

Guideline for the 1st Assignment

EE406 Contemporary Economic Issues

Section 046401

Semester 1/2021

Main objective

- To introduce the application of **real-time data** such as **Google Trends** and **Mobility Index**.
- These datasets can be **the alternative sources** for **timely monitoring** of the **current economic situation**.

Step 1

Select the conventional economic indicators

- These are **economic indicators officially produced** and distributed by **government agencies** (e.g., Bank of Thailand, Ministry of Finance, NESDC).
- Some indicators are provided in the **Excel file** (Moodle's assignment folder).
- **Normalize** these data.
- You may have to **adjust the frequency** of these data in order to **match them** with **Google Trends** or Google Mobility Index.

Step 2

Find the keyword search statistics on Google Trends

- Seek the data that are **highly correlated** with the **conventional indicators** selected in the first step.
- **Normalize** these data.
- In addition, you may use **Google Mobility Index** or **Apple Mobility Index** to represent the volume of economic activities.
- You may have to **adjust the frequency** of the data by computing the **quarterly average** of keyword search statistics.
- Use **correlation test** and/or **regression analysis** to **validate** the relationship between the **conventional economic indicators** and **Google Trends (or Google Mobility Index)**.

Step 3

Suggest the applications of these results

Examples

- Bank of Thailand and NESDC can use these new datasets to timely monitor the economic situation.
- Ministry of Finance can use these alternative indicators to estimate the fiscal revenue.
- Airline and airport can use these real-time indicator to adjust their service capacities.
- Hotel and restaurant can predict the cyclical patterns of their clients.