

[Content](#)

Content

Software/Tools Needed	1
Libraries Needed	1
Potential Problems	1
Possible Output Files	1
Topics Considered	1
Topic 1 Layout Concept Draft Key Factors for Explanation Datasets Needed Datasets Available on OpenDOSM	2
Topic 2 Layout Concept Draft Key Factors for Explanation Datasets Needed Datasets Available on OpenDOSM	5

Content

Software/Tools needed:

- MS Visual Studio Code
- IBM Watson Studio
- IBM Cognos Analytics
- Terminal

Libraries needed:

- Pandas
- Matplotlib
- Folium
- Plotly express
- Dash (html, dcc)
- *Seaborn
- *NumPy
- *BeautifulSoup (for web scraping)

- Use GitHub to host the project

Potential Problem(s):

- hosting issue (if cannot host a website then try on Cognos Analytics to create dashboard)
- unable to access datasets

Possible Output Files:

- HTML file for the dashboard
- Excel worksheet for data tables, analysis, visuals
- Python notebook file for data wrangling, analysis, visuals
- Python coding file for dashboard

Topic Considered:

- Johor Population (total, male vs female, newborn by years, etc.)
- OR
- Malaysia Population/Crime Record/Immigrants etc.

TOPIC 1: Newborn Trend in Malaysia (Overall)

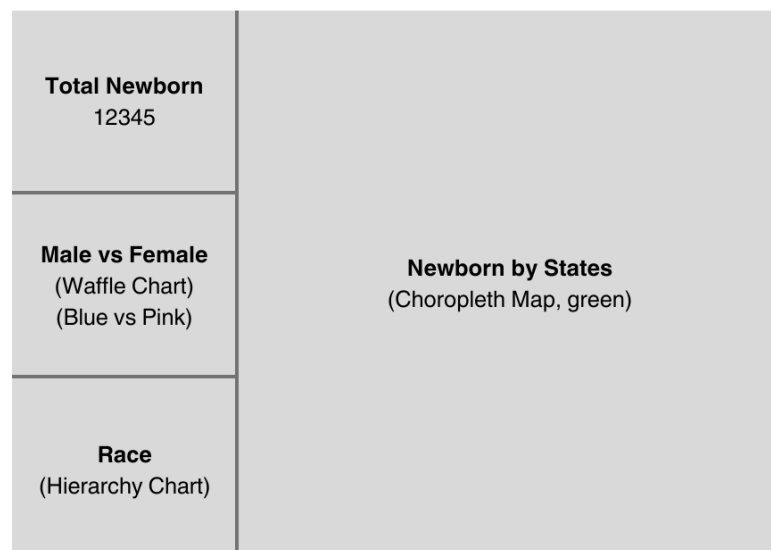
Purpose: Display the newborn trend in Malaysia over the years and some key factors/correlated factors (not necessary causation)

Layout concept draft: *(to be modified)*

Newborn Trend in Malaysia



Selected Year



Content

Income (Choropleth Map, green)	Expenditure (Choropleth Map, red)
Poverty (Choropleth Map, red)	Inequality (Income) (Choropleth Map, red)

Data source:

for personal learning purposes only

Descriptive and diagnostic factors (from the perspective of social and economy)

Descriptive	Diagnostic
<ul style="list-style-type: none">• Ratio of newborn to number of people in the age group suitable to give birth compared by years• Number of people in the age group suitable to give birth compared by years	<ul style="list-style-type: none">• Income/annual salary• GDP• Living cost• Inflation• Unemployment rate• Tax• Marriage percentage for age 25 - 40/by race• Health indices like BMI• Poverty• Income inequality

Datasets required:

- Population by age group
- **Newborn/birth by year, sex and ethnicity**
- **income/annual salary**
- GDP
- **living cost**
- inflation
- unemployment rate

Content

- tax
- Poverty
- Income inequality
- marriage percentage for age 25 - 40/by race
- health indices like BMI

Datasets available on OpenDOSM:

Population	by year, state, age, sex, ethnicity
Birth	by year, state, sex, ethnicity
Income	mean and median by year, state
Expenditure	income (mean & median), expenditure and poverty by year, state
Poverty	by year, state
Income inequality	by year, state
GDP	
Consumer prices	

TOPIC 2: Newborn Trend in Malaysia (comparing states)

Purpose: To show the newborn trend in the different states in Malaysia and compare their factors/indicators, e.g. income inequality, living cost, etc.

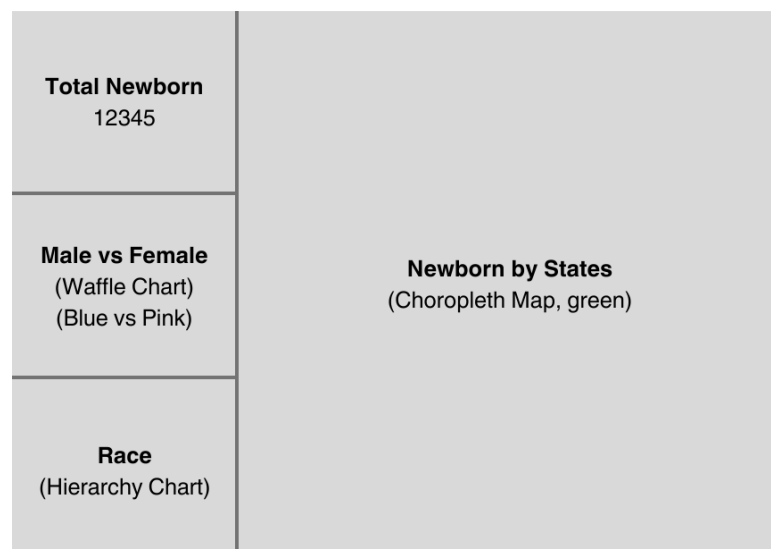
Layout concept draft:

- Other charts: choropleth map of total population/new born in year/total
- Can use choropleth map to compare correlation of different factors with newborn in the different states

Newborn Trend in Malaysia



Selected Year



Content

Income (Choropleth Map, green)	Expenditure (Choropleth Map, red)
Poverty (Choropleth Map, red)	Inequality (Income) (Choropleth Map, red)

Data source:

for personal learning purposes only

Descriptive and diagnostic factors (from the perspective of social and economy)

Descriptive	Diagnostic
<ul style="list-style-type: none">• Ratio of newborn to number of people in the age group suitable to give birth• Number of people in the age group suitable to give birth	<ul style="list-style-type: none">• Income/annual salary• Living cost• Unemployment rate• Tax• Marriage percentage for age 25 - 40/by race• Health indices like BMI• Poverty• Income inequality

Datasets required:

- Population by states
- Newborn/birth by year, states, sex and ethnicity
- income/annual salary
- living cost
- unemployment rate
- tax
- Poverty
- Income inequality
- marriage percentage for age 25 - 40/by race
- health indices like BMI

Datasets available on OpenDOSM:

Population	by year, state, age, sex, ethnicity
Birth	by year, state, sex, ethnicity
Income	mean and median by year, state
Expenditure	income (mean & median), expenditure and poverty by year, state
Poverty	by year, state
Income inequality	by year, state
GDP	
Consumer prices	