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Political Economy of Data Nationalism

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Abstract

Dominant narratives on data localization stress on the self-defeating nature of data localization measures in enhancing privacy and security, and stress on potential inefficiencies it imposes on trade and the significant economic costs that follow. However, the literature, in as much as its argument is based on the premise of free trade and competition, do not widely acknowledge the nature of digital economy, which tends towards market concentration and presence of 'superstar' firms, and the active role of the state and global power configurations, in either engaging with negotiating trade agreements, or actively promoting its domestic economy and most importantly, configuring the nature of its sovereignty in a fast changing and uncharted realm of the cyberspace

This paper attempts to focus on the role of the State, particularly the interplay of State Capacity, defined in terms of the ability of states to divert revenues for enhancing welfare, and enabling legal infrastructure that promotes productive capacities of its economy, and data localization laws that have been triggered by nations across, in their attempts to claim sovereignty in an erstwhile border-free cyberspace. Conjecturing on the interplay of State Capacity and Data localization laws leads us to believe that the outcomes of data localization laws cannot, in any straightforward way, be harmful. State capacity, we conjecture is a crucial variable which at least, in part, determines the outcomes of data localization measures.

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1. Introduction

1.1 Brave New World

The ubiquity and pervasiveness of the Internet cannot be overemphasised. Virtually, any aspect of human social, political and economic activity is undergoing ‘datafication’.¹ This is a result of the information generated by the myriad daily routines of digitally connected individuals and machines, that is creating a new kind of economy.² Theoretical models of endogenous growth which introduce research and development (R&D) (Romer 1990), human capital formation (Lucas 1988) and Schumpeterian creative destruction through business stealing (Aghion and Howitt 1990) as drivers of economic growth, together with positive externalities related to local knowledge spillovers, might explain the economics behind this new and emerging structure of the global economy that is driven by data.³

The increasing reliance on data as a fuel for growth also raises concerns, not only about the capacity, but also the integrity and commitment of those using our personal data, to protect the privacy of our digital lives. Taddeo and Floridi (2016) cite the example is of online service providers (OSPs) such as Facebook, Twitter, Dropbox, Yahoo etc. that play a crucial role in shaping the informational environment and influence users’ experiences and interactions within it. OSPs are often seen as information gatekeepers (Calhoun 2002), for they control the information available online by making it accessible for the users (Shapiro 2000, Hinman 2005, Laidlaw 2008), thus focusing increasing attention on their public role in contemporary societies. Their moral responsibilities ‘in the web’ include issues concerning information filtering, freedom of speech, censorship and privacy, while those ‘on the web’ pertain to access to the metadata concerning users’ activities online.

We are amidst a flurry of activity in the data protection sphere. Communication ceasefires that pass as debates increasingly flood our social media feeds - from news to rants, fake news to atrociously imbecile jokes. Most recently, data released by a social media metrics company

¹ <https://www.cigionline.org/articles/economics-data-implications-data-driven-economy>

² *Ibid*

³ *Ibid*

called 'NewsWhip' found that high quality news sources were getting less engagement on Facebook and lower quality sites were getting a lot more.⁴ The Facebook - Cambridge Analytica data scam has shaken up the collective consciousness of our perpetually logged in lot. It has made us rethink before checking the box against "I agree with the terms and conditions" without knowing the first thing about them. We are perhaps exercising a bit more caution with regard to the amount of information we share about ourselves on the Internet. However, the best of us continue to remain in the dark about the amount of our data that is actually on the web, and more importantly, how much of it is secure. What we know and can perceive is perhaps, just the tip of the iceberg.

1.2 Digital Fables

The year 2013 will possibly go down in world history as a landmark year that refuelled the discussion on security and surveillance and where nation states were towing the delicate line between the two. In July 2013, American computer whiz Edward Snowden leaked details about various NSA programs that brought to light America's monitoring of phone calls and internet communications of foreign citizens as well as using the Internet to spy on allied governments (Aaronson and Maxim, 2013). It was revealed that mass surveillance of citizens was being carried out through tapping of optical fibres and collection of mobile phone data, by hegemonies like the USA and the UK. These revelations led to several nation states proposing infrastructure-based initiatives to localise data within their jurisdiction citing concerns over privacy and security of their citizens (Sargsyan, 2016). The post-Snowden era has been rife with debates on restricting cross border data flows. Critics are sceptical of the value generated by data localisation initiatives in the domestic economy (Baur et al, 2013; 2014; 2015). However, several governments continue to adopt a range of data localisation laws for a variety of policy objectives, from safeguarding the data privacy of individual citizens and guarding their data sovereignty to promoting the growth of a domestic digital economy (Chander and Le, 2014; Castro and McQuinn, 2015, US Chamber of Commerce and Hunton & Williams, 2014). What is data localisation, we ask? Selby (2017) defines it as either of the following;

⁴ https://www.cjr.org/the_new_gatekeepers/facebook-algorithm-quality-news.php

Localised Data Hosting - a policy whereby national governments compel Internet content hosts to store data about Internet users in their country on servers located within the jurisdiction of the government.

Localised Data Routing - a policy whereby national governments compel Internet service providers to route data packets sent between Internet users located in their jurisdiction across networks located only within their jurisdiction.

The 2016 study by McKinsey stated that cross-border bandwidth had grown 45 times since 2005, and is projected to increase by another nine times in the following five years, as data traffic between and within companies expand. Cross border data flows improve productivity and enable the creation of efficient markets. According to McKinsey Global Institute (MGI) , all types of tangible and intangible flows have raised the world GDP by 10.1 percent, over the past decades. This value amounted to US\$7.8 trillion in 2014, of which, data flows accounted for US\$ 2.8 trillion. Information that flows through the internet, or digital data, is critically important to society and to the growth of the global economy.

Government policies on data localization can be implemented with a broad or narrow scope. It can be explicitly required by law or be the de facto culmination of other restrictive policies that make it infeasible to transfer data, such as requiring companies to store a copy of the data locally, requiring companies to process data locally, or mandating individual or government consent for data transfers across borders. While countries such as Russia and China have introduced broad localization policies, several others including Australia and EU member states have opted for the narrow approach.

The demand for localization is driven by various rationales, ranging from an inward outlook on commerce, protection of rights of data subject, law enforcement challenges, security, or foreign surveillance, etc. Some countries argue that limiting how personal data can be transferred across borders is one of the only practical ways they have to protect the privacy of their citizens, in the absence of a more comprehensive shared data protection regime between the countries concerned (Panday, 2017). The economic narrative driving localization efforts is a desire to attract

investment, fuel innovation and create competitive advantage for local companies. It is also perceived that a nation's ability to control data flows helps it move up ranks in the global Internet governance order. Such benefits do not come without costs. Various studies find that localization requirements act as a barrier to global digital trade. Services trade through Mode 1, from the territory of one country into the territory of another through the telecommunications and Internet infrastructure will be the most impacted. Cutting off data flows or making such flows harder or more expensive, puts foreign firms at a disadvantage (USITC 2017) while also making it challenging for local companies to participate in the global digital economy (IAMAI 2016, UNCTAD 2016). A policy choice on data localization would consider these trade-offs.

Various countries including India have enacted legislation or are considering data localization, albeit with varied degrees. Some countries explicitly force data to be located on home country servers, while others focus on select sectors of the economy. Most recently, India's Committee of Experts on a Data Protection Framework headed by Justice Srikrishna, released a White Paper that discusses cross-border data flows and data localization under the rubric of data protection. India had also enacted the National Data Sharing and Accessibility Policy of India in 2012 that prescribed that data that is owned by government agencies and/or collected using public funds must be stored in local data centers. In April 2017, the Indian government issued Guidelines for Government Departments, including those using contractual cloud services; mandating all government data to reside within borders. These varying models of regulation across countries consider or mandate different requirements of localization.

2. Literature Review

2.1 Data on Leash - From Then to Now

There exists a consensus in the literature on the definition of data localization. Kuner (2011) on the basis of a historical study of regulation of cross-border data flows, distinguishes two ‘default positions’ on regulating cross-border data flows, one which presumes data flow is permissible with possibility of regulation, and the other which presumes data flows are not permissible without a legal basis. Cory (2017), defines data localization measures as those barriers to cross-border data flows erected by countries, whereas, Chander and Le (2014) define data localization measures, broadly, as “those that encumber the transfer of data across national borders”. This definition is a useful place to begin with for it recognizes the varieties of data localization measures, both in magnitude and type, such as rules that prevent information being sent outside national jurisdiction, or rules that require copies of information to be stored within national borders, and the like. The emergence of computers and computer technologies and their ability to remotely process large volumes of data presented the need to enact data protection laws (UNCTAD, 2016). Aaronson and Maxim (2013), argue that, as the Internet belongs to all people in all states, no single government, company or individual controls its rules, processes and mechanisms. They posit that it was recognised by policy makers early on that the Internet would need a shared system of norms and rules to ensure that information could flow as freely across borders as possible. According to Kuner (2011), the first examples of regulation of transborder data flows under data protection and privacy law can be found in data protection laws passed in various European countries in the 1970s. Thereafter, instruments dealing with this subject were enacted in international organisations in the 1980s, most prominently the OECD Guidelines, he writes. The author documents that over sixty countries that include North and Latin America, the Caribbean, the European Union, the European economic area and other european countries, Africa, the Near and Middle East, Eurasia and the Asia-Pacific region, have adopted laws data protection or privacy laws that regulate trans-border data flows that are largely based on one or more of the aforementioned international or regional instruments.

He argues that there is significant difference in the regulatory measures that have been adopted by different countries and many of these derive from the nature of the societies and their legal

traditions and cultures. He cites examples from regions, such as the European Union, where data protection and privacy laws may have the quality of legally-binding human rights instruments while in others, they may be based more on realising the benefits of electronic commerce (as in the APEC region). UNCTAD (2016) posits that the underpinnings of these varied regulatory approaches, assume a certain coherence - these include, firstly, the need to have a legitimate reason for any processing activity, obtained either through consent or some other justification designed to acknowledge competing private and public interests and secondly, data security that plays a fundamental role of protecting against deliberate acts of misuse of or the accidental loss or destruction of data. Authors provide a summary analysis of the various data localization measures under taken across a wide range of countries such as Australia's Personally Controlled Electronic Health Records (PCEHR) act, section 77, which restricts registered operators to hold and process and not permit persons to do the same, outside of Australia, with exceptions under conditions of anonymity, or in China, where 'the Guidelines' serve as a regulatory baseline for Chinese Judicial authorities and lawmakers on transfer of personal data across borders. Cohen et al., (2017) and others highlight Russia's highly expensive data localization law, which prevents cross-border transfer of personal data of Russians and mandates locating storage servers within its jurisdiction. Others also highlight Russia's enforcement agency Roskomnadzor's standoff with messaging app, 'Telegram', which, while banned from Russia, continues to escape persecution.

Cohen et al's., paper points to the literature's recognition of the high costs of data localization and the failure of such measures on their own stated terms of enhancing personal privacy and security. Chander and Le (2014) present a detailed descriptive argument on the potential pitfalls and dangers of data localization measures on the basis of three issues: of foreign surveillance, personal privacy and security and economic development. With regards to the foreign surveillance based justification for localization requirements, they argue that the only way to secure data from United States's NSA's snooping, is to not have the data connected to the Internet, pointing to the scale and potential of surveillance capabilities that make localization requirements redundant. On privacy and security enhancement, they argue that data localization which centralise data storage make data more vulnerable, by preventing 'sharding', a process in which rows of a database table are held separately in servers across the world in such a way that

shards provide enough data for operations, but not re-identification of the individual. The economic argument for data localization that they propose are similar to arguments related to protectionism: the benefits of protectionism is restricted to the few, in the case of data localization, to local owners and employees of data centers and companies that service these centers, locally, at the cost of the entire economy. Trevisani and Chao (2013) estimate that the average cost of setting up data centers in Brazil is \$60.9 million, for Chile, \$51.2 million and for the U.S., \$43 million, with operating costs (energy and other expenses) at a monthly average of \$950,000 in Brazil, \$710,000 in Chile, and \$510,000 in the U.S. Furthermore, Data localization requirements are incongruent with the nature of technological advancements towards the Internet of Things, Cloud computing and the like, which confound attempts to localization.

With an increasing importance of trans-border data flows, in economic, political and social terms has led to several guidelines and regulations over time. According to Kuner (2011), the primary motivations for regulation of cross border data flows can be compressed into four broad policies - preventing circumvention of national data protection and privacy laws; guarding against data processing risks in other countries; addressing difficulties in asserting data protection and privacy rights abroad; and enhancing the confidence of consumers and individuals. The author argues that the global economy is currently undergoing an 'information explosion', which can 'unlock new sources of economic value, provide fresh insights into science and hold governments to account'. These developments represent a fundamental change in the business and technological environment for data processing, he posits. The increase in transfer of huge amounts of personal data across borders, while increasing productivity and efficiency, has also put privacy of individuals on the edge.

2.3 Varieties and Impact of Data localization

One of the more widely cited work that measures the economic impact of data localization measures, is that of Bauer et.al (2014), who estimated the losses from data localization requirements and other privacy and security laws that discriminate against foreign suppliers of data, and downstream goods and services provider, using a computational general equilibrium model, for seven jurisdictions including China, India, and Russia, to find substantial negative

effects on GDP: -0.2% for Brazil, -1.1 % for China, -0.4% for the EU, -0.1% for India, -0.5% for Indonesia, -0.4% for Korea, and -1.7% for Vietnam. Their approach also allows them to measure welfare losses, which go up to \$63billion for China, \$193 billion for E.U, whereas workers in India would lose 11% of their monthly salary on average, almost 13% of the same in China, and 20% in Korea and Brazil. Bauer et. al (2016) conduct an extension of this study using updated data sets, and a construction of a regulatory data index to measure costs of regulations due to data localization on domestic downstream industries. They also measure the effect of such regulation on total factor productivity- a measure of economic performance.

While the literature highlights the costs of data localization and the implicit and explicit protectionism embedded in its rationale, it also simultaneously highlights the significance of cross-border data flows, its relation to trade, and the economic benefits of free trade. Meltzer (2014) acknowledges the importance of International trade law as a site of governance and points towards issues that can be addressed through institutions and instruments such as WTO, GATS, and FTA's, enhance international trade and enable free flow of data across borders, some of which include developing binding commitments to cross-border data flows, while allowing legislative space for nations, develop international standards that enables interoperability and negotiating transparency and data center locations in ways that doesn't hinder economic activity.

Burri (2017) work offers insight into the troublesome waters of governing cross-border data flows through trade agreements in exploring the regulation of data flows through trade agreements highlights the intricate political economy underlying such agreements. Nation-states, in confronting the libertarian architecture of the Internet face a trade-off between capturing gains from trade while maintaining sovereignty in the cyber-space. Free Trade Agreements (FTAs) offer deeper and clearer provisions, and have overcome inconsistencies in multilateral regimes by actively setting norms in the relatively uncharted territories of digital trade, and creating tailored regimes for digital trade, often addressing non-trade issues such as consumer protection, mutual recognition of and safeguards for free flow of data. However, increasing number of free trade agreements offer add to the asymmetric distribution of power among countries and further exacerbate rule fragmentation. While multilateral arrangements may offset rule fragmentation, the role of lobbies becomes more important in such regimes, impinging on the 'free' in free trade.

Ciuriak (2018) offers a typology of data and their related frictions to reframe the domain of trade laws that govern data flows. The paper offers five modes of data activities- 1. 'digital to real' transactions, which includes provisioning of access to Internet, 2. 'real to real' business to household and business to business transactions with digital intermediation, 3. 'real to real' household to household transactions with digital intermediation, 4. 'real to real' household to business transactions with digital intermediation, 5. the capitalisation of data flows, with categories of frictions including technical trading restrictions, technology barriers, data localization requirements, Intellectual property rights, and the like. Based on such classification, Ciuriak further analyses how trade agreements between the U.S, E.U and China play out-balkanization of the digital economy in the short run, with different countries responding to different incentives they face, based on the alignment of their position with either the E.U, the U.S or China.

Such asymmetries in distribution of global power, and one which, as Aaronson (2016) points out, is skewed towards the U.S. makes different nation-states engaging in trade agreements to govern data flows, ambivalent, an explanation as to why the economic logic of the benefits of free trade do not compel policy-makers to prioritize it. The paper further points to how arrangements under the TPP (Trans Pacific Partnership) which covers over 800 million people, enforces the U.S system of Intellectual Property (IP) protection, that focuses more on enforcement, which is harsh and punitive rather than procedures which ensures fairness.

Arguments that highlight the gains from free trade (See: Ezell (2013), Cory et.al (2017)) do not acknowledge in their works, the political fact of the extant asymmetries in global distribution of power among nation states and that data localization and digital protectionist measures can be better rationalized as States (albeit imperfect) attempt to salvage loss (or anxiety over loss) in sovereignty.

The above literature also does not address the nature of data, its production, and data-driven economy, independently. Such considerations, add greater complexity to the political economy of data regulation that makes discussion on governance of cross-border data flows more multi-dimensional than how it is currently formulated i.e. in terms of existing trade agreements, gains from free trade and costs to firms, and the economy.

Haskel and Westlake (2017), describe four significant features of an ‘intangible economy’ that is transforming the very nature of global production and exchange: sunkness- that involve sunk costs when investing, Scalability- that is, investments exhibiting increasing returns to scale and which are replicable, Spillovers- that affect organization of interrelated activities , Synergies- that create strong ‘network externalities’. Cuiyak (2018) provide insight into features of data driven economy that can be considered as a subset of an Intangible economy. This data-driven economy, is fundamentally different- triggered by the above mentioned features of the intangible economy, it exhibits rapid depreciation of capital, shortening product cycles, a winner-take-all economy, with ‘super-star’ firms, which are dominant and high performing, that trigger strategic behaviour and rent-seeking, which is fundamentally pitted against the ambition of a laissez-faire, competitive digital economy.

2.2 The Home and the World

The information sharing and internet regulation narrative has gradually shifted from efforts to prevent data from flowing into a country through censorship, to include efforts to prevent data from flowing out through data localisation, write Chander and Le (2014). Information has always been at the core of conflict, writes Luciano Floridi in his article ‘The Latent Nature of Global Information Warfare’. He focuses on how the nature of information has acquired properties of a weapon as the targets have also become informational; today, those who live by the digit may die by the digit. While one side of the debate is of the view that forced data localisation is a deliberate strategy to protect the domestic economy and undercut competition to big international players (Lee-Makiyama, 2013; Chander and Le, 2014; Aaronson and Maxim, 2013), there is also considerable sympathy for concerns related to data privacy, surveillance and guarding the data sovereignty of countries, despite the impingement upon the cross-border flow of data (Rubin, 2015; Kong, 2010; Gurumurthy, 2017). Chander and Le (2014) argue that the issue is now also critical to the future of international trade and development as well as to the struggle between various governmental regimes. It is important to understand whether there is a direct correlation between the internet governance regime of a country and state governance capacity and whether it is fair or just to conclude that a country enacting data localisation policies automatically registers itself in the list of totalitarian nations. Gurumurthy, Vasudevan and Chami argue that free data flows may be antithetical to new pathways of growth - as the current data regime

favours the extraction of data for digital intelligence from the South by the corporations of the global North. Thus, according to them, in order to harness the power of digital intelligence, developing countries need to enact interventionist state policies in a number of areas such as promotion of local over foreign platforms, financing an 'Internet plus' digital industrialisation strategy on big data, cloud and the Internet of Things, and enabling smaller enterprises to build their presence online, among others.

Krisch (2014) posits that, the necessary question to ask is how international law, with its consensual structure and its strong emphasis on the sovereign equality of states can tackle challenges wherein there is lack of consensus in legal order. The author argues that international law has never been based on pure consent and has for long been influenced by natural law ideas; some of its traditional pillars, customary international law and general principles of law, cannot be fully explained on the basis of state consent. The premise of data localisation is essentially based on the very idea that the state's freedom and interests must be protected above collective ones, which forms the underpinning of the two primary rationales behind data localisation i.e. privacy and protectionism. Krisch (2014) argues that, as countries become increasingly interdependent and vulnerable to global challenges, an order that safeguards states' freedoms at the cost of common policies is often seen as anachronistic; according to this view, we need to turn to nonconsensual lawmaking mechanisms, especially through powerful international institutions with majoritarian voting rules. Gurumurthy et al (2017) argue that with the emergence of data as a factor of production, regional trade agreements such as the Trade in Services Agreement (TISA), Trans-Pacific Partnership (TPP), Regional Comprehensive Economic Partnership (RCEP) etc. have become sites where the material structures of data flows are being determined through de-facto global policies on e-commerce. They discuss how international bodies have raised concerns about local hosting requirements impeding new and growing businesses that want to compete on a global stage, but are unable to afford 'data and information costs' brought on by localisation norms. However, they cite observations that the widely recognised rationale of security/censorship behind restrictions on cross-border data flows could actually be an economic measure to vitalise local digital corporations that need troves of data to be successful and to be shielded from global competition.

The problem arises with the recognition of Internet and big data as global public goods. Kaul et al., (1999) argue that global public goods are characterised by two aspects - firstly, that they should be non-excludable and non-rivalrous in their consumption and secondly, their benefits should be quasi universal in terms of countries, people and generations. Although public goods have been traditionally discussed under the framework of the nation-state, the concept has recently been extended to the global sphere, thus indicating the degree to which various public goods have come to be seen as influenced by global activities and actions (Kaul et al., 1999). Internet is one such global public good, that, although non-rivalrous, is only partially non-excludable due to access barriers. However, barriers to access do not equate to excludability (Krisch, 2014). Thus, alternatively, the Internet can be called a club good rather than an impure public good (Krisch, 2014). It is essential to ensure that global public goods are accessible to all, especially where the production effort has been a shared endeavour.

Debora L. Spar argues in her paper, 'The Public Face of Cyberspace', that there has been a growing trend towards 'privatization' of the Internet. Although, in theory, it qualifies as a public good, in that it provides a basic infrastructure that can be used by many future users, in practice, congestion problems are appearing, and servers are beginning to charge for access. Spar also discusses the Internet's positive and negative externalities. On the positive side, there have been gains in health, education and commerce, and hence growth. On the negative side, it is easier to transmit objectionable material. Internet regulations intended to tackle negative externalities will fail unless they are undertaken in concert among all nations, and even then they will be difficult to implement. At the global policy level, however, it is of utmost importance to ensure that developing countries obtain adequate physical infrastructure to reap the benefits of the Internet, and that those who can benefit most are not deterred by high prices from using the services.

It is now being argued that data, especially big data is the next global public good. Stiglitz (1999) and Varian (1999) define knowledge and information as public goods due to their low cost of production, however, they warn that knowledge can be made functionally excludable where the private sector gains value from controlling it and that regimes also determine the extent to which it is excludable, for example, in the form of taxes and patents (Taylor, 2016). Purtova (2015) identifies digital data deriving from people as a 'system resource' comprising an ecosystem of

people, platforms and profiles, and concludes that while it may be possible for knowledge to be a public good, it is not possible to make the same claim for digital data. In essence, knowledge produced through digital data is inherently commercial, and operates as an interaction between individuals and firms.

Recent arguments on recognising and treating big data as a public good hinges on the argument that personal data once shared should not be viewed any longer as private property of individuals or platforms and instead, the data in circulation should be viewed as a public good, and data aggregators should become its custodians.⁵ Therefore, the protection of data under private law should shift to data ownership, management and regulation under public law so that data serves the public interest.⁶ This argument stems from the need for constant innovation as data can prove to be a major entry barrier for new businesses.⁷ However, this approach naturally suffers from the problem of potential state control and surveillance of individuals. While policy solutions exist at the state level, several questions remain unanswered at the global level. With the centrality of consent in international law coming under attack over the years, the primary thrust of the critique remains that international law is incapable of solving problems related to collective-action; its consensual nature has been seen as the main obstacle to tackling key issues of global public goods (Krisch, 2014).

In the sections that follow, we make an account of the existing literature of data localisation, present a dashboard of data for a basket of countries, highlighting their localisation laws and rationales behind them, while also drawing cross country comparisons based on a set of pertinent metrics. In the next section, we analyse the collated data and embed an understanding of data localisation within an analysis of economic performance and state capacity. The final section of the paper summarises the findings and outlines questions for further research.

⁵ https://www.washingtonpost.com/news/theworldpost/wp/2018/05/02/big-data/?noredirect=on&utm_term=.f42f58c5394d

⁶ *Ibid*

⁷ *Ibid*

3. State Capacity and Economy - an Analysis

Johnson (1982), Amsden (1989), Wade (1990), and Evans (1995) argue that a key to the economic success of the East Asian economies, popularly known as the 'East Asian Miracle', was that they are all states with a great deal of capacity. Herbst (2000) and Centeno (2002) posited that the economic failure of African or Latin American countries is linked to their limited state capacities. Cross-country as well as within-country empirical evidence finds a positive association between measures of historical political centralisation and present day outcomes, thus suggesting that when states have less power to tax or interfere in economic activities, then there will be fewer political economy distortions and better economic outcomes (Gennaioli and Rainer, 2007; Michalopoulos and Papaioannou, 2003; Bandyopadhyay and Green, 2012; Acemoglu et al., 2015). Acemoglu et.al (2015) find that there are largely, four interrelated aspects of various conceptualizations of State Capacity - (1) Max Weber's monopoly of legitimate violence so as to enforce law and order and eliminate competitors; (2) Ability to tax and regulate economic activity; (3) Infrastructural power/capacity of the state related to the presence of the state and its functionaries; (4) Max Weber's rational/autonomous bureaucracy related the ability of state institutions to be somewhat autonomous from politically powerful groups in society. For Koyama (2016) state capacity describes the ability of a state to collect taxes, enforce law and order and provide public goods. According to him, it comprises of two components: (1) A high capacity state must be able to enforce its rules across the entirety of territory it governs; (2) It has to be able to garner enough tax revenues from its economy to implement its policies (fiscal capacity). He points to the large literature on institutions and economic history that sheds light on the fact that economically developed countries have a long lasting durable institutions and a centralized state whereas poor countries are poor because of a lack of centralized government and fragmented internally; and countries with weak state capacity are particularly vulnerable to civil war and conflict.

However, state capacity ought to be distinguished from either size or scope of the government. Johnson and Koyama (2016) argues that state capacity requires a degree of political and legal centralisation, which should not be identified with political centralisation per se. The concentration of political authority in the centre may cause inefficiencies and thereby undermine

state capacity (Oates, 1999). Weingast (1995) for instance, argues that federalised states have provided conducive environments for both effective governance and economic development.

Knutsen (2013) argues for the conceptual distinction between state capacity and regime type. He posits that democracy relates to popular control over political decision making and political equality among citizens (e.g., Beetham, 1999). According to him, some crucial institutional requirements for democracy include free and fair elections, broad participation rights and protection of civil liberties. He further argues that charge of political decision making is determined by the degree of democracy, which in turn, has implications for the shaping of economic institutions and policies (Przeworski, Alvarez, Cheibub and Limongi, 2000).

However, some dictatorships, particularly in Asia after 1960, experienced high growth (Knutsen, 2013). Some early statistical studies have shown negative effects of democracy on economic growth (see Przeworski and Limongi, 1993), but more recent studies have found either no significant, or a positive effect (e.g., Baum and Lake, 2003; Doucouliagos and Ulubasoglu, 2008; Przeworski et al., 2000). Knutsen (2013) however finds from empirical analysis that democratisation enhances economic growth more in low capacity than in high capacity states and higher capacity enhances growth more in dictatorships than in democracies, implying a causal role played not by regime type but by state capacity.

Besley and Persson (2011) define State capacity as the institutional capability of the state to carry out various policies that deliver benefits and services to households and firms. They further define state capacity as constituting fiscal and legal capacity, the former being the 'extractive' capacity of the state, that is, whether the state has the necessary infrastructure in terms of administration, monitoring and enforcement to raise revenues from taxes that can be spent on income support or services to its citizens, and the latter-legal capacity- referred to as the productive role of the state, whether it is capable of raising private sector productivity through provision of physical services such as transport, energy road infrastructure and the like and whether it has the necessary legal infrastructure in terms of the courts, educated judges who can effectively protect property rights and enforces contracts in ways that increases income.

We attempt to incorporate 'State Capacity' as defined above by Besley and Persson (2011) into our understanding of different data localization measures adopted by countries. Incorporating

State capacity will allow us to understand which countries are likely to effectively implement data localization- i.e. enhance privacy and security while simultaneously minimizing costs to the economy. This stems from the understanding that the outcome of data localization is not in any straightforward way, harmful. While different States experiment and explore the interaction of their sovereignty with the realm of cyber-space, States with greater capacity are likely to negotiate their way more effectively.

3.2 Data Analysis

In our analysis, we use 9 indicators across 17 countries. World Bank classifies countries into four categories based on income - High Income, Upper Middle Income, Lower Middle Income and Low Income. The income categories in our data set consist of 'High Income', 'Upper Middle Income' and 'Lower Middle Income' countries. There are 8 high income, 5 upper middle income and 4 lower middle income countries. The basket of countries selected correspond with ITI's Data Localisation Snapshot that gives a list of countries with active data localisation measures and countries with potential measures.⁸ The data table is given below and the data for every variable except 'Political Instability' is for 2015.

⁸ See ITI, Data Localisation Snapshot

Table 1: Country-wise Data on State Capacity Variables

Country	Income category	GDP (current, USD)	International Internet Bandwidth (Mbit/s)	International Internet Bandwidth per Internet User	Tax Revenue (% of GDP)	Political Instability (EIU Instability Index)	Legal Capacity			
							Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
Australia	High Income	1345383143356.35	1650000	81564.06	22.10	3.6	1.00	1.00	0.92	0.75
Brazil	Upper middle income	1803652649613.75	5250000	43633.78	12.81	5.4	0.50	0.50	0.33	0.33
Canada	High income	1559623393038.66	4603904	6530.38	9.37	2.8	1.00	1.00	0.92	0.83
China	Upper middle income	11064666282625.5	4300000	135495.70	12.32	4.8	0.50	0.45	0.58	0.33
Germany	High Income	3375611100742.22	8500000	117539.86	11.37	3.8	1.00	0.91	0.83	0.83
India	Lower middle income	2885570309160.86	1908736	5724.69	25.16	4.5	0.75	0.68	0.75	0.42
Indonesia	Lower middle income	861256351277.36	370000	6584.25	10.75	6.8	0.50	0.50	0.42	0.50
Japan	High Income	2089865410867.82	7411391	64180.12		3.8	1.00	0.95	0.83	0.75
Kazakhstan	Upper middle income	4394977752877.82	850695	71616.39	11.41	4.8	0.50	0.50	0.58	0.25
Korea	High Income	184388432148.72	2091476	46893.66	9.84	5.1	0.75	0.82	0.83	0.50

Nigeria	Lower middle income	1382764027113.82	260000	2986.16	13.95	7	0.25	0.45	0.33	0.25
Russia	Upper middle income	481066152889.09	2800350	28113.22		6.5	0.25	0.59	0.50	0.25
Saudi Arabia	High Income	1365864126832.81	1845531	88669.13	10.62	6.1	0.50	0.86	0.83	0.50
Turkey	Upper middle income	651757333333.33	2433237	59034.36		6.8	0.50	0.45	0.50	0.42
United Kingdom	High Income	859794177118.1	22000000	374553.90	18.24	4.6	1.00	1.00	0.83	0.83
United States	High Income	18120714000000.0	24000000	99147.08	11.24	5.3	1.00	1.00	0.83	0.75
Vietnam	Lower middle income	193241108709.54	1200000	24373.68		4.3	0.50	0.64	0.67	0.42

3.2.1 Economic Performance

GDP is used as a measure of economic growth, and is obtained from World Bank data sets. We use current GDP measured in current US dollars to compute correlations. The relative performance of countries can be evaluated by using World Bank's income group classifications.

3.2.2 Data Flows

International Internet Bandwidth and International Internet Bandwidth per Internet User have been used as proxy variables for data flows, from ITU data sets. According to Manyika et al., (2016), global flows of data consist primarily of information, searches, communications, transactions, video, and intracompany traffic. They posit that the aforementioned components underpin and enable virtually every other kind of cross-border flow. They observe that container ships still move products to markets around the world, but now customers order them online, track their movement using RFID codes, and pay for them via digital transactions. According to them, although videos use a majority of Internet bandwidth, the Internet of Things and other business applications are gaining importance. Since all data flows make use of Internet bandwidth, and cross border flows particularly require international Internet bandwidth, it provides a useful estimate of the amount of data flows. We use this rationale to justify our proxy variables. Although a more accurate measure of cross border data flows would be used international Internet bandwidth, due to unavailability of data, we use the variables mentioned above as proxies.

3.2.3 State Capacity

State capacity, as explained earlier comprises of fiscal capacity and legal capacity. We use tax revenue as a share of GDP from World Bank data sets, as a measure of fiscal capacity. Although this is not a direct measure of fiscal capacity, it is likely to be highly correlated with such capacity (Besley & Persson, 2011) and we use this as an illustrative variable. The data has been obtained from World Bank data sets. Political Instability, while it does not fall under the realm of either fiscal or legal capacity, it has been used as an independent inverse measure of state capacity. Besley & Persson (2009) posit that weak states tend to be extremely poor, unable to maintain basic economic functions and raise the revenue required to deliver basic services to their citizens. They further argue that such states are more likely to be plagued by civil disorder

or conflict. Intuitively, this is likely to have a negative impact on economic growth. The data has been obtained from the EIU Instability Index, where the latest available scores is for 2009.

Government's intervention to improve the functioning of private markets, is what we define as legal capacity (Besley & Persson, 2011). According to them, it can improve the efficiency of resource use and shape the incentives to accumulate capital, thus creating a better business climate. Thus, for legal capacity, four proxy measures are used, namely - Government Effectiveness (bureaucratic quality), Regulatory Quality (investment profile), Rule of Law (law and order) and Control of Corruption (corruption). These have been obtained from the International Country Risk Guide (ICRG) which includes a Political Risk Index which consists of 12 components measuring various dimensions of the political and business environment facing firms operating in a country. The data we use is from what is publically available, which is essentially averages of sub-indicators.

3.2.4 Correlations

The following table gives the computed correlations between each of the above mentioned variables.

Table 2: Correlations between Variables of State Capacity

	GDP	International Internet Bandwidth (Mbit/s)	International Internet Bandwidth per Internet User	Tax Revenue (% of GDP)	Political Instability (EIU Instability Index)	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
GDP	1.000								
International Internet Bandwidth (Mbit/s)	0.569	1.000							
International Internet Bandwidth per Internet User	0.152	0.701	1.000						
Tax Revenue (% of GDP)	-0.161	0.006	0.163	1.000					
Political Instability (EIU Instability Index)	-0.066	-0.194	-0.181	-0.222	1.000				
Government Effectiveness	0.229	0.584	0.402	0.222	-0.764	1.000			
Regulatory Quality	0.120	0.559	0.383	0.118	-0.643	0.873	1.000		
Rule of Law	0.135	0.377	0.330	0.156	-0.730	0.832	0.910	1.000	
Control of Corruption	0.123	0.593	0.434	0.049	-0.633	0.931	0.897	0.786	1.000

We would expect economic performance to be positively correlated with data flows and state capacity and data flows to be positively correlated as well. As computed in the table above, the results have been as expected. Besley & Persson (2009) argue that there is a complementarity between fiscal and legal capacity, implying that the two forms of state capacity are likely to be positively correlated with each other and with income. However, tax revenue as a share of GDP is negatively correlated with GDP. This could possibly be because we have not held the total tax take as constant. However, we use tax revenue as an illustrative variable and additionally, tax revenue as a share of GDP is negatively correlated with political instability and positively correlated with all other variables, which is what one would intuitively expect.

Besley and Persson (2009) propose that investments in legal and fiscal capacity increase with wages, share of national income not generated by natural resources, the expected value of public goods, the level of political stability and lower costs in either type of investment. They find that taxation and property-rights protection are both positively correlated with income across countries. Besley and Persson (2009a) find that a higher share of external conflict years in the past is always associated with higher measures of legal capacity as well as fiscal capacity in the present and past incidence of democracy or parliamentary democracy correlate positively with both types of state capacity. They argue that if there is a high demand for national common-interest goods such universal welfare state or health program, then any group that is in power would have a greater incentive to invest in fiscal capacity to finance future common-interest spending. It follows from this, they posit, that any incumbent group would face a smaller risk of the opposition using a larger fiscal capacity to redistribute against the incumbent, thus leading to a positive correlation between political stability and income, or a negative correlation between political instability and income, inducing more developed economic institutions. Therefore, evidence from literature corroborates our findings.

The other important question that arises here is the correlation between legal capacity and economic growth. Johnson & Koyama (2016) argues that it is imperative for a state to provide services effectively, regardless of the range of services that it provides. They argue that the quality of a bureaucracy matters even if the scope of state activity is tightly constrained. They

posit that states possessing an effective administrative machinery are better able to overcome vested interests and resist rent-seeking by losers. Attempts by potential losers to block reforms or innovations have played an important role in impeding economic growth (Acemoglu & Robinson, 2000; Cosgel et al., 2012). States with high fiscal capacity can raise revenue in ways that do not create large distortions in relative prices (Lindert, 2004).

It is important to acknowledge that state capacity may not necessarily lead to economic growth and it is possible for states with high capacity to pursue destructive economic policies (Johnson & Koyama, 2016). They argue that state capacity can be beneficial for growth when the state is constrained by law, one of the reasons for it being that high capacity states have the ability to enforce general rules and this is closely linked to rule of law. Acemoglu & Robinson (2012) posit that rule of law is often associated with 'inclusive institutions', or constraints on the power of the government. Legal literature on rule of law emphasises the importance of general and stable rules. However, Johnson & Koyama (2016) define rule of law as being the degree to which a society is governed by general rules which are applied to all citizens equally. They argue that low capacity states are unable to enforce general rules. According to the authors, while high capacity states do not necessarily enforce general rules, as per historical records suggest that as rulers invested in capacity, they were often confronted with strong incentives to make their rules more general. Generally for countries with heterogeneous populations, the costs of applying centralised fiscal and administrative rules was high and they were lowered when the rules and institutions were made more general. We find from our data that rule of law is positively correlated to legal capacity and negatively correlated with political instability, thus establishing coherence with evidence from literature.

3.3 State Capacity meets Data localization

Table 3: Case Study Framework		
Type of Governance and State Capacity	Authoritarian (A)	Non - Authoritarian (NA)
High State Capacity (HC)	(A, HC)	(NA, HC)
Low State Capacity (LC)	(A, LC)	(NA, LC)

To further illustrate how the demands of data localization laws interact with State Capacities of different countries, we use the above matrix to select countries based on a rudimentary configuration of power (authoritarian and non-authoritarian), and their respective State Capacities, defined as high and low state capacity based on their respective historical experience, that potential affect the outcomes of data localization measures.

3.3.1 China: Authoritarian, High Capacity

China is, as Cheng and Gawande (2017) point out, is widely acknowledged. Montinola, Qian and Weingast (1995) provide a political basis for the economic success in China in its post-liberalization phase. They argue that Chinese success did not rely on conventional arguments for economic success such as a well-defined system of property rights, liberal political reforms (that minimizes political interference) and an independent court system. While the Chinese government engaged in political discretion towards economic actors, it undertook reforms towards what the authors call ‘market preserving federalism’, that devolves significant power from the center to local governments in ways that are difficult to reverse, caused a shift in ideology which embraced market oriented approaches and which opened its economy. Such reforms point to the strength of Chinese style federalism, which fits the definition of state capacity this paper adopts. Lu et al. (2016), using Acemoglu’s (2005) production function consisting of public investment and private effort, find that in post 1978 China, when market

reforms were launched, the Chinese state extracted sufficient revenue so as to incentivize its citizens efforts while effectively re-investing in the provision of public goods that were valuable.

Data Localization laws

Chander and Le (2014) note the existence of sector specific localization obligations: Chinese banks and foreign commercial banks investing in China are prohibited from storing, processing, or analysing outside China any personal financial information which has been collected in China, or providing such information to an offshore entity. Similar laws apply to China's healthcare system.

In November, 2016, China officially declared its comprehensive cybersecurity law⁹, which among other things include a mandate for data localization. Article 37 of the cyber security law requires operators of 'critical information infrastructure' to store locally, all personal information and all important data gathered and/or produced locally. The law further asks for security assessment of local data, if cross-border data transfer is necessary. Data localization measures in China also mean that all foreign companies have to cooperate with Chinese data centers. However, the enforcement of this particular aspect is not universal for China allows for existence of third-party independent data centers.

Potential impact of State Capacity on Data Localization outcomes

If as Cory (2017), Chander and Le (2015) point out that localization laws severely constrain and drive out businesses away from countries, then the compliance of Apple, Microsoft and Amazon with the mandate to store data in Chinese servers, and negotiations of businesses lobbies¹⁰ with the Chinese state, despite strong International opposition, can be rationalized by the fact that the size of Chinese domestic markets are a source of large economic rents that outweigh the costs of regulation, and also by the fact that the high Chinese state capacity is credible enough to re-negotiate contracts with firms (Ciuriak et.al, 2018). High State capacity can also be attributed to the largely successful protectionist measures that allowed the State to divert revenues towards productive investments, that nurtured companies like Alibaba.

⁹ For an outline of China's range of cyber-security laws, which is used for discussion here, See: <https://jsis.washington.edu/news/chinese-data-localization-law-comprehensive-ambiguous/>

¹⁰ See <https://www.bloomberg.com/news/articles/2016-11-07/china-passes-cybersecurity-law-despite-strong-foreign-opposition>

3.3.2 Russia: Authoritarian, Low Capacity

If China's state capacity, as described by Montinola et.al (1995) above is a function of reforms that led to a stable ('almost irreversible') distribution of power between local governments and the center in a 'market preserving' way, and market promoting ideological shifts (which, also eventually, led to China's economic success) it is the low state capacity of Russia during privatization reforms in the 1990's that eventually led to concentration of power among the oligarchs, and the eventual rise of Vladimir Putin's authoritarian regime. Acemoglu and Robinson (2013) provide an account of Russia's privatization drive in the 1990's that is reflective of the centrality of state capacity in leading to unfavorable, policy induced welfare reducing outcomes.

A particular event that the authors highlight is that of loans for share deal in 1995 wherein, State shares in 12 highly profitable enterprises in the energy sector were used as collateral for bank loans to the government. As the authors argue, because the government did not have any intention of paying the loans, the banks which had the rights to sell shares, were bought by banks themselves by ignoring and even disqualifying outside bids. The consequent rise of the oligarchs can also be marked by the fact that as Treisman (2011, pp.223-24) notes, in 1994, 50% of workers owned average Russian enterprises, and by 2005, 71% of medium and large industries and communication enterprises had single shareholders who owned half the stock.

Data Localization laws

Russia's data localization law¹¹ went into effect on September 1st, 2015, and required all domestic and foreign companies to store, process and accumulate personal information of Russians over physical servers in Russia. Compliance is maintained by Roskomnadzor, Russia's federal services for supervision of communications, I.T and mass media, which maintains a list of companies due for audits.

¹¹ For broader discussion on Russian Data localization laws, its interaction with security and its politics, see: <https://jsis.washington.edu/news/russian-data-localization-enriching-security-economy/>

Russia's data localization laws were a response to both Snowden's revelations in 2013, and due to domestic and regional concerns, or rather, the Kremlin's desire to impose sovereignty over cyberspace and curtail those activities over the Internet that are deemed to be extremist. Russia also intends to bring capital flows towards its economy through digital barriers by requiring foreign companies to store Russian data on Russian servers.

Potential impact of State Capacity on Data Localization outcomes

Russia's data localization mandate while explicitly aimed at enhancing privacy, security and controlling extremism, also aims to attract capital flows to promote its I.T sector¹². However, owing to its weak State capacity, historically, as described above, Russia is steeped in rent-seeking behaviour that caters to its political elite, that will not allow capital flows to have significant transformational impact on its economy. Owing to its centralized, authoritarian governance structures, Russian data localization laws will further enable the State to crackdown on dissent, which further allows for a strict and successful enforcing its data localization mandate (Apple and Google), despite significant collateral damage and costs to citizens.¹³

3.3.3 E.U: Non-Authoritarian, High Capacity

Johnson and Koyama (2016) in their survey of state capacity literature, highlight the historical roots of the rise in state capacity across Europe. They highlight the different routes of various European countries such as England, France, Prussia, Spain and Poland, towards achieving effective states (high state capacity), such as configuration of power among local powerholders and monarchy, ethnic fragmentation, ability to invest in fiscal capacity, and history of violence and war. Bruzst and Campos (2017) conduct a more contemporary study of the sources of European State capacity. Covering over 17 EU candidate countries since 1997, authors use institutional measures covering capacity and independence of judiciary, bureaucracy, and competition policy. They find that a capable judiciary is a prime mover of bureaucratic independence, and that a strong judiciary and competition policy are positively correlated with

¹² Ibid

¹³ See Russia's crackdown on linkedin here: <https://www.ft.com/content/0da6d7bf-8606-3ace-af5b-0c561643062b>
And on telegram, here: <https://www.nytimes.com/2018/04/18/world/europe/russia-telegram-shutdown.html?mtrref=www.google.com>

income per capita and high export to GDP ratio, respectively. In measuring indicators from after 1997 when the EU implemented a standardised monitoring of institutional building of candidate countries which were to be subsumed under rules for the Single Market, they provide a causal story of European integration increasing European state capacity.

Data Localization laws

The E.U enforces its General Data Protection Regulation (GDPR)¹⁴ on the 25th of May, 2018. The regulation, which is a comprehensive mandate requires that companies use data for legitimate purposes, and informing subjects about processing activities on their personal data, forbid processing of personal data outside the legitimate purposes for which data was collected, require consent of data subjects when collecting personal data, ensure privacy by design within companies, require assignment of data protection officer to guide compliance and ensure accountability when transferring data to third parties.

Potential impact of State Capacity on Data Localization outcomes

Ciuriak et.al (2018) points to how, in light of transformations in digital economy that re-configure trade relations within countries, the EU is best placed to refine balance between digital trade and a host of uncharted regulatory issues that arise due to an expanding and transformative digital economy. This is largely attributed to the E.U's experience in its Telecom Single Market, and the efficiency of its judiciary in handing down legal decisions to challenges of European Commission's policies, all of which point to features of high state capacity, as discussed above.

3.3.4 India: Non-Authoritarian, Low Capacity

Bardhan (2015) argues that India's high state capacity is episodic, displayed through organizing complex logistics of its elections, which is the largest in the world, and its census, which is the second largest. However, for matters where political involvement may seem likely, for instance in effective distribution of electricity, the capacity is significantly reduced. Such shortfalls in capacities are due to issues of commitment wherein a highly bureaucratized state machinery is designed to cater to politician's rent-seeking behaviour. Another source of low state capacity has

¹⁴ For a summary discussion of key principle of the GDPR, See: <https://www.dataiq.co.uk/blog/summary-eu-general-data-protection-regulation> and <https://advisera.com/eugdpracademy/knowledgebase/a-summary-of-10-key-gdpr-requirements/>

been the sheer heterogeneity of India's population in terms of ethnicity and class, in ways that make organizing collective action to compel the state to perform, extremely difficult. As Kohli (2012) points out, the underlying social fragmentation within Indian democracy creates a political context with a highly elitist apex and a mobilized fringe. In terms of developmental capacities, which are defined not just in terms of judicial and bureaucratic capacities, but also capabilities to redistribute, Kohli (2004) finds that India is middling between the more efficacious East-Asian states, and the poorly performing sub-Saharan African states.

Data Localization laws

Chander and Le (2014) point out the various pressures on localizing data based on various rules in India. The I.T Act 2000, limits the cross-border transfer of 'sensitive personal data or information' of Indians and by companies located in India, to two cases- one where it is 'necessary' to do so, and the other when the data subject consents for such transfers. Section 4 of the public records act 1993 prohibits the transfer of public records, without prior permission of the central government. In 2014, the National Security Council (NSC) ordered for the storage of all data generated within India in Indian-based servers, subject to Indian laws, and called on the Department of Telecom to mandate all telecom and Internet companies to route data through National Internet Exchange of India.

In November 2017, India's Ministry of Electronics and Information Technology¹⁵ (MeitY) released a white paper on Data protection for public consultation, with the objective of ensuring growth of digital economy while also ensuring privacy and protection of personal data of citizens. The principles discussed include territorial applicability of law, clarity in defining constitution of personal data, centrality of consent and erasure of data after processing, models of enforcement, penalties and compensation. The white paper highlights the importance of ensuring security and privacy and data localization measures towards such goals and the severity of impediments data localization measures cause to its I.T sector and startups.

¹⁵ For summary discussion of the White paper on data protection, see:
<http://www.prsindia.org/parliamenttrack/report-summaries/white-paper-on-data-protection-framework-for-india-4986/>

Potential impact of State Capacity on Data Localization outcomes

The Indian Government, in its white paper discussion on Data protection, provides for a separate chapter on data localization, which stresses on the significant costs to various sectors such as I.T, E-commerce and start-up ecosystems due to data localization measures. While low on state capacity, the service sector, which is expected to be significantly affected by data localization measures, is a major driver of India's economic growth and transformation, in a manner which compels a democratic, decentralized government that stresses on the transformational capacity of its digital economy to carefully legislate on data localization measures.

4. Conclusion

Dominant narratives on data localization stress on the self-defeating nature of data localization measures in enhancing privacy and security, and stress on potential inefficiencies it imposes on trade and the significant economic costs that follow. However, the literature, in as much as its argument is based on the premise of free trade and competition, do not widely acknowledge the nature of digital economy, which tends towards market concentration and presence of 'superstar' firms, and the active role of the state and global power configurations, in either engaging with negotiating trade agreements, or actively promoting its domestic economy and most importantly, configuring the nature of its sovereignty in a fast changing and uncharted realm of the cyberspace

This paper attempts to focus on the role of the State, particularly the interplay of State Capacity, defined in terms of the ability of states to divert revenues for enhancing welfare, and enabling legal infrastructure that promotes productive capacities of its economy, and data localization laws that have been triggered by nations across, in their attempts to claim sovereignty in an erstwhile border-free cyberspace. Conjecturing on the interplay of State Capacity and Data localization laws leads us to believe that the outcomes of data localization laws cannot, in any straightforward way, be harmful. State capacity, we conjecture is a crucial variable which at least, in part, determines the outcomes of data localization measures.

More specifically, countries (manifested either in rudimentary terms of authoritarian or non-authoritarian power structures) with high state capacity can better navigate the challenges of data localization by leveraging the strength of their domestic economy and their ability to credibly commit to re-negotiations with businesses, to ensure securing gains and minimizing losses. Countries with low state capacities face a different set of potential outcomes that are determined in part by the country's governance structures and their ability to leverage on the strengths of their domestic economy.

The most significant drawback of this research lies in the absence of a more empirical approach which allows for testing of the stated conjectures. However, such an approach, that is, to append research in empirical political economy to literature on digital economy and regulation, is according to us, remained unattempted by existing literature. For us, this paper is a step in that direction.

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