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IPS Paper

Visualising higher frequency economic indicators from unconventional sources using BI tool

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IPS0240_Visualising high-freq indicators in BI

Brief Description

I illustrate the utility of Business Intelligence tools to extract, process and visualise high frequency indicators from unconventional sources for initial exploration of their information content in tracking the economy.

The empirical use cases will demonstrate the end-to-end workflow using Power BI to visualise open-source data on Google searches, prices of consumer goods, and sentiment extracted from news articles.

It also leverages on running Python/R scripts within for complex queries.

Abstract

This paper illustrates the utility of Business Intelligence (BI) tools for extracting, processing, combining, and visualizing higher frequency indicators as an initial data exploratory tool to enable users to monitor the state of economic activity. As an empirical use case to showcase these advantages, I will demonstrate an end-to-end workflow that utilizes Microsoft Power BI to compile publicly available high-frequency indicators, including data from Google Trends, electricity generation from the grid system operator, prices of consumer goods, and sentiment extracted from news articles. These high-frequency indicators are then transformed and visualized within a single platform, alongside the official economic statistics they are designed to track or correlate with. This workflow leverages several of Power BI's features, including the ability to (i) read data directly from online CSV files; (ii) perform a POST request against a URL with dynamic parameters, (iii) run Python/R scripts within Power BI, and (iv) automatically refresh all datasets loaded into the Power BI file's model. With such a workflow, the processing of high-frequency indicators from disparate sources can be streamlined, and dynamic visualizations can be made accessible to a wide group of users, allowing them to explore the information content of these indicators in tracking economic activity.