

StatsTalk-Africa: Use of Big Data for Nowcasting

Tuesday, October 31, 2023

Concept Note

Background

As a part of its StatsTalk Africa Series on demystifying statistical concepts and using developments in technology for development of Statistical Systems and products, we plan to understand the usage of data on near time or real time to estimate or predict some major macro-economic indicators like GDP and inflation. For this we will have two experts who are statistician cum data scientist to dwell on this subject.

In compiling Gross Domestic Product (GDP), many data sources – administrative, census and survey data – are needed. Some of these traditional sources supply data annually/ quarterly. Moreover, some of these datasets will be available only after 2-3 weeks of end of quarter. Therefore, nowcasting of GDP or any other economic indicator cannot depend on traditional datasets or traditional techniques of GDP compilation. Google trend analysis is one such technique for estimating GDP growth for a smaller time window like week/month/quarter etc. This kind of GDP tracker helps in early detection of shocks in economy and helps the policy makers in taking corrective measures. Pandemic kind of situation has accelerated the search of alternative (near real time) data sources and techniques to augment traditional methods of compiling micro-economic indicators.

Google Trends provides access to a largely unfiltered sample of actual search requests made to Google. It's anonymized, categorized (determining the topic for a search query) and aggregated (grouped together). Google search results may be obtained for specific geographical region and time window. Based on the study conducted by Nicolas Woloszko of Economics Department of OECD in November 2020, a google trend analysis of 111 relevant keywords have been done and quarterly growth rate of GDP with respect to India was estimated. Whereas official quarterly estimates of GDP take around six weeks to be published, google trend-based GDP may be obtained on the last day of ongoing quarter. Summary results and methodology in India's pilot study of nowcasting GDP will be shared with the hope of increasing the understanding and possible application of this approaches in African Context.

Furthermore, big data provides a means to capture economic activities that may be missed by traditional data sources. For instance, the sharing economy, characterized by services like ride-sharing and short-term rentals, often escapes the scope of conventional economic data collection methods. Big data allows us to tap into these emerging sectors, providing a more accurate and comprehensive picture of economic activity. The second presentation will discuss current tools and techniques using big data for nowcasting GDP and some best practices. Discussion on nowcasting GDP using machine learning to support the generation of more frequent statistics will be held.

Objective

The ACS is convening the monthly webinar series – **StatsTalk-Africa** – to provide a space for a dialogue about data, statistics, and innovative tools with data experts and users. Specifically, StatTalk-Africa aims to:

1. Serve as a knowledge-sharing and exchange platform.
2. Demystify and promote greater understanding of key statistical concepts and alternative data sources that could be harnessed in the African context.

Date and Time

The Webinar is scheduled for Tuesday, **31st October 20, 2023 from 11:00 to 12:30hr EAT.**

Language

English will be the official form of communication for this webinar series.

Registration Link

<https://events.teams.microsoft.com/event/5a97c4f6-68ee-4ebf-af34-f167aad13c3@0f9e35db-544f-4f60-bdcc-5ea416e6dc70>

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