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Digital Inclusion vs. Fiscal Revenue Assessing India's Per-Gigabyte Data Tax

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Abstract – India has reportedly submitted a study proposal to its DoT which has the potential to change the digital landscape of the country. The proposal is to impose a one rupee charge on each gigabyte of mobile Internet data used, and the aim is to discourage the youth from consuming data that is not productive and to reduce their addiction to social media. The proposal seems modest and could generate just under three billion dollars in new annual revenues, but it would increase the average user's mobile bill by 10 to 15 per cent. However, beneath this seemingly simple proposal lie a range of technical, economic, philosophical, and constitutional issues. This article aims to critically analyse the proposal and place it in the context of the ongoing digital transformation in India and the international discourse on the taxation of the Internet economy. It assesses the rationale of nudging users to behave in a certain way, the inability to distinguish between productive and unproductive data flows, the regressive consequences for lower-income users, and macroeconomic risks for sectors relying on low-cost connectivity. The article also refers to the experiences of other countries, such as Uganda and Hungary, to illustrate that the internet usage tax has consistently failed. Finally, it suggests alternative policy frameworks that will mitigate the concerns while maintaining digital inclusion, innovation and fundamental rights.

Keywords: India data tax, Digital tax India, Per GB tax proposal, Internet tax India, Mobile data levy, Digital India policy, Telecom tax reform, Data consumption tax.

1. INTRODUCTION

A new policy concept has been introduced in India's policy debates, and it could change the economic equation of using the Internet for nearly a billion people. The idea put forward in the proposal is to impose a tax of one rupee per gigabyte of mobile data used, arguing that the young people of this country are becoming addicted to social media and other forms of unproductive use of mobile data. The suggestion, which was reportedly sent to the Department of Telecommunications (DoT), has sparked a broad debate in the policy, economic, telecom and civil society circles. On the face of it, the offer seems harmless enough. At a price of one rupee per gigabyte, in a country where telecom operators charge around 12-15 rupees per gigabyte, it is an insignificant incremental price. But there's much more to the offer than just the money. It poses fundamental questions about the taxation of digital activity, the distinction between productive and unproductive consumption, the relationship between privacy and surveillance, and the effectiveness of nudges in policy-making, and whether they are really effective in nudging behaviour, or just a burden on those who can least afford them.

This article aims to delve into these aspects in detail. It examines the history which brought India to this juncture, reviews the technical and economic issues involved in the introduction of such a tax, looks at the experiences of other countries and presents other possible options that could better address the concerns that underlie the proposal. The discussion is designed to be relevant not only to Indian readers but also to a

worldwide audience since the issues India is facing are likely to emerge in many other countries in the next decade.

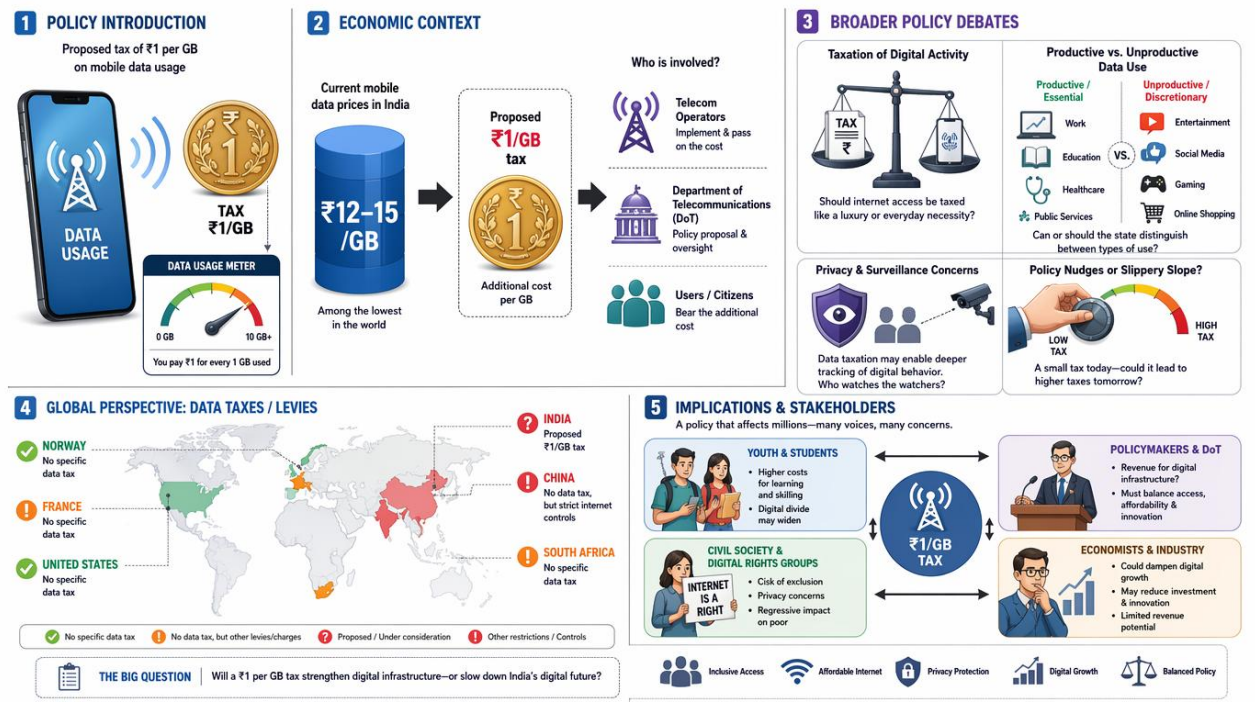

Fig -1: Global Perspective Data Taxes and Levies

2. OBJECTIVES OF THE STUDY

This article seeks to offer a systematic and evidence based analysis of the proposed mobile data tax in India per GB. This is done by following several specific objectives for the analysis.

1.The first is to map the history of India's digital growth, and the policy choices and market dynamics that created one of the largest and lowest cost mobile internet markets in the world. It is important to understand this trend as it will form the benchmark for any new tax.

2.The second goal is to break down the arguments put forward for the proposed tax, and determine if the claims of social media addiction and unproductive consumption stand up to scrutiny. This includes studying the comparative use of sin taxes in public policy and determining if digital consumption is in line with the pattern.

3.The third is to determine the technical viability of imposing a differential data tax in the background of the architecture of the modern mobile network, end to end encryption and privacy safeguards under the Indian law.

4.The fourth goal is to examine the distributional effects of such a tax by income groups, regions and sectors of the economy, especially the regressive effect of flat consumption taxes.

5.The fifth goal is to assess India's proposal against other jurisdictions that have tried similar measures, and learn from successes few and failures many.

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The ultimate goal is to describe alternative policy options that could be used to tackle concerns of digital well-being and fiscal contribution of the platform economy without jeopardizing the benefits of India's digital revolution.

3. HISTORICAL BACKGROUND

3.1 The Road to a Connected India

To appreciate the seriousness of the present proposal, one has to take a look back at the journey of India becoming one of the most connected countries in the world. The penetration of the internet was as low as twenty percent in the country as recently as 2014, mobile data was still relatively costly, and access to digital services was still largely an urban privilege. The situation changed completely in 10 years.

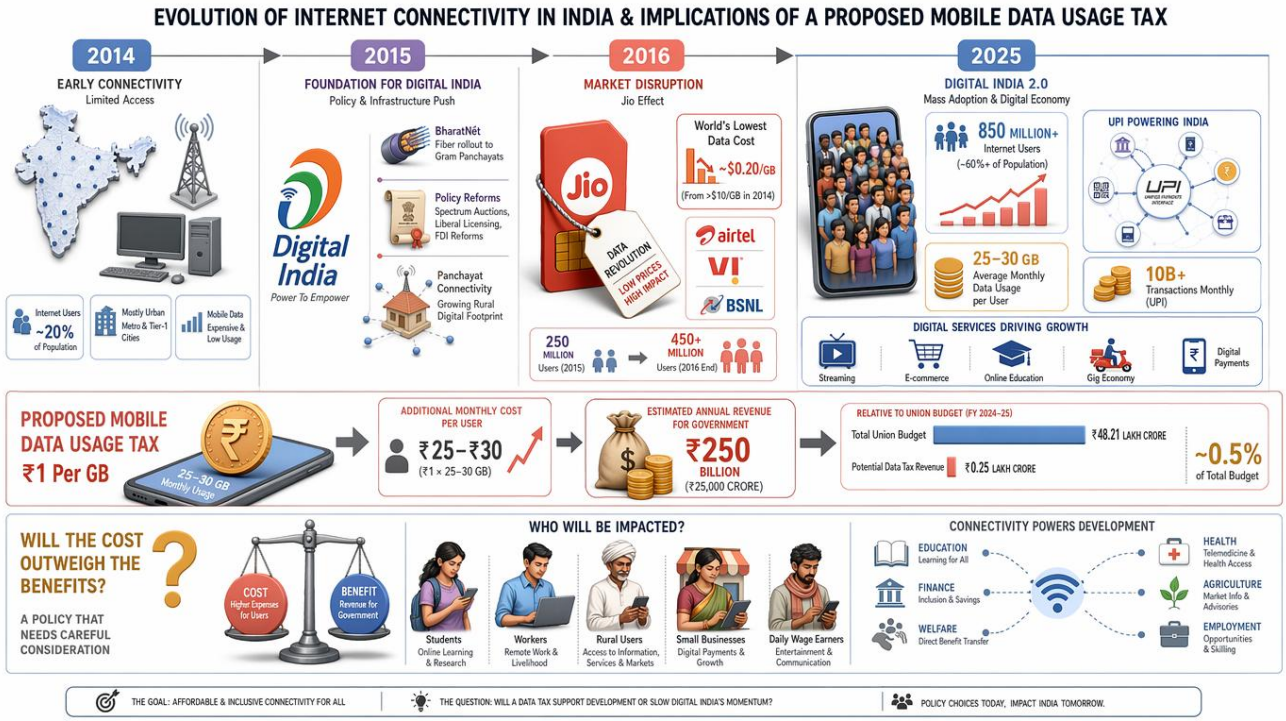

Fig -2: Evolution of Internet Connectivity in India & Implications of a Proposed Mobile Data Usage Tax

There were two factors that influenced this change. The first was the policy of the government. In 2015, Digital India was launched with a bold vision to ensure that villages are connected to the Internet, public services are digitized and that Aadhaar is used to verify identity in almost all government transactions. BharatNet was one of the initiatives focused on providing fibre optic connectivity to all panchayat, and the spectrum auctions and licensing reforms fostered private investment in mobile infrastructure.

The second was disruption of the market. With the launch of Jio in 2016, the telecom industry's pricing assumptions were thrown out of the window. Jio's free voice calls and incredibly low data tariffs led to a price war by incumbent operators like Bharti Airtel and Vodafone Idea, which ultimately benefitted the consumers and put a pressure on the finances of the operators. In a few years, India had the cheapest mobile data in the world, sometimes referred to as less than twenty cents per gigabyte.

This mix of policy intent and pricing strategy yielded an amazing access growth. By 2025, the number of Indians who were online was over 850 million, and the average monthly data consumption per user was around 25-30 GB, which is one of the highest in the world. The country's Unified Payments Interface, which was introduced in 2016, is the world's largest real time payment network with more than ten billion transactions per month. In the wake of mobile data being cheap, streaming platforms, e commerce marketplaces, online education services and gig economy applications all thrived. What's the point of telling this history. It is to emphasize that connectivity is not an incidental of modern day life in India. It's the bedrock of welfare provision, financial inclusion, access to education and economic mobility. This greater structural dependency must therefore be taken into account when assessing any policy which increases the cost of access, even slightly.

3.2 The Proposal in Detail

The current idea, gleaned from the public, is a one rupee charge on every gigabyte of mobile data consumed. The argument is that of productivity loss due to the amount of time Indian youth spend on social media, purportedly watching entertainment, short videos and games. The financial effect on the users, if applied uniformly, would be about twenty five to thirty rupees a month, with the average consumption. The total revenue for the country can be as high as 250 billion rupees per year for a country with more than 850 million Internet users, which is close to three billion U.S. dollars. In financial terms, it may seem like a small amount, but in terms of the Indian budget, which is more than 50 trillion rupees, it's not a game-changer. The more important question is whether the policy would deliver on the desired behavioral change and whether the costs of the policy to the users, businesses and the whole digital economy would be worth the revenue. An answer to that question must look at a number of dimensions starting with the very logic of the tax.

4. CURRENT TRENDS IN INDIA'S DIGITAL LANDSCAPE

To understand the merits of the proposal, it's important to first understand the current state of digital consumption in India. There are a number of patterns that are pertinent.

First, mobile data usage has been steadily increasing, with video being the main driver. The short-form video segment consisting of applications such as TikTok and other domestic ones that have sprung up since the ban on TikTok in 2020 have attracted huge audiences. The bandwidth is used for streaming film and television services, both worldwide and regional. During big sporting events like cricket, there are big surges in usage.

Second, social media engagement is now so much a part of commerce and information. Small businesses are using WhatsApp to communicate with customers, take orders and make payments. Farmers turn to YouTube for information on farming. Candidates visit LinkedIn, etc. to look for jobs. Twitter now X and Facebook are platforms for political parties and civic groups to mobilize. It's now almost impossible to separate the social and economics of these platforms.

Third, fintech is a huge consumer of data. Continuous connectivity is essential to UPI transactions, mobile banking, insurance applications and investment platforms. RBI and NPCI have been actively promoting this transition, as digital payments can be used as a means to achieve financial inclusion and tax compliance.

Fourth, the creator economy has become a big job creator. It is estimated that there are over 80 million creators creating content in India and several million of them are monetizing it. This industry relies on creators being able to upload content at an affordable price, and viewers being able to view it at an affordable price.

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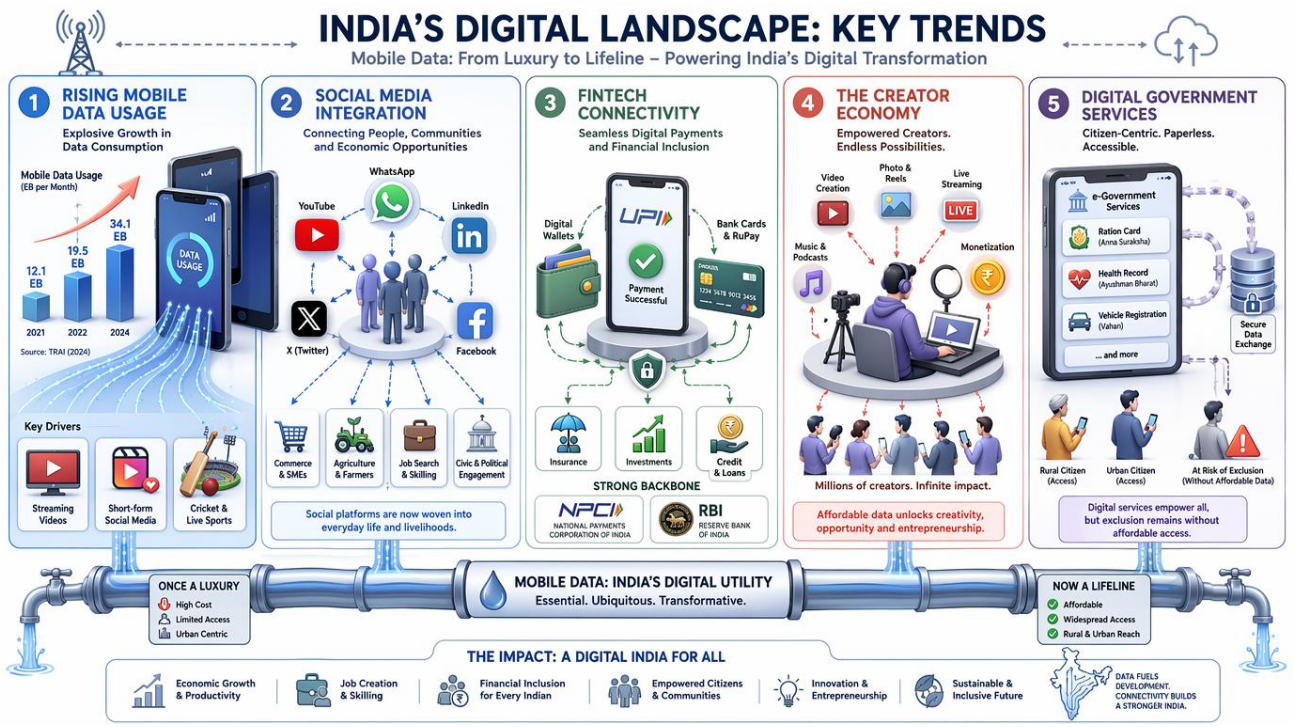

Fig -3: India's Digital lan Key Trends

Fifth, government services have firmly embraced the digital. Digital interaction is becoming more necessary for ration cards, health records, vehicles registration, scholarship applications and pension disbursement. Without data access, citizens who are unable to afford it are at risk of being denied access to basic entitlements.

All these indicate that mobile data is becoming less of a luxury product and more of a utility product, much like electricity and water, in India. Implications of taxing it extend beyond the entertainment applications it is specifically aimed at.

5. THE SIN TAX ARGUMENT AND ITS LIMITATIONS

Those who support the data tax frequently raise the example of sin taxes to include those placed on tobacco, alcohol, sugary drinks and gambling. Negative externalities, the idea that some activities impose costs on society which are not reflected in the market price, provides an economic justification for such taxes. Governments can both cut consumption and raise revenue to offset the harms caused by these products by increasing the price of these products.

But there are several reasons why the analogy doesn't hold true for mobile data.

The first issue is the diversity of the activity that is being undertaken. Tobacco and alcohol are products with rather similar properties. A cigarette is a cigarette and no matter who uses it or for what purpose, it is a cigarette. Mobile data, on the other hand, is a versatile carrier of a myriad of activities. A gigabyte can be used to conduct a medical consultation, a job interview, a banking transaction, a political conversation or an entertainment binge. Such uses are not equivalent and to treat them as such, is to violate the very basis of the idea of targeted taxation.

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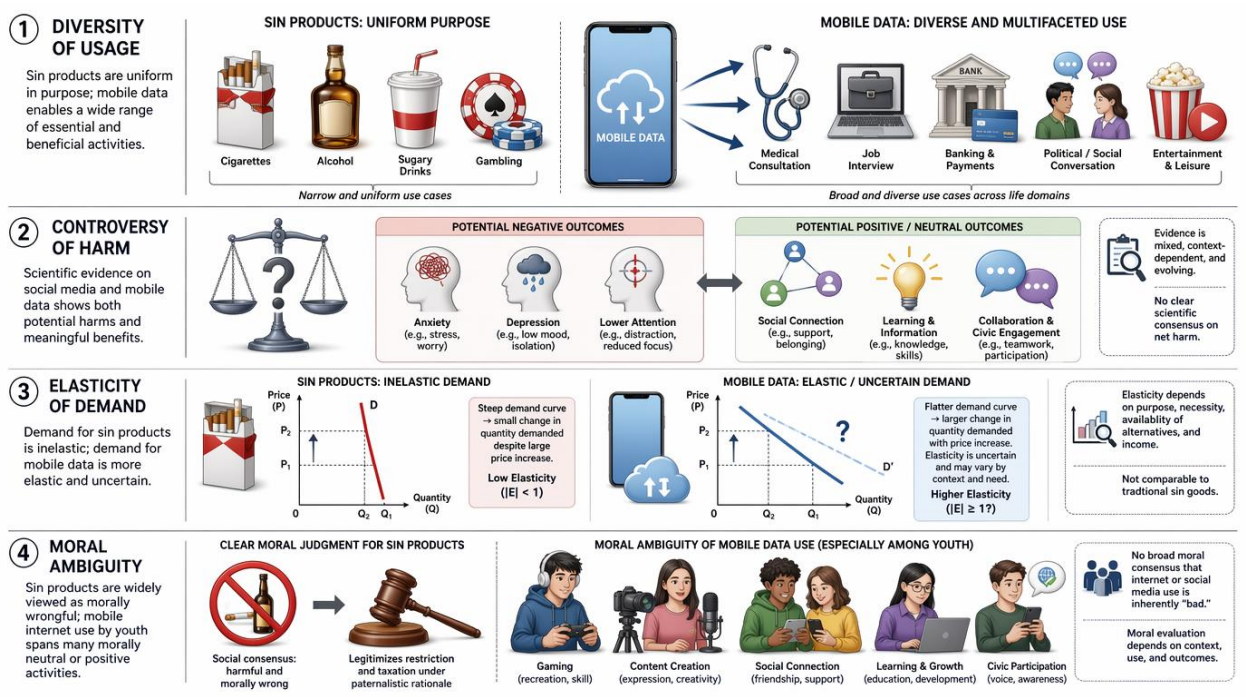

Fig -4: The Sin Tax Argument and Its Limitations

The second issue is that the harm is controversial. The study of the impact of social media use is truly mixed. Heavy use has been associated with higher levels of anxiety and depression, and decreased attention spans, especially in adolescents. Other studies have also reported null or even positive outcomes, particularly when use is not passive but is rather focused on socialization and connection. The science is far from settled, and the policy based on shaky science can result in more harm than good.

The third issue is the elasticity of demand. The most effective sin taxes are those that make consumers react to price increases with decreased consumption. With addictive products such as nicotine, the demand may be fairly inelastic, so that people continue to consume such products even if the prices are increased, resulting in revenues but not necessarily much behavior change. The empirical question whether marginal price rises will lead to a decrease in use is open for social media. Heavy users may simply absorb the cost and light users, not the target of the policy, may decrease their already small consumption.

The fourth issue is one of morality. An implicit judgment of sin taxes is that the activity they tax is bad or undesirable. Such a determination on internet usage in general or social media usage in particular needs a consensus which is not available. Activities that older generations have identified as unproductive, such as playing video games, creating content and engaging in social interactions online, are at the core of the social and economic lives of younger citizens.

But these restrictions don't imply that the worries about an over-reliance on screens are baseless. They just advise that the sin tax approach is not well suited to tackle them.

6. TECHNICAL FEASIBILITY

6.1 The Encryption Barrier

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One of the key practical issues with any differentiated data tax is the technical nature of today's Internet traffic. Nearly every major platform has adopted Transport Layer Security (TLS) and end to end encryption protocols. For a telecom operator carrying data packets, the information carried in the packets is pretty much black-box. Sometimes, operators can guess, based on metadata, what service a user is accessing, but they cannot be certain if a YouTube session is for a math lesson or a comedy video.

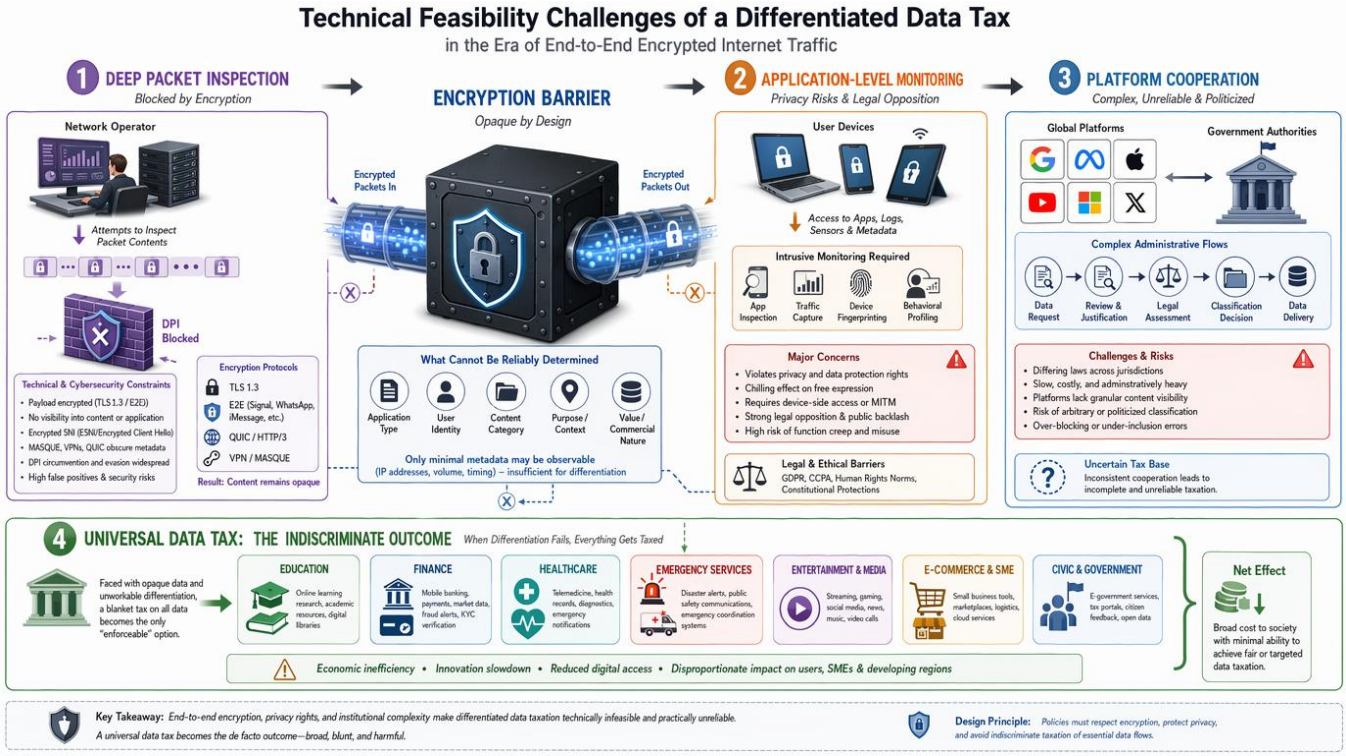

Fig -5: Technical Feasibility Challenges of a Differentiated Data Tax

Governments would require any one of three things to be able to classify traffic by purpose. They would have to be able to perform deep packet inspection, which means that they analyze the content of data flows in real time. This capability would clash with the encryption standards and would necessitate backdoors in encrypted protocols or partnerships with platforms that are willing to hand over data on their users' activities. Both of these methods pose significant cyber security issues and would likely be strongly opposed by tech companies around the world and civil society. Or, governments could force application level monitoring, which would involve devices or operating systems monitoring and reporting what users do. This is a serious issue with regard to privacy and would be in violation of the constitutional protections laid down by the Indian Supreme Court in the 2017 Puttaswamy judgement which declared privacy as a fundamental right. Mass monitoring of digital activity is also problematic under the Digital Personal Data Protection Act of 2023, which further entrenched principles of data minimization, data purpose and user consent.

Platform cooperation is the third choice. Platforms might be mandated to provide governments with self-reporting on user activity to taxation authorities. This would be a complex administrative process, especially for global platforms that have little presence in India, and would need to be clearly defined what would be taxable. There would be a significant risk of arbitrary or politically driven classification. If there is no feasible way to differentiate, then the tax would have to be imposed on all data equally. This would include taxing

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government functions, educational material, financial transactions, and emergency communications along with entertainment. When the policy loses its purpose, the only reason for it is to raise money, and then other questions arise.

7. THE EQUITY PROBLEM

7.1 A Tax That Hits the Poor Hardest

Flat consumption taxes are virtually by definition regressive. They are the same price to all users, but are a much higher percentage of the income of lower income users. A rich businessman who uses cell phone service worth Rs. 30/- is not very much affected. The same raise for a daily wage earner whose whole family subsists on a few hundred rupees a day is a significant portion of his/her net income.

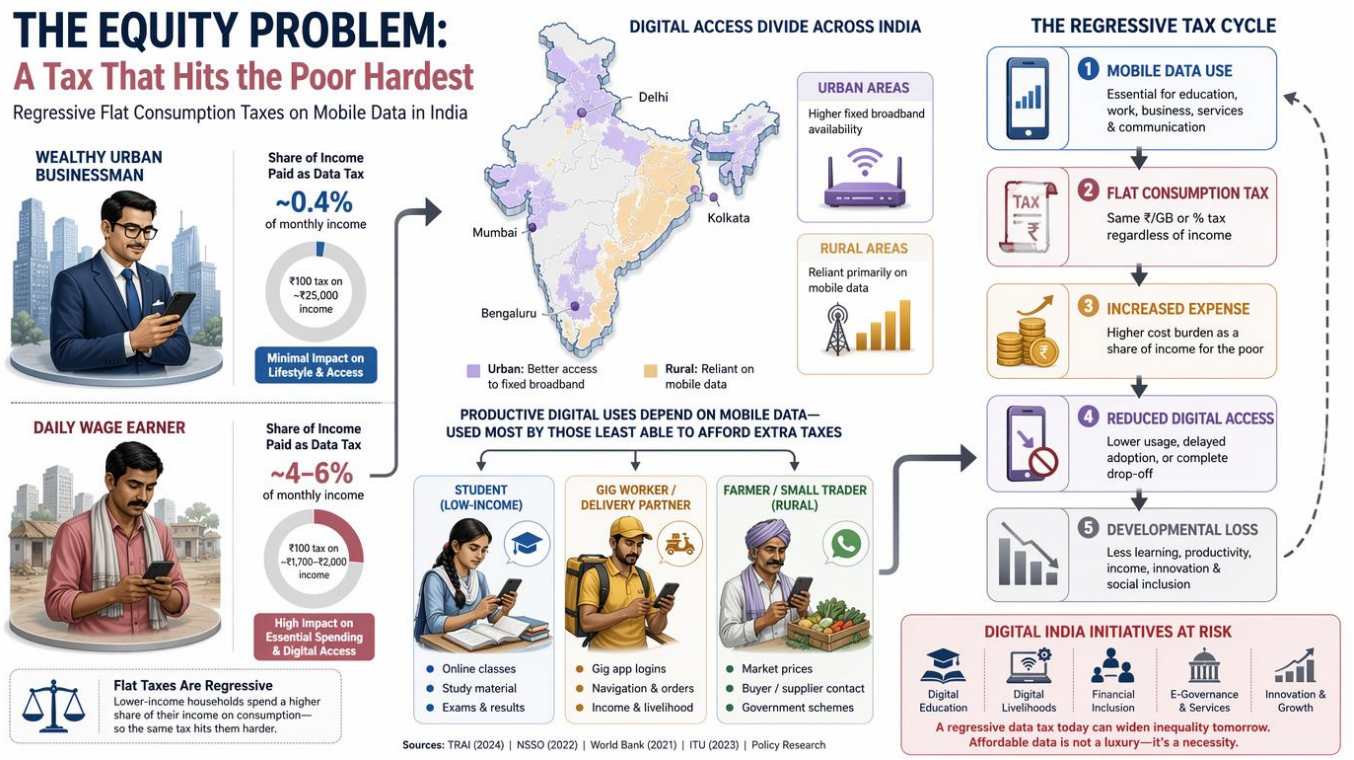

Fig -6: The Equity Problem

This regressivity is exacerbated by the nature of Internet access in India. Higher income urban households tend to have fixed broadband internet at home and use unmetered internet services as a substitute for mobile data, which is more expensive. By contrast, mobile data is the only data source used by rural and lower income households. Fixed broadband in rural India has not yet reached 20% and any tax on mobile data is a tax on the connectivity options available to the poor.

The irony is compounded with regard to the demographics of so called productive use. Lower income students rely on cell phones to access the Internet for learning, studying for tests, and practicing skills. For gig workers, staying connected on the move is essential for getting jobs, finding directions and making payments. Messaging apps are used by small farmers and traders for logistics coordination and to get market information. Those that will use the service most productively are the ones who can least afford the extra

expense. Thus a policy that will impose the same taxes on all digital access will have the effect of driving marginal users out of the digital economy altogether. This is not only a financial loss, but also a developmental loss, which will set back some of the developmental measures taken under Digital India and other Developmental initiatives.

8. MACROECONOMIC IMPLICATIONS FOR SECTORS AND GROWTH

Digital economy in India has become a significant part of the Indian economy. According to different estimates by government and industry sources, the contribution of digital activity to GDP is about ten per cent today and is expected to grow to 20 per cent by 2030. A per gigabyte tax would have multiple direct and indirect impacts on several sectors.

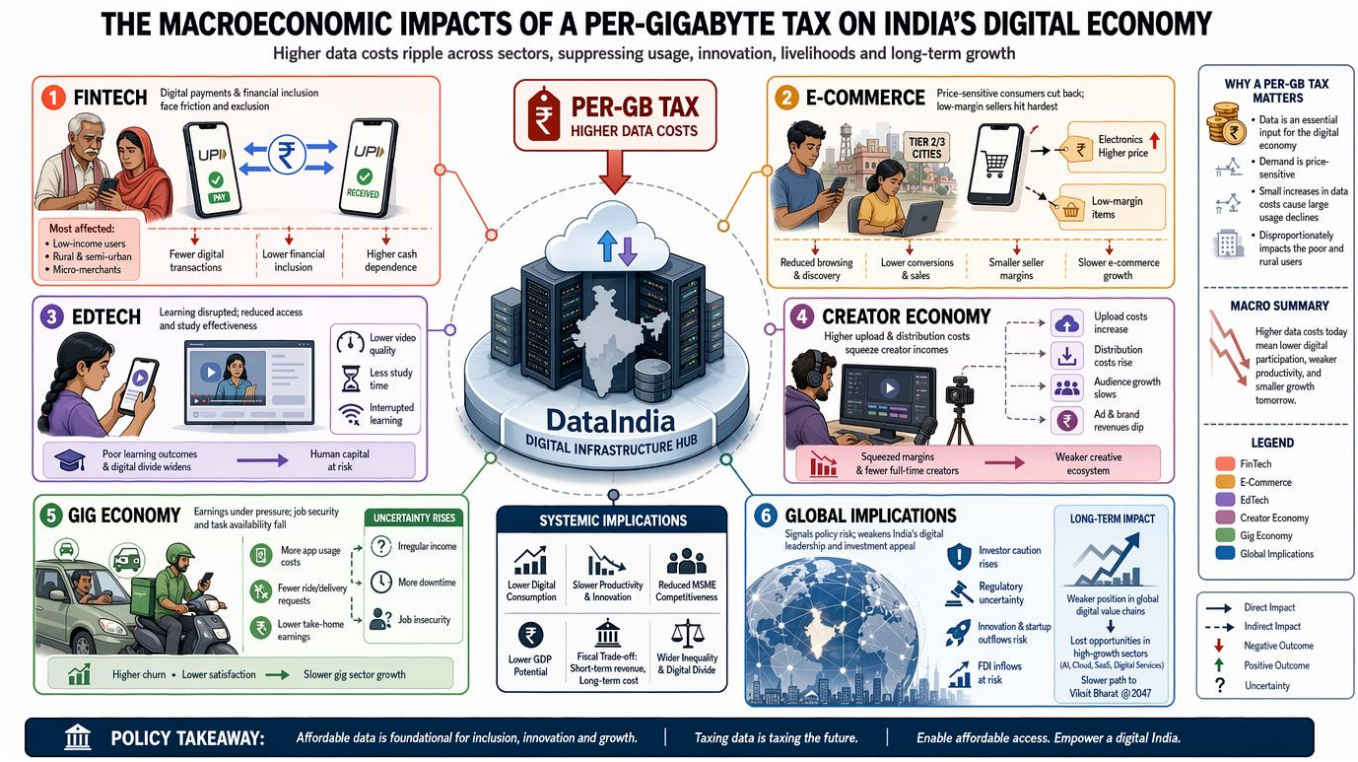

Fig -7: The Macroeconomic Impacts of a Per-Gigabyte Tax on India's Digital Economy

The FinTech industry is especially vulnerable. More than ten billion transactions are processed by UPI every month, many of which are small transactions by lower income users. Even if mobile data costs were to rise slightly, some mobile phone users might go back to using cash, undoing years of work to formalize the economy. The Reserve Bank of India and the Ministry of Finance have made a huge policy investment in the promotion of digital payments and this investment may be jeopardized by a tax which essentially increases the cost of every payment. The same applies for e commerce platforms. It is known that consumers in tier two and tier three cities in India have been the ones to spur the growth in online shopping, but they are also known for being price sensitive. As data costs increase, the data browsing, comparison, and ordering equation may change, especially for low margin product categories.

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The growing edtech industry, which has seen a boom in the pandemic era, relies on low cost video courses, pre-recorded lectures and live tutoring. Many students use these services on family cell phone plans, and the higher the data costs, the less time they have to study or the fewer services they will have. The creator economy is being caught between a rock and a hard place. Creators use a lot of data to create, edit and upload content. In order to interact with that content, their audiences have to ingest the data. Such a tax, which would increase the costs on both sides of this equation, would squeeze out profits, especially for smaller creators with thin profit margins.

India's gig economy is one of the most data driven industries. For delivery riders, ride hail drivers and freelance service providers, they spend a lot of time each day on the apps, which are constantly using data. A per gigabyte tax could have a significant impact on these workers, who are already dealing with the uncertainty of income and lack of social protections. In addition to these sectoral effects, the overall signalling effect should also be taken into account. India has emerged as a global leader in the digital innovation segment, receiving a significant amount of FDI in technology, telecommunication and fintech. This picture could get more complicated if there is a tax that gives the state an inkling of suspicion of digital consumption, especially for foreign investors who have to consider the regulatory landscape in India relative to other options.

9. THE TELECOM INDUSTRY'S COMPLICATED POSITION

Telecom operators are in a sort of limbo when it comes to the proposal. On the other hand, they have long said they are the ones paying for most of the digital infrastructure and platforms get the lion's share of the value. It has been discussed in Europe, South Korea and other markets, usually with the backing of the telecom industry, that there should be a fair share contribution from OTT services. In this context, any method that pumps more money into network operators' pockets or that sets the precedent of contribution from data-intensive applications could have some support in the industry.

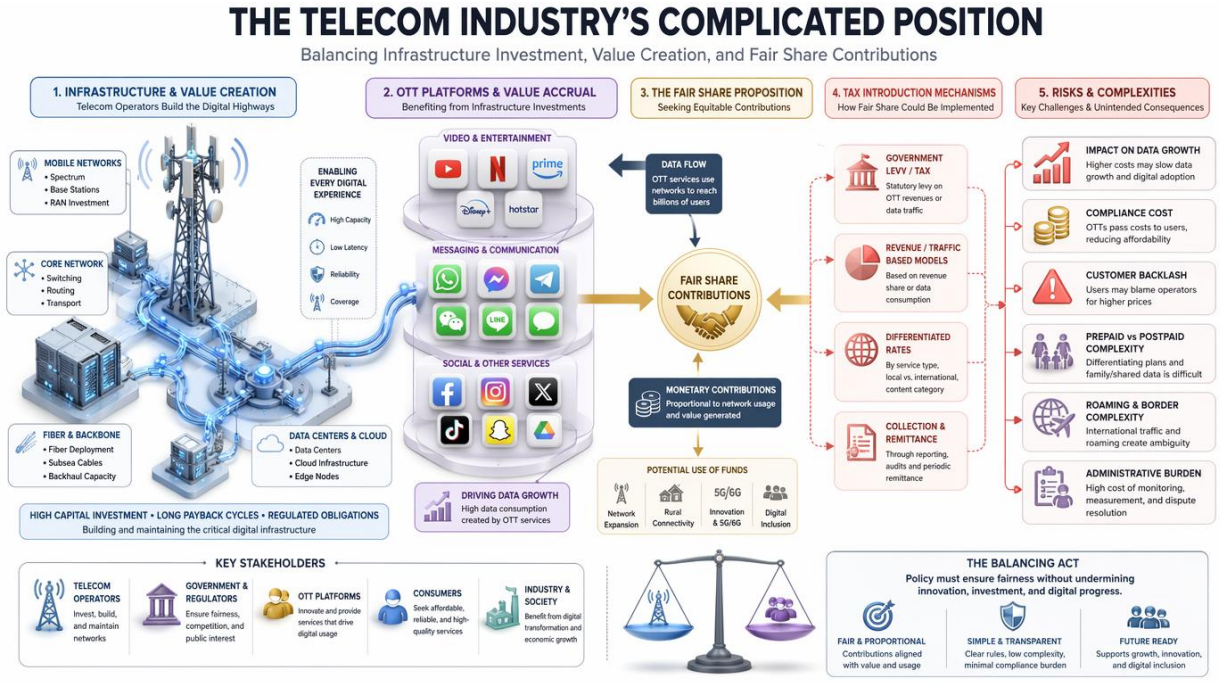

Fig -8: The Telecom Industry's Complicated Position

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However, a tax that pushes the price of data to the end user could also stifle data consumption growth, the lifeline of revenue for telecom in India. Indian operators have been on a wild price roller coaster for years and have just started to get on their feet financially, so any policy that reduces demand or alters consumer habits to be more conservation friendly could jeopardize their efforts. Through industry associations, operators have expressed their wish that pricing power should be vested in the market, rather than in regulatory or fiscal measures which limit consumption. The question of how to implement it is also important. The telecom operators would have to bear the compliance cost if they have to collect the tax and there would be a risk of customer backlash. Much care would need to be exercised in designing the mechanism for distinguishing between prepaid and postpaid customers, the application of the tax to roaming services and the mechanism for reconciling shared family plans. The administrative load may be significant, especially for smaller operators or in rural areas where billing systems are not as advanced.

10. COMPARATIVE LESSONS

10.1 When Other Countries Tried

This isn't the first time that India has been looking at imposing a tax on internet usage, and the track record of other countries is not encouraging.

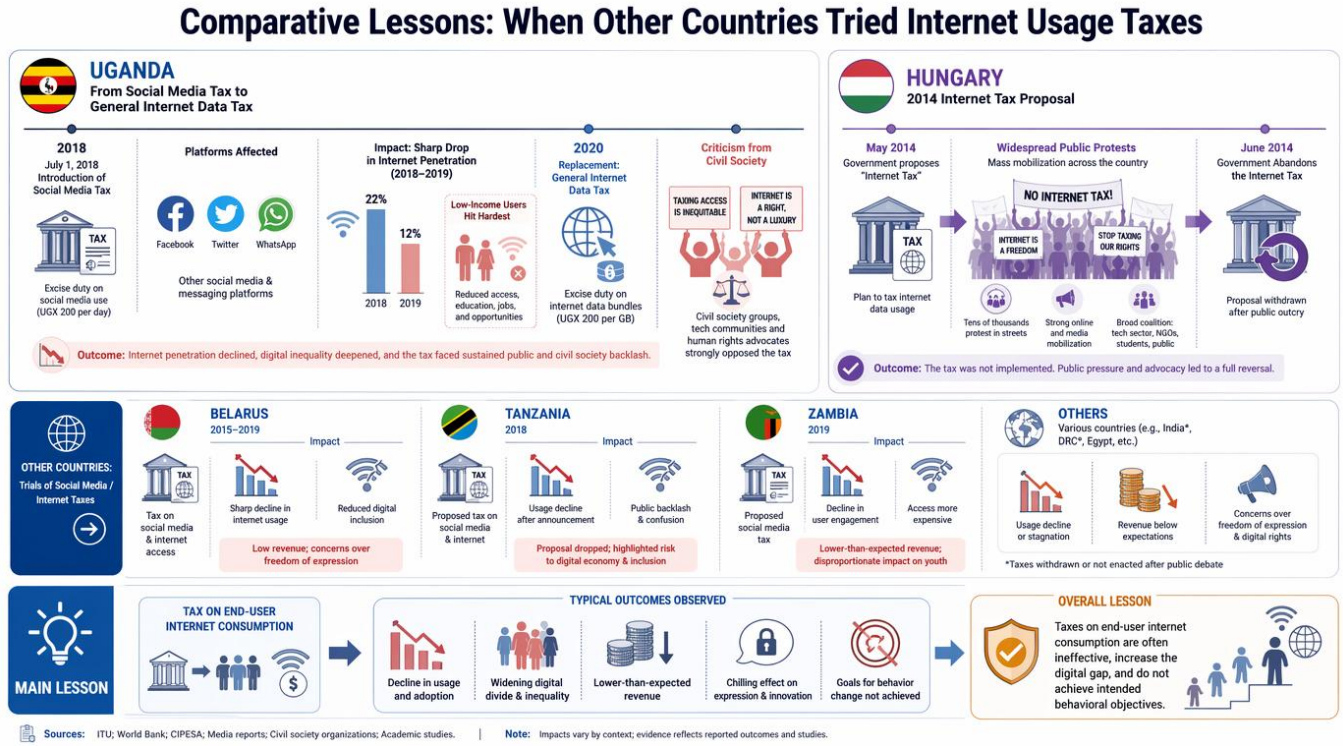

Fig -9: Comparative Lessons when other Countries Tried Internet Usage Taxes

The most popular example is Uganda, where a tax on social media was introduced in 2018 to be paid daily. The platforms such as Facebook, Twitter and WhatsApp had to charge a small fixed fee to the users. The goal was to stop people gossiping and make money, but what happened was that there was a significant decline in internet penetration, especially among low income people. There was evidence of a decrease in connectivity after the tax, recorded by the Alliance for Affordable Internet, and civil society groups

condemned the tax as a means of curbing political opposition. The tax was later to be replaced by a tax on internet data in general and was subject to similar criticisms. In 2014 Hungary tried to implement an internet tax. The proposal sparked some of the biggest public protests in the nation's post-communist history, with tens of thousands of people taking to the streets to protest the proposal. Within weeks the government backed down, Realising that the political damage outweighed any benefits to be gained from the revenue.

There have been trials of internet and or social media taxes in Belarus, Tanzania, Zambia and other countries. The patterns are very uniform. There is a decline in usage, especially among poorer users. Often the revenue is less than expected due to the reduction in consumption. Freedom of expression and digital inclusion are issues of concern raised by civil society and international observers. In a few instances, the taxes are later adjusted or even dropped. The experiences indicate that tax policies to limit Internet use are often ineffective in achieving their behavioral objectives, and have a continuous effect of increasing the digital gap. The lesson is not that taxation of the Internet is impossible, but that taxes on end user consumption are especially ill-suited to accomplish the policy objectives.

11. THE DATA CLASSIFICATION DILEMMA

One of the major themes that emerges in the analysis is the lack of clean classification of data. This is worthy of a separate post, as it is at the very core of the problems with the proposal.

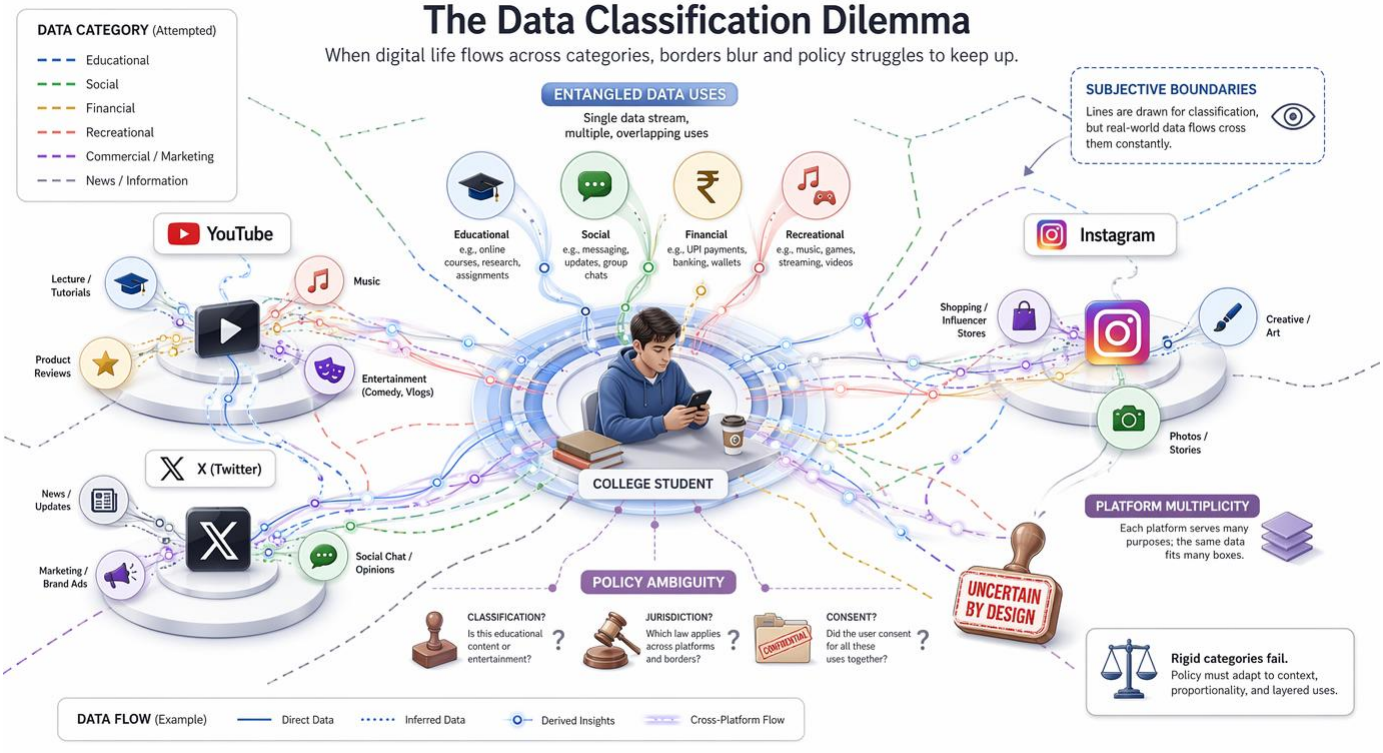

Fig -10: The Data Classification Dilemma

The use of the internet today is not amenable to a thinking in categories that is the basis of differentiated taxation. Let's take an example of a college student, who uses WhatsApp. The student could be talking about

an exam, sharing a meme with peers, sending money to a roommate through UPI and planning a trip for the weekend in one conversation. One application, one data flow is used for educational, social, financial and recreational purposes at the same time. It would be either too fine-grained or too coarse to attempt to distinguish between these uses in any classification system. The same thing goes for the majority of the platforms. Academic lectures, music videos, news, product reviews, religious sermons and entertainment videos all share a common domain and are all housed on YouTube. Twitter now X is a source of news, a marketing tool, a customer service tool, and a social platform. Instagram is a mixture of shopping, artwork, socializing and entertainment. The actual architecture of these platforms renders the notion of a domain based classification pretty moot.

Even if classification were feasible, the classification itself would be subjective and more politically loaded. So who gets to determine if a debate on social media is productive political engagement or distracting noise. Who rates a recipe video, helpful for one who is learning to cook professionally, and entertaining for one who is watching for fun? Digital activity would inevitably be classified in a bureaucratic manner and would inevitably be interpreted differently and manipulated. This predicament reveals a more fundamental conceptual problem with the proposal. The framing implies that productive and unproductive uses are distinct and can be separated and that policy can be used to promote one and to discourage the other. The lived experience of digital activity is much more entangled and any tax which does not recognise this entanglement will be flat tax and will defeat the purpose of the tax.

12. THE ROLE OF PRIVACY AND CONSTITUTIONAL CONSIDERATIONS

Apart from the technical and economic aspects, the proposal has far-reaching consequences on the issues of privacy and constitutional law in India. The 2017 case of Justice K.S. Puttaswamy vs Union of India gave privacy the status of a fundamental right under the Indian Constitution and had a huge impact on the manner in which the government could collect, process and use personal information. The Digital Personal Data Protection Act, which came into force in 2023, reinforces these principles with those of consent, data minimisation and purpose limitation. Any sensible application of a tax regime that involves categorizing user activity would involve some level of monitoring and/or reporting. This would be likely to challenge the constitution, especially if it involved the classification of the content of communications or browsing. Even if the telecom operators were to aggregate data and use it only for tax purposes would there be no questions about scope, retention, access, and oversight. The relationship between fiscal policy and fundamental rights is not always clear-cut, and the Indian judiciary has been quite stringent on government's inroads into citizens' digital lives. Any proposal that is in the vicinity of these constitutional limits should be approached with extreme caution and proposals that are outside of these limits are highly litigious.

12.1 Alternative Approaches Addressing the Real Concerns

Assuming that there are valid concerns around the well-being of young people, fiscal sustainability and the role of digital platforms in generating revenue for the public, the next question is how to tackle these concerns without the unintended negative consequences of a data tax per gigabyte.

12.2 Several alternative approaches deserve consideration.

One of them is the investment in digital literacy and wellbeing education. If young people have an understanding of the design of platforms, the algorithms that they are optimized for, and how to identify indicators of problematic use, they are more likely to be effective at managing their own use of the platforms. School, community, and public media programs can be a low-cost way of reaching large audiences. There

are a number of countries where digital literacy has been included in the national curriculum, and whilst there is mixed evidence, it does seem that informed users make better choices.

The second one is design oriented platform level regulation. Structural drivers of excessive use can be addressed through regulations that mandate transparency in algorithmic recommendations, default time limits for younger users, easy access to usage analytics and protections against engagement maximizing dark patterns. Partial models are provided by the Age Appropriate Design Code (UK) and the Digital Services Act (EU). India can also implement the same in its own context and concentrate on the platforms which have the maximum reach.

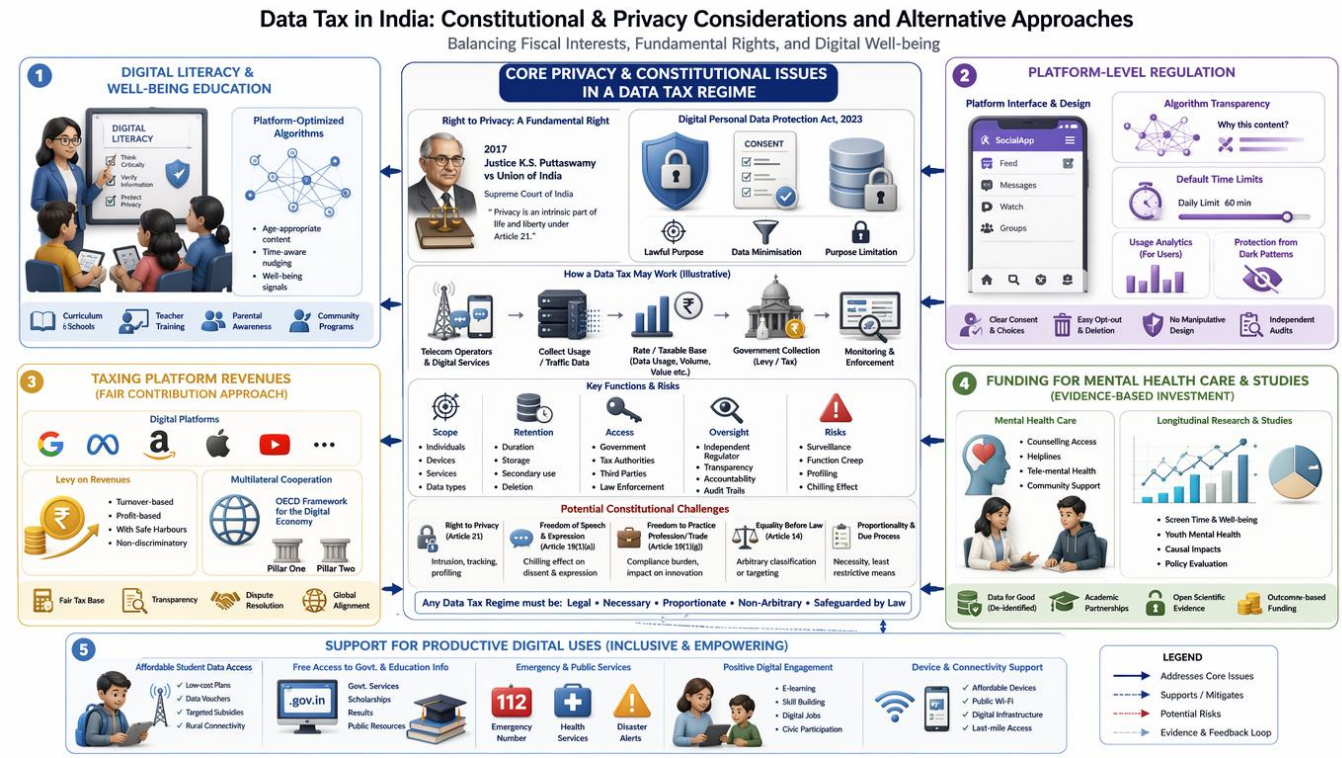

Fig -11: Data Tax in India Constitutional & Privacy Considerations and Alternatives Approaches

The third is based on taxing the revenues of the platforms, not the consumption of the users. India already has an equalization levy on a portion of the digital advertising revenue of foreign platforms. This idea could be broadened or developed, with the idea that companies that are creating a lot of value from Indians should contribute accordingly to the public coffers. Although the two pillar framework for international taxation proposed by the OECD is far from ideal, it would provide a multilateral solution to the problem and would not lead to a race to the bottom.

The fourth is funding for mental health care and studies. While the issues of youth well being are common to all countries, the answers should be based on facts not assumptions. A tax on consumption would be a more indirect approach to the problem than a funding of longitudinal research on digital habits and mental health, along with increased access to counselling and support.

The fifth is a structure to support productive digital uses. Making data more affordable for students, making government and education information free, and eliminating charges for emergency services can help

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change the relative cost calculus in favour of positive uses without applying a uniform charge. Some of these mechanisms are already in place, albeit in a fragmented fashion and could be extended.

All of these alternatives have a similar principle. They address the specific issues which have led to the data tax proposal without undermining the basics of affordable connectivity that has driven India's digital progress.

13. THE PHILOSOPHICAL DIMENSION PRODUCTIVITY, LEISURE, AND THE ROLE OF THE STATE

The data tax idea is based on an unstated pecking order of the various things that can be done with data, with the most productive activities education, commerce at the top and the least productive activities entertainment, socializing at the bottom. This hierarchy needs to be questioned.

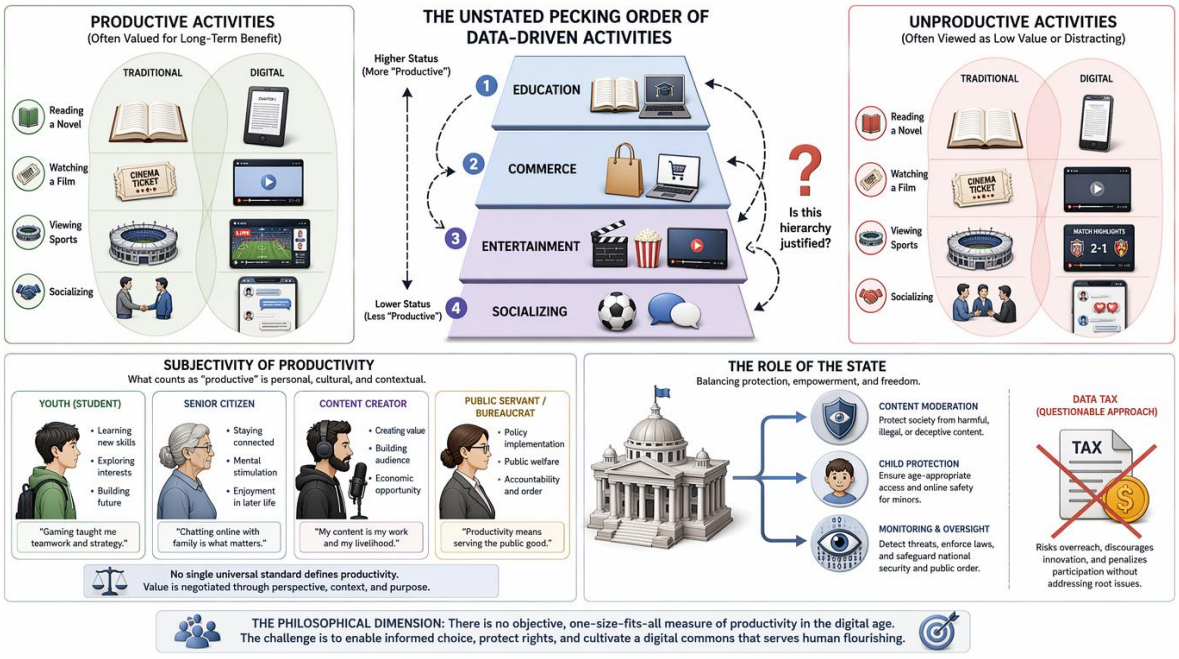

Fig -12: The Philosophical Dimension Productivity, Leisure, and the Role of the State

The dichotomy of productive and unproductive activity is an old philosophical concept that can be traced back to classical economics and to modern utility theory. But it doesn't all fit so well in the digital world. Does reading a novel have a positive impact. Most societies would answer Yes, because they consider literature as a cultural asset and a source of personal gratification. Does watching a movie help you to gain knowledge? Film is believed to be an art. Is it a good use of time to watch a sports team. Sport generates vast amounts of economic activity, and social cohesion. Do you talk with friends and does it help. Social connections are fundamental to the wellbeing of humans. Why is it that these activities are productive if done in traditional media, and are not productive if done online. The answer, which is seldom discussed, is that online versions are more excessive or addictive than older versions. In some instances, this may be the case, but the policy intervention should focus on the addictive nature of the platform, not the actual human actions of reading, viewing or socializing. The other question is whose definition of productivity is it anyway. There are vastly different opinions as to what is a good use of time among different generations, cultures and economic classes. If a creator has income from short video, then he is doing commerce. A retired individual who is viewing travel vlogs is experiencing leisure in the sense that he or she is doing it as a result of work. A teen who

is texting friends is developing his social skills. A bureaucratic definition of productivity would always give preference to some uses over others, and it would most likely be the uses that the definers are interested in, not the uses that users are interested in.

It is also disputed what part the state should play in this mediation. The liberal democratic tradition views it as generally desirable that adults have the freedom to spend their time and attention in any way they want, except where it does harm to other people. Interventions that involve taking away choices from individuals for the sake of behaviour need to be well justified and it is hard to see how this can be done for such diverse and somewhat unclear behaviours as the use of social media. But it does not imply that the state is not involved in the formation of digital environment. Moderating content, child protection, and monitoring are legitimate functions. But, taxes on access to discourage consumption are a very crude and loaded way of intervening, and one that is somewhat at odds with the general philosophy of personal freedom.

14. PROGRESSIVE DIGITAL TAXATION FRAMEWORKS

14.1 Lessons from Global Practice for Indian Policy Design

The discussion on digital taxation in India has been a binary one, either a flat per GB tax or the existing tax regime. However, the international experience shows that progressive and well designed digital taxation regimes can be effective to meet fiscal goals while ensuring digital inclusion. A study of the above frameworks can provide valuable lessons for Indian policy making.

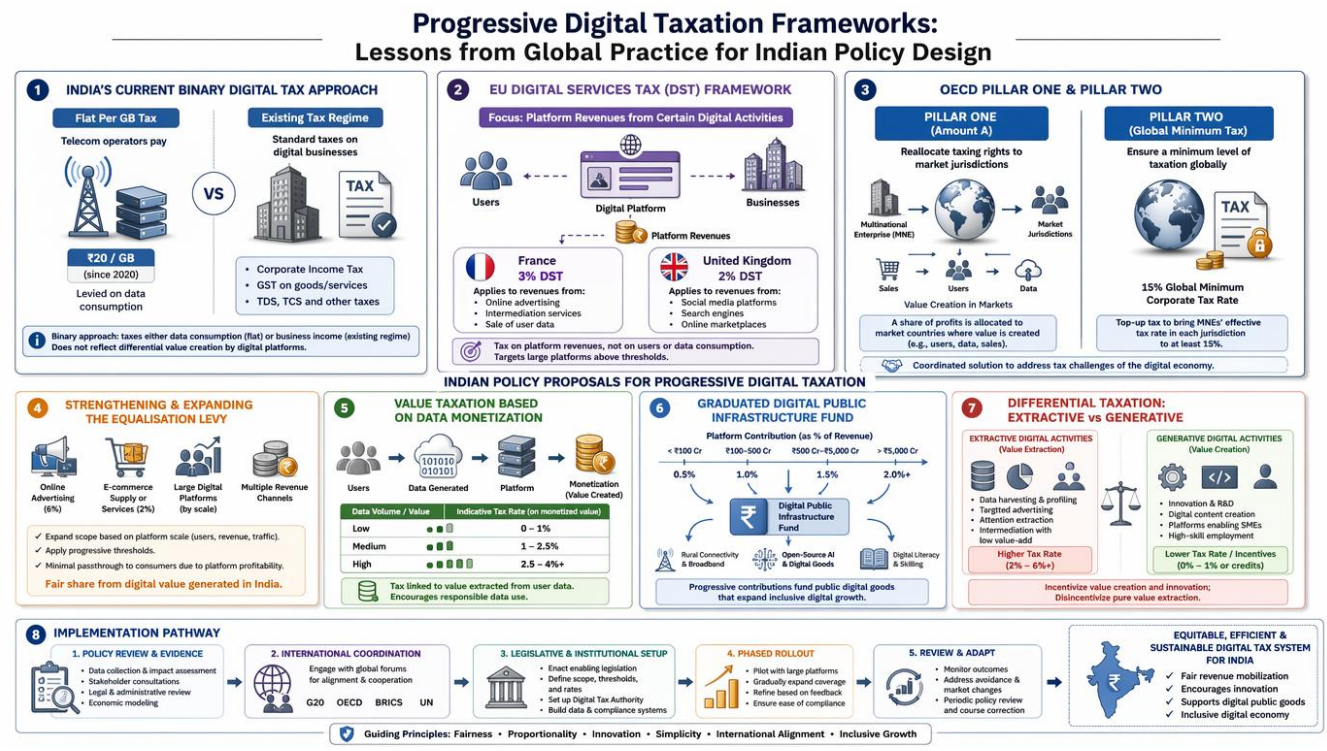

Fig -13: Progressive Digital Taxation Frameworks

The most popular model is the European Union's Digital Services Tax framework, which focuses on the revenues of platforms, instead of on the consumption of users. France's 3% digital services tax, which was

implemented in 2019, raised about 700 million euros a year, but had no impact on the price for the end user. The two per cent digital services tax in the United Kingdom followed a similar course It's a tax that has been implemented on large platforms with network effects, which can generate revenue without imposing a cost on the consumer. The OECD's Pillar One and Pillar Two framework, which was agreed to in 2021 and is being rolled out gradually since 2023, is the most comprehensive global initiative to coordinate digital taxation, aimed at making sure that multinationals pay their fair share in the countries where they operate and value is created.

As for India, the scholarly work of Rao and Sengupta 2022 and the National Institute of Public Finance and Policy has suggested that the current Equalization Levy, which was introduced in 2016 and expanded in 2020, is a good starting point which could be strengthened instead of being replaced. The levy, which has been at six per cent on online advertising and two per cent on e-commerce supplies by non-residents, has brought in increasing revenues without causing any friction on the consumer side. This could be a progressive expansion, with the size of the platform, profitability and number of users in India in mind, to achieve revenue goals without losing the affordability that has been the key to digital inclusion.

Another innovation to be considered is value taxation based on data monetization and not data consumption. Researchers like Zuboff (2019) and Couldry and Mejias (2019) have noted the ways in which platforms monetize the data they create, and how they generate wealth which is not often taxed where it is mined. A data monetization tax that would be based on the volume and value of data processed by platforms for Indian users for commercial purposes would bring tax incidence more in line with value creation. However, implementation would need to be coordinated with the Digital Personal Data Protection Act, 2023, and the regulatory framework to monitor data flows is becoming more and more available.

The third approach is a graduated contribution to a Digital Public Infrastructure Fund from platforms. The success of Aadhaar, UPI and the overall India Stack has proved the worth of the public digital infrastructure in India. A small contribution percentage on the big platforms, proportionate to their revenues in India, can be used to fund the growth of public digital goods such as rural connectivity, open source AI infrastructure and digital literacy programs. There are some parallels with the universal service obligations in South Korea, and the FUST telecommunications fund in Brazil.

The fourth innovation is the differentiation between extractive and generative digital activities, with differential taxation. This can be achieved by designing tax systems that encourage value creation rather than value extraction, as Mazzucato (2018) has done, and apply higher tax rates to the latter than to the former. This Pigouvian strategy is able to internalize the externalities and promote socially useful innovations.

In India, there are a number of steps in the implementation pathway. Firstly, the Central Board of Direct Taxes and Ministry of Electronics and Information Technology should order a thorough examination of the current digital tax instruments, to look for gaps and opportunities to consolidate. Secondly, India's chairmanship of the G20 and BRICS offers an opportunity to promote a coordinated set of international principles that will stop tax base erosion without compromising the policy space of countries. Thirdly, a phased approach, starting with platform contributions to digital public infrastructure and moving towards more full-fledged frameworks, would enable institutional capacity to grow with policy ambition.

The literature clearly indicates that good tax design can go hand in hand with digital growth. Bird and Zolt (2008) showed that it is the design of a tax rather than the tax rate that is of greater significance for both revenue and equity considerations. But evidence informed design can lead to simultaneous progress on both

goals, and India has the institutional and technological infrastructure, and policy experience, to create such designs.

15. PUBLIC DIGITAL INFRASTRUCTURE AS A PATHWAY TO INCLUSIVE INNOVATION

India is now a global leader in creating public digital infrastructure, which is also known as Digital Public Infrastructure (DPI). The achievements of Aadhaar, Unified Payments Interface, Digital Locker system and the Open Network for Digital Commerce are a unique policy paradigm that has garnered academic interest around the world. Looking at DPI as a possible alternative to the goals of revenue and inclusion that underlie the per-gigabyte data tax proposal provides much insight into how innovation can be used to benefit society without regressive costs to citizens.

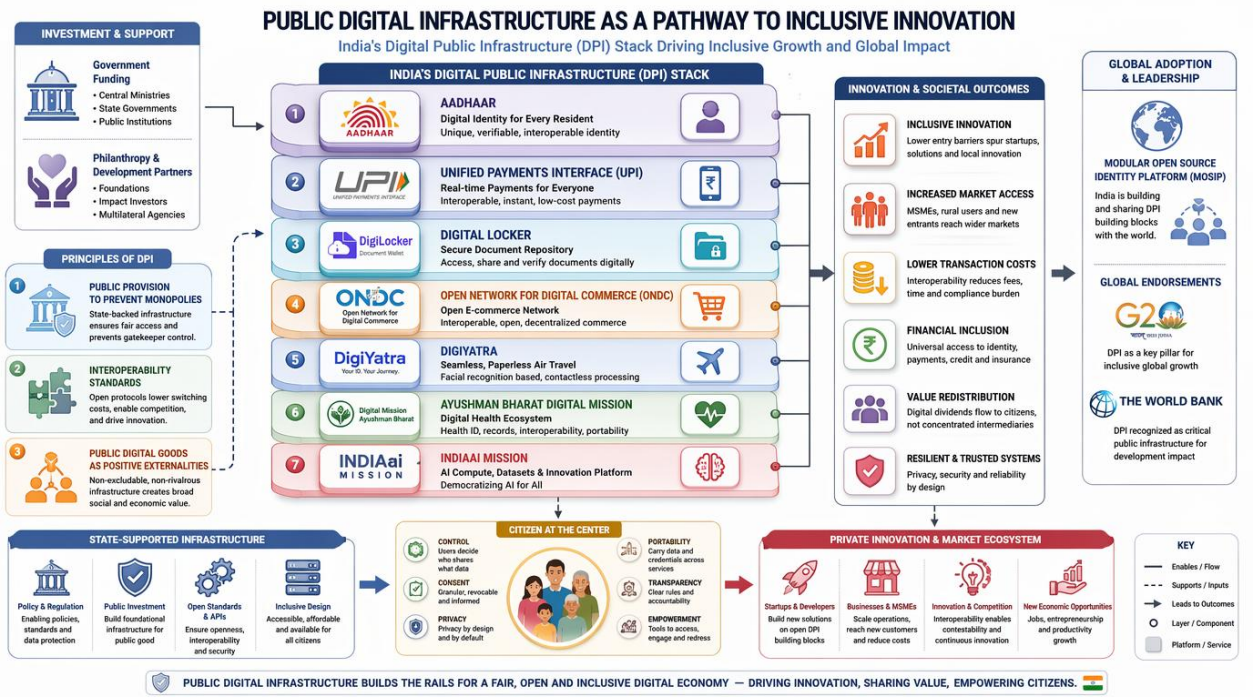

Fig -14: Public Digital Infrastructure As a Pathway to Inclusive Innovation

The key academic work that inspired thinking on DPI is the work of Nilekani and Shah (2015) on the India Stack, which expressed the vision of a layering of public digital goods that support the state as well as private innovation. The Centre for Digital Public Infrastructure and the Bill and Melinda Gates Foundation have since reported on the workings of DPI to reduce transactions costs, increase market access and achieve financial inclusion at scale. In 2024, UPI had over 16 billion monthly transactions, proving that public digital infrastructure can scale up to match or surpass private platform options.

There are three principles of the economic logic of DPI, all of which appear in the academic literature. First, there are network effects in digital systems that can generate natural monopolies, and public provision can be a way of avoiding rent extraction by the private platform owner. Second, interoperability standards lower switching costs and allow for application layer competition, which helps to spur innovation while avoiding platform capture. Third, Public Digital Goods have positive externalities that warrant public investment, especially if private incentives lead to underinvestment in inclusive design.

There are a number of innovations in DPI that could provide a way forward to resolve the issues that are driving up proposals such as the data tax. Launched in 2022, The Open Network for Digital Commerce is an example of how public protocol layers can revolutionize e-commerce and make it accessible to small sellers, without the need to pay high commissions to intermediary platforms. Alok and Ghosh (2023) indicate that ONDC can help in redistributing the value from the middlemen to producers and consumers by reducing the platform commission from 20 to 30 percent to less than 5 percent. Other examples of public digital infrastructure that can generate value without extracting rents from users include the DigiYatra system for airport identity verification and the Ayushman Bharat Digital Mission for health records. Both exemplify a model of state supported infrastructure with private innovation and public accountability and citizen control.

One key area of focus is public AI infrastructure. The India AI Mission, which was approved in 2024 and is estimated to cost around 10,000 crore rupees, is an early effort towards creating public computing infrastructure, foundational datasets, and algorithmic resources that will be accessible to researchers, startups, and government agencies. Researchers like have recorded the centralisation of power in the hands of a few actors with ample resources, but public infrastructure can provide a counterweight to help democratise access to advanced AI capabilities. Funding for DPI needs to be given due policy consideration. The current system is based on a mix of central government funding, state government funding and philanthropy. An alternative, more sustainable approach would be to combine platform contributions, as detailed in Chapter A, and user-side mechanisms to maintain affordability. According to several scholars, the Digital India Foundation framework will bring all the funds for DPI under one umbrella with defined governance, transparency in fund allocation and quantifiable results.

Indian DPI is becoming more and more international. The Modular Open Source Identity Platform, which is based on Aadhaar, is being used in the Philippines, Morocco, Sri Lanka and Ethiopia. The DPI has been explicitly endorsed as a development model in the G20 New Delhi Declaration in 2023 and a dedicated DPI practice is set up in the World Bank. The leadership of India is a big soft power advantage and an opportunity for Indian technology companies. The literature leads to a definite conclusion. Instead of trying to tax digital consumption to collect revenues or limit the use of technology, India should invest more heavily in its public digital infrastructure, thereby increasing the pie, making it more evenly distributed and laying the groundwork for future innovation. This is in keeping with the developmental state tradition and taking advantage of India's unique capabilities in technology and institutional design.

16. BRIDGING THE DIGITAL DIVIDE RURAL CONNECTIVITY, AFFORDABILITY, AND INCLUSIVE INNOVATION

The per-gigabyte data tax proposed needs to be considered in the light of the fact that the digital divide is a reality in India. Although mobile internet penetration has made tremendous strides, there are still huge gaps in the adoption of mobile internet between rural and urban, gender, income and linguistic groups. The gaps and the innovations that can fill them provide an alternative policy pathway that focuses on inclusion rather than on revenue extraction. There is a large body of empirical literature on the digital divide in India. The Internet and Mobile Association of India (IAMAI) and LIRNE Asia network have been observing rural internet penetration to be 20-25 percentage points lower than urban penetration, with overall penetration more than 60 percent. The gender disparity is even greater with NFHS-5 data showing that 33 per cent of rural women have ever used the internet compared to 55 per cent of rural men. The material implications of these gaps are for economic opportunity, levels of education and political participation.

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As Gurumurthy and Chami (2019) have pointed out, the digital divide should not simply be seen as a lack of access but as differential ability to reap the benefits of digital technologies. Beyond network availability, this conceptual framework based on Sen's capability approach argues that there are other factors that are crucial for meaningful digital inclusion: affordability, relevant content, digital literacy, and appropriate devices. There are opportunities for innovation in each dimension that can help to promote inclusion without creating extra costs to users.

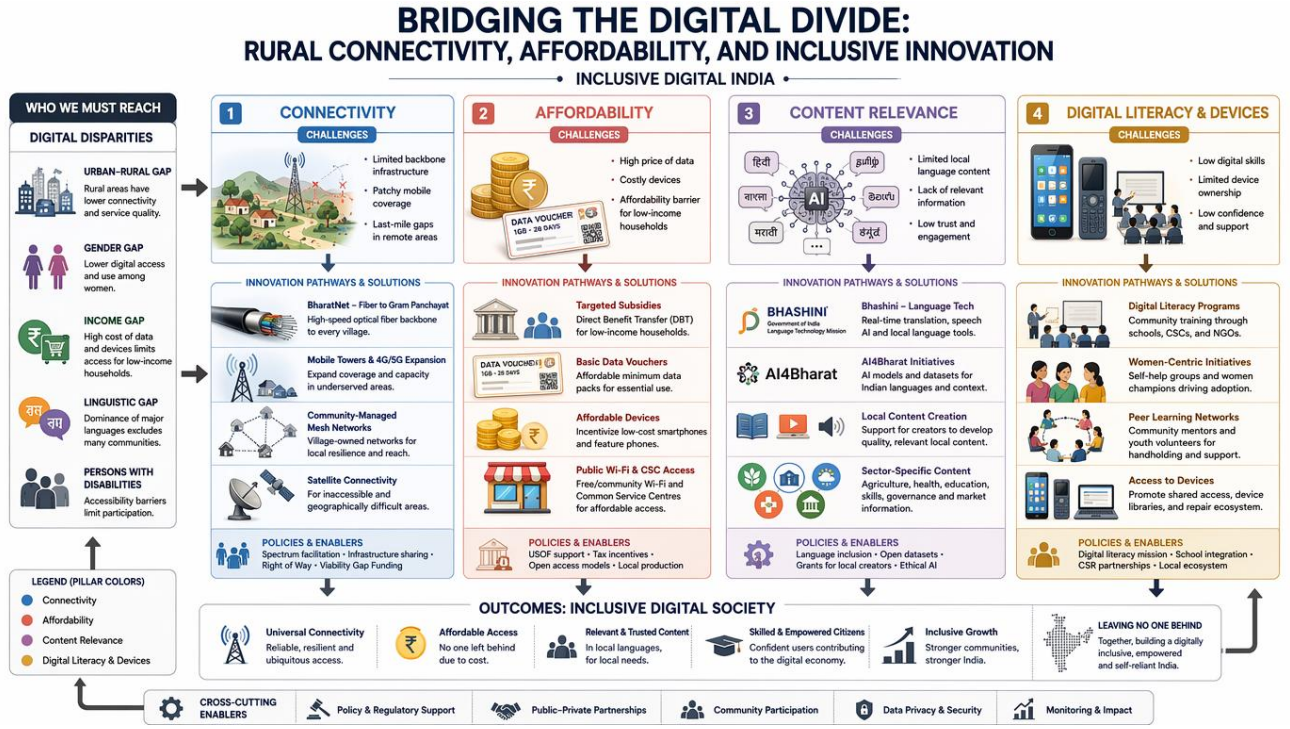

Fig -15: Bridging The Digital Divide Rural Connectivity Affordability and Inclusive Innovation

The availability of the network has improved significantly with BharatNet connecting more than 200,000 gram panchayats with optical fiber. But last mile connectivity is still an issue and last mile fiber penetration in rural households is less than 12 per cent. Examples of innovative solutions included in the technical literature are community owned mesh networks, low Earth orbit satellite networks and the use of the TV white space spectrum. The Gram Marg project at the Indian Institute of Technology (IIT) in Bombay has shown that the community managed wireless networks can provide low-cost connectivity to remote areas, at a much lower cost than traditional deployments.

There are a lot of users for whom the price is a limiting factor. Although India has one of the lowest data prices in the world, the 2024 data price hikes have made it difficult for the poorest 20% of the population to afford the minimum monthly recharge. Galperin (2017) and others have indicated that targeted subsidies, which can be created using the Direct Benefit Transfer infrastructure, can be used to solve the problem of affordability without distorting markets. A Digital Inclusion Voucher system in which a basic amount of data is allocated to households with an income below a certain limit would be in sync with the overall welfare system in India.

The digital divide is a dimension that is not well appreciated: content relevance. The study conducted by Kumar and Rangaswamy (2013) has revealed that the content offered on digital services is not relevant to the

rural users' needs, and in their local languages. This gap is filled by the Bhashini initiative, which is working towards creating AI translation between Indian languages. The AI4Bharat consortium at IIT Madras has developed the basis of language models for 22 Indian languages, which will help with the development of content and services at scale.

There is mixed evidence for the effectiveness of digital literacy interventions. The Pradhan Mantri Gramin Digital Saksharta Abhiyan has so far reached out to over 50 million rural citizens, but studies by the National Council of Applied Economic Research indicate that retention and meaningful use are limited. Pedagogical innovations such as community-based peer learning and mobile-first instructional design can provide a way to more lasting results.

Device affordability is the last dimension. With the growth of sub-7,000 rupee smartphones, access has increased but those using feature phones, which are more than 250 million, are still digitally limited. To address this, innovations have been introduced, like the JioBharat phone, which was launched in 2023, to provide smartphone like services on feature phones. A further reduction of the costs of devices for low income households could be achieved by public procurement programs that group together demand from different welfare schemes.

The cumulative argument is that it is not additional taxes that are going to help bridge the digital divide, it is continued investment in inclusive innovation. The productivity, education and welfare benefits of investments in policy resources in the areas of connectivity, content, capacity and devices are compounding. There is ample evidence in the literature that inclusive digital infrastructure is cost-effective as it leads to higher economic activity and higher income tax and GST revenues.

17. BEHAVIORAL APPROACHES TO DIGITAL WELLBEING

17.1 Evidence-Based Alternatives to Taxation

One of the driving forces behind the per-gigabyte data tax proposal is a fear of overconsumption of data, excessive screen time, and social media addiction and more generally, digital overconsumption. These are valid concerns and there are some early signs of this, but, taxation is a blunt tool for dealing with these concerns. There is now a wealth of behavioural science evidence that provides more effective, precise and equitable ways of promoting digital wellbeing that do not limit access for those who rely on the internet for critical needs.

The evidence base of digital wellbeing issues has been significantly strengthened. Twenge, Haidt and their colleagues have found some correlation between high social media usage and poor mental health in adolescents, especially in girls. The 2023 study in Nature Human Behaviour indicated that there are small but statistically significant negative relationships between social media use and adolescent wellbeing, but the impact sizes are smaller than is often thought. Researchers at NIMHANS have studied the Indian context and have found that there is an increase in the use of the internet among the urban youth and this is causing an increase in disorders related to the Internet. But the policy response needs to take into account the diversity of digital use. The majority of India's Internet traffic is utilitarian from UPI transactions to accessing government services, educational material, and economic activity by small businesses. A uniform tax on data consumption is a blunt instrument that penalizes good uses of data and does not provide any rewards for good uses of it, with the goal of tackling bad uses of data. Behavioral economics has more specific alternatives.

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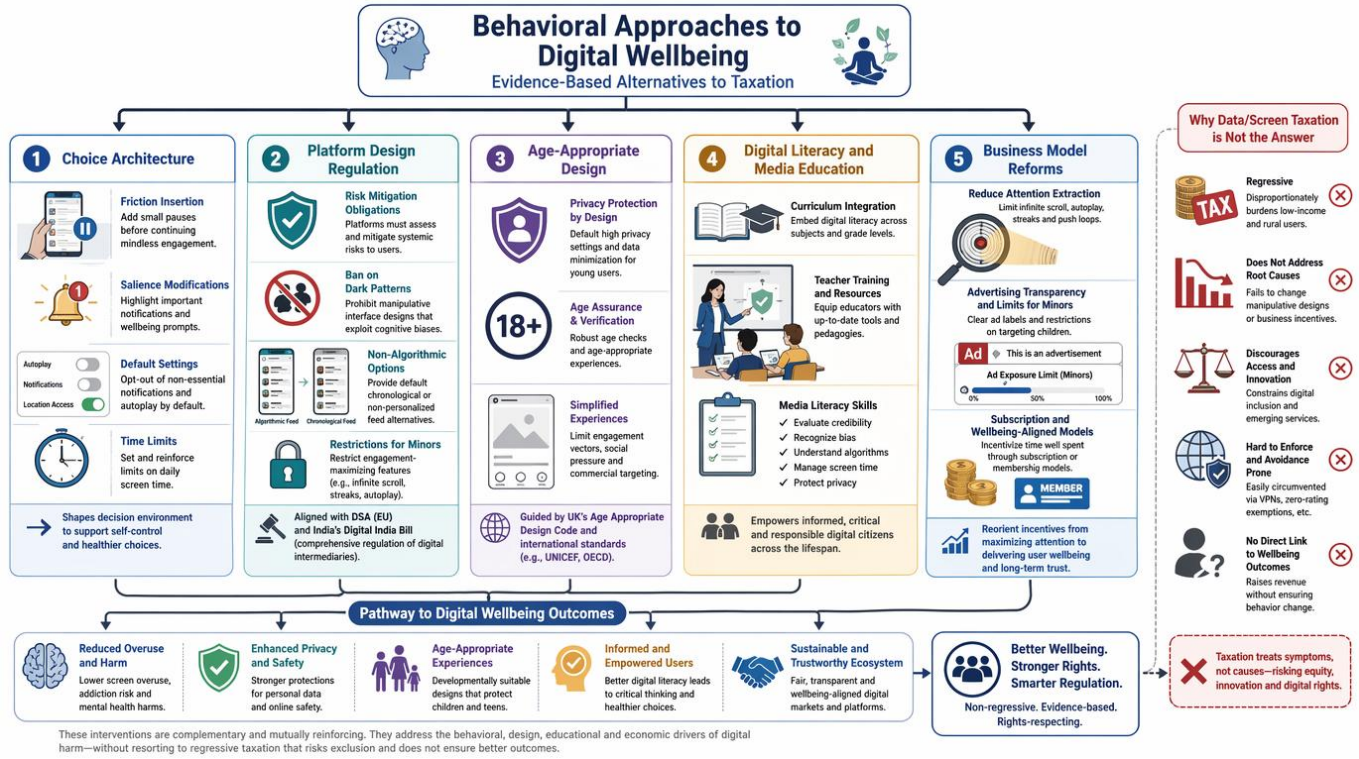

Fig -16: Behavioral Approaches to Digital Wellbeing

The first type of alternatives is based on choice architecture, which was popularized by Thaler and Sunstein (2008). Friction insertion and salience modifications can have a large impact on behavior without limiting choice, and default settings can have a significant impact conducted research that revealed that users who were given usage information and imposed time limits on their own social media use decreased their social media usage by about 23 percent, but did not report any decrease in wellbeing. Low cost regulatory interventions include mandatory time reporting, enabling wellbeing tools by default, and friction based interventions on infinite scrolling.

The second type of regulation is platform design. From 2024, the Digital Services Act of the European Union (EU) will make very large platforms responsible for evaluating and reducing systemic risks, such as risks to mental health and to minors. Similar provisions could be incorporated in India's Digital India Bill which is under consultation. Design requirements that have been successfully piloted in the literature include the ban on dark patterns, the requirement for a non-algorithmic feed option and the restriction of engagement maximizing features for minors.

The third is based on age appropriate design. Under the Age Appropriate Design Code which came into effect in 2021, the United Kingdom has mandated that platforms provide default privacy protection and limit features that encourage users to engage with the platform, particularly if they are under the age of 18. The 5Rights Foundation's research has shown that there is a lot of change in platform behaviour after implementation. Such interventions are already available in the existing IT Rules, and the Digital Personal Data Protection Act, although the implementation is still in its infancy.

The fourth one is digital literacy and media education. Media literacy interventions have been shown to significantly enhance people's capacity to assess online information, among others by the Stanford History Education Group. The integration of digital literacy into the school curriculum through teacher training and the provision of new pedagogical resources can have lasting impact and build over time. Such integration is envisioned in the National Education Policy 2020, but has been inconsistent.

The fifth category seeks to consider the business models behind engagement-maximizing design. Researchers such as Wu (2017) have suggested that attention extraction is the root of the digital wellbeing issues and that a change in incentives at the source can be achieved with reforms that target advertising based business models. Proposals range from additional requirements for advertising disclosure, to limiting targeted advertising to minors, to tax breaks for subscription-based business models that incentivize platforms to do what's best for their users.

Comparative evidence is always in favor of behavioral and design based interventions as opposed to consumption taxes. In 2023, OECD published a systematic review of digital wellbeing policies in 27 countries, which found that design regulation of platforms can have tangible impacts, and that taxation policies have limited impact and high equity costs. India has the power to enact evidence based policies that balance concerns around digital wellbeing with non-regressive policies for the general population, and the institutional machinery to do so.

18. DATA GOVERNANCE, AI ETHICS, AND THE REGULATORY INNOVATION FRONTIER

The issue of data taxation is not a standalone one, as it is closely linked to the issue of data governance. In the process of creating one of the world's largest digital economies, the regulatory regime that regulates data transfers, algorithmic decision making and AI systems will determine how digital benefits are distributed, and the legitimacy of any fiscal instruments. This chapter explores the regulatory innovation frontiers and suggests that India has the potential to create governance regimes that are globally influential and can be an alternative to the extractive taxation regimes.

Since the European Union's General Data Protection Regulation (GDPR) went into effect in 2018, the scholarly literature on data governance has grown in a rapid fashion. The Brussels Effect has been the subject of research by Bradford (2020) which has documented the influence of GDPR on the norms for data protection globally through regulatory diffusion. India's Digital Personal Data Protection Act, 2023, is a unique framework that incorporates European concepts and principles, tailored to the developmental needs of India. As well as the Centre for Communication Governance at NLU Delhi have offered scholarly evaluations of the strengths and weaknesses of the framework of implementation of the Act.

One of the key innovations introduced by the Indian data governance framework, as outlined in the DPDP Act and the Account Aggregator framework, is the concept of consent managers and data fiduciaries. The Indian model is based on the idea of building intermediary institutions that can help to make consent scalable, as opposed to the European model which focuses on enforcement of individual rights by regulatory bodies. Find that such an institutional innovation may be more successful in settings where the individual enforcement power is weak but there are still implementation issues.

The AI governance horizon is filled with opportunities and risks. In 2024, the European Union (EU) finalized its AI Act, a risk-based framework which bans specific uses, introduces regulatory requirements for high-risk applications and transparency obligations for general purpose AI systems. India's stance has been more of

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Volume: 05 Issue: 02 | April – June 2026 | ISSN: 2583-5602 | www.puirj.com

an enabling one, as expressed in the IndiaAI Mission and the NITI Aayog Responsible AI Principles, which focus on fostering innovation while establishing voluntary standards. However, this has been contested by scholars like Marda (2018) and Sundar Rajan (2022) who believe that such a strategy can lead to the continuation of algorithmic harms in welfare administration, criminal justice, and credit allocation, among other areas, where algorithmic decisions disproportionately affect marginalized populations.

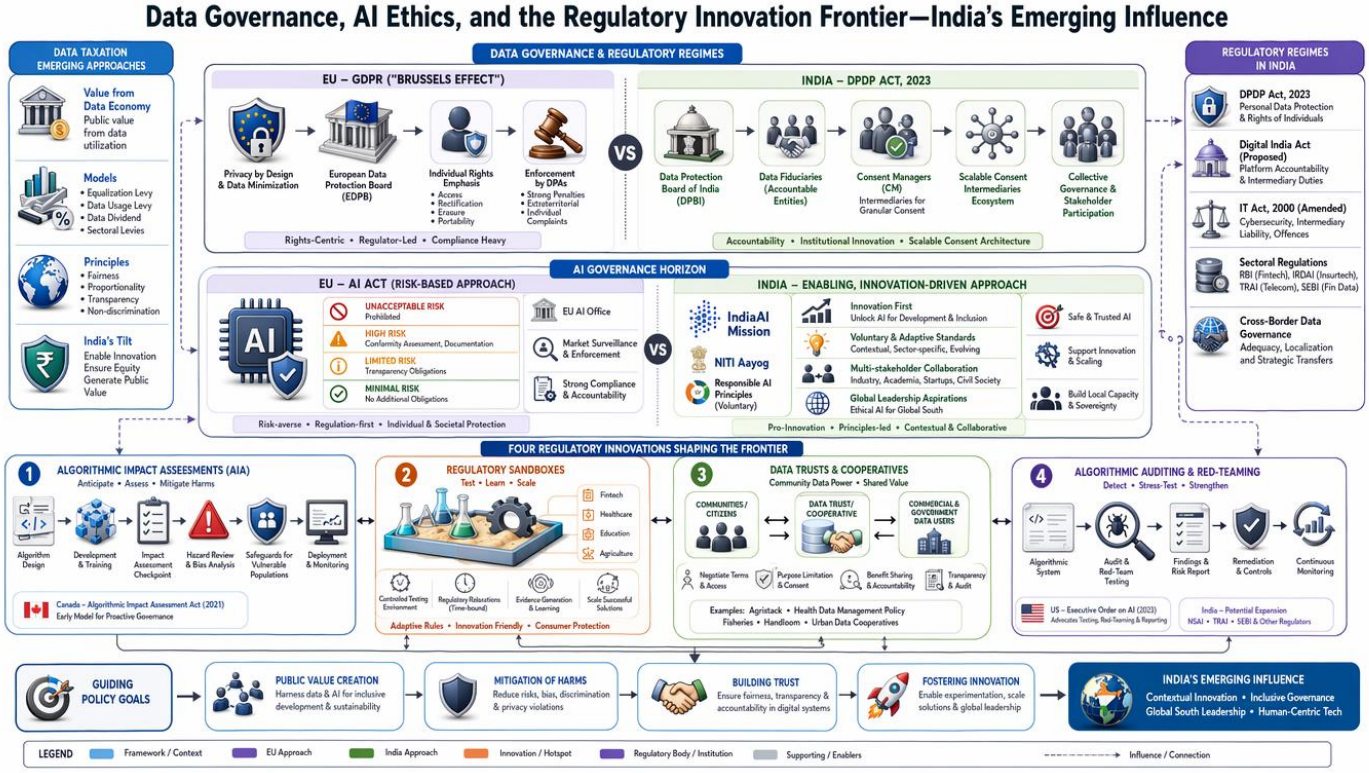

Fig -17: Data Governance, AI Ethics, and the Regulatory Innovation Frontier India Emerging Influence

The literature suggests that there are a number of regulatory innovations that can balance innovation and accountability. Algorithmic impact assessments are similar to environmental impact assessments, and would mandate public sector deployers of AI to assess and disclose potential harms before deployment. In 2019, Canada adopted a Directive on Automated Decision-Making, which offers an early implementation model. The potential for a welfare exclusion problem, as observed in the studies on the implementation of Aadhaar in the PDS in Jharkhand and other states, could be avoided through the application to welfare and public administration systems.

The second innovation is regulatory sandboxes, which enable the testing of new technologies in a regulated environment. The Reserve Bank of India's regulatory sandbox for fintech has proven this model to be effective and comparable models can be implemented in the healthcare, education, and agriculture sectors for the use of AI. However, Allen (2019) proposes that a well-designed sandbox can overcome the innovation regulation trade-off by producing evidence on the performance of the technology in real world conditions.

A third innovation is the data trust and data cooperative, which can be used to establish collective governance structures for data resources. The theoretical framework has been developed by Delacroix and Lawrence 2019 and empirical exemplifications through pilot projects in the health sector, agriculture and

urban governance provide further insights. India's Agristack and the proposed Health Data Management Policy provide infrastructure that could facilitate data trust models where communities could negotiate the terms of use of data with commercial actors as a whole.

The fourth innovation is algorithmic auditing red-teaming requirements. In October 2023, the United States released an executive order on AI safety, which includes mandated safety testing for advanced AI systems. The National Strategy for Artificial Intelligence (NSAI) in India may be expanded to include the same for AI systems used in critical areas. Technical auditing has been showcased by both the Telecom Regulatory Authority of India and the Securities and Exchange Board of India, which could be scaled up to algorithmic systems.

The cumulative argument is that the policy arena for digital governance is more significant than fiscal extraction, and that regulatory innovation is the most significant. Good governance creates public value through the mitigation of harms, facilitation of trust and the provision of conditions for ongoing innovation. There is keen interest in India's regulatory initiatives in the international community and well considered regulatory frameworks can enable India to become a global standard setter in digital governance. This is a soft power and economic dividend, which is much bigger than any revenue that can be generated from a per-gigabyte data tax and is much more beneficial to the welfare and rights of the Indian citizens that any taxation.

19. THE POLITICAL ECONOMY OF THE PROPOSAL

19.1 Stakeholders, Incentives, and the Road to Adoption or Rejection

Technical aspects of policy proposals seldom make the difference between success and failure. They traverse a political landscape fraught with the interests of various stakeholders, institutional incentives, electoral calculations and coalition dynamics. The per gigabyte data tax, proposed in India, is no exception and understanding the political economy of it is key to predicting the future course of the tax.

The result will be determined by several stakeholder groups. The first is the central government itself which is under constant fiscal pressure due to growing welfare spending and changing buoyancy of indirect taxes. If the revenue source is likely to be around three billion dollars per year and relatively inexpensive to collect, it will attract attention from the Ministry of Finance even if the policy makes little sense. But the same government has poured a lot of political money in Digital India, UPI and the overall connectivity story. This kind of measure, which is easily seen to increase mobile bills, could compromise this branding, especially in the run up to state and national elections.

The second set of companies are telecom companies. As mentioned above, operators are in a dilemma. In general, the Cellular Operators Association of India (COAI) has been against the measures that would come at a higher cost to end users without commensurate revenues. But there is a sense that some operators might consider any policy that introduces the concept of higher charges for heavy users of data especially if future versions could involve platform side levies that are more advantageous for the network operators.

The third set of companies are the platform companies. Meta, Google, Netflix and big Indian companies such as Flipkart, Zomato and Swiggy have a significant presence and lobby in India. They will probably not be seen to oppose a user side data tax, as it won't directly impact their balance sheets, but they will oppose any expansion to include platform revenues. What they want is a measure that if adopted will be limited and not open the door for more taxation of platform activity.

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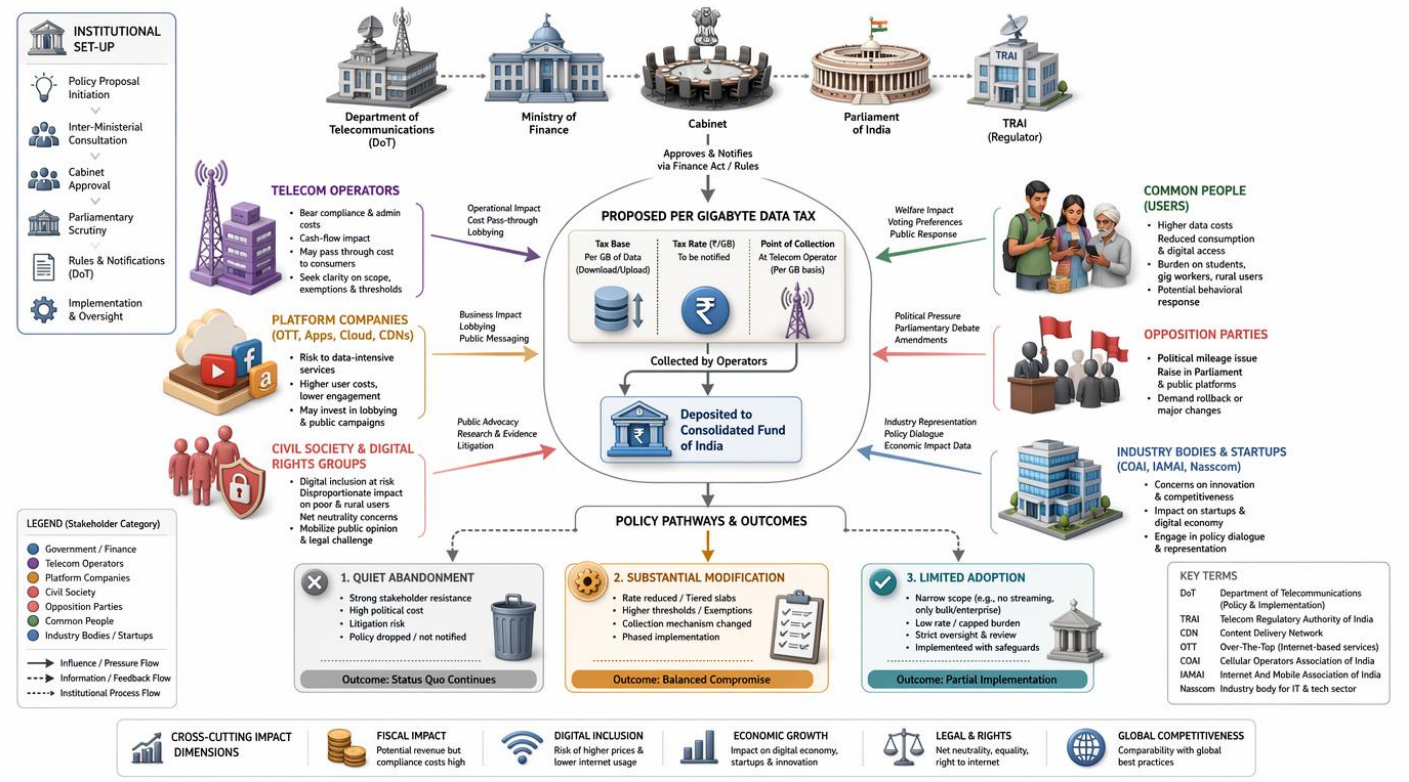

Fig -18: Political Economy of the Proposal

The fourth are civil society groups. There are organizations like the Internet Freedom Foundation, Centre for Internet and Society and Access Now that have proven themselves to be able to garner public attention around digital rights issues. The proposal addresses several issues in their jurisdiction such as digital inclusion, privacy issues of any classification system and the general issue of state powers over digital life. They will probably continue to oppose and have documented evidence.

The fifth group are the opposition political parties. The opposition parties have increasingly made digital policy a political battle ground while the Bharatiya Janata Party led central government would be the one to make the decision. A mobile bill hike would provide a handy talking point for the BJP, especially in states where it has to contest the elections. This political risk could reduce the enthusiasm of the government for adoption.

The sixth group are the common people. Indian consumers have been highly price sensitive in the telecom market, and the impact of the tariff hikes in July 2024 was reflected in the social media buzz and consumer actions. A government tax, rather than an increase in the market price, would be more likely to be opposed, as it would not be legitimate as a consequence of competition.

The institutional set up is also important. The proposal is part of the Department of Telecommunications, and any tax move would have to be endorsed by the Finance Ministry, approved by Cabinet and, most likely, have to pass through Parliament. TRAI would be consulted and historically, TRAI has been very pro-consumer with regard to pricing. A fragmented institutional structure can give rise to several possible veto points where the proposal can get stuck.

There are three possible trajectories. The first is the quiet abandonment, which is the study of the proposal, and the determination that it is impractical and cannot be implemented, without a formal rejection. This is most likely to happen in the history of similar ideas. The second is substantial modification, in which the revenue intention remains the same, but the mechanism changes to platform side levies, the extension of the equalization levy or sector specific contributions. The third is adoption of some sort, either at the highest brackets of consumption or for certain types of use, but that is fraught with the implementation issues noted throughout the article. Monitoring the mobilization of stakeholders, the nature of coalitions, and the evolution of the proposal over time will provide valuable clues to the outcomes of the policy and the trajectory of digital governance in India.

20. FUTURE PROSPECTS THE LARGER CONVERSATION AHEAD

The tensions underlying this particular proposal, will not go away, whatever the fate of the proposal. The question of taxation of the digital economy, which does not fit easily into the traditional fiscal categories, has become a challenge for governments across the world. They want to find ways to respond to issues of youth mental health and platform power. They face the challenge of funding the growth of public services in a slower growth, changing demographic, world. These are not problems that are unique to India and the policies it chooses will be closely followed by other emerging economies.

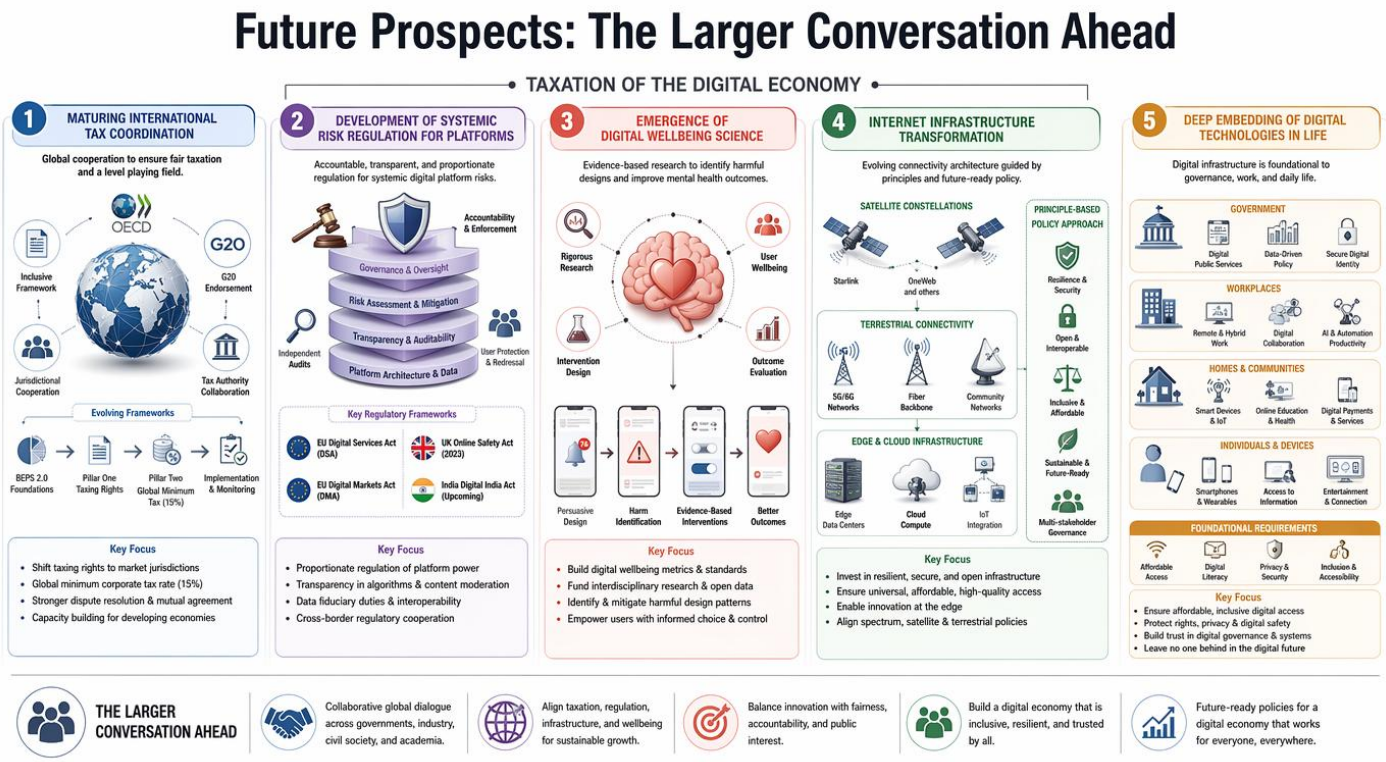

Fig –19: Future Prospects The Larger Conversation Ahead

There are a number of trends that will influence the next stage in this dialogue.
The first is the international tax coordination which is maturing. The work undertaken by the OECD and G20 to develop minimum corporate tax rates, and to shift taxing rights for digital activities, is important and is some

way advanced, although implementation is not uniform. India has been actively involved in these discussions and has its own interests in ensuring that platforms that create value from Indian users do their fair share in contributing to the public revenue.

The second is the development of systemic risk regulation of platforms. New accountability frameworks are being put in place in the European Union with the Digital Services Act and Digital Markets Act, the United Kingdom with the Online Safety Act and others. This is a global trend of which India's own Information Technology Rules and upcoming Digital India Act are a part. These are all different ways of circumventing the direct taxing of users to deal with concerns about platform behavior.

The third one is the new science of digital wellbeing. With the passage of time and the evaluation of the same designs in various contexts, policy makers will be able to better determine which design elements and usage patterns are harmful, and which are not. This evidence base will enable interventions to become more targeted and effective.

The fourth is the internet infrastructure transformation that is underway. 5G, satellite based internet connectivity (e.g. Starlink and OneWeb) and edge computing will continue to alter the cost and architecture of connectivity. Policies that are aimed at a certain technological period can soon become obsolete, implying that a principle based approach should be used instead of taxing schemes.

The fifth is the more profound embedding of digital technologies in governance, working and living. Although there may be a lot of entertainment and social aspects to current use, the trend is towards increased reliance on digital infrastructure for critical functions. This path reinforces the need for continued access to be both affordable and inclusive even more so than it is now.

21. PRACTICAL FRAMEWORKS FOR POLICY MAKERS AND CITIZENS

Beyond the specifics of the proposal, several principles can be gleaned that can help in thinking about digital policy in India and elsewhere.

Wherever possible, policy should aim to tackle structural drivers of behaviour, not individual behaviour. If the issue is the overuse of platforms, then the regulation should be on the design of platforms not on the cost of accessing the internet in general. This is more effective, and less likely to have unintended consequences. Policy should be based on evidence and be subject to change. Speculation and anecdote are not good bases for decision making and will likely lead to poor decisions. Reinvestment in data collection, research, and pilot programs enables learning and course corrections to be done in an iterative manner.

Equity and inclusion should be fundamental values of the policy. Any measures that place a disproportionate burden on lower income users is contrary to the broader development goals being pursued, even if it seems that it is helping to achieve other goals. Distributional analysis should be routinely included as part of all large scale policy proposals. Policy should be in line with constitutional and legal obligations. Fiscal goals are not the only considerations to be balanced against privacy, free expression and equal treatment. They constitute basic principles which limit the design of legitimate policy.

Proportionality of policy to the problem. There is no justification for any and all interventions, even if they are based on legitimate concerns. The tools selected should be commensurate with the size and type of problem, and the costs and benefits of the tool should be considered. The consequences for citizens are also very real. Individuals' decisions on digital use what they use, how they use it and how much they use it are now overlapping with larger policy discussions. Participating in these conversations and promoting inclusive and

rights based policies, as well as cultivating personal practices that connect with well being are all powerful ways of exercising agency.

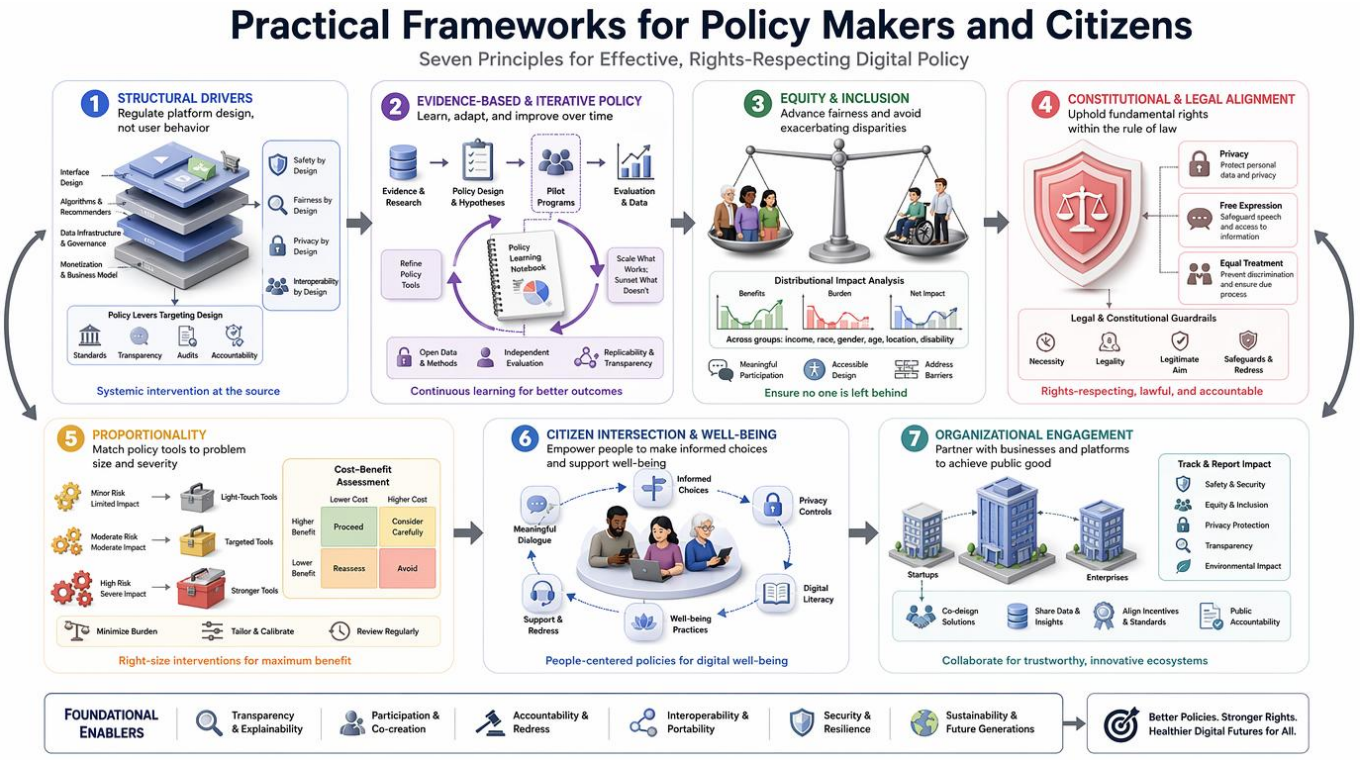

Fig -20: Practical Framework for Policy Makers and Citizens

The proposal is significant for organisations and businesses, as it points to the need to keep track of policy developments which could impact their activities. Businesses relying on low-cost connectivity need to be actively and positively involved with policy makers to make sure the costs of proposed interventions are fully understood. Platforms have a part to play in responding to real concerns about the wellbeing of users, not only because it is the right thing to do, but also because it will defuse any pressure for crude regulatory action.

22. CONCLUSION

At one level, the proposed per gigabyte data tax in India is a rather limited fiscal concept that may or may not be able to make it through the consultation process. More fundamentally, it is a telling example of the struggle of governments to deal with the digital age. It encapsulates the strains of fiscal constraints, paternalistic impulses, regulatory zeal and the reality of everyday life of citizens whose everyday experience is increasingly shaped by mobile internet. In its present shape the tax would almost certainly be regressive, technically foolish, economically damaging and philosophically dubious. It would put pressure on the digital poor more than on the digital rich, wouldn't differentiate between productive and unproductive use and would end up stalling the very transformation that India has been promoting. Experience in Uganda, Hungary and other countries shows that this kind of action is seldom successful in achieving the desired results and is always more likely to increase inequalities. A more positive way forward is to tackle the concerns at hand and implement targeted, evidence based, rights respecting policies. Digital literacy, platform design, fair taxation of platform revenues and structural support for inclusive access can further public interest without impacting

connectivity. What India is discussing today will become a topic of discussion in many other countries in the near future. The resolution of this issue will impact not only mobile bills each month, but the contours of digital citizenship for a generation.

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