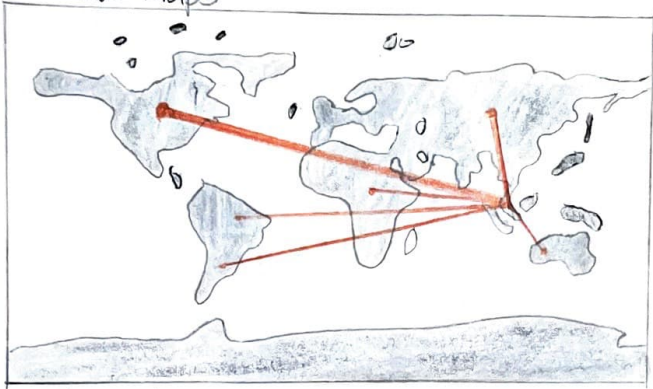


IDEAS

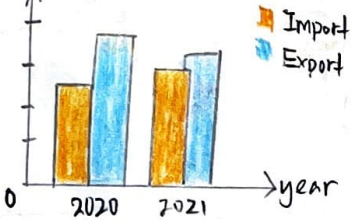
① Trade Routes (Import & Export)

- Flow Maps

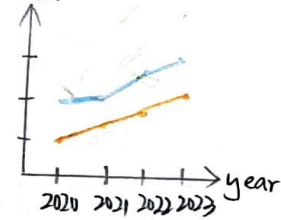


② Total Import & Export trade value

- bar chart

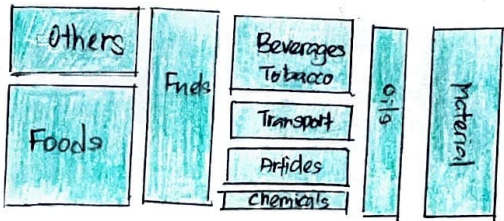


- line chart



② Types of goods traded (Import & Export)

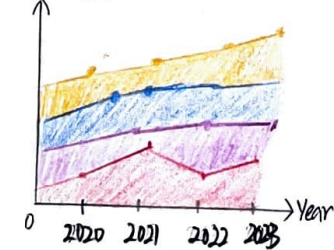
- Tree map



- Pie chart

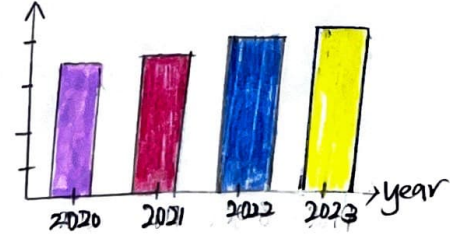


- stacked Area chart

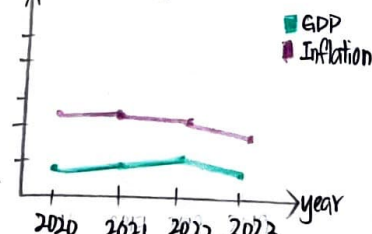


③ Economic Indicators

- Bar chart



- Line Chart



FILTER

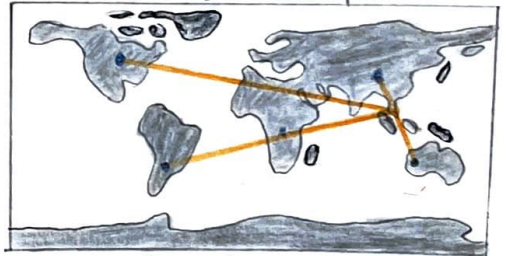
- add zoom feature for map
- flow maps provides better visualization of the actual trade paths
- tree map, pie chart, stacked area chart might be hard to compare between import and export.
- can add year filter to filter trade of goods
- minimize the number of bar chart

CATEGORIZE

- By Year
- trade routes
- types of good traded
- Economic indicators
- Total import & export value

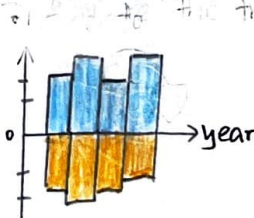
COMBINE & REFINE

① Trade Routes (Flow maps)



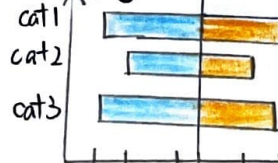
- the size of point varied by the trade value

② Total import & export value



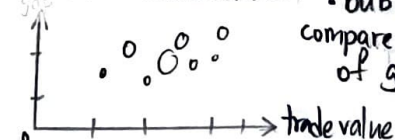
- refine to bar chart with negative value to have a view on the trade balance.

③ Types of goods category



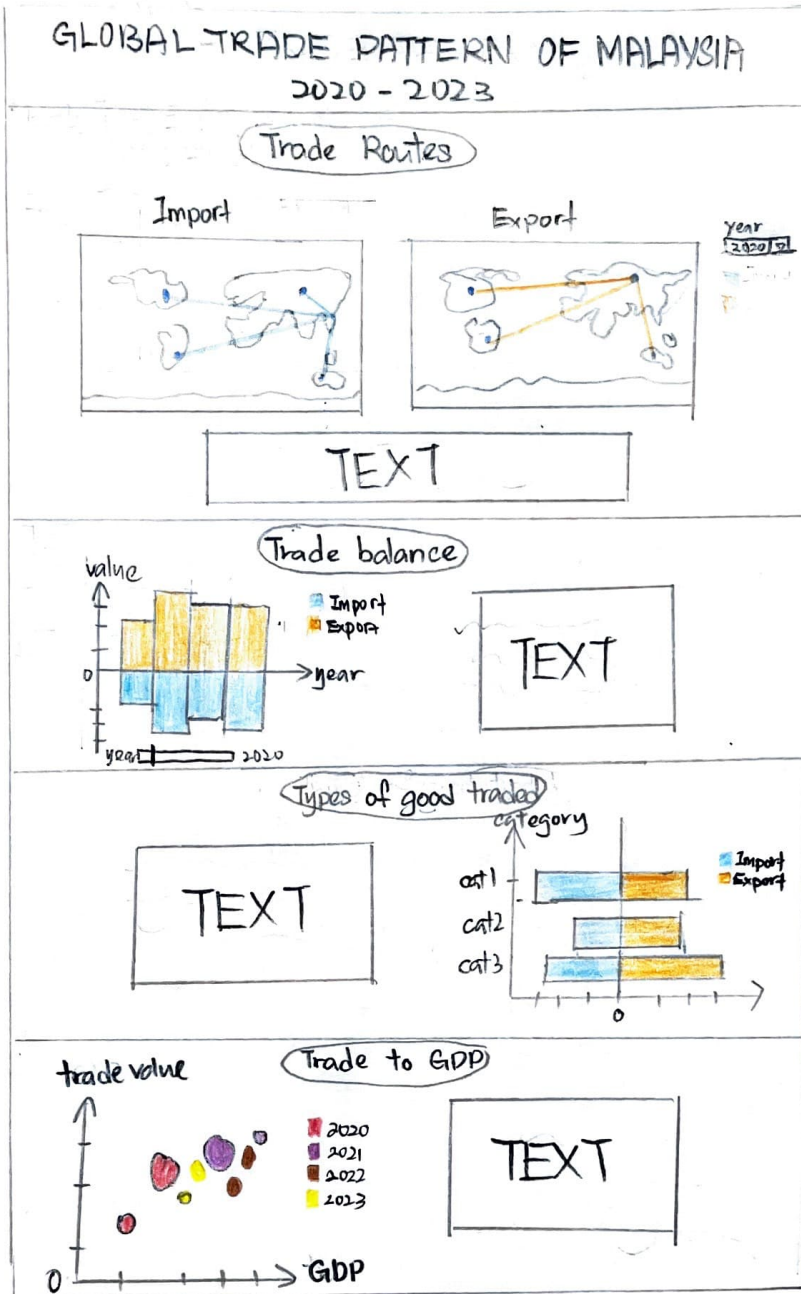
- refine it to population pyramid for better comparison between export and import

④ Economic Indicators



- bubble plot to compare relationship of GDP and trade

LAYOUT



OPERATIONS

- ① Year filter in trade routes, types of goods traded

Year	
2020	▼
2021	
2022	
2023	

- ② Tooltips: by hovering through all the chart, a tooltip with related data will be shown.

- ③ Year slider in trade balance to show the data on the required range.

Year 2020

DISCUSSION

PROS:

- the graphs are separated into clear sections
- interactivity allows users to focus on specific data

CONS:

- too many filter might be hard to make comparisons
- two maps show together might reduce the readability as it will become smaller.

FOCUS

- Main Idea: a comprehensive design to show the trade routes, trade balance and relationship between GDP, trade values and categories of goods traded.

- ① Trade routes: side by side to compare the routes between import & export.

LAYOUT

OPERATIONS

① toggling between views:

- click button to switch the map between import & export

Import Export

② Zoom function:

- zoom in and out on the map to specific region

zoom 100

Asia

③ Tooltip:

- hovering on trade routes will display the details

DISCUSSION

PROS:

- interactivity allows user to focus on specific data
- limiting the flow map to show one at a time make the visualisation clean.

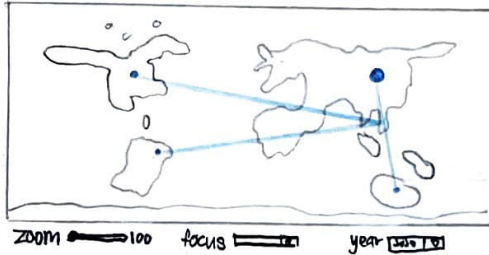
CONS:

- loss of side by side comparison for import and export.

GLOBAL TRADE PATTERN OF MALAYSIA 2020 - 2023

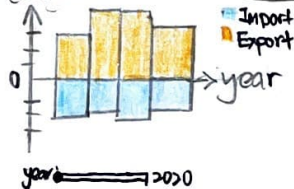
Trade routes

Import Export



TEXT

trade value

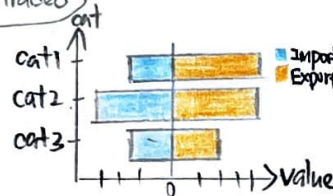


Trade balance

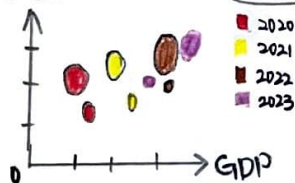
TEXT

Types of good traded

TEXT



trade value



Trade to GDP

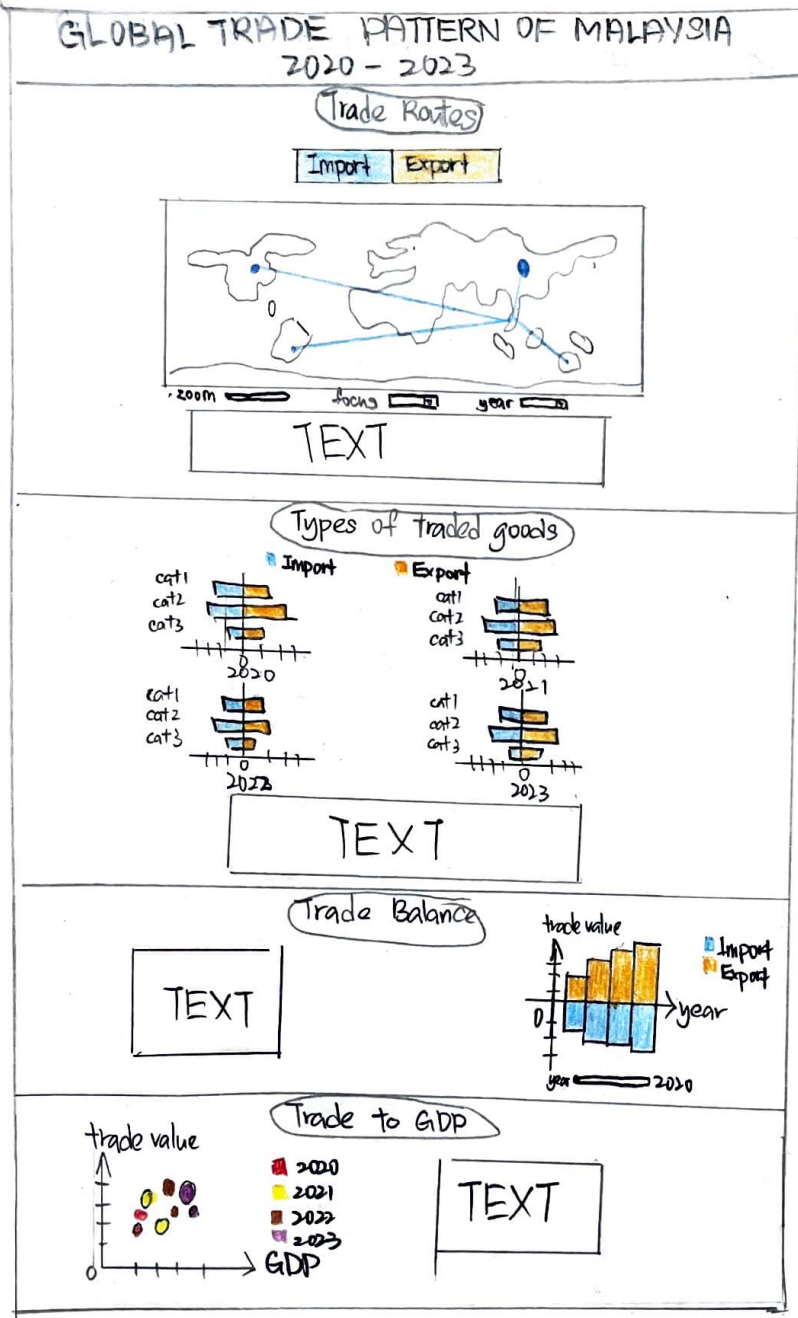
TEXT

FOCUS

- Flow map (trade routes)

- combined to one to make a bigger view
- button is added to change the view between import and export, which enhance the user engagement
- zoom function enables user to zoom in to the map

LAYOUT



OPERATIONS

- Yearly comparisons:
user can quickly view and compare the import and export by goods for each year
- Tool tips:
* Hovering over the pyramids provides the details

DISCUSSION

PROS:

- enhanced the comparison view for users
- simplifies the process to users

CONS:

- lessen the user interactions

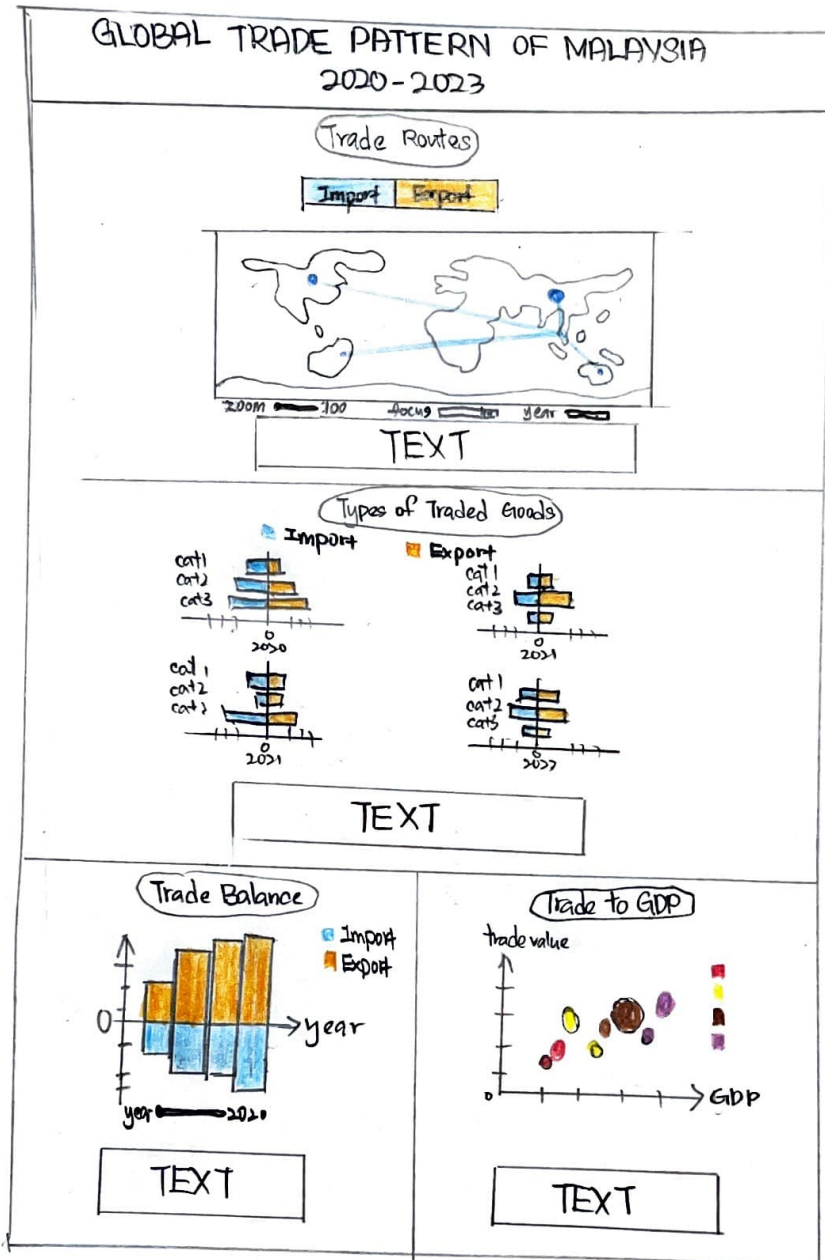
FOCUS

- Small multiples population pyramid for types of good traded
 - each small multiple shows the population pyramid for a specific year
 - enhanced clarity and facilitated a straightforward comparison.

Five Design - Sheet 5

Name: Heng Zi Ying
ID: 33261865
Date: 20/9/2024
Sheet: 5

LAYOUT



OPERATIONS

- ① Trade Routes:
 - the flow maps allow user to toggle between the import & export of the trade routes
 - the map allow user to zoom in and out to a specific region
- ② Trade balance
 - the chart allow user to use the slider to show a data of specific year range
- ③ Trade to GDP:
 - the chart allow the user to highlight on the specific year when hovered.
- ④ Tooltips:
 - tooltip will be implemented in each chart to provide detailed info

DETAILS

- ① Implementations:
 - fit the data into the vega-lite and create the chart accordingly
- ② Dependencies:
 - HTML
 - vega Lite
 - Vs code studio
- ③ Estimated time
 - one week
- ④ Specific requirement:
 - laptop that installed with vscode studio

FOCUS

- ① Trade Routes (flow maps)
 - ↳ analyze the trade routes of malaysia and its trade value
- ② Types of goods traded (small multiples population pyramid)
 - ↳ focus on representing the types of goods traded each year for both import and export
- ③ Trade balance (bar chart with negative values)
 - ↳ Highlights trade surpluses and deficits over time, showing the trade performance. Import will be represented as negative value
- ④ Trade to GDP (bubble plot)
 - ↳ illustrate the relationship between GDP, trade value, and trade - to - GDP ratio, linking trade activity to economic growth.