

Assimilation Report

**The Chair on Internet Policy:
Value, Security and
Governance**

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The Chair on Internet Policy: Value, Security and Governance

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Assimilation Report

The Chair on Internet Policy: Value, Security and Governance

1. Introduction

The Chair on Internet Policy: Value, Security and Governance (hereinafter ‘the Chair’) instituted by ICRIER and funded by the Ministry of Electronics and Information Technology (MEITY), Govt. of India was envisaged to conduct policy research and engage with a wide range of stakeholders to understand and analyze the role played by Internet on the society at large, along the lines of Value, Security and Governance. Over the duration of the Chair, ICRIER was assigned specific topics of research by MEITY that are summarized in this report. In addition to the brief summaries of deliverables, this report also provides some suggested areas of future research that will help strengthen policy making on internet governance issues in India.

In addition to three research papers and two policy briefs, the deliverables under this programme included a fortnightly newsletter¹, op-eds published in newspapers and magazines², seminars³, and a strategic dialogue conference⁴. With all its deliverables the Chair programme provided a comprehensive overview of policy progress on Internet governance over a period of 30 months. This Assimilation Report is divided into two parts. The first part provides a summary of the research papers and policy briefs prepared during the course of this project along with related areas of further research; the second part provides a summary of potential areas for future research. The future areas of research have been identified as important through our research and stakeholder interactions under the Chair programme at ICRIER.

2. Research Papers

2.1 A Review of the Domain Name Market in India

Summary

The evolving role of the Internet has resulted in a paradigmatic shift in the way trade and commerce is now conducted. More and more businesses are going online; the past decade has witnessed an explosive growth in the number of businesses and individuals who have invested in a personal webspace. As a result, the demand for domain names have increased. On the back of a vibrant Internet ecosystem in India, thrives a rapidly growing domain name market. Domain name registrations recorded a total of 5 million in May 2020. Registrations in India, however, account for only 1.24 percent of the global market. The popularity of .com is also observable in India. As a legacy TLD it commands almost 51% of the domain name market in India followed by .in and .org with their shares being 31.14% and 4.41%, respectively. The

¹ The newsletter can be accessed at: <http://internetpolicy.in/home/index.php/news-digest/>

² The link to the op-eds are: [Op-ed 1](#), [Op-ed 2](#), [Op-ed 3](#), [Op-ed 4](#) and [Op-Ed 5](#)

³ The seminar details are available [here](#) and [here](#)

⁴ The event details are available at: <http://icrier.org/newsevents/conferences-workshops-details/?id=151>

preferred nTLDs are *.xyz* and *.online* and *.ooo*. The market shares and rankings of TLDs change over time, even though the top choices have always remained *.com* and *.in*. The primary reason for choosing *.com* or *.in* is the need to reflect business activity and location. Other important reasons that influence the decision of registrants are familiarity, easy recognition, trust, affordability and the resale value of a purchased domain.

The enterprise and individual surveys conducted as a part of this study sought to understand these trends in usage and selections of domain names. The survey also delved into currently under utilized, yet high potential, categories such as Internationalized Domain Names (IDNs). In terms of awareness, while individual and enterprises both could recognize the ngTLDs, they were not aware of the nomenclature. Similar but far more pronounced was the case with IDNs.

The industry trends and findings from the survey has showcased the under penetrated market for domain names in India. India presents a huge opportunity for domain names as online businesses trickle down to Tier 2 and Tier 3 cities. However, to help this industry achieve its maximum potential, marketing strategies of registries and registrars have to be well aligned. India has seen a steady rise in the number of registries, registrars and resellers that drive the supply side. While several stakeholders have entered the market, there have also been prominent exits among registrars and several resellers have shut shop. The ability of players to enter and exit the market is an indicator of competitiveness and is applicable universally. An analysis of competition using Porter's Five Forces Model in the report finds that the domain name industry in India is fairly competitive (Medium-High). The presence of a large number of registrars and registries along with the deeply networked reseller market makes the industry attractive for new players. There is relative ease in the entry and exit of registrars and the market is not yet subject to onerous regulations. This makes it an attractive proposition for new players, who are vying for a share of a rapidly growing market in India.

Registries and registrars are tempted to offer promotions and discounts to acquire new registrations. However, lack of awareness and technical know-how often limits the registrant's ability to bargain at the time of renewal. Met with reasonable services, even price sensitive registrants hesitate to transfer domains given the actual and perceived costs of switching. Table below summarizes the analysis where a given factor is ranked as either low, low to medium, medium, medium to high and high; based on our analysis of how each of these forces is likely to impact competition.

Table 1: Summary of the Competition Analysis of the Domain Name Market using Five Forces

| Porter's Five Force | Level of Competition | Summary Analysis |
|------------------------------|----------------------|--|
| Competition Rivalry | Low-medium | <ul style="list-style-type: none"> • Large number of registrars but few of them are dominant. • Registration of new gTLDs are led by two key registrars – Go Daddy and PDR-who between them control about 80 per cent of the market share in this category. • Core product sold by most registrars is identical; however, value-added services are a differentiating mechanism. • The exit barriers are moderate; process is not very tedious. |
| Threat of new entrant | Medium | <ul style="list-style-type: none"> • Accreditation process is user friendly and the barrier to entry is extremely low for ICANN accredited registrars (The compliance burden on registrars is significantly higher than that for resellers). • Those selling legacy TLDs are relatively less monitored than those selling the new generation new gTLDs. • ccTLD registrar involves accreditation from each ccTLD registries. Documentation requirements and/or nexus rules require registrants to be physically present within their countries, involves verification and validation of documents which ultimately increases the compliance burden for registrars and their overall cost of operations. |
| Bargaining power of supplier | Medium | <ul style="list-style-type: none"> • Each gTLD is managed by a single registry that is responsible for maintaining necessary records (as prescribed by ICANN) of all registered domain names within the TLD that it controls. • Competition in the supplier market of new gTLD is fiercer as each registry tries to create a niche for itself in the market. • ccTLD registries have mandated citizenship or domestic incorporation as a criterion to register their domains and therefore can control the users of the domain names through individual TLD policies. |
| Bargaining power of buyer | Low -Medium | <ul style="list-style-type: none"> • The registrants in the industry can switch registrars - the latter has power to bargain with registrars. • However, lack of awareness about domain names along with bundled services provided by registrars makes consumers continue with registrars they originally register with, limiting their ability to bargain. |
| Threat of Substitutes | Low- Medium | <ul style="list-style-type: none"> • With the rise of social media platforms and e-commerce websites, small companies no longer feel the need to register their own domain and instead piggy back on that of an existing platform/ marketplace to advertise its product or service. • However, there is no substitute for highly personalized emails. Domain name registration becomes necessary for a business email address. |

While the state of competition can be improved, it may be adequate to produce efficient outcomes and consumer welfare, at least in the short term. Competition could be increased by increasing the market size of the industry and initiatives that can promote the registration in

India. The role of policy becomes important to create an enabling ecosystem that will help take this growth forward. Curating and maintaining a robust database of the industry, developing strategies to increase consumer awareness, address information asymmetry, promoting geographic TLDs and domain names in local language, supporting startups and SMBs and organizing an annual domain names conclave to increase India's participation in international fora is important to voice priorities that are unique to India.

Areas for Further Research

1. Deeper analysis for the relationship between registries and registrars and their impact on competition through collections of data on domain name registrations, renewals, porting and other important parameters that track the growth and evolution of the market in India.
2. Policy analysis for promotion and growth of geo-TLDs through state and local governing authorities that can identify areas within their geography that can benefit from a geo-TLD.
3. Policy analysis on Internationalized Domain Names (IDNs) through government engagements both at the central, state and local level to create local language versions of their websites hosted on IDNs, particularly .*bharat* domains in local scripts. Stakeholder engagements with registries and registrars will also help identify potential areas to target and propel the growth of IDNs as well as options to market and enable the growth of IDN registrations.

Capacity Building

1. An annual conclave for the domain names market in India to invite and engage with a wider community of stakeholders
2. Increase India's participation in relevant trade shows and conferences.
3. Identify existing/new programmes such as the Start-up India, Atal Innovation Mission etc. that are shaping India's technology journey where domain names can provide a digital identity to participants etc.
4. Invest in the Internet ecosystem that indirectly promotes the domain market. This would include smart phone adoption, online commerce, digitization of small and medium business and other e-governance initiatives.

2.2 Data Flows and Data Localisation: An Economic Analysis

Summary

Data forms the marrow of today's information society. Its creation and consumption continue to grow manifold and its flow between the innumerable nodes of individuals and machines fuels the digital economy.

Studies have shown that cross border data flows improve productivity and enable creation of efficient markets. According to McKinsey, all types of tangible and intangible flows have raised the world GDP by 10.1 percent, over the past decades. Data flows through the Internet,

and other digital media, has become critically important to the information society and to the growth of the global economy. However, the rise of data flows is not an unmixed blessing. The ever more reliance on data as a fuel for growth raises concerns about the integrity of those using or having access to our personal data. Privacy as a fundamental right is being increasingly asserted as digital connectivity makes personal data vulnerable to actual and perceived misuse.

Amid these calls for concern, diverse data localisation measures have been resorted to by many countries. Data localisation has been defined differently in the nascent but growing literature on the subject and can be broadly characterized as any measure “that encumber(s) the transfer of data across national borders.”

The dominant form of data localisation is localised data hosting, where governments compel Internet content hosts to store data of Internet users in the country on servers located within their jurisdiction. Within this type there are varying degrees of localisation. Some which allow for the data to flow outside of the geographic territory of the country as long as a copy of it is retained within the country’s geographic territory (commonly referred to as *mirroring*). This copy may be live i.e. simultaneously updated with the original database or a periodically updated copy. A stricter degree of localisation mandates that data shall not leave the geographic territory of the country, and should be maintained, processed and analysed only within. This is usually restricted to categories of data that are considered critical or highly sensitive.

Despite skepticism around the value generated by data localisation initiatives in domestic economies, several governments continue to adopt a range of data localisation laws to meet a variety of policy objectives, from safeguarding sovereignty, protecting data of individual citizens to promoting growth of the domestic digital economy. Some countries argue that limiting transfer of personal data across borders is the only practical way to protect privacy of their citizens, especially in the absence of a comprehensive shared data protection regime between the countries concerned.

The overarching objective of the study was to investigate whether there is a relationship between data regulation and localisation measures, and features of the economy (general and digital), and state capacity. Towards this, measures of restrictions on cross-border data flows imposed by overarching data protection frameworks and sectoral legislations (General RCBDF and Sectoral RCBDF, respectively) for 74 countries are scored on the basis of types of restriction, type of data, and status of law. The computed scores are then correlated with a composite index, the ‘Digital Potential Index’ that captures the features of the General Economy, Digital Economy, and State Capacity of the 74 countries. These countries are also ranked based on the values of the Digital Potential Index. Furthermore, the scores that capture General RCBDF measures are correlated with the various sub-indices that capture the features of the economy and state capacity to observe more specific relationships subsumed under the composite index.

The results of the composite index show that India ranks 61 of the 74 countries: India ranks highly in the state-capacity sub index but features in the bottom 10 percentile in the index of digital economy and general economy. More generally, there is a weak negative, but

statistically significant correlation between General RCBDF scores and the composite ‘Digital Potential Index’, as well as the sub-indices. The corresponding correlations of the composite index and sub-indices with Sectoral RCBDF scores are weak and statistically insignificant.

On the whole, correlations show that the higher a country ranks on the Digital Potential Index, i.e. the more developed the country is in terms of its general economy, digital economy, and state capacity, the less stringent restrictions it is likely to have on cross-border data flows. While the results seem to be general and intuitive, there remain gaps: for example, all the countries with the highest RCBDF score of 5, except for Pakistan, rank higher than India on the composite index, as well as the general economy and digital economy sub-indices, despite India having a lower RCBDF score. On the state capacity sub-index, however, India ranks higher than all these countries, except for Indonesia.

For a more in-depth and reflective understanding, case studies of specific data localisation measures by countries present a more nuanced picture of the global data localisation landscape. This paper conducts an in-depth review of four individual data localisation measures of Indonesia, Vietnam, Australia and South Korea. The key themes that emerge relate to:

Motivation and scope: Australia and South Korea both have very specific data localisation measures that motivated from concerns within specific sectors. Whereas the more recent localisation measures in Vietnam and Indonesia have much broader scope and are motivated by the protection of data privacy of citizens and easier access of data to law enforcement agencies within the country. However, there are also allied motivations that are not explicit such as greater control of online dissent or even the promotion of domestic industry.

Cost implications: The cost implications involved at a country level can be understood in two ways: first, the cost of required infrastructure and enabling environment; and second, the compliance costs to entities affected by the localisation measures. Data localisation measures are costly in terms of creating the infrastructural environment that enables data localisation, such as providing land, continuous power supply, cooling systems etc. Typical sources of costs in complying with data protection regulations involve incident response plans, compliance audits and assessments, redress activities among others. The responses of countries to cost implications have been different. Vietnam proceeded with its legislation amid concerns of ambiguity and costs of compliance, but has subsequently planned to dilute the localisation requirements. Indonesia has introduced new provisions that ease its data localisation requirements.

Enforcement challenges and consequences: Countries that introduced broad based data localisation requirements faced difficulties with compliance, followed by intense lobbying geared towards amending such requirements to more specific requirements. A major challenge in enforcing data localisation legislations is the formulation of the categories of data. In cases of both Indonesia and China, the initial legislation that mandated data localisation requirements were defined in ways that industry bodies in the respective countries found it ambiguous. South Korea’s data localisation, witnessed success in terms of restricting location data within its borders through localisation measures. Consequently, the data localisation requirements

compelled foreign companies to negotiate with South Korea for access to location, while it also created competitive indigenous location-based industries.

Localisation norms in India already exist through different laws and policies, prior to the discussions in the Draft Personal Data Protection bill, 2018 and subsequently the Personal Data Protection Bill, 2019. The motivations for data localisation measures in India broadly stem from privacy, security and protectionist ends. RBI's data localisation directive in 2018 (now under review) cited security and monitoring as a key motivation, whereas, erstwhile data localisation measures within the draft National Policy Framework for E-Commerce in India were viewed as a measure to protect domestic companies including data centers and digital payments groups. India is at a crucial juncture with respect to its policies on data regulation. It presents a timely opportunity to examine the implications of data localisation measures, and potential impact it will have on the economic fabric in India.

Although data has been widely acknowledged to create economic value, its valuation has proven elusive as yet. As a result, economic impacts of data localisation measures, both at the micro and macro level are yet to be fully understood. This is due to the fact that many countries are at the stage of legislating, amending, or enforcing data localisation measures. In theory, the more restrictions placed on data, imply it could harm innovation and competition and thereby value. The inference from international comparisons based on derived indices shows that strength of a country's macroeconomic climate, digital economy and state capacity allows for a more permissive regime with respect to cross-border data flows. In the absence of explicit valuation models, this study presents case studies that review various data localisation measures, the reaction in countries, and the implication and challenges that follow from such measures. These present considerations that inform the utility of data localisation measures beyond those used in construction of the index. Additional considerations that emerge include *regulatory impact assessment, specificity of data localisation measures, coordinated strategies towards data localisation measures, requisite regulatory environment, and fixing liability and burden of costs.*

Areas for Further Research

1. A deeper analysis of the localisation measures on each states objective to transparently examine the options that provide least regulatory burden to businesses in a fledgling digital economy.
2. Conduct regulatory impact assessments for policies that place restrictions on data flows.

Capacity Building

3. Propose an inter-ministerial group to examine data localization measures. A multi-stakeholder process with a sound technical sub-group can articulate and clearly verify the technical aspects of localisation measures that are proposed.

2.3 Bridging the Digital Divide: Barriers to Adoption and Usage

Summary

The Information and Communications Technology (ICT) revolution has radically improved connectivity across the globe and permeated almost every aspect of modern human life. However, benefits of ICT can only be appropriated by those with access to the technology and capabilities to use the same. India's ICT adoption has been on the rise since the year 2000, but with sizeable disparities across the country. This study surveys the correlates of ICT adoption and its use capabilities in India. For instance, the urban tele-density is almost three times of the rural tele-density, even though close to 70 per cent of India's population resides in the rural sector. It has been observed that income, education and household demographics are strong determinants of household ICT adoption, while education, age and gender are strong classifiers for variations in individual's ICT use capabilities. Furthermore, research suggests that socio-economic disparities, associated with digital differences, could be exacerbated if the existing digital divide is not bridged.

In order to realise India's 2024-25 vision of US\$1 trillion digital economy, it is crucial to bridge the existing digital divide in India. Any enabling policy intervention to further this goal required a sound understanding of the factors associated with the differences in ICT adoption and its use capabilities. In order to do so, this study examines the correlates of digital disparities in India using the recent national representative household sample survey. Empirical analysis has been carried out on data collected from the household sample survey. As such, empirical evidence appears in confirmation with the prior literature thereby validating that differences in ICT adoption and its use capabilities in India are correlated with the socio-economic and demographic characteristics of the population.

Finally, the paper puts forth implementable policy recommendations for the Government of India to plug the existing digital divide within the country. Some of these include incentivising indigenous device manufacturing, creating robust infrastructure, focusing on underserved areas with most urban areas tending towards saturation and investing in manpower development within the country. In addition to policy makers, the paper also recommends strategies that may be undertaken by service providers and businesses to propel ICT adoption and use in the country.

Areas for Further Research

1. Analyse barriers to digital divides and recommend policy changes that can help address these barriers. Specific areas include – linguistic barriers, disability barriers, literacy barriers, gender barriers, affordability barriers, etc. These can be assessed and analysed through ground level surveys at the Pan-India level using detailed questionnaires.

Capacity Building

1. Organise volunteer programmes to promote digital literacy and skills across institutions. These can be in collaboration with the Ministry of Human Resource Development or the National Skill Development Corporation or other Public Private Partnerships. An

accountability framework must be designed in order to ensure efficient implementation of these programs.

3. Policy Briefs

3.1 .in ccTLD

Summary

Country-Code Top Level Domains (ccTLDs) are a significant element in the global internet addressing system. These unique two-letter strings assigned to a country or geographical area provide them identity in the domain name system. As of March 31, 2020, there were 307 global ccTLD extensions delegated in the root zone, including IDNs, with the top 10 ccTLDs comprising over 65% percent of all ccTLD domain name registrations. The .in domain registrations in India has grown at a compounded annual growth rate of 24 % from 120,702 in June 2005 to 1,899,614 in June 2018. Similarly, the number of registrars too has grown from 35 in 2005 to 122 in 2018.

.in is the second-most popular ccTLD in India after .com. While .com remains the de facto first choice of most registrants. Reasons for this choice were reported to be the sheer legacy value of .com and its recognition, however it was also noted that .in is inevitably next-in-line for firms once the possibility or viability of acquiring .com is exhausted or expensive.

Furthermore, India's domain name industry is underpenetrated and the .in domain name has an untapped growth potential. India presents a huge opportunity for the domain name market as online businesses trickle down to Tier 2 and Tier 3 cities.

It was noted that there is a significant need to improve the uptake and awareness surrounding Internationalised Domain Names (IDNs). Given that India is a multilingual country, and with a majority of non-english speakers, creating a multi-lingual internet that caters to this population is essential to realise the vision of the Digital India Programme. IDNs will play a crucial role in enabling the growth of local language internet in India and bridge the linguistic digital divide. A proactive policy and a forward-looking business strategy for .in domain and its IDN variants proliferation can help establish .in as a globally recognized symbol of India's growth and improve online experience for the population nationally.

The opening of the .in Registry has significantly improved and broadened the availability of the domain names. Today, the .in ccTLD sees wider recognition and greater adoption compared to the early phase. While domain name registrations under '.in' have continued to grow, it is still underpenetrated. The role of policy becomes important to create an enabling ecosystem that will help develop a sustainable growth trajectory. Through this policy brief, ICRIER has proposed policy recommendations that will be helpful in bridging this gap, they include (i) curating and maintaining a database of total domain name registrations and making such statistics available to public at large (ii) enhancing the corporate image '.in' and undertaking awareness and brand building efforts (iii) incentivising registrars to aggressively promote '.in' and (iv) invest in IDN deployment and promote development of local language content.

Capacity Building

Note: Some of these are common to and overlap with the recommendations for the paper on 'A Review of the Domain Name Market in India'

1. Engage with the National Internet Exchange of India (NIXI), Neustar, and relevant registrars to collect and curate data on .in registrations in India, renewals, and other important parameters to track the growth and evolution of the ccTLD in India.
2. Review past marketing efforts and curate a dashboard of different programmes to utilize in marketing efforts for the .in ccTLD
3. Work with state and local governments to create local language versions of their websites hosted on IDNs, particularly .bharat domains in local scripts.
4. Work with NIXI, Neustar, and wide range of registrars to identify potential areas to target and propel the growth of IDNs. Explore the options of extensive marketing and generate a growth surge for IDNs registrations
5. Organise annual conclaves for the domain names market in India, and participate in not only promoting the .in ccTLD but also learn from the success stories of other ccTLDs, gTLDs and new gTLDs in India.
6. Invest in the Internet ecosystem that indirectly promotes the domain market. This would include smart phone adoption, online commerce, digitisation of small and medium business and other e-governance initiatives.

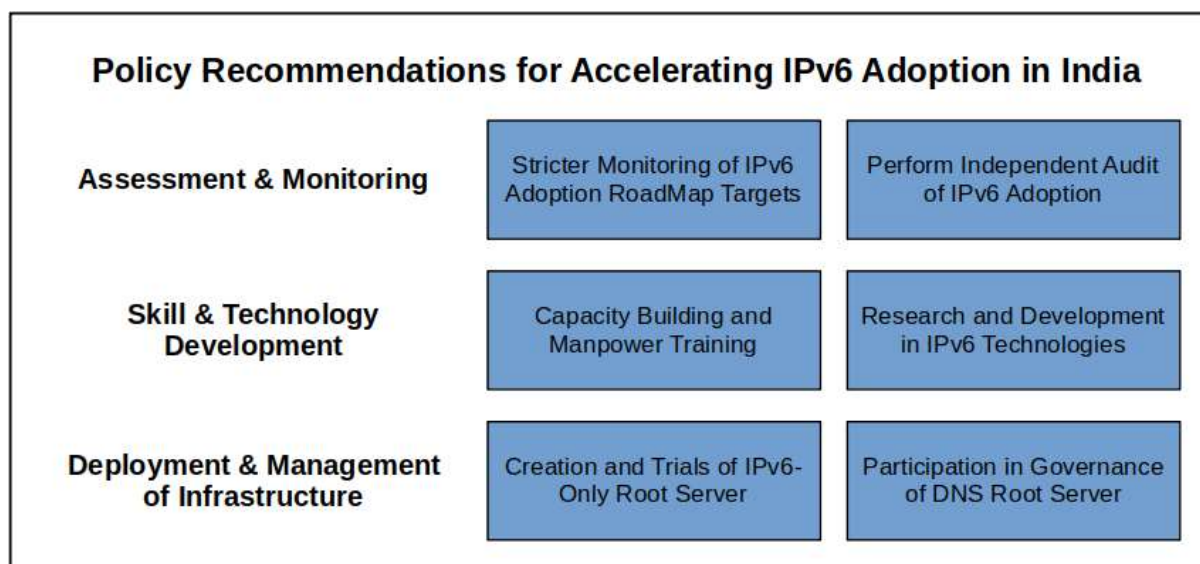
3.2 IPv6 Transition

Summary

Internet Protocol (IP) is a set of rules governing the format of data transferred between computers over the internet or any local area network. The existing protocol supporting the internet today - Internet Protocol Version 4 (IPv4) - provides the world with roughly 4 billion IP addresses, inherently limiting the number of devices that can have a unique, globally routable address on the internet. While the Information Technology (IT) community has come up with workarounds to address this shortage in the IPv4 environment, the adoption and deployment of Internet Protocol Version 6 (IPv6) which has an exponentially large number of IP addresses is the only long-term solution to this problem. The wide-scale implementation of IPv6 in existing and newer networks is essential to the continued growth of the Internet and the development of novel applications that can leverage the increase in mobile internet connectivity.

The adoption of IPv6 is vital for addressing the depletion of IPv4 addresses and ensure the growth of the Internet in a developing nation like India. The Government of India has already put initiatives in place to promote the adoption of IPv6 in existing and developing network infrastructure. These initiatives focus on preparedness for the future of networking and internet technology by enabling networks to support IPv6 addresses and data packets. However, this

critical transition should be done methodically and mindfully, with complete awareness of the benefits, challenges, and caveats surrounding the adoption of IPv6 to avoid any significant disruptions. This document strives to outline issues around the IPv4 to IPv6 transition and provides an overview of the initiatives taken by government agencies tasked with IPv6 transition. This report analyses various issues and challenges related to adoption and migration to IPv6, and provides implementable recommendations to the Government of India on accelerating IPv6 adoption and transition in India.



Areas for Further Research

1. Analyse and identify practices for stricter monitoring of IPv6 Roadmap targets including an independent audit of IPv6 adoption in India

Capacity Building

1. Encourage technical training required for the transition to and maintenance of IPv6 networks.
2. Encourage awareness campaigns which elaborate on the benefits of transitioning to IPv6 and also facilitate a smooth transition.
3. Invest in technical research for development of IPv6 technologies in collaboration with the industry.

4. Future Areas of Research for an Internet Policy Chair 2.0

India's digital economy and the corresponding internet policy ecosystem has been rapidly evolving. The Covid-19 pandemic has only accelerated the changes and increased peoples' dependence on the internet and allied technologies. This has also brought forth new regulatory and policy challenges. For instance the deepening of the data ecosystem, does not only warrant a re-examination of the localisation policies, but also calls for an assessment of India's cyber security preparedness, along with policies around data monopolies and harnessing data for public good, ethics and governance of emerging technologies, development and adoption of

standards for emerging technologies, among others. Accordingly, we propose following new areas for policy research for MeitY's consideration:

- 1. Jobs and Migration in the Digital Era:** Linking India's digital growth to India's unemployment challenge, the potential for microwork, vulnerability of gig workers and addressing the gender divide through employment in digital businesses.
- 2. Cybersecurity Preparedness:** Cyber security is a crucial cog in India's digital ecosystem. As India prepares its National Strategy on Cyber Security, a state-level preparedness index or a sector-level preparedness index can help decentralize efforts in building resilience within India's overall digital ecosystem.
- 3. National Internet Governance:** Assess the need for a grand digital strategy and assess the role of India in the global dialogue on Internet Governance. The possibility of developing a National Internet Governance Forum should also be explored.
- 4. India's AI Economy and Ethics:** The AI ecosystem must be guarded against the ills of data perturbations that may have a discernible impact on outcomes. Policies strengthening AI governance and ensuring meaningful existence of Ethics Councils must be proposed through detailed research.
- 5. Competition in the Digital Economy:** The rising concern of data monopolies must be checked, albeit through limited regulation. Policy analysis must help harness the growth of digital platforms but violations of privacy and business conduct causing consumer harm must be protected through regulation.
- 6. IoT Standards and Preparedness for Smart India:** Despite the vibrant startup community in emerging technologies, the standards space is dominated by big conglomerates. The Indian community of businesses and academics fall far behind other countries in the dialogue on standards adoption and development. Policy support is necessary to encourage the active participation of Indian stakeholders in the standards dialogue to aid development of indigenous standards and prevent being locked into foreign technologies.