

SG TRADE INSIGHTS

A VISUAL ANALYTICS TOOL FOR EXPLORING AND ANALYSING SINGAPORE IMPORT DATA

Christian CHUA, Cornelia Tisandinia LARASATI, Timothy TAN Swee Guang



MOTIVATION

PROBLEM: LACK OF DATA-DRIVEN IMPORT DECISIONS

- Our sponsor organisation plans and reviews marketing campaigns for the UK to encourage British businesses to expand into Singapore.
- Traditionally, these decisions do not use historical import data to determine what commodities to bring into Singapore.
- This could lead to a loss in untapped import opportunities, where there may be undetected patterns in Singapore's imports, which may benefit UK's export revenue and potentially, their overall GNP.

SOLUTION: EXPLORATORY STORYBOARD

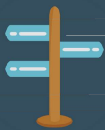
ASID (Analysing Singapore Import Data) aims to provide users with an exploratory tool to interpret and gain insights on extensive trade data.

GOALS:

To determine **trade sectors** which have the highest value in Singapore.

To identify **high/low-performing commodities** that Singapore imports from the UK.

To identify **competitors** importing a similar mix of commodities.



APPROACH

WHO IS OUR CLIENT?

The Department of International Trade in a Singapore-based British organisation.

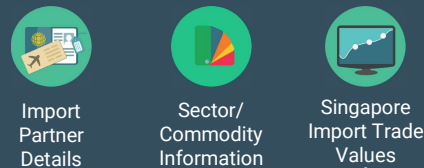
WHAT DATASET DID WE USE?

UNcomtrade
Includes Commodity HS Codes

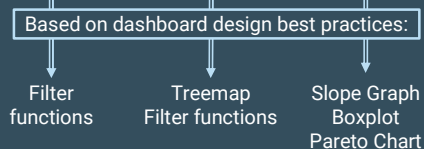
WHAT TYPE OF APPLICATION ARE WE CREATING?

- Analytical and exploratory storyboard
- Drill-able level of detail
- Different insights in each dashboard

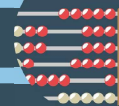
WHAT TYPE OF DATA WAS GIVEN?



HOW DID WE SELECT OUR VISUALISATIONS?



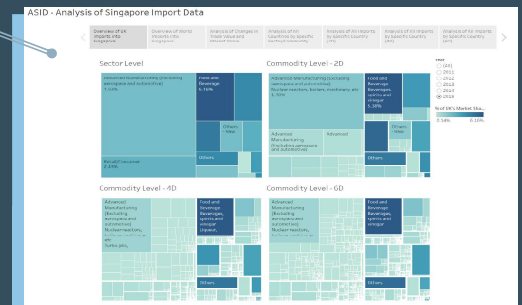
WHAT TOOLS DID WE USE?



APPLICATION

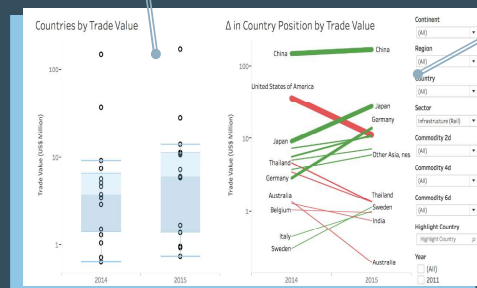
TREEMAP

- Provides overview of (1) value of UK's sector/commodity imported into Singapore and (2) market share of UK relative to the world
- Drill-down function displayed through the 2D, 4D and 6D treemaps



BOXPLOT

- Shows performance of imports in a specific sector/commodity, relative to the yearly median and to other countries
- Linked to slope graph



SLOPE GRAPH

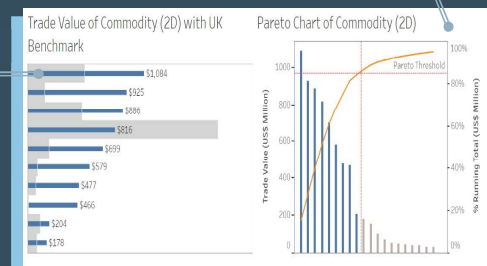
- Shows relative positional changes of the UK to other countries in a specific sector/commodity across 2 years

PARETO CHART

- Identify biggest contributor to a specific country's total import value
- Also available for analysis of a specific sector/commodity

BARCHART + REFERENCE BAR

- Comparison of specific country's import trade values in all its imports vs UK (as a benchmark)
- Also available for analysis of a specific sector/commodity



FUTURE WORK

1. EXPANSION OF SCOPE

- Include Singapore exports and other countries' imports and exports to holistically determine trade balances
- Expand to international trade of services (MSITS)

2. IMPROVE FREQUENCY OF UPDATES TO DATA

- With the help of a user guide and data cleaning protocol, end-users are able to autonomously update the data using publicly available UN Comtrade data for more up-to-date analysis and exploration.

