

# Information and Communication Technology Dossier

A Global Perspective



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With digital economy growing leaps and bounds every second, the broader Information and Communication Technology (ICT) ecosystem is also growing and evolving, which is proving to be uber-cool for consumers but a rat-race for governments. Globally, regulators are making continuous efforts to match the pace of such technologies and innovations, which time and again are being scrutinised by users on parameters, such as ethics and biasness.

While the US Federal Communications Commission (FCC) has taken conscious initiatives to make the US telecom ecosystem free from unreasonable regulatory barriers and make it 5G-ready, other regulators are in constant battle with big tech firms on data and competition issues. The Indian policymakers have also joined the bandwagon, creating a flutter among the big tech firms on strong opinions on data protection and privacy, and data localisation has taken the centre-stage in the ongoing discourses.

This edition of the ICT Dossier covers four major stories, namely FCC Actions Aim to Lower Regulatory Barriers for 5G; IBM launches tool aimed at detecting AI bias; The next antitrust standoff — Big Tech's use of data; and the much-talked about Draft Personal Data Protection Bill released by India's policymakers, with specific reference to Data Localisation aspect.

Like the previous edition, this ICT Dossier focusses on four verticals, namely; IPR and Competition; Innovation and Disruption; Connectivity; and Privacy and Data Ownership. The purpose of the dossier is to flag important issues for each of four verticals, to a layperson as well as policymakers. Each story ends with several questions for the reader to contemplate and think of the way forward. This dossier may also be accessed at [www.cuts-ccier.org](http://www.cuts-ccier.org).

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## FCC Actions Aim to Lower Regulatory Barriers for 5G

Today, the FCC took another important step in its ongoing efforts to remove regulatory barriers that inhibit the deployment of infrastructure necessary for 5G and other advanced wireless services. This action, which builds upon those already taken by states and localities to streamline deployment, underscores the FCC's commitment to ensuring that the US wins the global race to 5G.

The first part of the Commission's decision, a Declaratory Ruling, focuses primarily on local fees for the authorisations necessary to deploy small wireless facilities. Specifically, the Declaratory Ruling:

- Explains when a state or local regulation of wireless infrastructure deployment constitutes an effective prohibition of service prohibited by Sections 253 or 332(c)(7) of the Communications Act;
- Concludes that Section 253 and 332(c)(7) limit state and local governments to charging fees that are no greater than a reasonable approximation of objectively reasonable costs for processing applications and for managing deployments in the rights-of-way.
- Removes uncertainty by identifying specific fee levels for small wireless facility deployments that presumably comply with the relevant standard; and
- Provides guidance on when certain state and local non-fee requirements that are allowed under the Act, such as aesthetic and undergrounding requirements, may constitute an effective prohibition of service.

Source: [www.lightreading.com/regulation/fcc-actions-aim-to-lower-regulatory-barriers-for-5g-/d/d-id/746393?itc=lrnewsletter\\_lrdaily&utm\\_source=lrnewsletter\\_lrdaily&utm\\_medium=email&utm\\_campaign=09282018](http://www.lightreading.com/regulation/fcc-actions-aim-to-lower-regulatory-barriers-for-5g-/d/d-id/746393?itc=lrnewsletter_lrdaily&utm_source=lrnewsletter_lrdaily&utm_medium=email&utm_campaign=09282018)

### **Food for Thought**

*With the global digital economy booming with various innovations and initiatives for consumer benefit, the telecom industry and regulators have shown significant interest in 5G technology as it brings along several benefits. It is estimated that by 2035, 5G will enable US\$12.3tn of global business, generate business of US\$3.5tn and support 22 million jobs worldwide. However, implementation of 5G and reaping the benefits it confers requires technology enabling infrastructure. Realising this urgent need, several regulators across the developed and developing economies have initiated roadmaps and ideations.*

*While the FCC has taken steps to reduce regulatory barriers to boost infrastructure deployment, several African regulators came together during the ITU Telecom World 2018 to discuss and deliberate on the role of 5G technology to enhance the continent's development and connect the unconnected. India just recently announced its new National Digital Communications Policy 2018 that looks at 5G as a key enabler to achieve the laid-out objectives. Many*

*European countries have also started 5G trials and reworked their spectrum allocations to give preference to 5G networks.*

*Some prominent global challenges to 5G deployment are high equipment cost, accessibility to existing optical fibre network, developing new cell sites in both rural and urban locations. Current regulatory frameworks and policies are not holistic to accommodate these developments and need to be redesigned so as to reduce these challenges. Hence, in order to harness the potential of 5G technology and prepare the future roadmap, the following questions need to be pondered upon – how do regulators ensure a balance between and transition from existing and proposed regulatory frameworks? how do regulators develop a cohesive strategy to include participation of industry players in designing the future roadmap? How do regulators ensure that such initiatives remain commercially viable in the long run, especially in rural areas of any country? How do regulators ensure support for the telecom sector is on resources such as spectrum, licences, taxes, etc. to make 5G deployment feasible and profitable?*

### **IBM launches tool aimed at detecting AI bias**

IBM is launching a tool which will analyse how and why algorithms make decisions in real time. The Fairness 360 Kit will also scan for signs of bias and recommend adjustments.

There is increasing concern that algorithms used by both tech giants and other firms are not always fair in their decision-making. For example, in the past, image recognition systems have failed to identify non-white faces.

However, as they increasingly make automated decisions about a wide variety of issues, such as policing, insurance and what information people see online, the implications of their recommendations become broader. Often algorithms operate within what is known as a 'black box' – meaning their owners cannot see how they are making decisions.

The IBM cloud-based software will be open-source, and work with a variety of commonly used frameworks for building algorithms. Customers will be able to see, via a visual dashboard, how their algorithms are making decisions and which factors are being used in making the final recommendations.

Source: [www.bbc.com/news/technology-45561955](http://www.bbc.com/news/technology-45561955)

### **Food for Thought**

*Artificial Intelligence (AI) and Machine Learning (ML) are path-breaking techniques in data analytics, which have created multidimensional use cases to solve societal problems and enhance processing of information. Powered by algorithms and codes, these applications have the ability to reshape healthcare, agriculture and democracy, and show tremendous potential for helping to achieve sustainable development objectives globally. These techniques have also opened up new avenues for existing businesses to transform their approach towards doing*

*business, while also giving equal opportunities to new and emerging businesses to compete. However, the story is not so rosy when looked from the consumer perspective.*

*In developed countries, there have been instances when ML tools automate racial profiling, to foster surveillance, and perpetuate racial stereotypes. Algorithms may be biased, either intentionally or unintentionally, and may lead to disparate or unfair outcomes between minority and majority populations. Also, complex models could make it difficult to establish transparency, accountability or seek redress when models make mistakes as well as identify when mistakes are made. Hence, ethics and intent of such applications have been hotly debated and questioned time and again, with discourses becoming more vocal and aggressive. Big Tech firms have realised this friction and now proactively started developing mechanisms to counter such disparities, infuse transparency and accountability, along with giving control back to consumers, with the overall objective to regain confidence and trust.*

*With consumer at the centre of these discussions, it would noteworthy to explore few pertinent areas that would help empower consumers in dealing with AI and ML applications. Since most coders of these applications are part of big tech firms of the developed world, how to bring in diversity in this work stream so as to reduce biasness and infuse sensitivity towards other communities? How do big tech firms work with other stakeholders in the value chain to build inclusive mechanisms and make these applications more consumer-friendly? How would regulators match the pace of such a dynamic ecosystem, where such applications keep evolving with time and data legacy? How do consumers keep themselves aware and protected? Can there be a collaborative model wherein consumers may seek redress from unethical use or conduct? How do we infuse an accountable framework that keeps a check on ethical use of AI? With borderless digital economy thriving, would regional and multilateral models of governance benefit in promoting transparency and accountability towards AI usage? Is it possible to develop unbiased AI-enabled tools and applications that support consumers in tackling misinformation and fake news?*

## **The next antitrust standoff — Big Tech's use of data**

Competition regulators are amidst a new debate: Big Tech's use of data.

From Europe's top antitrust czar Margrethe Vestager announcing an investigation into Amazon over its potential abuse of digital information, to the US Federal Trade Commission holding a public hearing in early November on big data and competition, officials are gearing up for a new round of antitrust battles.

It is going to be a bare-knuckle fight.

In one corner stand some of the world's largest tech companies, like Google, Facebook and Apple, whose ever-expanding economic might come to a large extent from data (everything from people's search queries to online movie streaming habits) that they now collect on billions of individuals worldwide.

In the other corner are the world's most powerful antitrust authorities from Brussels to Berlin to Washington, who increasingly question if a small stable of Silicon Valley companies should be the sole gatekeepers for data on all aspects of our activities online. The big question is what limits, if any, policymakers should place on the data empires at a time when companies from Amazon to Microsoft are searching for new business opportunities, including online groceries and gaming.

And as big tech harvests greater and greater amounts of data, average internet users like you and me face some hard choices.

Source: [www.politico.eu/article/competition-data-amazon-margrethe-vestager-antitrust/](http://www.politico.eu/article/competition-data-amazon-margrethe-vestager-antitrust/)

### **Food for Thought**

*Big tech firms and regulators of the developed world are at constant loggerheads, as digital platforms grow in size and dominance, eventually leading to concentrated markets in the digital economy, thereby raising alarm bells for antitrust authorities. However, it was these tech firms who created this digital economy using internet, which has led to tectonic shifts in the fields of technology, innovation, research and design. New global businesses have emerged from the advent of digital economy, which have been able to provide new products and services to consumers. Entrepreneurship has been redefined with plethora of risk-taking individuals coming up with start-ups around the world, some of which have been able to compete and grow in size and profits.*

*While all this is true, this fast-growing economy has been consumer data, which at multiple forums, has been termed as the 'new oil' as it has become invaluable for this tech firms, both big and small. Using data analytics, these tech firms have been able to recognise patterns in consumer choices and behaviours, which are used to enhance existing offerings. However, there have been multiple instances, across several jurisdictions, where big tech firms have been found to influence consumer choices to kill competition and create a monopolistic environment. These instances have been growing for quite some time now and have been causing jitters among regulators, forcing them to think of ways to tame these big tech firms. While abuse of dominance is one end of the spectrum, the very existence of this digital economy and efficient use of the internet for public good and creating consumer choices is the other end of the spectrum.*

*Hence, while this tussle seems to be building day by day, there are some critical spaces for consumers, businesses and regulators to contemplate upon. How to ensure optimal regulations and policies in the digital economy that does not stifle innovation, but also does not compromise on accountability for consumer data use? Should not consumers be party to the benefits of this monetisation approach, created by big tech firms? Where do regulators draw the line on investigating big tech firms and strangulating their growth? How to design a constructive framework that keeps a check on big tech firms' abuse of dominance and multi-sided market approach, while also promoting competition in the sector?*

## Data Localisation: India's Policy Framework

The draft Personal Data Protection Bill, 2018 and the Data Protection Committee's Report (released on July 27, 2018) contain the framework and policymakers' insight on protection of personal data in India. The recent Draft E-commerce Policy indicates government's thought process on storing data in India. The Reserve Bank of India (RBI) in April 2018 mandated that all data generated by the payment systems in India, is to be stored in India. The Ministry of Health and Family Welfare has published the draft legislation called Digital Information Security in Healthcare Act, to safeguard e-health records and patients' privacy. Thus, all these new rules/policies/regulations (collectively referred as 'the Data Protection Framework') indicate a very strong direction that the government wishes to undertake on data localisation, which is intended to help enforcing data protection, secure nation's security and protect its citizen's data, better control on transmission of data outside the country and more.

It is believed that initial steps were taken when under the Companies Act, 2013, the maintenance of books of account in electronic form, required copies to be kept in servers physically located in India.

Many questions abound that the government take fast paced measures in enabling infrastructure to build data-centres, keep operational costs for small and medium-sized enterprises (SMEs) low, jump-start initiatives on AI, while maintaining delicate balance on surveillance and protection.

Source: [www.mondaq.com/article.asp?article\\_id=739546&signup=true](http://www.mondaq.com/article.asp?article_id=739546&signup=true)

### **Food for Thought**

*On July 27, 2018, the much anticipated draft version of the 'Personal Data Protection Bill 2018' was unveiled by Justice Srikrishna through a press conference held in New Delhi alongside IT Minister Ravi Shankar Prasad. This exercise was executed in 2017 wherein a committee setup under the Ministry of Electronics & Information Technology (MeitY) that looked at designing a legal framework wherein personal data of Indian citizens is protected.*

*The draft bill, which is expected to be debated during the winter session of the Parliament, looks at various aspects of citizen data and attempts to define the contours of the framework. One aspect, which has caught the eye of most businesses operating in this domain, has been the bill's significant emphasis to store data within India's boundaries – popularly known as Data Localisation. Another set of recommendations by RBI bring forth mandating local storage of a copy of user's data, or data mirroring, to protect financial sovereignty of Indian consumers.*

*California's Silicon Valley has been at the forefront to give birth to the digital economy, with most of these tech firms physically present in the US. Technology firms thrive on data to redesign existing solutions in order to provide new choices and offerings to consumers and business clients around the world. And since these firms have put in human and capital efforts to develop their businesses, they have also made sure that cross border data flow is seamless*

*and leads to further proliferation of business and ecosystems around the world to support the digital economy.*

*Moreover, tech firms take the onus of making these data sets highly secure and protected from any cyber vulnerabilities. Hence, they practice extra caution while allowing access to such data sets, which at times lead to delays and difficulties for governments and law enforcement agencies around the world to solve local problems and issues.*

*Hence, over a period of time, demands for data localisation have arose from several countries in furtherance of data sovereignty. India, for that matter, has decided to join the brigade of countries demanding data localisation as it houses the largest consumer market for most tech firms, with very limited local players to cater to this market. Known for its heavy red-tapism and lack of ease of doing business, India needs to be realistic while demanding data localisation, which requires a sound ecosystem and infrastructure to function and support the digital economy. It could be seen as a protectionist measure creating a non-tariff barrier.*

*Is India correct in demanding data localisation and mirroring? How would consumers benefit in such a scenario? Does the protectionist mandate ensure consumer sovereignty? How will policymakers ensure a smooth and business-friendly ecosystem to build data centres in the country, keeping in mind the establishment and operation cost? Will such a move lead to birth of more local players in the data business and proliferate an ancillary industry? Should not policymakers conduct a thorough cost-benefit analysis on the provision of data localisation and data mirroring? How would such a move impact innovation and the start-up ecosystem in the country, which relies heavily on freely accessible data and services? The government intends to safeguard its citizens from cyber vulnerabilities and foreign surveillance. Additionally, it seeks to ensure a grievance redress mechanism in case of any misuse of their data. Does the localisation mandate address these concerns effectively and efficiently? Do localisation and mirroring approaches enhance security and mitigate associated risks? Is there no less restrictive, more efficient alternative to hard localisation measures? These are some of the issues that need careful thought while designing regulations on cross-border data flow.*



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