



PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA



9TH MALAYSIA STATISTICS CONFERENCE

Department of Statistics, Malaysia

Dealing with Uncertainties: Unearthing Measures for Recovery

4TH OCT 2022
(VIRTUAL)
&
5TH OCT 2022
(ILSM, SUNGKAI, PERAK)



Emerging Data Needs in Dealing with Uncertainty: DOSM Official Data Request

NUR AIN ZAINAL ABIDIN; HAMZAH ISMAIL; SITI NORHUDAH NORDIN; NAZIRAH IBRAHIM; 'ARIFAH ABDUL MALIK; NURUL ATIQA ZAINAL ABIDIN; FARRIL FARDAN DANIAL

Abstract

The demand for official data and statistics has increased substantially in recent years. Reliable and timely data and statistics are more important than ever before. Data are being used in many contexts. Having visible and active national statistics producers is key to help ensure that the public receives information that is reliable and can be used for informed decision-making.

The COVID-19 pandemic has turned into the world's largest collective learning exercise ever. Global collaboration underpins this momentum. Perhaps most obvious is scientific collaboration, where governments and universities share research publicly on the impact of the pandemic on the world. The pandemic has pushed more users to be aware of the importance of data in order to survive this crisis. The Department of Statistics Malaysia (DOSM), the national statistical organization, has been instrumental in Malaysia's development planning process for the last seven decades. To understand and overcome the phenomenon related to this unprecedented crisis caused by the coronavirus infectious disease (COVID-19), the importance of data exchange and sharing across fields has gained social attention. Policymakers need data to react to the crisis. Data and data sharing management including ad-hoc data, administrative systems and existing sources become very important in times of crisis.

This study examines the changes that occurred in the pattern of DOSM data requested before, during and after COVID-19 due to the COVID-19 pandemic. Based on Malaysia's scenario the number of data requests increased from the year 2019 to 2021 throughout the COVID-19 pandemic forcing the country and government to look more seriously at various issues that are affected.

To respond to the growing demand for information arising from the COVID-19 outbreak, DOSM has to manage huge data requests during COVID-19. DOSM also conducted and disseminated special surveys which are Survey on Effects of COVID-19 on Economy and Survey on Effects of COVID-19 on Companies and Business Firms. These data provide a reliable reference point for measuring the economic and social impacts of the crisis. At a time when statistics are most needed, many statistical systems are struggling to compile basic statistics, highlighting once again the need to invest in data and statistics, and the importance of having modern national statistical systems and data infrastructure.

Keywords:

Data Needs; Data Request; DOSM; Data Exchange; NEWSS; Data Sharing; Decision Making

Objectives

The objective of this study are to identify the overall pattern of the data request before, during and after the COVID-19 outbreak and to explore the profiling of the data request such as category and organization of data requester, subject of data and period of data.

Method

- To explore the pattern data needs in dealing with the uncertainty of Official Data Requests in DOSM, the data from the National Enterprise Wide Statistics Systems (NEWSS) portal from the Department of Statistics Malaysia from January 2019 until July 2022 was used. NEWSS is the platform that facilitates the automated processes that interact with the services within DOSM as well as external services. The data covering the period January 2019 until July 2022 recorded the profile of users requesting data.
- The pattern was analyzed by conducting a descriptive analysis and visualizing it in a graph.

Literature Review

- M. Straf (2015) asserted that government statistics provide accurate, timely, and credible information that informs current and future policy. The respect and trust of data providers are enhanced by maintaining the confidentiality of their information.
- Hayshi (2020), stated that to understand and manage the phenomenon of this unprecedented crisis caused by the coronavirus (COVID-19), the importance of data exchange and sharing has gained social attention in various fields.
- Senda Bouaziza (2021), underlining the critical need for quick access to data and analytics for informed decision-making as COVID-19 rages over our world.
- DOSM as the official statistics office is highly needed since based on Mukherjee, B. (2022), to perform real-time predictions, researchers need a team that can broadly link data sources, maintain software, and writes code in real-time.

References

- Dattner, I., Gal, R., Goldberg, Y. et al. The role of statisticians in the response to COVID-19 in Israel: a holistic point of view. *Isr J Health Policy Res* 11, 22 (2022).
- M. Straf, (2015) Government Statistics, in *International Encyclopaedia of the Social & Behavioural Sciences* (Second Edition).
- Mukherjee, B. (2022). Being a public health statistician during a global pandemic. *Statistical Science*, 37(2), 270-277.
- Senda Bouaziza, Ahlem Nabli and Faiez Gargouria (2021). Towards data warehouse from open data: Case of COVID-19, *International Journal of Hybrid Intelligent Systems* 17, 129-142, DOI: 10.3233/HIS-210010.
- Nur Ain, Nurul Atiqah, Farril Fardan (2021). Exploratory Analysis on Official Data Request during the COVID-19 Outbreak in Malaysia's Scenario. *Kolokium Statistik and Scientific Poster 2021, Malaysia*.

Finding

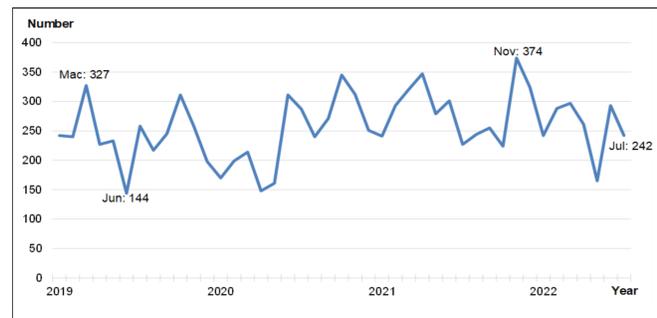


Chart 1: Number of data request for the year 2019 - 2022

It rises strenuously in June and fluctuated throughout the year until October 2020 and falls off at the end of the year. As of the year 2021, the number of data requests hit mostly higher every month compared to other years. The highest number has been shown in November with a total of 374 requests. In 2022, the trend of data requests was slower than the previous year from February to Jun 2022.

In 2019, Chart 1 showed the number of data requests is high in March 2019. However, it lessened from April to June 2019 and began to surge in July and slightly increase in October 2019 then reduce along the year. During the Movement Control Order (MCO) phase in 2020, mostly the number of data requests was low compared to the year 2019. The number of data requests has slightly increased up to March and reduced in April.

Occupation	Population & Demography	Others	Environment & Agriculture	Price, Household Income & Expenses	International Trade
Student	1,564	320	275	250	200

Table 1: Top five subjects by occupation (student), 2019 - 2022

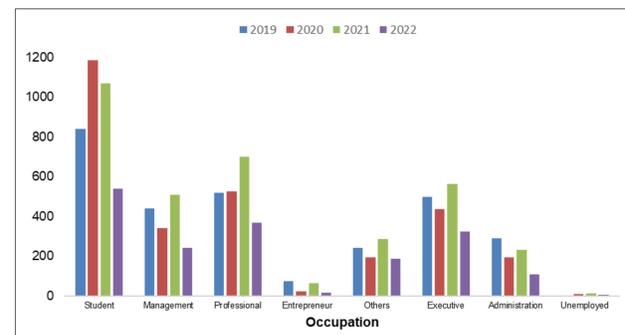


Chart 2: Number of data request by user's occupation, 2019 - 2022

International Trade each contributed 250 and 200 to the number of data requested. The students were unable to collect data in the field for their academic project from 2020 until 2021 due to the MCO. Hence, the number of data requested by students increased compared to 2019 and 2022.

Industry	Population & Demography	International Trade	Others	Environment & Agriculture	Price, Household Income & Expenses
Others	1,415	1,183	209	189	187

Table 2: Top five subject by industry (others), 2019 - 2022

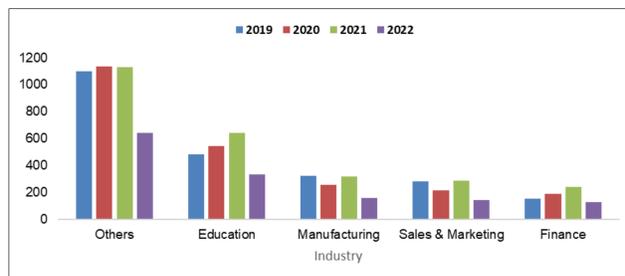


Chart 3: Number of data request by top five industry, 2019 - 2022

Household Income & Expenses with a total of 1,183, 209, 189, and 187 requests respectively. Generally, most of the industries recorded the highest data requested in 2021. The data requested was highest during the MCO since their movement was limited so they cannot obtain the data face to face.

(Data as of January 2019 until July 2022)

Discussion and Conclusion

While it is difficult to tell exactly what the economic damage from the global COVID-19 coronavirus pandemic has been, it has had severe negative impacts on the global economy. There is a need in data to dealing with uncertainties due to pandemic outbreak. Data request for the year 2021 showed the highest request were from top five in industries compared to previous year. Similarly, the same pattern for the user's occupation in management, professionals and executive which showed the needed for data in 2021 increased compared to the previous year. We can conclude that data plays an important role for the industries, management, professionals, and executive in making decision for the survival of industries and dealing with uncertainties. By having the right data can help them making the right decision in critical times and planning for the future.

Recommendation for future studies to extend the analysis up to the variable request by the users so that we can identify the direction of the analysis by the users and provide and recommend the right data and source for them.

Organised by:



PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA



BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA



MALAYSIA INSTITUTE
OF STATISTICS



StatsMalaysia
www.dosm.gov.my