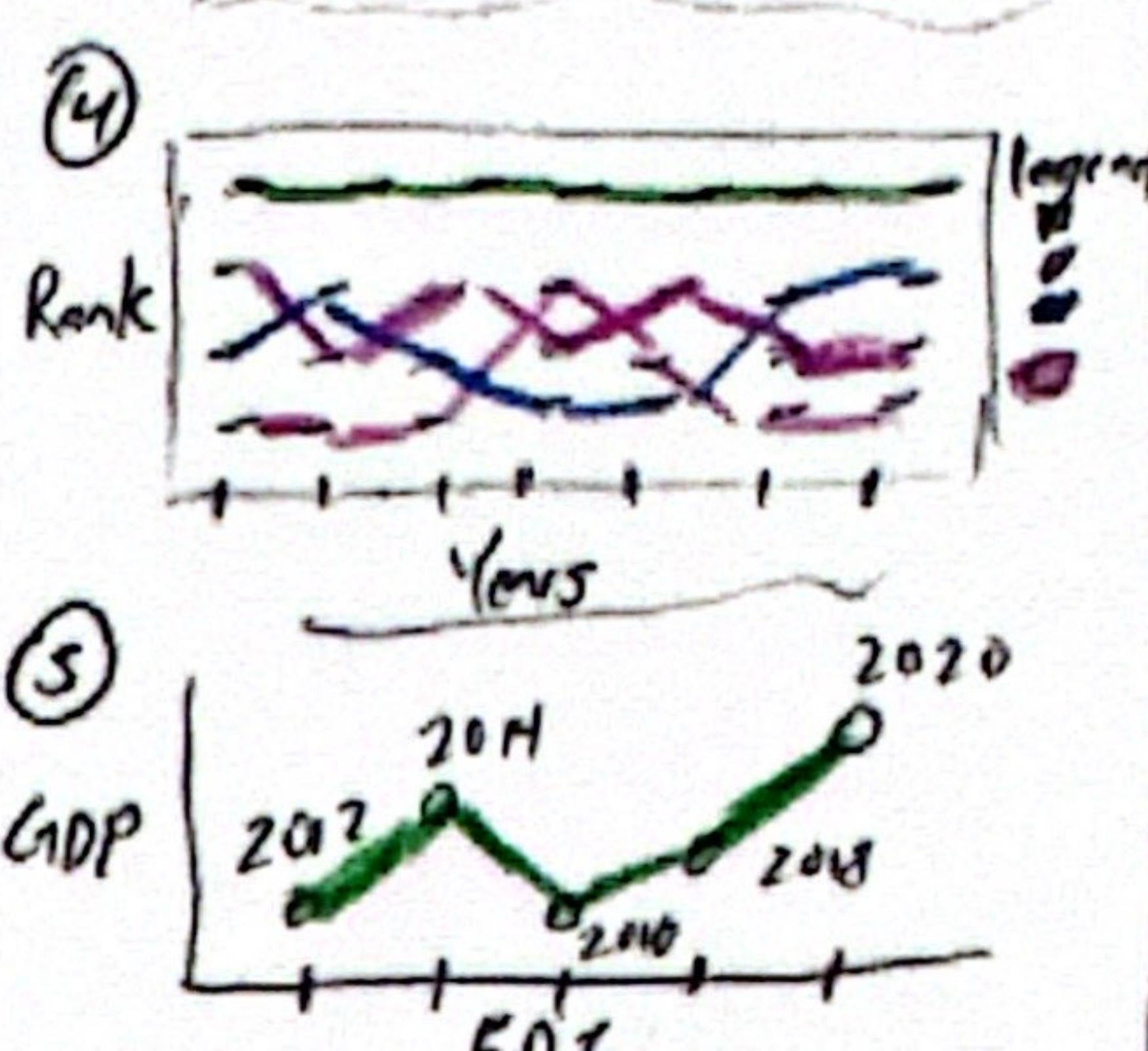
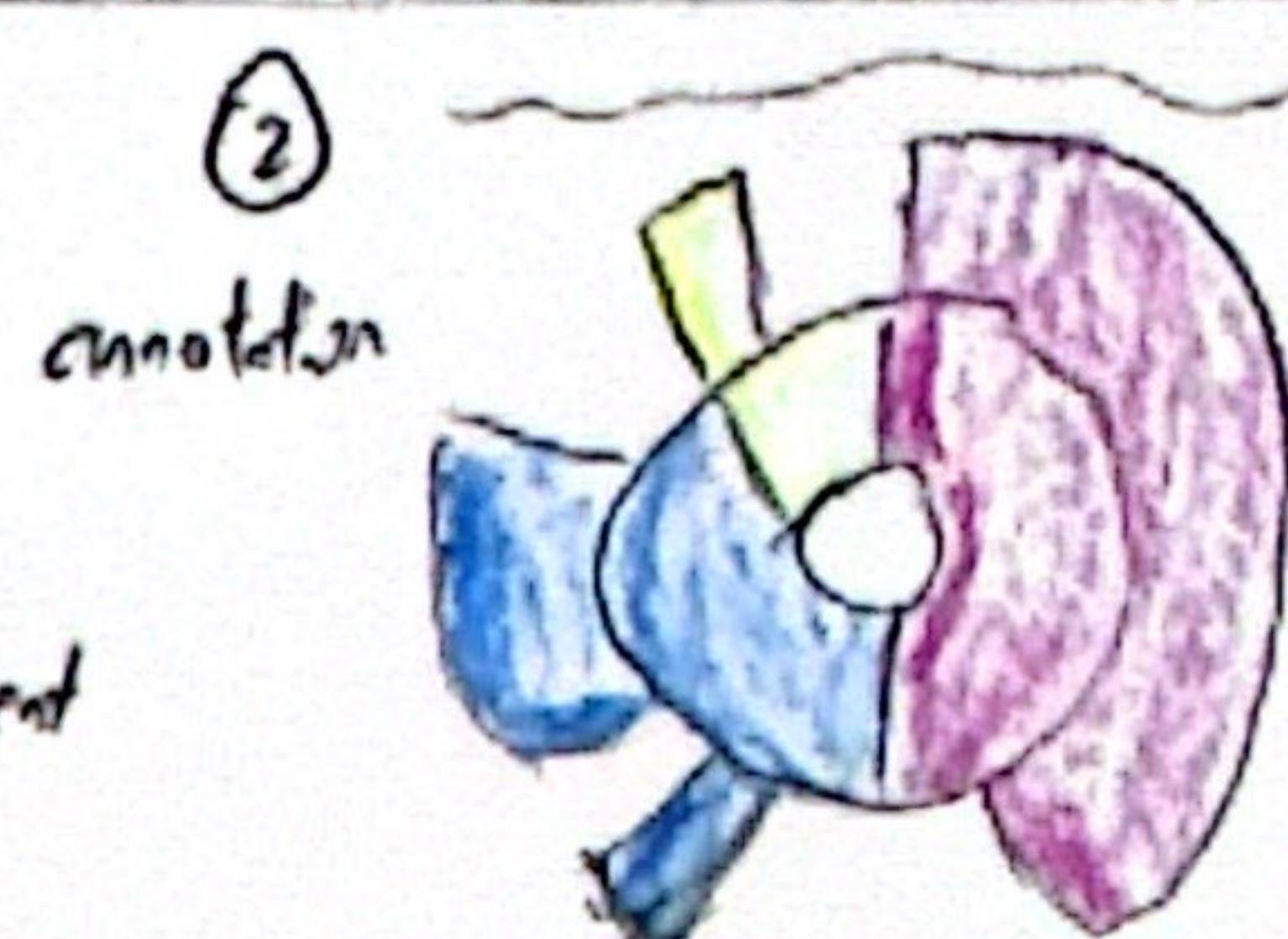
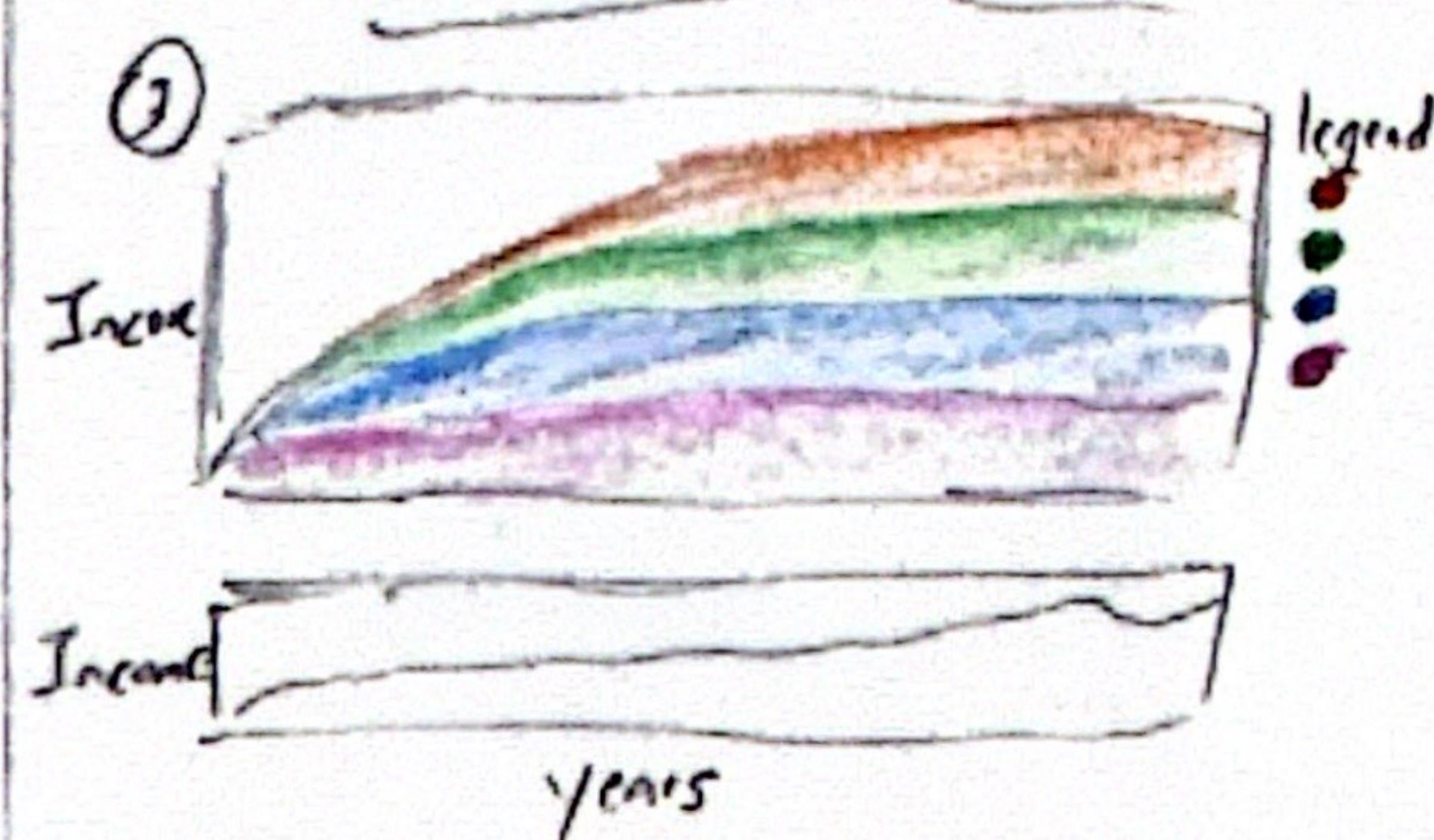
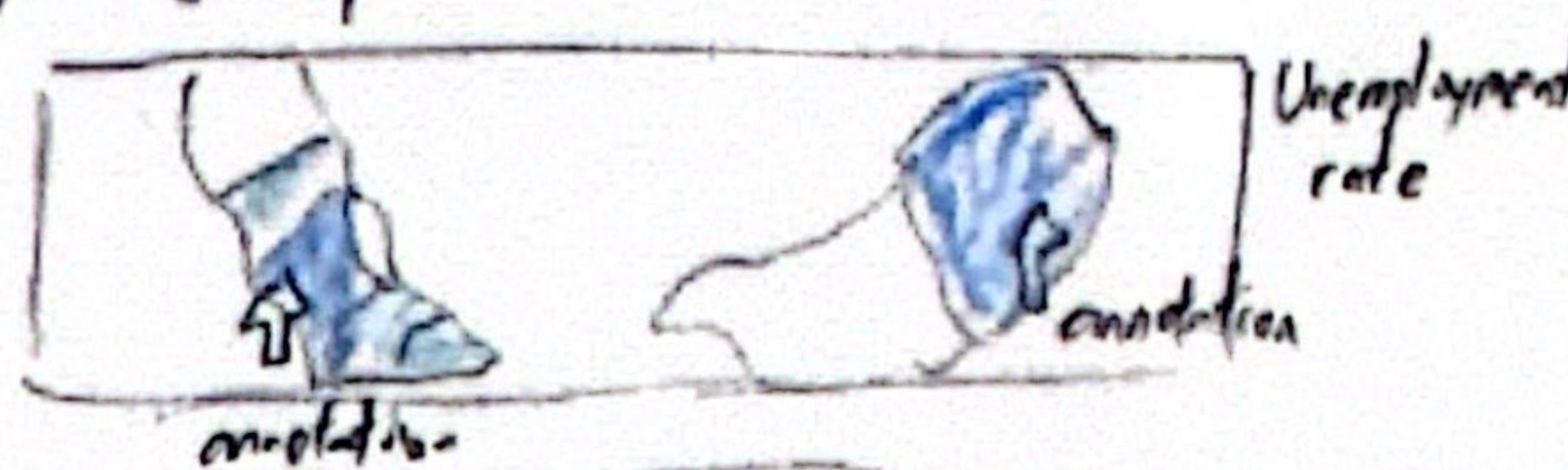
→ User cannot visualize the entire dashboard in one glance.

→ User need to scroll the dashboard so that cannot compare with other charts.

# AYOUT

## MALAYSIA ECONOMICS

### ① Choropleth Map



### ③ Line Chart with Stacked Area Chart

→ Stacked Area Chart will change its value dynamically with the line chart

→ Line Chart is used for year selection

### ④ Bump Chart

→ Showing the ranking throughout the years for different states

### ⑤ Connected Scatterplot

→ Showing the correlation between two quantitative values.

### ② Zoomable Sunburst

→ colour represent different GDP sectors

→ Each big sector has subsector, the size depend on GDP value.

## FOCUS

In this dashboard, everything is focused

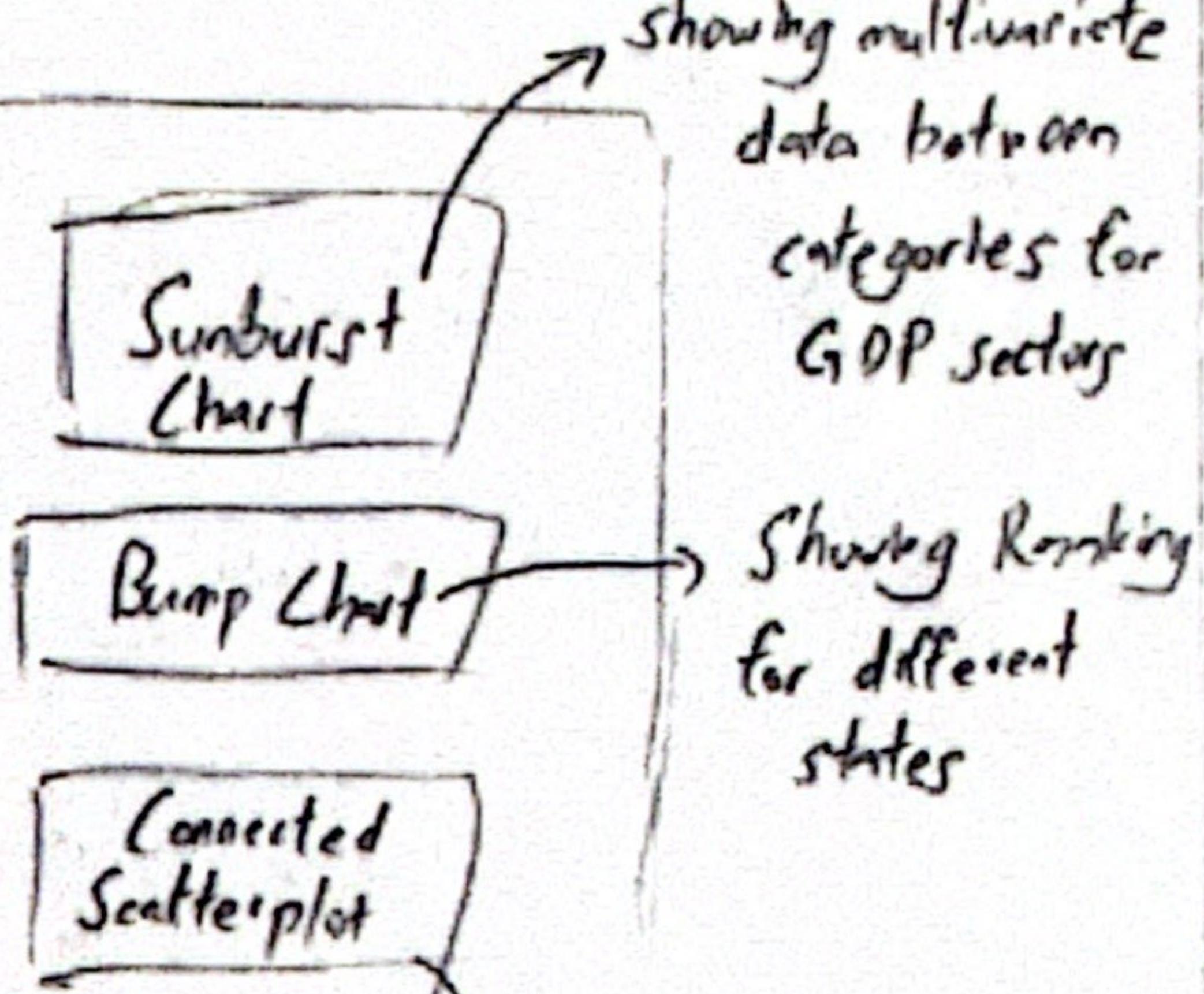
Showing unemployment rates for different states.

Title

Choropleth Map

Stacked Area with Line Chart

Serve as interactive selection purpose, user can choose the desired visualized years.



Showing Correlation between Foreign Direct Investment and GDP

Title : Story Telling #2

Author: Tan Jun Koen

Date : 10/11/2024

Sheet : 3

Task : Design an infographic poster

## OPERATION

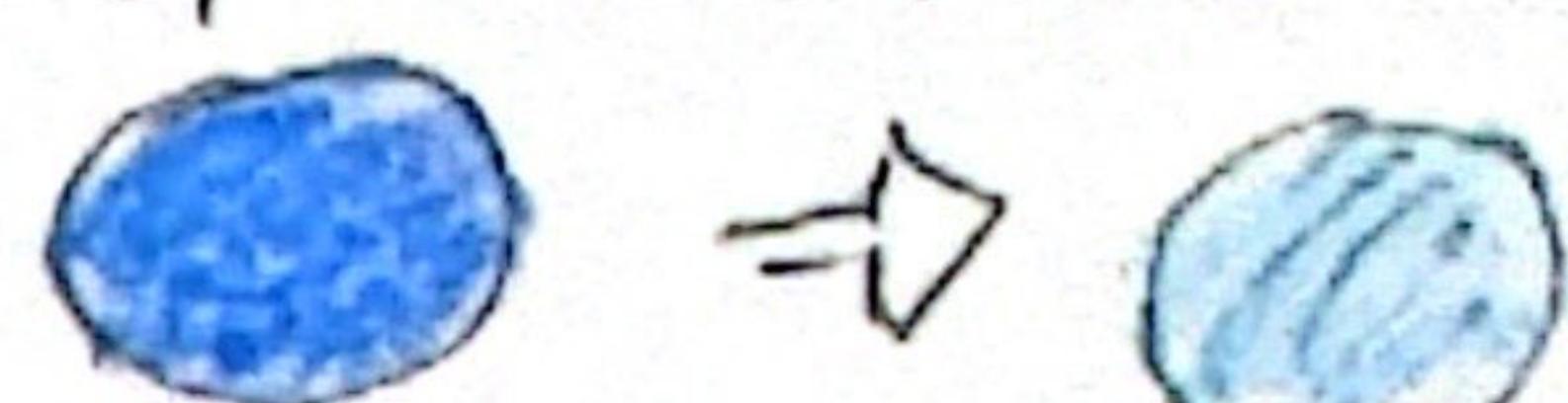
### ① Showing Tooltips



state : name  
value : GDPvalue

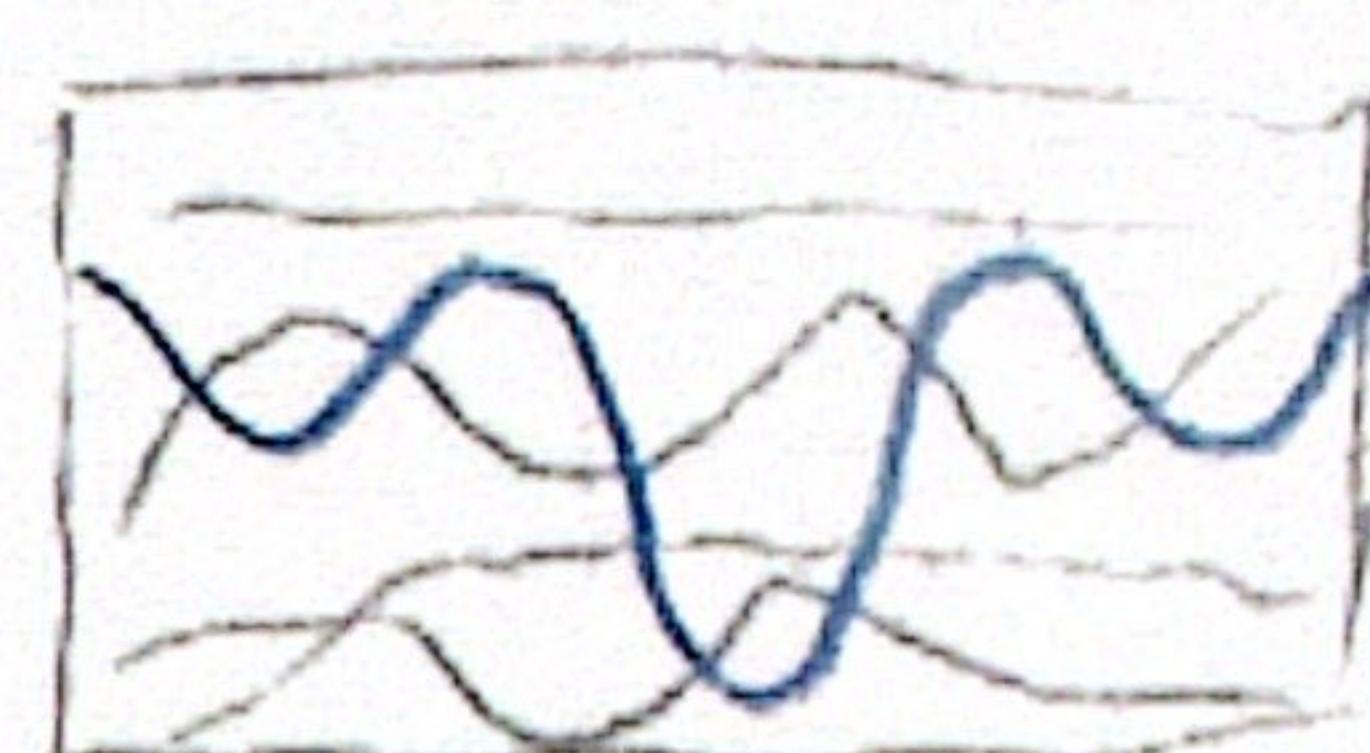
### ② faded effect when mouse hovering

→ capture user attention



### ③ Click the legend

For example, click "Ketahan State"



→ this line will be emphasized.

## DISCUSSION

### \* Advantages

→ not necessary to use the mouse to scroll up or down, see entire graphs in one glance.

→ reader can easily compare with different charts for different purpose

→ interactivity is concise and simple to use.

### \* Disadvantages

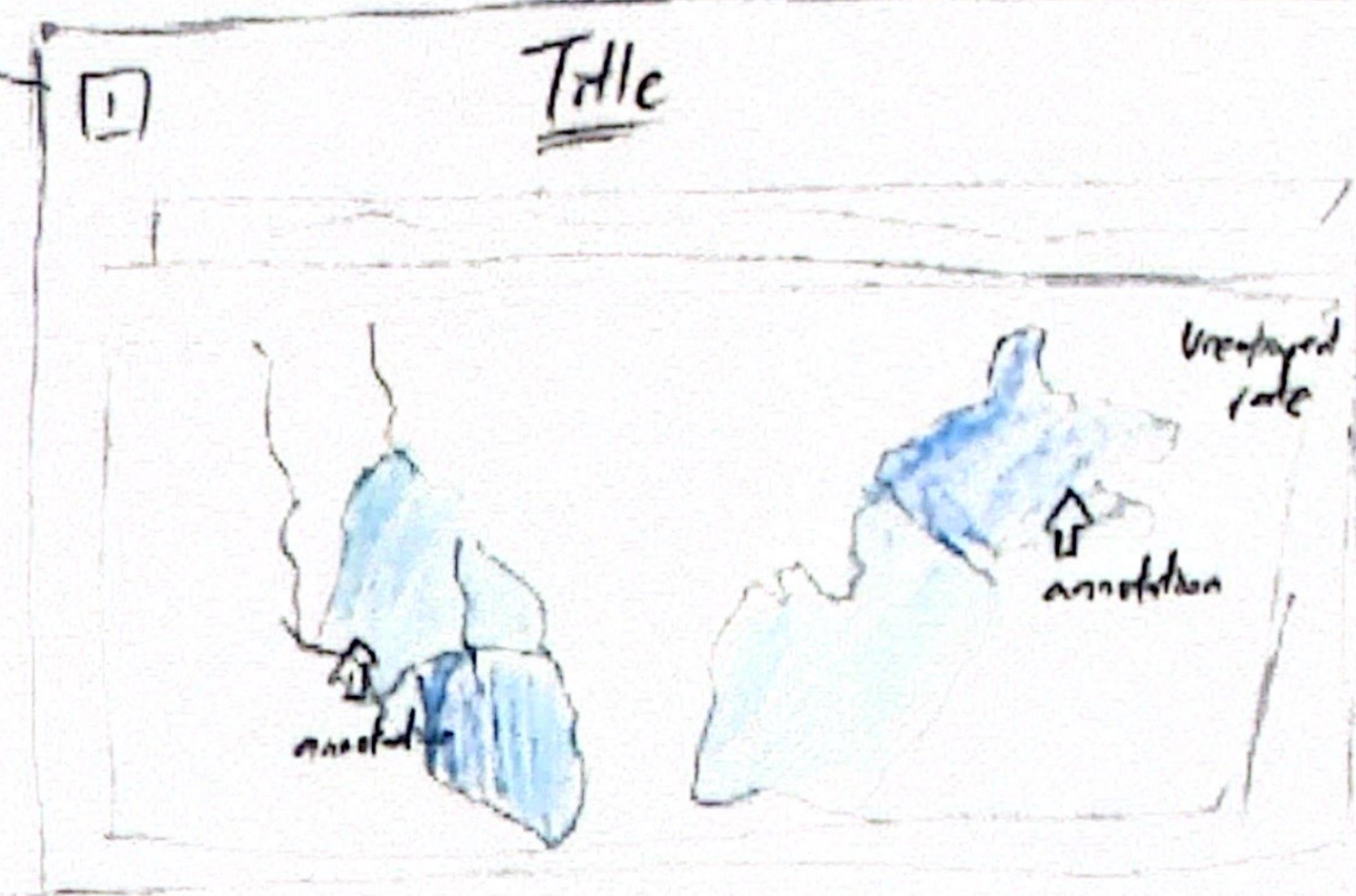
→ user require long term memory due to the suffering of heavy cognitive load

→ There is no emphasis on any chart

→ The reader will easily get overwhelmed

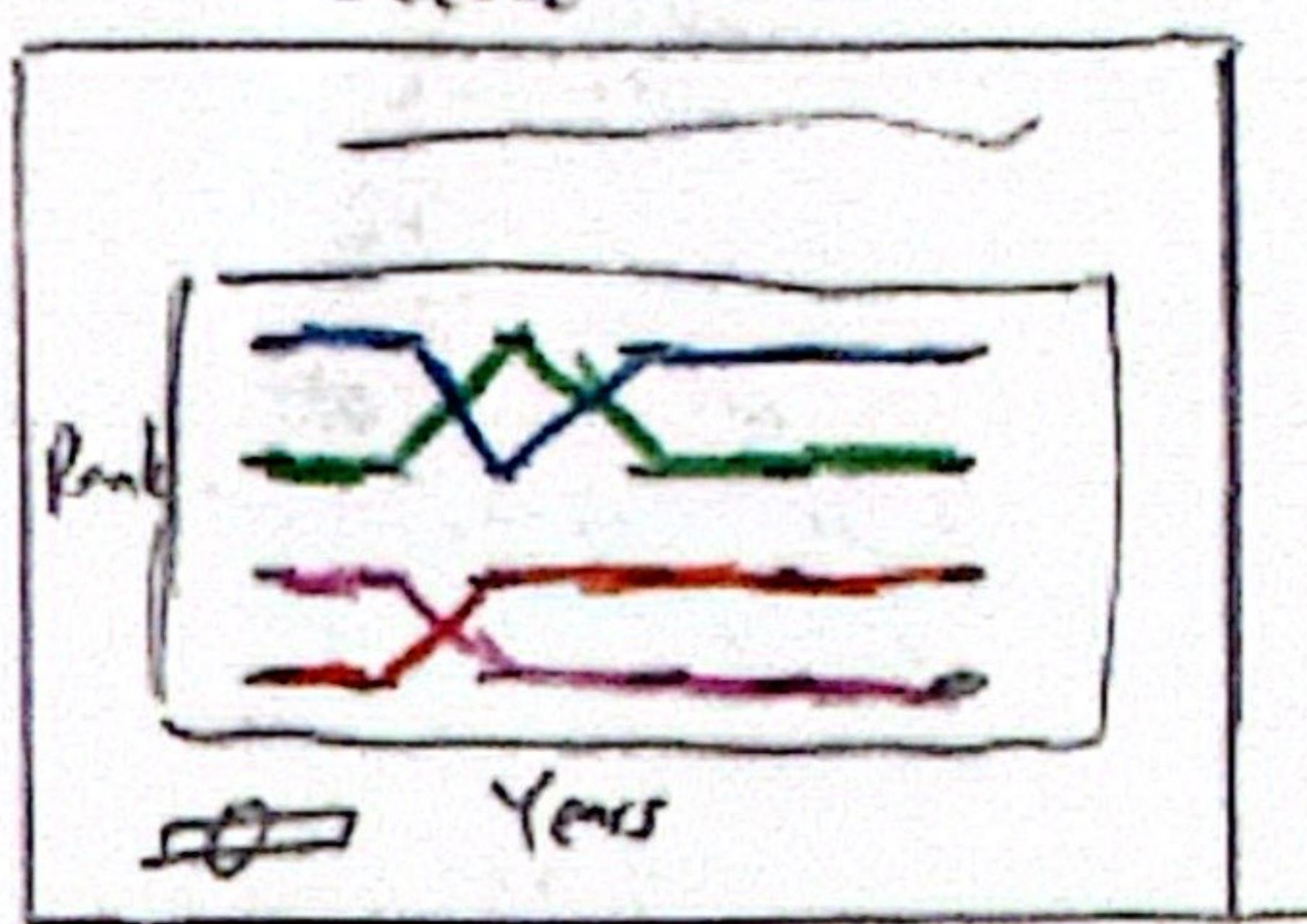
# AYOUT

first view

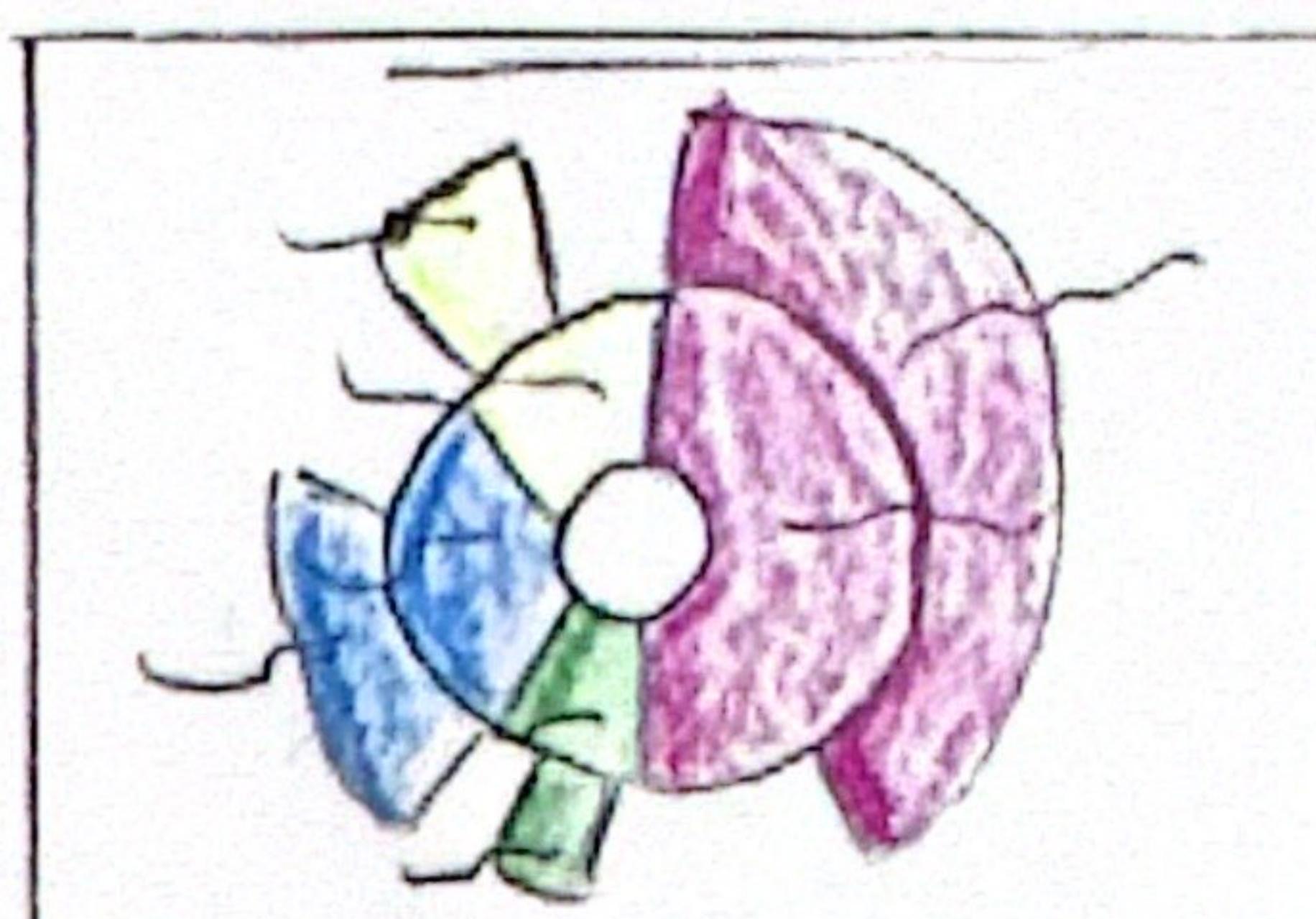


Title

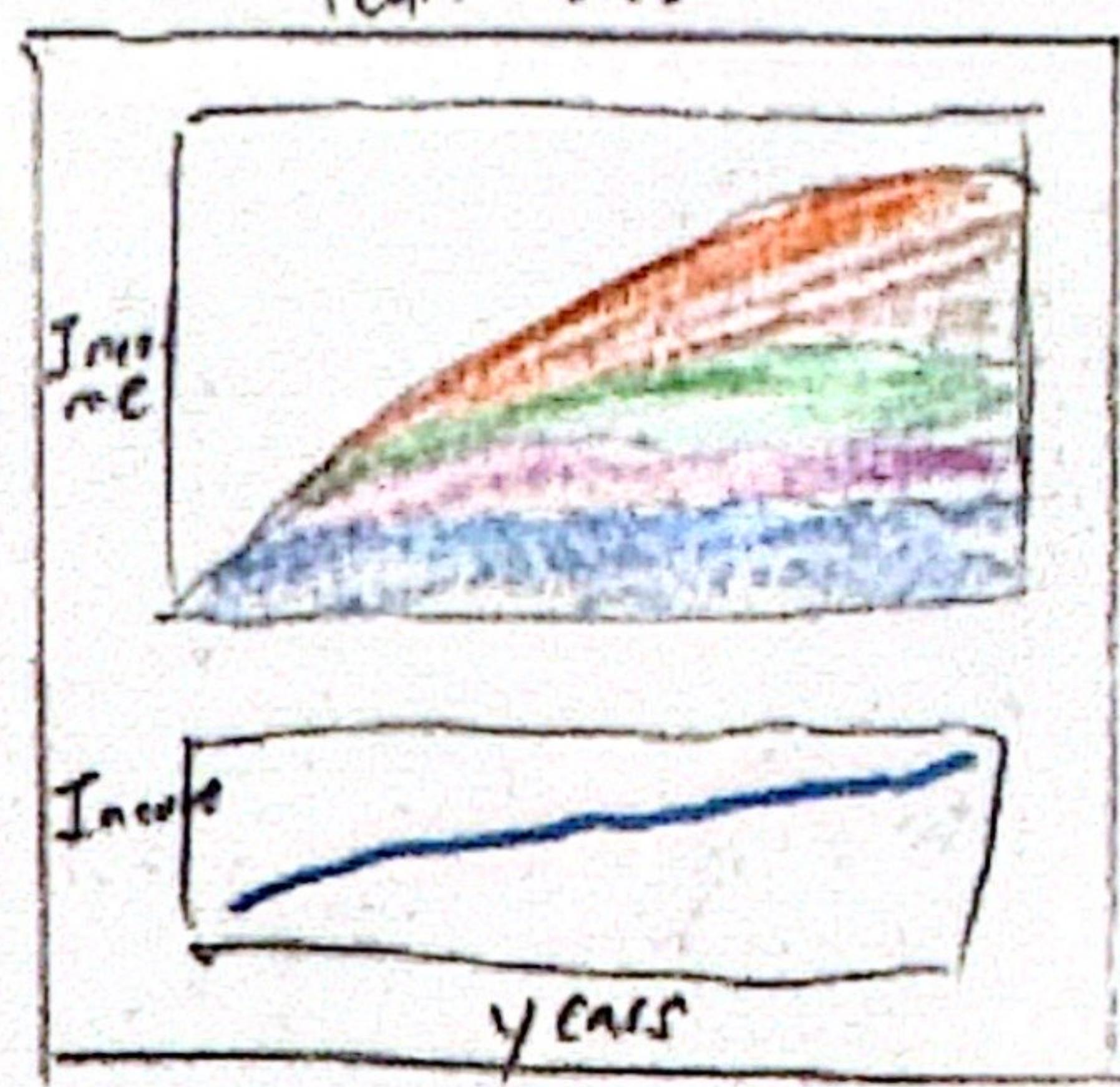
Second View



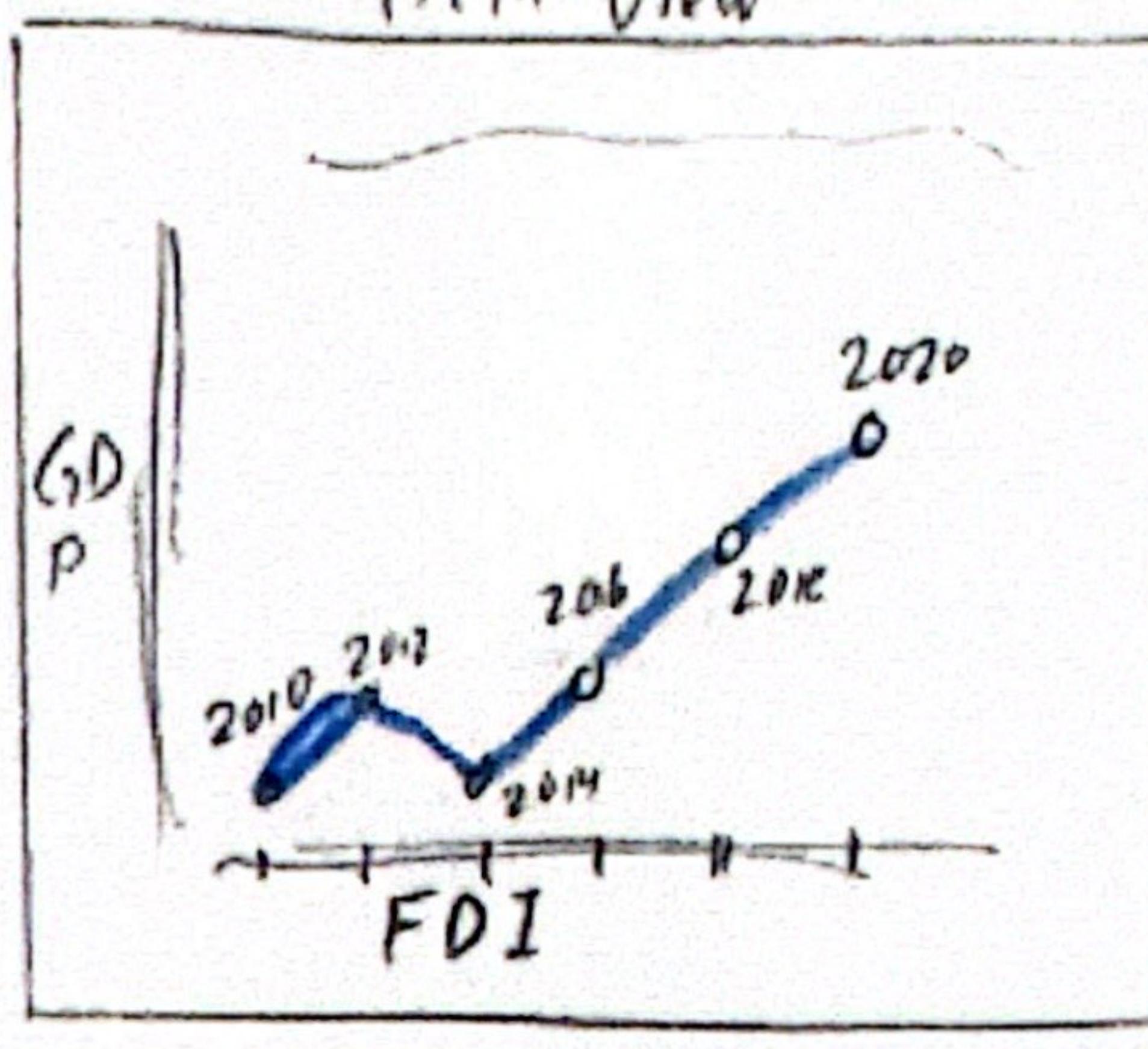
Third View



Fourth View



Fifth View



Title : Story Telling # 3

Author : Tan Jiar Koon

Date : 11/11/2024

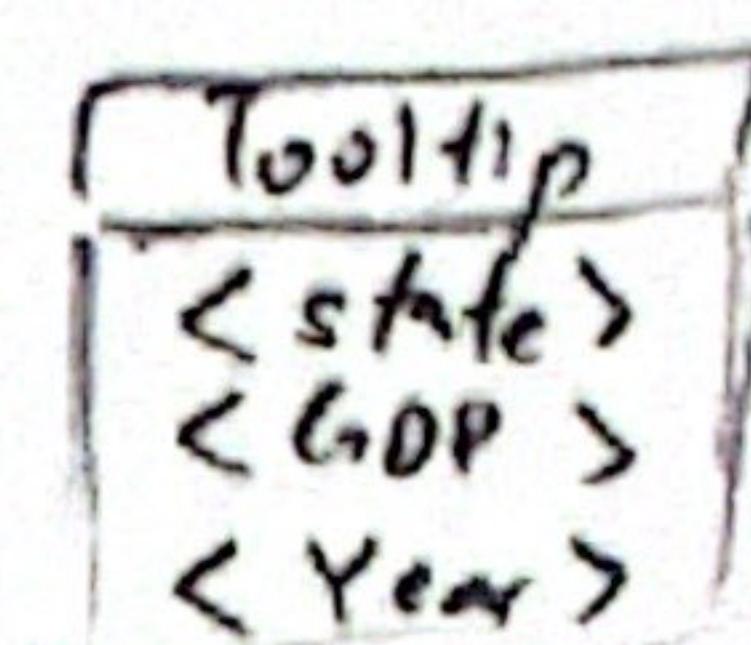
Sheet : 4

Task : Design a aesthetic dashboard telling a narration

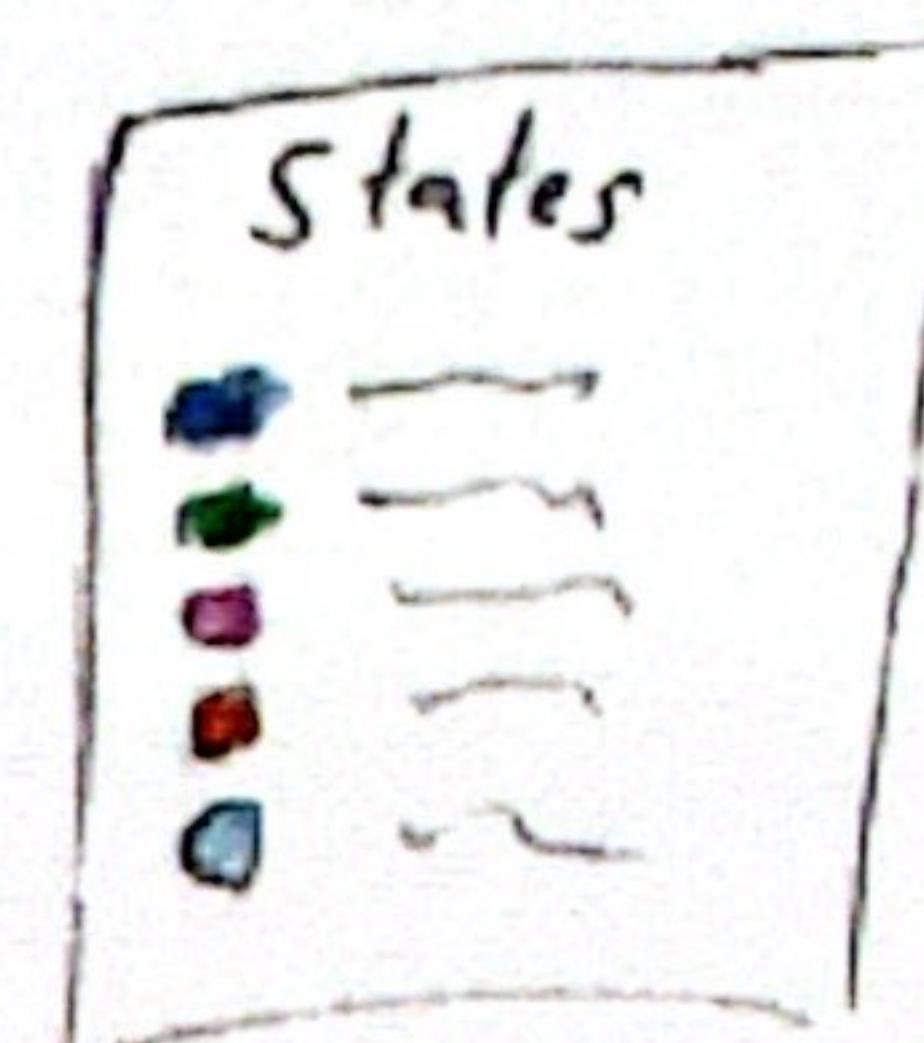
## OPERATION

This dashboard focus on one chart on the viewer view.

1 hovering cursor



2

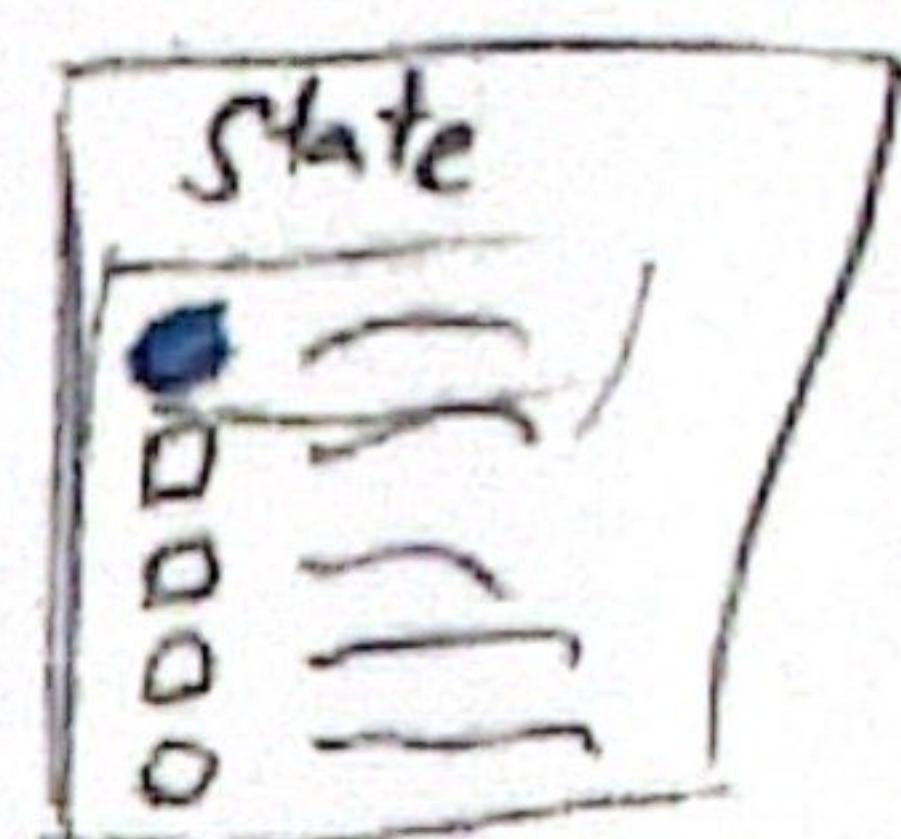


3

Replay Animation

→ able to reanimate the line graph.

After click  
only focus  
on selected  
state

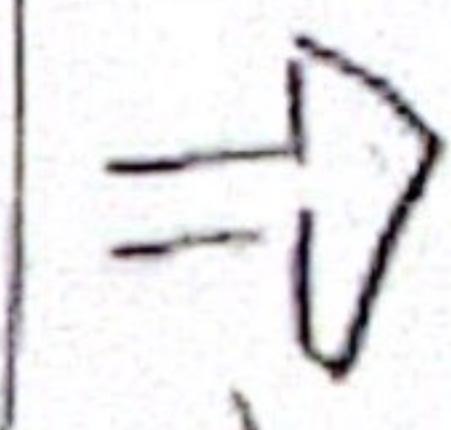
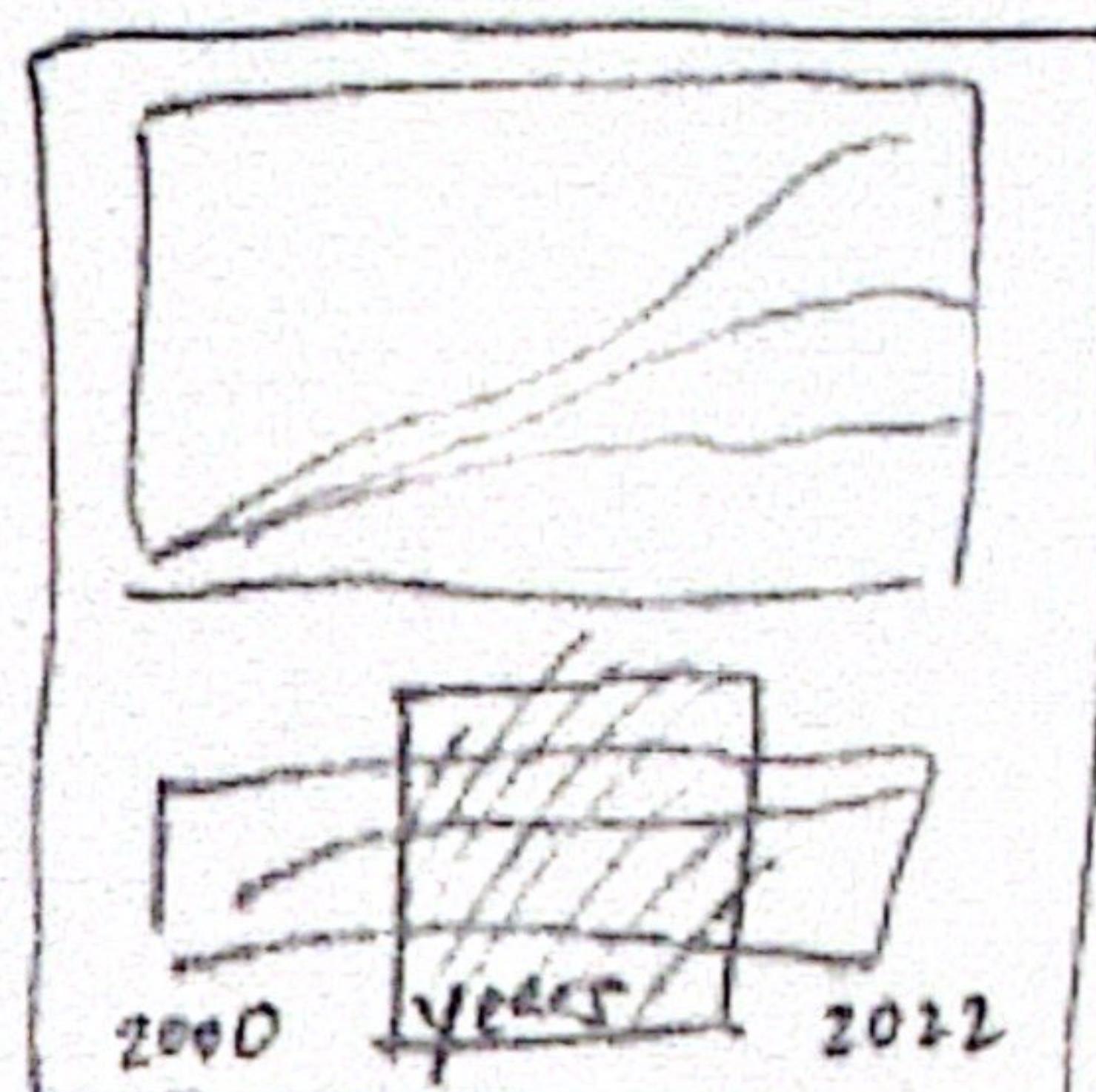


## FOCUS

Key Concept

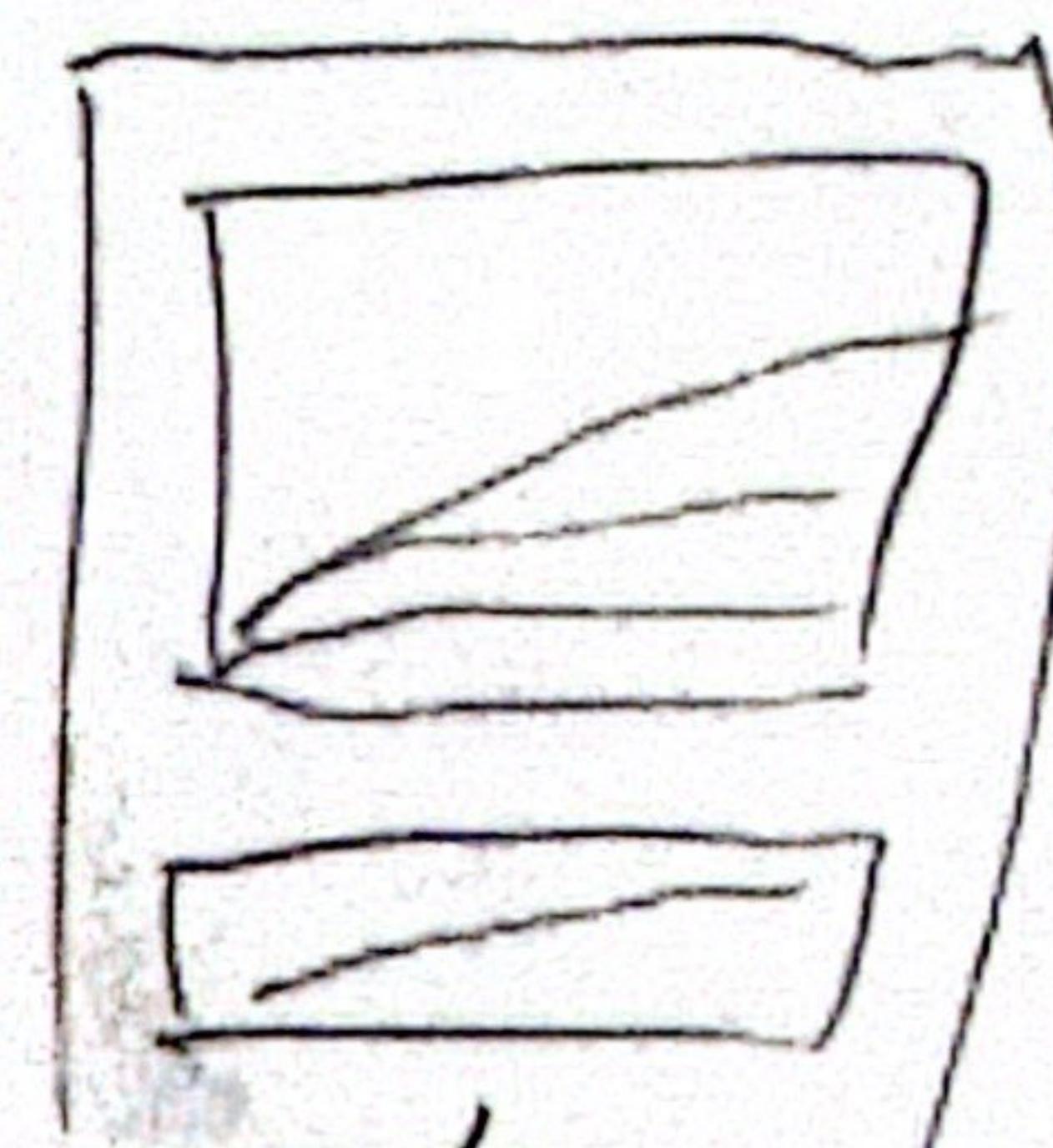
From fourth view

Step 1: Overview first



after selected  
filtered years

Step 2: Zoom and filter



only years of

2010 ↔ 2016

\* View more detailed information

## DISCUSSION

\* Advantages:

→ Change Bladness is good, since viewer will be viewing on one chart only.

→ Allow more interactivity, labels, annotation, tooltip even highlight for wanted chart.

→ Cognitive load is not overwhelmed.

\* Disadvantages:

→ User cannot view other graphs at the same time.

→ Sometimes the graph and charts will be truncated.

