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India's Race of Technology and Digitisation

An analysis of Carnegie's Global Technology Summit

Arun Teja Polcumpally

Edited By: Aryan Gupta

Countries around the world are racing to get their hands on advanced technologies. Almost all, strive to have the two core pillars of technology to sustain and create global influence. One is to get the first-mover advantage of technology, and the other is homegrown innovation. India is not a latecomer to this race. Both central and state governments encourage technological innovation and start-up culture. There are numerous state incubators like *T – hub* in Telangana, *Start-up village* in Andhra Pradesh, and *innovate Karnataka* in Karnataka to name a few. There is also a centrally controlled seed funding agency and incubator called *start-up India.* Other than opening a channel to promote innovative businesses, India is also gearing up to invest more in the research of advanced technologies like Artificial Intelligence, quantum computing etc. For a better understanding of India's position in the geopolitics of data, it is important to know the thought process of the political, and business elite of India. This article attempts to do the latter by critically examining select sessions of Carnegie's *Global Technology Summit*.

Carnegie India has been organising an annual global technology summit in Bengaluru since 2016. For the past two years, it has been virtual.[1] The latest summit was held from the 14th to the 21st of December, 2021 (Global Technology Summit, 2021). The theme followed in this summit was 'Global Meets Local.' It consisted of speakers like Foreign Minister Dr Jaishankar, British Prime Minister Boris Johnson, data governance heads of Amazon; director of data governance, Google; and deputy head of international data flows, European Union. Given the high-profile speakers, an analysis of the summit focusing on data governance will provide the current perspective of private and public institutions on the rapid pace of digitization in India. This article focuses on the panel discussion regarding the geopolitics of data and the recent digital transformation of India.

The panel titled 'Fragmentation: The Future of the Geopolitics of Data" has anchored its discussion on the importance of global data flow. It concluded that the states have an option to either allow data to cross its borders with minimum restrictions, or to barricade the flow with strong localisation policies. Rahul Jain, head of data governance at Amazon, highlighted that, "… in the last four to five years, the number of countries that adopted data legislations approximately doubled from 35 in 2017 to 62 in 2021." If data legislations increase, the globalisation of digital technologies will be challenging. He also espoused that these restrictions would "… increase compliance burdens

[1]The author has attended most of the Global Technology Summits.

on the companies." It appears that his concern is valid. Each country would enact legislation aiming at data that should be stored and processed. This creates a situation where an application developed in one country will not function in another country. One solution is to establish separate offices in every country and change the product as per the national data regulations. However, there is an increasing push for regulation at the stage of design itself for advanced technologies like AI. If they materialise, then a product developed in one country cannot be used anywhere else in the world, even with offshore development sites.

Avoiding such a situation is ideal but is it possible to set up multilateral agreements? Michael Nelson, Senior Fellow, Technology & International Affairs Program, Carnegie Endowment for International Peace, said 'NO.' This is because even within a country, there are two factions inclined to data localisation or unrestricted global data flow. It would be practically difficult for all the states to accept a single framework. He further quotes the disagreements at World Trade Organisation (WTO) as an example of the failure of multilateral agreements. When different nations craft their data legislations, start-ups might lose access to the global internet. The bigger question looming over the heads of policymakers and geopolitical analysts is, how do we let the data flow freely across the borders even in 2025 or 2030?

Nelson mentions six fundamental forces that shape the data governance policies and perspectives of states:

1. Governments want cyber security. Security regimes require every application to pass benchmarks before releasing them to the public.
2. Data protection and privacy: Government asks companies not to share data, but the military is happy to take all the available data from companies.
3. A blanket ban of foreign companies displays a lack of understanding of what a strong policy in the technological sphere entails.
4. Law enforcement in surveillance
5. Rent-seeking and control of the data companies
6. Geopolitics of the data governance

All six factors cover the existing concerns and realities of data legislation. Governments are taking undue advantage of data and using it for their political purposes. When a democratic government takes an undue advantage, it is a clear violation of democratic principles. Nelson points at the de facto realities of serving political party behaviours in democratic countries. Political leaders use

their influence to force private data companies to act by the leaders' goals hence destroying the process of equal access and service provision. The non-existence of data legislation and a holistic understanding of advanced technology impact on society make cyber security a nascent subject.

Another panellist, Ralf Sauer, deputy head of Unit for International Data Flows, DG Justice, European Commission, opined that data protection legislation of the EU is equally applicable for private companies and government agencies. Michael's second and fourth fundamental factors affecting data legislation are taken care of from the perspective of the EU. As modern economies are dependent on data flows, it is not easy to curb them. However, cross border flow of data should happen with some safeguards. The prime importance would be for national security and protection of privacy.

EU's Electronic ID and the European cloud servers signal regionalism. EU's electronic ID is supposed to provide a safe and secure way for individuals within Europe to access online services[2]. The proposed eIDAS (Electronic Identification, Authentication and Trust Services) regulation will help the citizens, residents and businesses operating in the EU to avail government services across the EU with a single identification[3]. Nelson pointed out that it is difficult for all the states to agree on single data regulation. Similarly, the EU appears to have a bias towards regionalism over globalism. Microsoft and Google already agreed to store and process the European data within European cloud servers[4][5]. This shows that the private companies are happy to comply with regional data regulations rather than country wise. An alternative for the absence of regional or global data frameworks is to allow private companies to have their own framework. EU's data protection laws and regional cloud services show increasing regionalism. In addition, it also shows that European integration is getting strong, irrespective of Brexit. In a scenario where regionalism is increasing, where does India stand?

[2] European Union, "Eidas Regulation," Shaping Europe's digital future (European Union, September 2021), https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation.
[3] European Union, "Eidas Regulation," Shaping Europe's digital future (European Union, September 2021), https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation.
[4] Brad Smith, "Answering Europe's Call: Storing and Processing EU Data in the EU," EU Policy Blog, May 6, 2021, https://blogs.microsoft.com/eupolicy/2021/05/06/eu-data-boundary/.
[5] Marc Crandall and Nathaly Rey, "How Google Cloud Helps Customers Stay Current with GDPR | Google Cloud Blog," Google (Google, July 15, 2021), https://cloud.google.com/blog/products/compliance/how-google-cloud-helps-customers-stay-current-with-gdpr.

India and its digital transformation

In another session, the digital transformation of India was discussed. The AI stack[6] (AI Standaradization Committee, 2020), which is an API layer architecture released by the government of India was deemed as the first wave of India's digitization by the moderator of the session, Mridul Sharma. He is an investment promotion officer at the Ministry of Electronics and Information Technology (MEITY), Government of India. Such a statement uttered directly by a government official can be considered the opinion of MEITY itself. It was released in 2020 and has still not been adopted. If this is the first wave of total digitisation, what would other initiatives like digital India achieve? Such a question is left open to the reader's reasonings.

When discussing digital technologies and innovations, it is common to compare any digital innovation system of a country to the Silicon Valley of the US. It is generally accepted that Bengaluru, Karnataka is the Silicon Valley of India. However, for the digital transformation journey of India, how similar a role will Bengaluru play to California?

Bengaluru as well as India is ready to move to any part of the world if their start-up ideas are incubated. Start-ups in India have applied to venture capital firms like Y – combinator to kick start their multinational business idea. Investors from across the world are no longer sceptical about investing in Indian start-ups. Mrs Motwani correctly points out all these aspects. She speaks from personal experience of funding innovative ideas in India and assisting them to reach their potential through seed funding and incubation.

However, the gap between technological skill production and demand is not yet bridged in India. Mrs Motwani claims that access to the internet and the English language will help bridge the gap. China successfully has provided fierce competition with the US without prioritising the English language in its education. Having only English as a source of knowledge transfer is a bit stretched as a theory. To encourage homegrown innovation and ensure that there is enough technical skill (advanced technology), proper implementation of a new education policy might be sufficient.

[6] AI Standardisation Committee, "India Artificial Intelligence Stack" (New Delhi,2020)

Conclusion

An excellent question from the audience can end this brief analysis. Companies and states can brainstorm on the various initiatives that promote innovations. They can establish funds that kick-start research on AI and other fundamental technologies. But how can one be sure that they are targeting the actual issues in society? This question is significant for government funding of advanced technology research. In most countries, people do not have a say in the decision-making process of technology adoption. But governments and private companies claim that new technological products are being developed to help people.

Mr Sahil Jini, co-founder and CEO of the "Setu" platform, opines that it is the job of the private sector and the innovations team to understand the public's problems. However, this is a costly affair for a budding entrepreneur. An alternative could be accelerators or incubation centres establishing anticipatory governance research teams that carry out timely assessments of the technologies like AI, and Blockchain. They can also release half-yearly reports on their social impact findings. More than a private incubator having these future research teams, it is more logical if the government establishes them. Future research and policymaking should be the government's task.

Future research was successfully conducted for the Human Genome Project in the 1990sby the US. At present, future research is institutionally carried out for nanotechnology. It is promising to have such research conducted by government incubators so that taxpayers' money goes into appropriate technologies with enough information provided to the public.

There are numerous examples of how countries have initialised future studies[7], but India has lagged behind. Anticipatory governance encourages educating all the stakeholders on advanced technology, deliberation and constructing consensual futures. When such futures are constructed, the funding of research will be encouraged only to those projects which fit into such futures. This is one way to achieve a democratic way of controlling the advanced technologies' development. It

[7] Lucy Kimbell and Lucia Vesnić-Alujević, "After the Toolkit: Anticipatory Logics and the Future of Government," *Policy Design and Practice* 3, no. 2 (February 2020): pp. 95-108, https://doi.org/10.1080/25741292.2020.1763545.

will bring variety to data-based technologies. However, this will hamper the globalisation of software applications. As each country has separate stakeholders, their future construct will vary and because of this, there cannot be homogenised data transfer rules and ethical practices. If globalisation is to be protected, there should be an anticipatory governance council at the international level, that formulates foundational principles of technology development with oversight authority. This oversight authority cannot consist only of government representatives. It should consist of private companies at the top, a representative from a think thank, and officials from governments around the world.

On the establishment of such multilateral fora, regarding advanced technologies, the panel discussion provided no significant conclusion. There is no consensus on how to regulate the data flow as well. EU appears to have old school policymakers whose emphasis is on the well-being of the public, while the technocrats focus mostly on building products and releasing them to the public. There is a wide gap of understanding of policy between technocrats and policymakers. If the current policymakers are to make policies for the future, then it is obvious that they need a multi-stakeholder approach and there has to be a state-led discussion. These should not be done in closed rooms. The outcomes must be discussed with civil society representatives and higher education institutions. Definitions of personal data, privacy, should be re-evaluated. The policymakers should understand what people consider private data. In India, for example, a phone number is not a very private detail. During every purchase, people are asked for their phone numbers even though it is a voluntary option. In the name of loyalty points, personal phone numbers are collected. There is no option for opting out of the notifications. No company or store displays how the data storage is operated. This is an issue that is essential to the public. The solution can be easily availed if the policymaking teams deliberate with higher education institutes.

Lastly, the six fundamental concerns espoused by Michael Nelson create the base for the discussion on data regulation. It shows that the data regulation of any country is in response to domestic and global concerns. It also shows that national security is no more just border tensions and business rivalries, but also includes data security and usage. The government's undue advantage in using citizen-generated data is also a national security concern. The six concerns

provide a holistic approach to data regulation analysis. Importantly, they provide a new window for non-traditional security by including the state as belligerent in the securitising of a nation.

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Arun Teja Polcumpally is a doctoral fellow at the Jindal School of International Affairs and is a Research Associate at the Centre for Security Studies, JSIA. All views expressed in this publication belong to the author and do not reflect the opinions of the Centre for Security Studies.