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DATA-POP ALLIANCE

Changing the world with data

Presidency of the Council of Ministers
Central Administration of Statistics

DOS 1949
دائرة الإحصاءات العامة
Department of Statistics

Big Data for Public Policy and Decision Making

Can big data assess the effectiveness of Government Crises Responses? Covid19 Case in Jordan and Lebanon

26 October 2022
Beirut, Lebanon

Why the Platform?

Why

In crisis and disaster settings, there is a need for up-to-date real-time data & quick evaluation of the effectiveness of response policies being implemented in achieving their objective and target.

Target users

1. Civil servants dealing with assessing socio-economic risks or shocks
2. National Statistics offices
3. Ministries of planning and other line ministries concerned with national risk mitigation
4. Disaster management unit within General Security
5. Development practitioners in the multilateral organizations

Steps Followed

Twitter

- Depending on the nature of the crisis, the user is able to select a category of interest (ex. health, education, economy, employment, food security etc.)
- The user can also select the time period of interest (ex. past week, past month)

1. Define topics and keywords of interest
    a. Relevant topics per policy
    b. Keywords per topic
2. Define date ranges to scrape
    a. Before announcement of policy *(leading up to policy)*
    b. During time of implementation of policy
    c. After end of policy implementation *(results of policy)*
3. Perform the scrape
    a. Twitter and GDELT
    b. Google Search Trends
4. Results Analysis

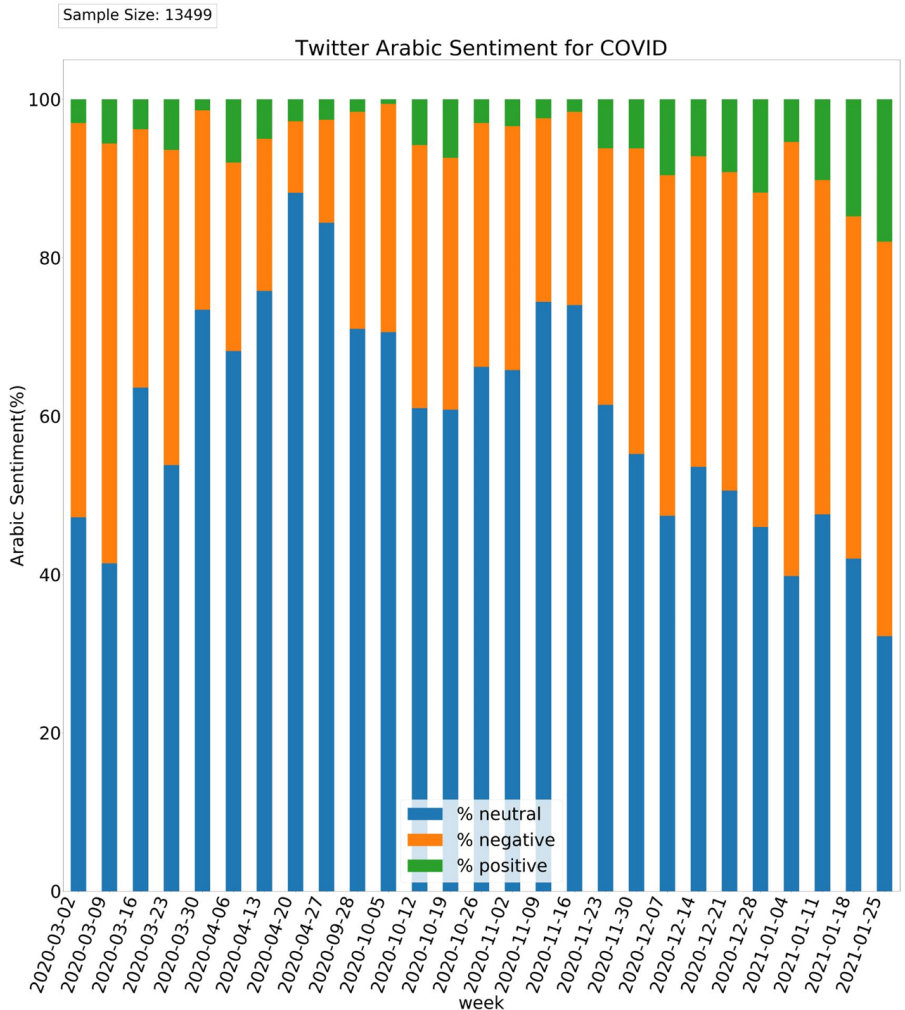
Example Policies

Lebanese Ministry of Health COVID-19 Health Strategic Preparedness and Response Plan

- March 10, 2020
- Case Management
  - Hospital bed capacity including ICU: needs, upgrading, capacity building, distribution, etc
  - Isolation centers capacities for positive asymptomatic cases
  - The objective is to increase capacity, reach, geolocation and target population.
- As of september 2020, number of beds for Covid patients total 871, 674 regular beds and 197 ICU

Jordan Ministry of Education rolled out the 'Darsak' distance learning program

- Darsak offers short video clip courses for grades 1 to 12 and includes wide-scale online learning platforms and assessments.
- Syrian and Palestinian refugees are included and have access to the program.
- Mid March 2020



Lebanon: Arabic weekly sentiment analysis for *Covid-19 related equipment & supply shortages*

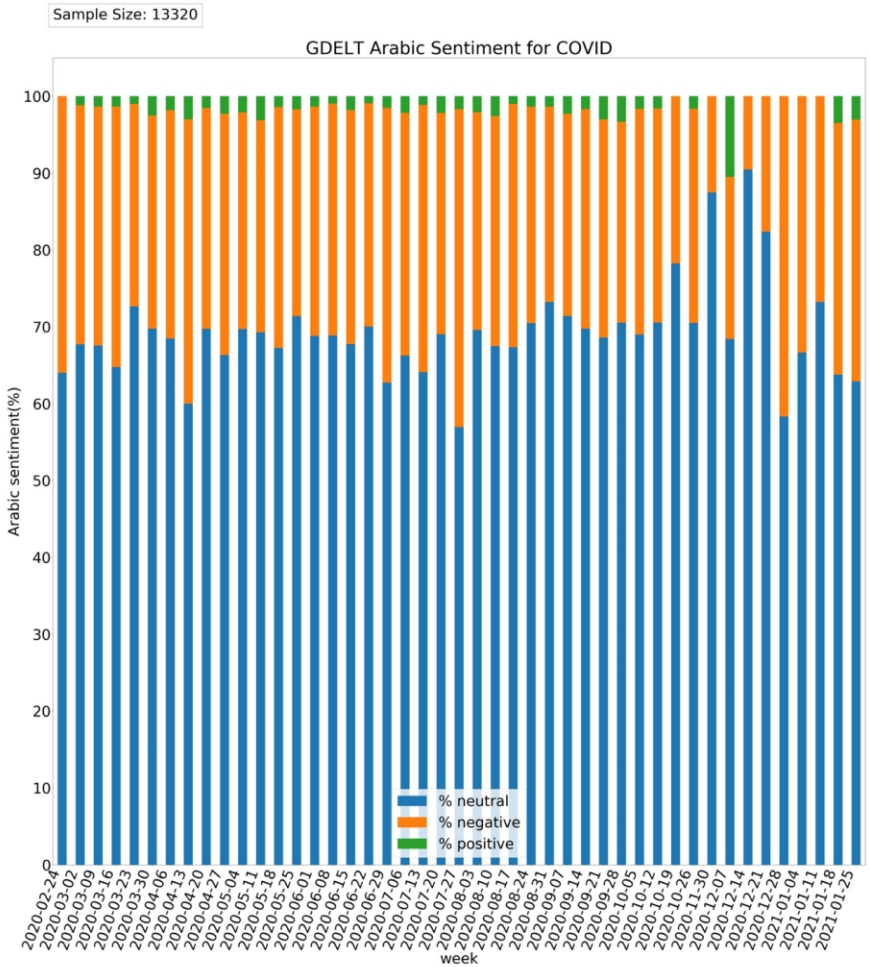
March 2020 - Jan 2021
Sample size: 13,499

P.S. to avoid bias by small sample size, we drop weeks that have sample size less than 100

Lebanon: March 2020

Lebanon: Jan 2021

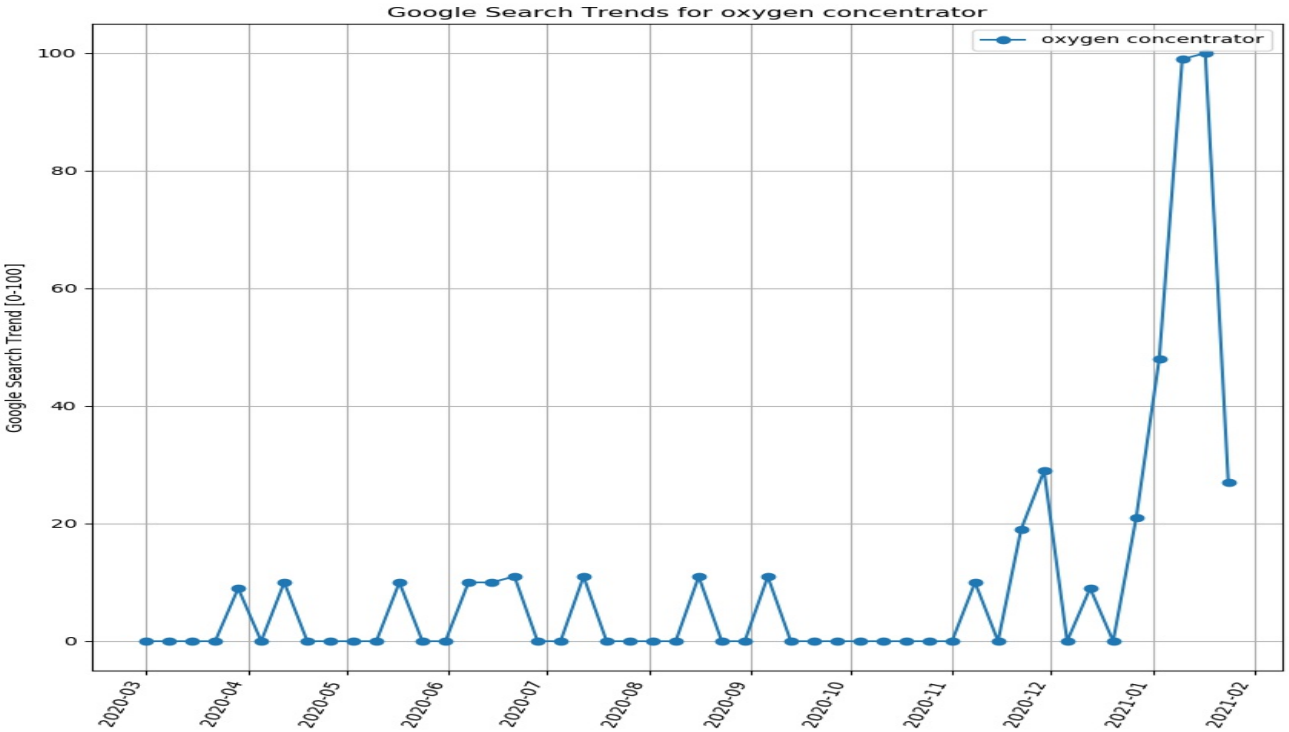
P.S. to avoid bias by small sample size, we drop months that have sample size less than 500



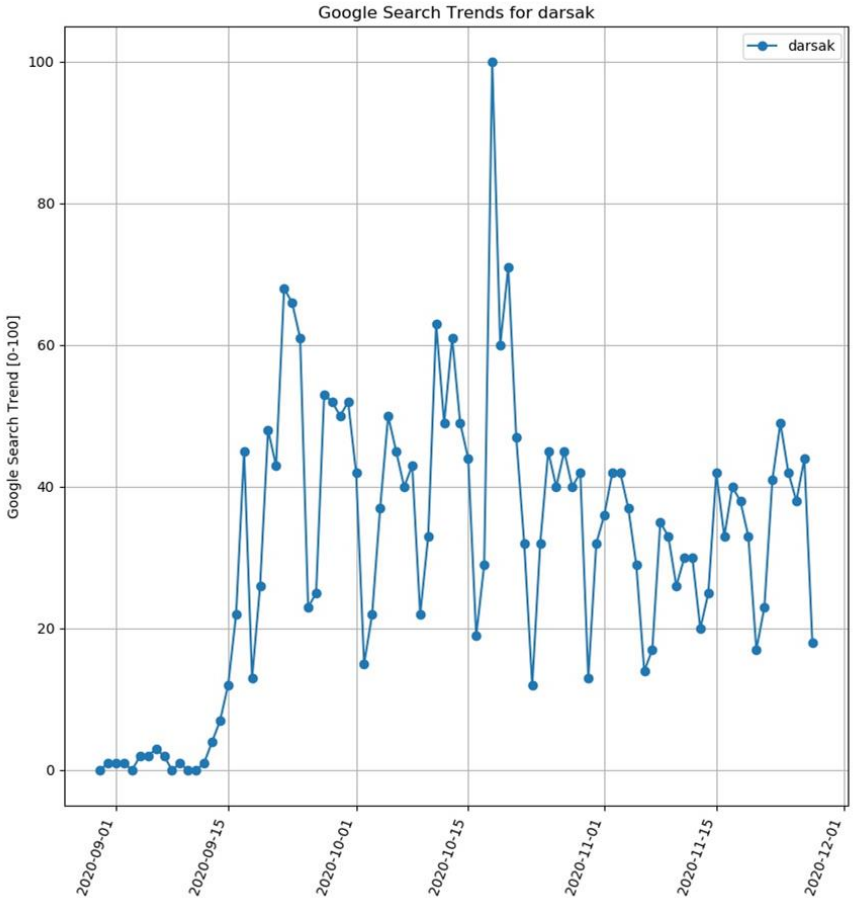
Lebanon: Arabic Articles weekly sentiment analysis for *Covid-19 related equipment & supply shortages*

March 2020 - Jan 2021
Sample size: 13,320

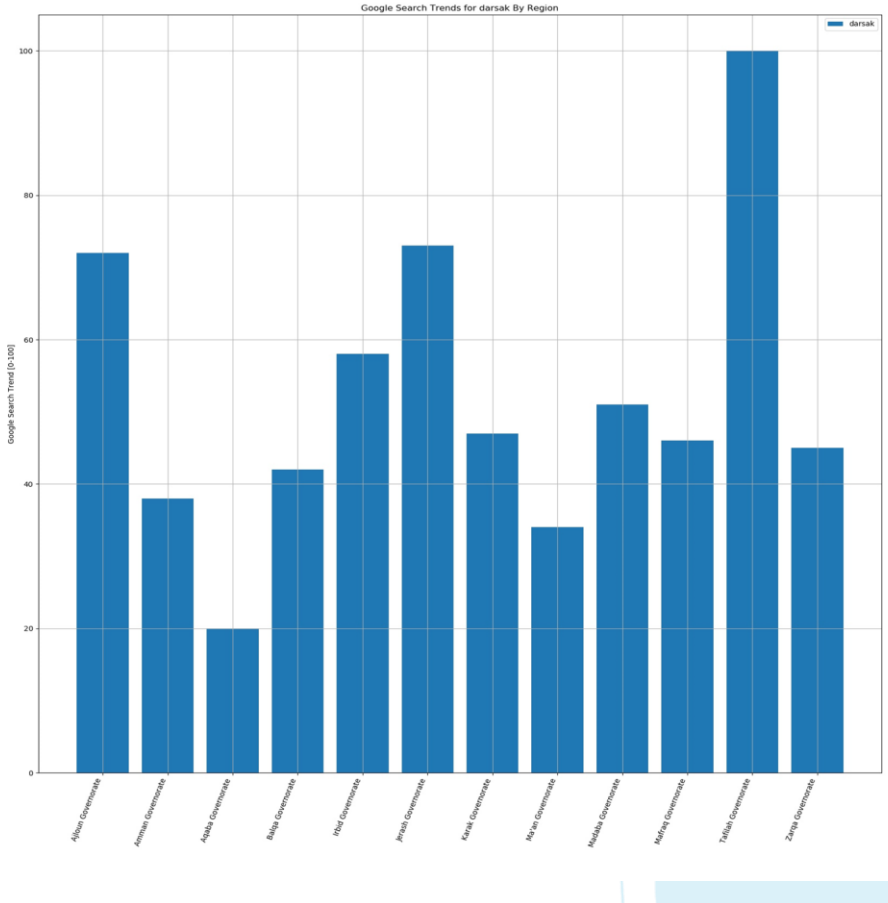
P.S. to avoid bias by small sample size, we drop weeks that have sample size less than 50



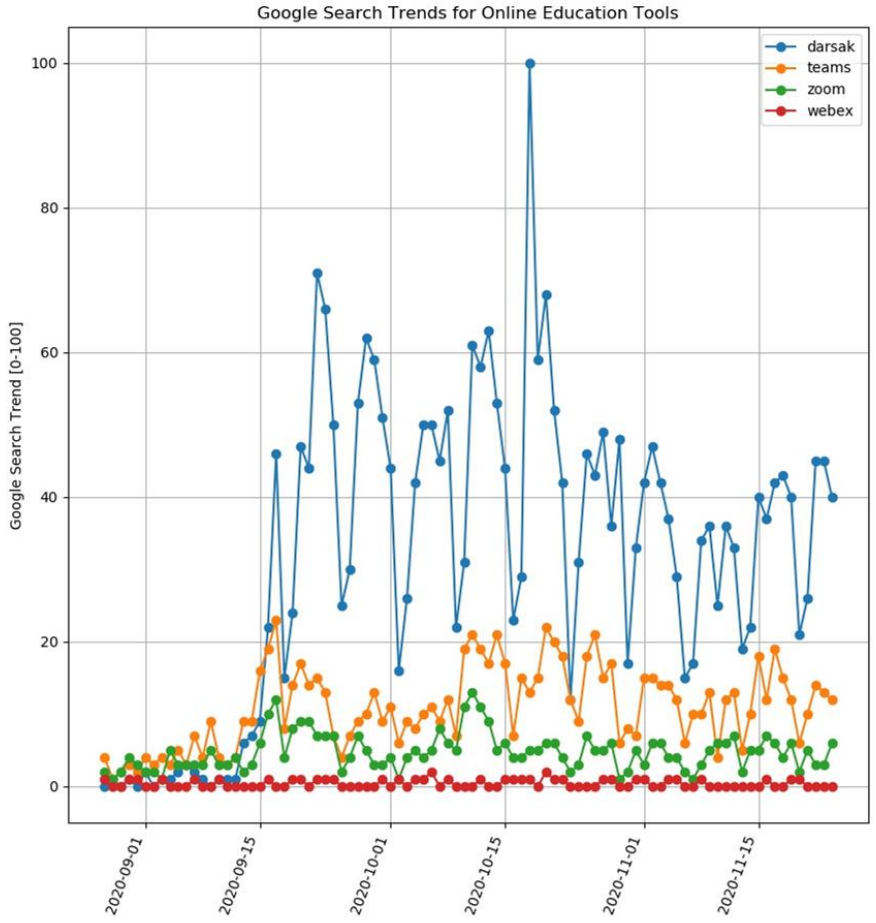
Lebanon: O2 concentrator searches on Google peaked in January 2021, when people were purchasing for home

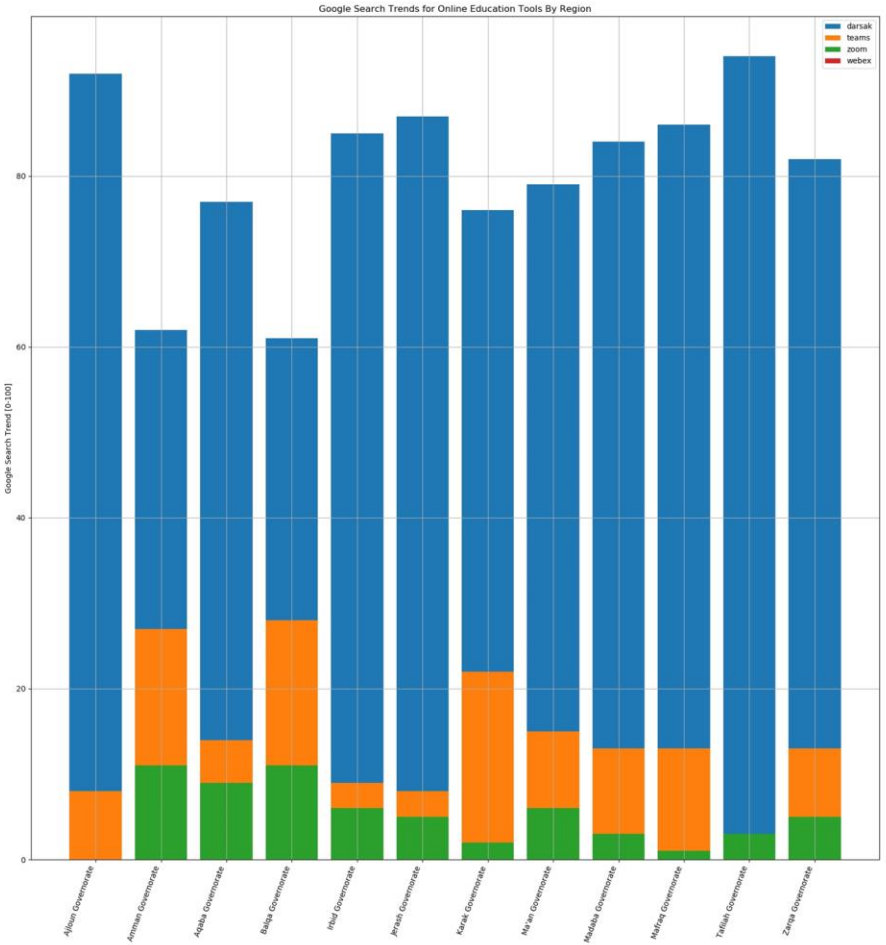


Jordan: Darsak platform across time (sep-nov 2020) peaked during exams period (october)



Jordan: Darsak platform across regions (Sep-Nov 2020) peaked in Tafilah governorate





Jordan: Darsak v.s. Other tools for online teaching. (Sep – Nov 2020) across time and region

Conclusion

- Some Data sources (SM) are made available only during Crisis !
- In cyclic crisis like Covid-19, possible to “near real time” correction
- Bias due to technology dependence is a calculated risk
- Balanced between data richness (accuracy) and the protection of privacy
- CODE - Council for the Orientation for Development and Ethics