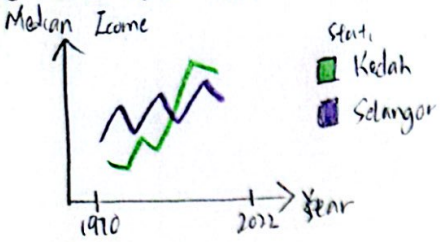
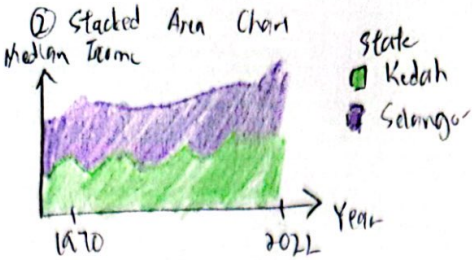
Ideas

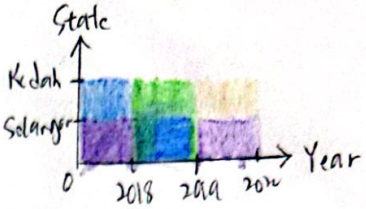
① Time Series Plot



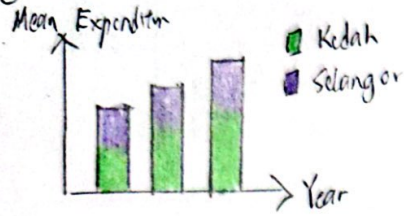
② Stacked Area Chart



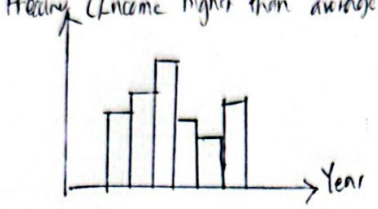
③ Heatmap



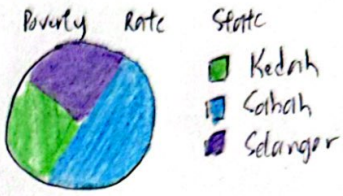
④ Stacked bar chart



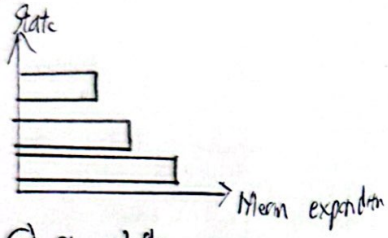
⑤ Histogram



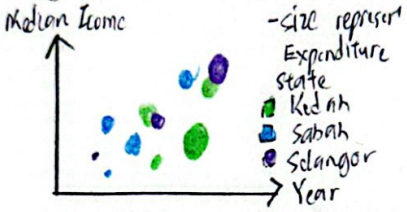
⑥ Piechart



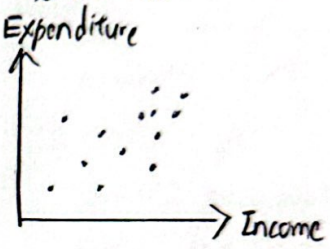
⑦ Bar Chart



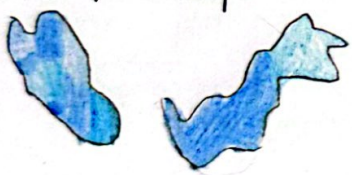
⑧ Bubble Chart



⑨ Scatter Plot



⑩ Choropleth Map



Filter

- Graph ② is filtered as it brings same information as ④ but harder to visualize
- Graph ⑥ is used to represent instead of ③ so the poverty rate can be visualize easier
- Graph ⑧ and ⑨ both some relationship between income and expenditure but ⑧ is more interactive

Categorize

Median Income by State

↓

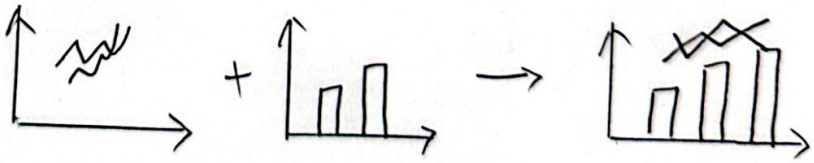
Mean Expenditure

↓

Poverty Rate by State

Combine & Refine

① + ④



- Explore income and expenditure at once

Questions

- Are these idea implementable?
- Does these visualization provide sufficient information?
- Are they relevant to my topic?

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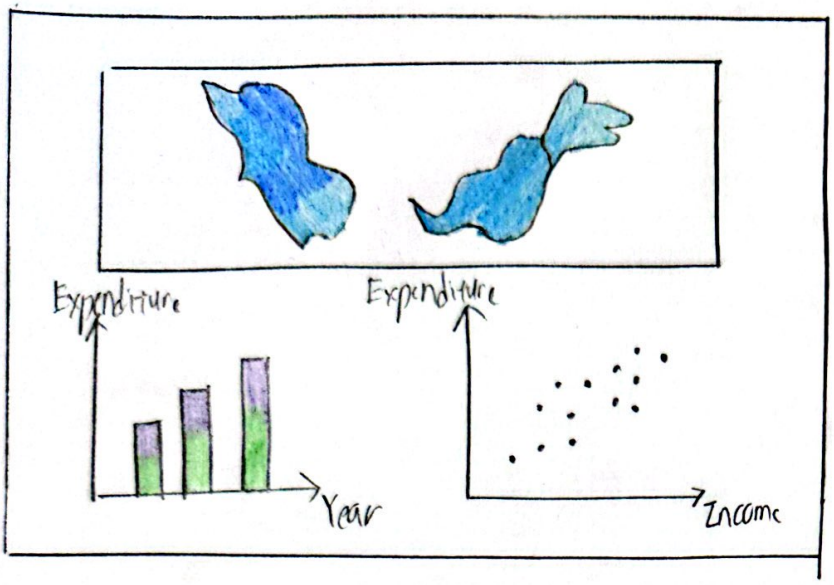
Layout



Title : Household Income in Malaysia

Author: Mak Ying Zhang

Date : 14/10/2024

Sheet : 2

Task : Map, stacked bar chart and scatter plot

Operations

① Choropleth Map
- Diverging colour shows the median income by each state

② Stacked bar chart
- colour represent state
- area coverage shows the expenditure each state by year

③ Scatter plot
- shows the relationship between income and expenditure by each state

Focus

- Choropleth Map
  → Shows the difference in median income between states
- Scatter plot
  → Find the relationship between income and expenditure

Discussions

Positives

1) clear visualisation of changes in income and expenditure
2) Easy implementation

Negatives

1) Less interactive

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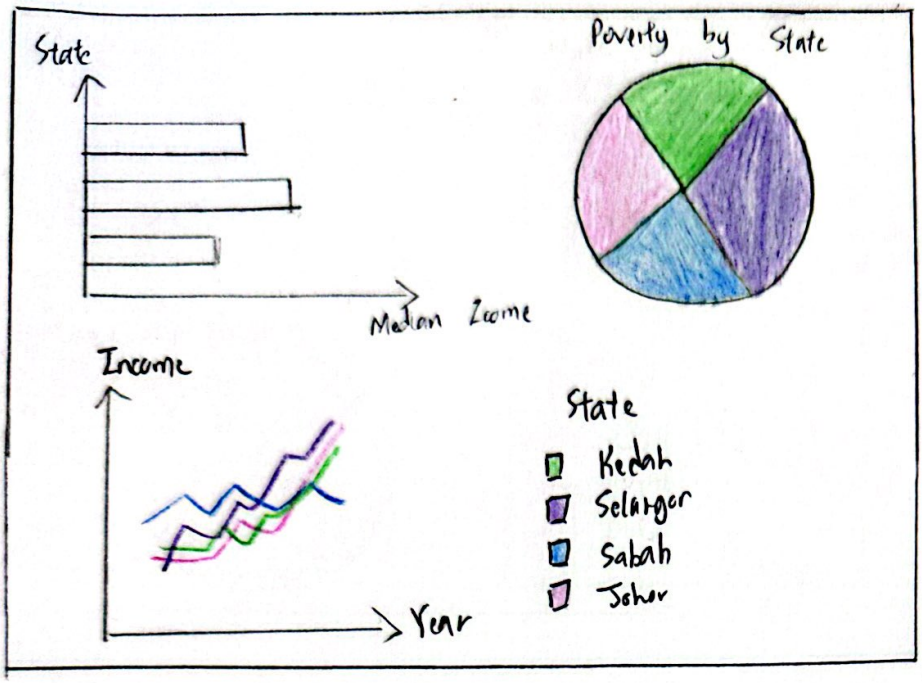
Layout



Title : Household Income in Malaysia

Author : Mak Ying Zhang

Date : 14/10/2024

Sheet : 3

Task : Bar chart, pie chart and line graph

Operations

① Bar chart
- show the different in income between state

② Pie chart
- colour represent state
- each portion represent poverty rate

③ Line graph
- colour represent state show changes in income

Focus

→ Line Graph
- Show the trend of change in income of each state overy year

→ Pie chart
- percentage of each state poverty can be visualized clearly

Discussion

Positives
- Clear visualization of change in income
- simple and clear

Negatives
- Not interesting

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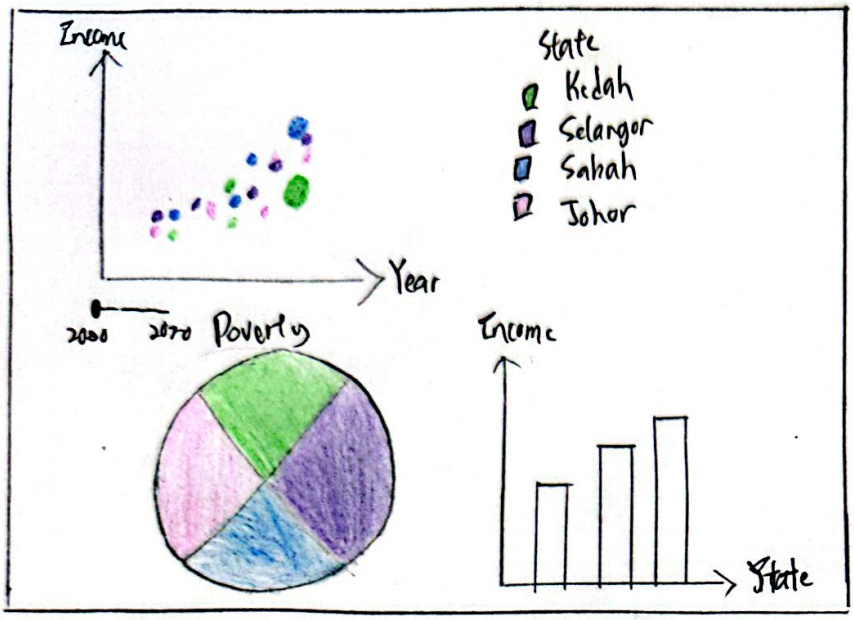
Layout



Title : Household Income in Malaysia

Author : Mak Ying Zhang

Date : 14/10/2024

Sheet : 4

Task : Bubble plot, pie chart, bar chart

Operations

① Bubble plot
- show relationship between income and expenditure

② Pie chart
- colour represent each state shows the poverty rate

③ Bar chart
- show difference between state each year

Focus

→ Bubble plot

0 → 0 → 0

Larger bubble shows higher expenditure

- a slider filter is apply to filter year

Discussion

Positives

1) Interactive bubble plot ~~between~~ to visualize relation between income and expenditure

2) Easy implementation on pie chart and bar chart

Negatives

- layout lack of story flow

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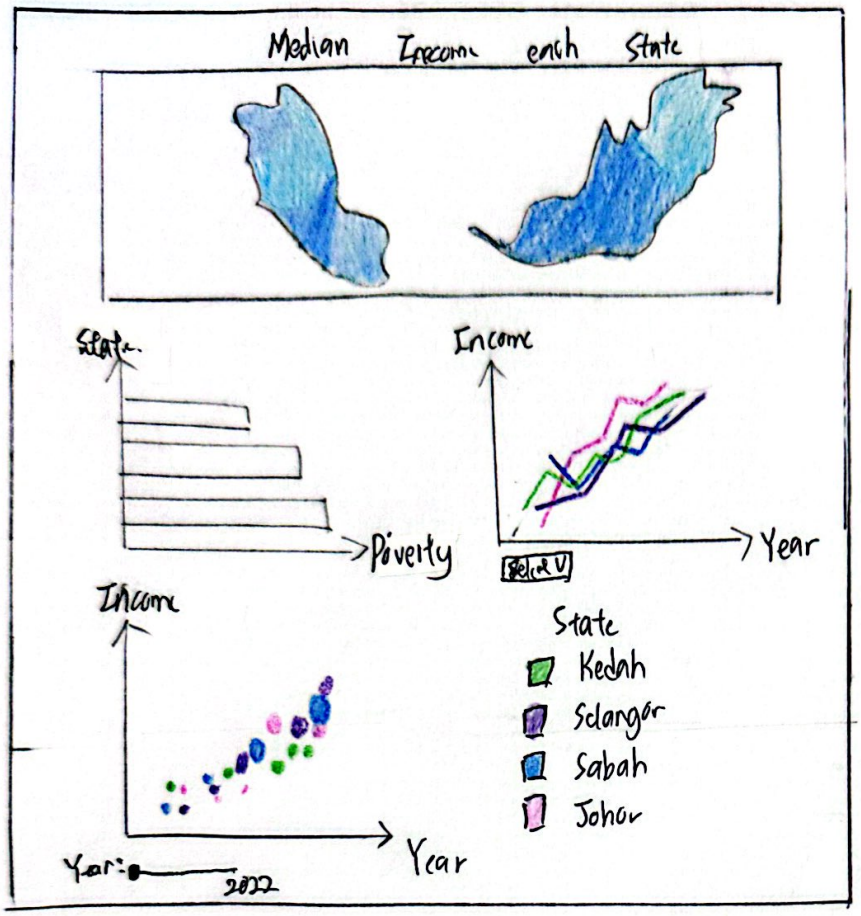
Layout



Title :

Author: Mak Ying Zhang

Date : 14/10/2024

Sheet : 5

Task : Final layout

Operations

① Choropleth Map created to show the median income of each state

② Bar chart shows comparis in between State

③ Line graph created to show the change in income

④ Bubble plot shows the relationship between income and expenditure

Detail

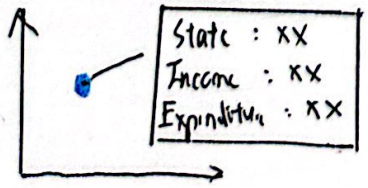
- Clear legend must be shown to know state
- Annota the maximum point in bubble plot and line graph
- Make comparison to show contrast between poverty and income

Focus

① Choropleth Map
- Show the different in income of each state

② Line graph
- A select filter is applied
- can see income trend by overall or selected state only

③ Bubble plot
- each bubble with different colour represent its state
- size increase with expenditure
- Each bubble provides complex information



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