Data Diplomacy and its Implications

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We live in an age where data has been termed the new oil. Like oil, data in its raw form needs processing to obtain useful insights. But the relationship between data and the source of data is extremely complicated. The basic premise of the field of Data Analytics lies in recognising patterns in the collected data so that improved estimates can be made about the future. So, data is an extremely important tool in the arsenal of policymakers for informed decision-making. With decision-making becoming increasingly scientific by the day, the raw material for the process, the data itself, must be high quality. Otherwise, spurious relationships can be shown to steer the decisions for a specific agenda.

Data sharing is a strategic tool for negotiations among states to govern crucial aspects of society.[1] Countries across the globe are setting up dedicated departments that handle the affairs of obtaining relevant data from other states and using the data to quickly gauge the ground reality and provide timely aid to those in need. The emerging field of data diplomacy focuses on the advantages 'big data' can provide to diplomats engaged in foreign policy.[2] Data diplomacy helps connect the dots between the data at hand and its usage for the multiple dimensions of negotiations.[3] Diplomacy is a very nuanced field and requires several years of exercise to form strong bonds between two parties. With the help of data, a redefinition of relationships can occur that is based more on objective truth than qualitative discussions. This sudden shift can be difficult for diplomats to inculcate and needs a touch of subtlety on their part.

The world is currently host to several problems that are global in nature. Climate change, rising wealth disparity, food insecurity and the prevalence of deadly diseases lie on the agenda of several global welfare institutions. Measuring something is the first step in acknowledging the extent of the problem at hand. Data on these issues quantifies the task at hand. The global nature of these problems motivates the need for cooperation among different states. Access to raw data is imperative for pioneering the discussion concerning a solution. Diplomats across the world can use advanced data analytics to have leverage over strategic negotiations with a high level of confidence in possible scenarios. Advancement of technology has prompted the collection of data from a myriad of sources which was earlier simply not in the realm of possibilities. This has brought new horizons into the picture. Several new applications, like the collection of genetic information, health indicators, behavioural activities, etc., have come up that provide new avenues for research.[4]

Data sharing is riddled with challenges at every step of the process. Data sharing can be done either within an organisation or externally. Both sets of processes have different challenges associated with them. The one we are interested in is external data sharing. Governments worldwide take help from the research community for assistance in making public policy decisions. Many times, this involves sharing sensitive public data with the researchers. For data sharing, the most crucial challenge is maintaining an efficient data management system. This helps track where and how data is being used and prevents data copies.

Thus, it reduces the risk of dissemination by preventing unauthorised data sharing. Another key challenge is data privacy and compliance with data security regulations. Different countries might have different legal speak when it comes to following security laws. A translation of the laws in a language that is standardised universally will go a long way in curtailing this barrier. Similarly, privacy laws tend to act as hurdles when sharing data among different organisations are involved. As technology improves, the insecurity related to data sharing will reduce, unlocking different avenues for research and collaboration.

International collaborations rely on sharing information among countries for mutual benefit. Big data can be one form of information that helps in discovering patterns and trends with sophisticated techniques. The UN project of Humanitarian Data Exchange (HDX) is a positive initiative that is bridging the gap between the data and the policies that are derived from it. This project provides the availability of big data in an open source for researchers to draw inferences that will aid public policy. Security is another key arena where countries share their data to eliminate potential threats. Solving the above-mentioned challenges can go a long way in enabling countries to trust each other when it comes to sharing big data.

It took years to collate information about the cause of the black death. At the same time, the disease continued to devastate populations in Asia, Europe and Northern Africa, wiping out one-third of their total populations. Contrast that to the spread of COVID-19 and the dissemination of information regarding every aspect of the disease. All this happened due to data sharing regarding the number of infections and deaths. Mass testing allowed governments to plan for resource allocation and predict the intensity of the disease. Sharing the genetic data of the Sars-CoV-2 virus allowed for the development of vaccines in an extremely compressed time frame. The data regarding the number of infections in a locality can be used to plan for improved allocation of doses. The Decision Engineering and Pricing (DEEP) Lab at IIT Madras is working on a possible solution for optimal vaccine allocation strategies. Data regarding the changing efficacy of the vaccine doses has brought up conversations regarding the requirements of yearly booster doses to keep the threat of viral infection at bay. There is no doubt that data sharing has been crucial in establishing a singular frontier in the fight against the pandemic.

Data sourcing is an essential feature which forms the foundation upon which the entire structure of data analysis is built. Data should be collected in an ethical manner that ensures the privacy of the data provider. Many-a-times, the permission to collect data is hidden in pesky terms and conditions, which can trick the data provider or discourage the user altogether from participating. One method of eliciting true ground reality is forming the consensus of the general public. Game theory can help in achieving this goal with the help of a concept termed mechanism design. Instead of forcing people to provide true information about the ground truth, they are incentivised to do so. The consensus or the average value reported by the aggregation of the information reported by all the agents can then be assumed to be the ground reality. Participants who report observations close to the ground reality are rewarded, while those who try to report maliciously are not. Honest reporting of true values is the dominant strategy for each agent. This method of truth elicitation is termed as 'Community Sensing', and depicts how primary data can be collected. It can be employed in sensing the levels of air pollution, the prevalence of a disease in a locality, or even feedback on government services in the region.

Data is a key pillar in the 'Digital India' revolution. Collecting high-quality data is a vital ingredient that will facilitate several objectives. The government aspires to improve the quality of decision-making by using the data it collects from the citizens. This data can be utilised to estimate several key economic indicators, which can be employed for formulating global policies in an informed way. The data is also used for safeguarding the public from potential security threats.

In an age where the decision-making process is becoming more scientific by the day, trust must be established between the data scientists and those involved in making diplomatic relationships. It is also crucial that both these stakeholders remain autonomous in their functionality. Data scientists, under the domination of diplomats, may be forced to derive spurious relationships with the data to achieve specific

diplomatic goals, which may not represent the true ground truth. Audits must be carried out diligently to ensure truthful behaviour.

Finally, the data collected must protect the fundamental rights of the citizens. Cyber privacy laws are becoming a topic of hot discussion in several global forums, especially when the ethics of sharing personal data is involved. The road towards achieving a consensus regarding data sharing is a rocky one and needs to be tread with extreme caution. Global issues call for actions at a global scale, and global collaborations require extreme forms of diplomacy. Unlike oil, countries do not have a strict monopoly over their data. Some countries might not be willing to share their data. The rate of digital innovation across countries will widen the gap between the development rate as well.[5] Data is critical for the next revolution of global development and diplomacy is the means for its facilitation.

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