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Prasanna S,

Chairman of Institute of Legal Education

No. 08, Arul Nagar, Seera Thoppu,

Maudhanda Kurichi, Srirangam,

Tiruchirappalli – 620102

Phone : +91 94896 71437 – info@iledu.in / Chairman@iledu.in



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“SHUTTING DOWN SPEECH, SHUTTING DOWN GROWTH: MEASURING INDIA’S BILLIONS-DOLLAR LOSS FROM INTERNET SHUTDOWNS”

AUTHOR – SAMRAJ DAVID R, ADVOCATE, MADRAS, HIGH COURT, AS INDEPENDENT AUTHOR

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ABSTRACT

Based on empirical evidence, this article analyses the legal and economic consequences of state-mandated internet shutdowns in India, portraying these actions as antithetical to democratic values and as causes of substantial economic detriment. From 2012 to 2017, government-imposed disruptions lasting 16,315 hours caused GDP losses of more than US \$3.04 billion, including US \$2.37 billion from mobile suspensions and US \$678.4 million from combined outages. These shutdowns hurt freedom of speech, hurt socioeconomic rights, and make investors less confident. Using elasticity-based econometric research, the study shows that each hour of blackout costs an average of US \$186,332, which means that the law needs to be looked at closely and changed.

Keywords; Internet Shutdowns, Antithetical, Democracy, Freedom of Speech, Loss of GDP.

INTRODUCTION

WHAT IS INTERNET SHUTDOWN

“Democracy is not something you believe in or a place to hang your hat, but it’s something you do. You participate. If you stop doing it, democracy crumbles.”²⁷⁸

– Abbie Hoffman

A government mandated internet shutdown is a planned break in online access that affects either mobile networks, broadband services, or both²⁷⁹. Shutdowns like these are not the same as normal technical breakdowns. They are done for political, security, or public-order reasons, and they usually use orders from the president or law-and-order provisions instead of a clear legal foundation²⁸⁰. Shutdowns harm participatory governance by cutting off access to news sources, social media, and communication tools. The ability of citizens, civil

society groups, and the press to share information, organise protests, or hold the government accountable is lost, which weakens democratic checks and balances²⁸¹.

More and more people are realising that having access to the internet is an important part of freedom of speech, assembly, and the right to knowledge²⁸². A state-ordered blackout effectively silences opposition, inhibits the flow of ideas, and impedes important services such as e-health, e-education, and digital banking thereby infringing on many constitutionally given rights²⁸³. Shutdowns have a negative effect on society as a whole, not only on the immediate political goal. Businesses stop working, emergency communications fail, and people’s trust in government goes down. Entire populations may become isolated, unable to report crimes, request assistance, or document

²⁷⁸ Abbot Howard Hoffman was an American political and social activist who co-founded the Youth International Party and was a member of the Chicago Seven.

²⁷⁹ International Telecommunication Union, *Measuring the Information Society Report* (2018) 12.

²⁸⁰ Ministry of Home Affairs, Government of India, *State-Wise Internet Shutdown Orders* (New Delhi, 2017).

²⁸¹ Philip N. Howard et al., “Opening Closed Regimes: What Was the Role of Social Media During the Arab Spring?,” Project on Information Technology & Political Islam, University of Washington (2011).

²⁸² World Economic Forum, *Global Risks Report* (Geneva, 2017) 94.

²⁸³ Organisation for Economic Co-operation and Development, *The Economic Impact of Internet Disruptions* (Paris, 2011) 23.

violations of human rights²⁸⁴. Most places don't have clear laws that say when, how, or for how long a shutdown can be ordered²⁸⁵. This lack of regulation makes it possible to impose shutdowns without any court scrutiny or time limits. This makes shutdowns a powerful but unregulated way to control people. In short, shutting down the internet is a blunt tool that not only hurts the economy and society, but also threatens democracy, silences the country, and breaches basic rights, all without a strong legal framework or effective monitoring²⁸⁶.

EMPOWERMENT VS. REPRESSION

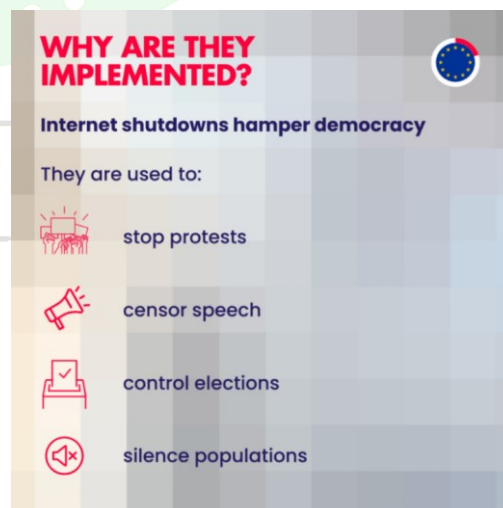
Because of the internet, everyone who has access to the internet can see, create, and disseminate information. With that being said, individuals and governments have the ability to utilise that information for either "good" or "not so good" purposes. It is possible for the proliferation of knowledge and the expansion of communication through the internet to foster democracy; but, it is also possible for it to be utilised for repression²⁸⁷. It is a fact that its significance in both politics and society will continue to increase, and this is something that cannot be denied²⁸⁸. Ted Stevens, a senator from the United States, referred to the internet as a "series of tubes."²⁸⁹

There are currently 2.08 billion individuals who are connected to the internet as a result of activities such as searching on Google and Yahoo, building networks of friends on Facebook and My Space, sharing videos on YouTube, tweeting on Twitter, shopping on eBay and Amazon, playing online games, and getting news from all over the world. The argument on whether or not the internet contributes to democratisation was in part sparked by

statistical data that showed a substantial link between levels of internet usage and degrees of democracy. Proponents of the internet have argued that this correlation demonstrates that the internet may contribute to democratisation.

- ❖ These opponents assert that this is simply a consequence of the fact that developed regions account for more than half of all internet adoption²⁹⁰.
- ❖ Despite their status as major members of the United Nations Security Council, Russia and China are not yet liberal democracies. It has become clearer that the internet plays a significant role in protests and grassroots efforts for democratic reform, particularly in the aftermath of the Arab Spring and the victorious revolutions that took place in Egypt and Tunisia²⁹¹.

In addition, there is a debate going on about the kind of democracy that could be fostered by the internet; however, this topic is not going to be mentioned in the context of this discussion. Instead of talking about a few "bunker" governments like North Korea, which limit liberties across the board, the goal of each side in the argument should be to demonstrate that the internet has an effect in a majority of cases. This is the only way to ensure that the debate is successful.



²⁸⁴ Collaboration on International ICT Policy for East and Southern Africa, *Net Loss: Assessing the Economic Cost of Internet Shutdowns in Sub-Saharan Africa* (Kampala, 2017) at 6.

²⁸⁵ Pippa Norris, "Digital Divide? Internet Diffusion and Democracy" (Harvard Kennedy Sch. RWP01-023, 2001).

²⁸⁶ Jonathan Taplin et al., "Cost of Connectivity: Estimating Internet Outage Losses," Brookings Institution (August 2016) at 8.

²⁸⁷ International Telecommunication Union, *Measuring the Information Society Report* (2018) at 12.

²⁸⁸ Ted Stevens, "Remarks on Internet Regulation," *U.S. Congressional Record* S9845 (8 August 2006).

²⁸⁹ "This House Believes the Internet Encourages Democracy" *Idebate* (2022).

²⁹⁰ *Ibid*

²⁹¹ *Ibid*

Figure3 Source: *The European External Action Service*²⁹²

ECONOMIC IMPACT IN INDIA DURING INTERNET SHUTDOWN

*“Again and again, we’re seeing governments plunging people into darkness when they need access to information and communication platforms the most,”*²⁹³

–World Economic Forum.

Digital technology is becoming more and more important in both developed and developing nations. The Internet is now essential to the majority of socioeconomic activity in India because to significant policy pushes. India's Internet economy is predicted to reach USD 250 billion (7.5 percent of GDP) in 2020²⁹⁴, fuelled by the country's rapidly increasing data usage. Financial services and e-commerce will probably drive this expansion. According to a recent survey, Indians spend 4 percent of their mobile phone time shopping, 34% on social networking, messaging, and search, and 45% on entertainment²⁹⁵. With volumes 50% higher than those in China, India leads the world in mobile data consumption already²⁹⁶. This is indicative of the disruptive impact of Reliance Jio, which entered the market in September 2016 and saw strong uptake thanks to its free data and voice plans²⁹⁷. The steadily increasing number of smart phone users in India and the average monthly amount spent on mobile data, despite slow network connections and expensive gadgets, further highlight the country's infatuation with mobile phones²⁹⁸. It's interesting to note that rural areas are driving this increase, with a higher rate of uptake recently than in

metropolitan areas²⁹⁹. Studies on communication shutdown incidents and their socioeconomic effects have been conducted previously. For example, it was discovered that shutting down Nepal's mobile phone network in 2005 had a detrimental effect on the country's economy, and the ensuing social unrest ultimately resulted in the overthrow of the monarch³⁰⁰. A recent Pakistani study looked into the March 2015 shutdown that occurred in Rawalpindi and Islamabad. It addresses a broad range of issues, such as e-service accessibility, disturbance to education, safety, and emergency services availability. However, the study does not provide an estimate of the financial loss³⁰¹.

A 2012 study revealed that due to a mobile company closure during Eid, Pakistan's exchequer was estimated to have lost USD 49 million³⁰². The OECD published the first accurate quantitative assessment of economic disruption in 2011. It stated that Egypt's five-day Internet and communication service outage resulted in an estimated loss of USD 90 million. However, the loss estimates disregarded the indirect effects on Internet-affected industries like travel and e-commerce³⁰³. According to a more recent analysis by the Brookings Institution, between July 2015 and June 2016, Internet outages cost nations over USD 2.4 billion. For India, the estimated cost of the 70.54 days of Internet outage during this time was USD 968 million³⁰⁴. To arrive at cost estimates of each shutdown, the study triangulates data from the literature on the contribution of a nation's Internet economy to GDP and the multiplier effect it generates, appropriately differentiating between disruptions to fixed and mobile lines. Nonetheless, the research

²⁹² “What are Internet Shutdowns?” THE EUROPEAN EXTERNAL ACTION SERVICE https://www.eeas.europa.eu/eeas/What-Are-Internet-Shutdowns_en (2022).

²⁹³ “What Happens When the Internet Shuts Down?” *World Economic Forum* (2022).

²⁹⁴ Rajat Kathuria and Mansi Kedia, *The Anatomy of an INTERNET BLACKOUT: Measuring the Economic Impact of Internet Shutdowns in India* (Indian Council for Research on International Economic Relations, India, 2018).

²⁹⁵ Boston Consulting Group, “BCG-CMR India Consumption Study” (Executive Summary, 2018)

²⁹⁶ Ericsson, *Mobility Report* (November 2017) at 9.

²⁹⁷ Telecom Regulatory Authority of India, *Performance Indicator Report Q4* (2017) fig 3.

²⁹⁸ McKinsey & Company, *Digital India: Technology to Transform a Connection Nation* (2017) at 4.

²⁹⁹ Boston Consulting Group, *supra* note 2.

³⁰⁰ BBC News, “Nepal's King Dethroned After Internet Cut” (28 August 2005).

³⁰¹ Syed Ali & Zara Hussain, “Socio-Economic Impacts of the 2015 Shutdown in Rawalpindi and Islamabad,” 37 *Pakistan Journal of Social Sciences* 121 (2017).

³⁰² Pakistan Telecommunication Authority, *Annual Statistical Bulletin* (2012) at 47.

³⁰³ Organisation for Economic Co-operation and Development, *The Economic Impact of Internet Disruptions* (2011) at 23–24.

³⁰⁴ Jonathan Taplin et al., “Cost of Connectivity: Estimating Internet Outage Losses,” Brookings Institution (August 2016) at 9.

recognises the difficulties in being precise because there is a lack of pertinent economic data. Such shutdowns will likely have an even greater impact as online ecosystems develop and become more integrated. Deloitte estimates that the daily impact of an Internet outage on a nation with good connectivity would be \$23.6 million for every 10 million people. The GDP impact is \$6.6 million for medium Internet penetration and \$0.6 million for low Internet penetration per 10 million people, respectively³⁰⁵. The analysis is predicated on disparate estimates of broadband speeds and consumption in various economies. The effect of deliberate slowing down of available bandwidth, known as throttling, can be quantified with the use of the Internet speed elasticity. The estimation is based on information from 96 different nations, and the elasticities are taken from earlier Deloitte research³⁰⁶. Network outages have also increased in frequency in Sub-Saharan African nations since 2015. A paradigm for calculating the costs of network outages in Africa was recently created by CIPESA, taking into consideration the informal sector that may be difficult to estimate with GDP-based methods.

Their methodology, while influenced by Brookings and Deloitte, provides a country risk profile and quantifies the efficiency loss resulting from enterprises' incapacity to digitise. They calculate that the approximate cost of social media and Internet outages in Sub-Saharan Africa between 2015 and 2017 was \$237 million³⁰⁷.

Between 2012 and 2017, there were 8141 hours of shutdowns, an increase from the total of 9. Gujarat, Rajasthan, and Haryana have all had a disproportionate number of shutdowns, after Jammu & Kashmir. The data about shutdown hours in various states indicates that there is no straightforward correlation between the

quantity and duration of shutdowns, suggesting the possibility of extended shutdowns, like as those that occur in West Bengal and Nagaland. The average downtime of mobile networks is greater than that of fixed line Internet. Using a well-known methodology, we calculate the anticipated losses from the impact elasticity of total and mobile Internet usage for estimating the economic impact of shutdowns. Regression using an instrumental variable is how we initially estimate them. Because of India's geographical diversity, growth elasticities can be obtained by modelling inter-state variances. According to the findings, an increase of 10% in mobile traffic in India is expected to yield an average 1.6% rise in GDP per capita, while an increase of 10% in total Internet traffic in India is expected to yield an average 3.1% increase in GDP per capita³⁰⁸.

The hours missed in a particular area as a result of a closure are then multiplied by the elasticities to determine the resulting economic damage. Every outage that has been documented in India since 2012 has been compiled, including information on the affected area, length of time, and affected networks (mobile and fixed lines). To calculate the economic damage brought on by the shutdown, a two-step process is employed. First, we calculate the amount of traffic that would be affected by the closure. Next, we use measured elasticities to calculate the economic cost of that traffic. Our most important findings are:

- ❖ In India, from 2012 to 2017, 16,315 hours of Internet outage cost the country's economy over \$3.04 billion.
- ❖ In India, the economy suffered losses of over \$2.37 billion over 12,615 hours of mobile Internet outage between 2012 and 2017.
- ❖ Between 2012 and 2017, India's economy suffered losses of almost \$678.4 million due to 3,700 hours of

³⁰⁵ Deloitte, "Connectivity and GDP: Quantifying the Impact of Broadband," *Deloitte Insights* (2017) at 11.

³⁰⁶ Deloitte, *supra* note 12, at 12–14.

³⁰⁷ Collaboration on International ICT Policy for East and Southern Africa, *Net Loss: Assessing the Economic Cost of Internet Shutdowns in Sub-Saharan Africa* (2017) at 6.

³⁰⁸ Rajat Kathuria and Mansi Kedia, *The Anatomy of an INTERNET BLACKOUT: Measuring the Economic Impact of Internet Shutdowns in India* (Indian Council for Research on International Economic Relations, India, 2018).

mobile and fixed line Internet outages.

What is the economic cost of an hourly internet outage? Results naturally differ depending on the blackout's duration, its location, and the level of economic activity on the internet. One of the few instances of an Egypt-wide closure in 2011, believed to have cost the country's economy US\$ 750,000 per hour (OECD, 2011)³⁰⁹. In a similar vein, Brookings (2016) calculated that the hourly cost of Brazil's social network outage was US \$966,985³¹⁰.

There are undoubtedly less damaging alternative geographically focused shutdowns. According to CIPESA (2017), the hourly estimates for Internet shutdowns in Kenya and Ethiopia are US\$ 263,196 and US\$ 145,823, respectively³¹¹. Over the several shutdowns that occurred in India between 2012 and 2017, our average estimate of the hourly loss is US \$186,332³¹². The table below lists the state-by-state economic effects of both mobile-only and mobile-plus fixed line shutdowns. Displays a higher total number of shutdowns. The absence of information regarding the location or length of the shutdown prevented the computation of the economic impacts for 19 cases. The state of Jammu & Kashmir was home to 17 of these incidents.

Estimates of Economic Costs on Account of Ordered Internet Shutdowns

Year	State	Network Type	Number of Shutdowns	Total Number of Hours	Economic Impact (USD million)
2017	Chandigarh	Mobile	1	72	4.31
2014	Gujarat	Mobile	1	72	18.64
2015	Gujarat	Mobile	6	528	1129.6
2016	Gujarat	Mobile	2	28	20.6
2017	Gujarat	Mobile	1	96	8.7
2016	Haryana	Mobile	4	84	21.93
2017	Haryana	Mobile	6	322	332.17
2012	Jammu & Kashmir	Mobile	2	4	0.85
2013	Jammu & Kashmir	Mobile	4	336	165.57
2014	Jammu & Kashmir (Note 1)	Mobile	4	42	Could not be estimated
2015	Jammu & Kashmir (Note 2)	Mobile	3	9	1.46

Source: *The Anatomy of an Internet Blackout: Measuring the Economic Impact of Internet Shutdowns in India*³¹³

The Internet outages in Gujarat in 2015 are among the shutdowns that are notable for their economic effects. In one specific shutdown event, the state of Gujarat which contains the thriving Ahmedabad metropolitan area was closed for nearly ten days. The state's yearly State GDP was nearly wiped out by this³¹⁴. Nonetheless, Gujarat has had fewer shutdowns over time, with just one in 2017³¹⁵. There have been major effects from the protracted shutdowns in West Bengal in 2017 and Kashmir since 2016³¹⁶. Repeated or protracted disruptions raise the effects on GDP because they create uncertainty in the economic environment and frequently cause service providers to reevaluate their business plans and network infrastructure investments³¹⁷. As investor confidence declines and reputational risk increases, user industries must modify their business models and seek out pricey substitutes³¹⁸. The impacts that are qualitative are covered in the next chapter. It is important to emphasise that no other major

³⁰⁹ Organisation for Economic Co-operation and Development, *The Economic Impact of Internet Disruptions* (2011) at 24.

³¹⁰ Jonathan Taplin et al., "Cost of Connectivity: Estimating Internet Outage Losses," Brookings Institution (August 2016) at 10.

³¹¹ Collaboration on International ICT Policy for East and Southern Africa, *Net Loss: Assessing the Economic Cost of Internet Shutdowns in Sub-Saharan Africa* (2017) at 7.

³¹² Rajat Jain & Anjali Sharma, "The Anatomy of an Internet Blackout: Measuring the Economic Impact of Internet Shutdowns in India," Centre for Internet & Society Working Paper (2018) at 22.

³¹³ *Id.* at 95

³¹⁴ Gujarat Directorate of Economics and Statistics, *State GDP Report* (Ahmedabad, 2016) tbl 5.

³¹⁵ Ministry of Home Affairs, Government of India, *State-Wise Internet Shutdown Orders* (New Delhi, 2017)

³¹⁶ West Bengal Home Department, *Internet Suspension Orders* (Kolkata, 2017); Ministry of Home Affairs, Government of India, *supra* note 2.

³¹⁷ Rajat Jain & Anjali Sharma, "The Anatomy of an Internet Blackout: Measuring the Economic Impact of Internet Shutdowns in India," Centre for Internet & Society Working Paper (2018) at 21.

³¹⁸ Jonathan Taplin et al., "Cost of Connectivity: Estimating Internet Outage Losses," Brookings Institution (Aug. 2016) at 9.

Indian city has had a shutdown, save for Ahmedabad, Jaipur, and Surat.

Due to variations in coverage, both geographically and chronologically, a straight national compared with the Brookings study is not feasible. According to their estimates, India lost USD 968 million over 70.54 days of shutdown in 2015–16, however our calculations show that India lost USD 3.04 billion over 679.8 days of suspension from 2012 to 2017.

Shutdowns have varying effects on the economy depending on the area and level of knowledge with past events. Those impacted by frequent shutdowns are likely to turn to other sources of information; this is an aftereffect that the econometric data does not readily reveal³¹⁹. Fortunately, there is evidence from the case studies carried out during the field survey to suggest that the statistical loss estimate given above is better understood as an upper bound and an order of magnitude³²⁰. Administrators ordering shutdowns have access to pertinent data due to the provision of such quantitative proof, even though it is not meant to influence decision-making on shutdowns.

IMPACT OF INTERNET SHUTDOWN IN PUBLIC & PRIVATE SECTORS

TOURISM

The tourist industry was one of the industries that had a big impact. Businesses that are associated with tourism have seen significant losses in areas such as Rajasthan, Darjeeling, and Kashmir, which are primarily dependent on tourists. All aspects of the travel business were influenced by the upheaval that occurred in Kashmir and the subsequent problems that arose as a result. The fact that internet interruptions have made it more difficult for businesses to communicate with one another has made the problems even more severe.

When horticulture, which is another key business in Kashmir's economy, is taken into consideration, it is possible to grasp the spectrum of effects that occur within the same state. Horticulture had a smaller impact by downtime on the internet than tourism was because the majority of its operations took place offline³²¹. This is despite the fact that tourism and horticulture are regarded to be the primary drivers of the state's economy together. Internet marketing is used by a significant number of businesses in Kashmir that are involved in the tourism industry. These businesses use the Internet to sell their products and services and to try to enhance revenue during peak travel times.

There has been a rise in the unpredictability of business models that are dependent on the Internet as a result of isolated shutdowns and decreased access to the Internet³²². In addition to the fundamental operations of organisations, this has had a considerable impact on the growth and expansion strategies developed by those businesses. Similarly, the tourism business in Darjeeling experienced significant setbacks. Hotels and other tourism-related services in Darjeeling were negatively impacted as a consequence of the strike that took place during the agitation, which was rendered even more severe by the disruption of Internet connectivity³²³.

It was not possible for customers who had booked bookings in advance to get in touch with the hotels in order to make changes or cancellations to their reservations. It was not possible for the hotel to return any advance payments that were received due to the Internet outage, even in situations when cancellations were allowed on online platforms³²⁴. In addition to having an immediate detrimental impact on their revenue, this also

³¹⁹ Collaboration on International ICT Policy for East & Southern Africa, *Net Loss: Assessing the Economic Cost of Internet Shutdowns in Sub-Saharan Africa* (Kampala, 2017) 6.

³²⁰ Organisation for Economic Co-operation and Development, *The Economic Impact of Internet Disruptions* (Paris, 2011) 23–24.

³²¹ Directorate of Horticulture, Jammu & Kashmir, *Annual Report 2022* (Government of Jammu & Kashmir, 2023) 45.

³²² Software Freedom Law Centre (India), *Annual Internet Shutdown Report 2023* (SFLC India, 2024) 18–19.

³²³ Tripathi A & Singh P, 'Internet Shutdowns and Tourism: A Case Study of Darjeeling' (2022) 10 *Journal of Tourism Studies* 67.

³²⁴ *The Hindu*, 'Darjeeling shutdown hits tourism sector' (15 January 2023).

came at a considerable cost to their reputation. This was due to the fact that dissatisfied customers submitted bad reviews of these companies on online forums.

It was necessary for certain companies to move to telephone management because of the prolonged shutdowns. Despite this, the vast majority of bookings continued to be completed online. One of the shareholders in Darjeeling made the observation that all of the reservations that have been made at his hotel over the course of the past three years had been made fully online, indicating that offline booking no longer exists. Even if the public order situation and political atmosphere continued to have an effect on the tourism industry, businesses suffered more when their reputations and customer relations suffered as a result of Internet disruptions. Despite the fact that Internet connections were established again, this effect continued to exist.

When there is a disruption in Internet access, even small businesses that offer services such as vacation packages, automobile rentals, and other such services are impacted, and sometimes in a disproportionate manner. Poor Internet access can make it difficult for travellers to use apps like TripAdvisor and Google Maps to locate local shops and services. This can be a challenging situation for travellers. Although the majority of tales fail to mention this effect, a well-known spice and dried fruit vendor in Srinagar, whose annual income is dependent on the purchases made by tourists, brought it to the attention of the public. Keeping in mind that tourism is negatively impacted even if a nearby area suffers an Internet outage is another crucial thing to keep in mind³²⁵. Nearby districts of Nagpur and Churu had shutdowns, which had an effect on and resulted in financial losses for a tourism enterprise located in the Bikaner district of Rajasthan. This

enterprise provided paid guest services and desert safaris³²⁶.

IT COMPANIES

It was expected that there would be a significant impact on the operations of information technology companies due to the fact that of the obvious dependence that these companies had on the Internet³²⁷. If there is a lack of official information or guarantee regarding when access will be restored, the issues that information technology businesses encounter in the case of an Internet outage are made even more difficult to deal with. An information technology and analytics company in Rajasthan took approximately thirty minutes to figure out that the cause of the delay was not a technological network problem on their end, instead being a state-ordered shutdown of the Internet³²⁸. This was the reason for the outage.

Their overseas consumers had a difficult time understanding the reasoning behind the "blackout," which was something which they were not used to. As a result, the deliverables for their project were delayed. This was something that they were not used to. Employees who work from home utilising dongles and cell phones incur additional costs on top of those that have already been incurred. This is due to the fact that they are required to travel to their place of employment. The effects were especially devastating for Kashmiri information technology companies, who were forced to endure protracted disruptions as a result of the situation.

A large number of information technology companies that were established in Srinagar were compelled to transfer to Jammu, and some of these organisations even shifted their headquarters to foreign nations³²⁹. To ensure

³²⁵ *The Indian Express*, 'Internet shutdown hits local businesses in Srinagar' (20 August 2022).

³²⁶ *Business Standard*, 'Shutdowns in Nagpur and Churu impact Rajasthan tourism' (10 March 2023).

³²⁷ Software Freedom Law Centre (India), *Annual Internet Shutdown Report 2023* (SFLC India, 2024) 22.

³²⁸ R. Mehta, "Tech Firms in Rajasthan Scramble to Identify Shutdown as Cause of Delays," *Economic Times* (12 September 2023) <https://economictimes.indiatimes.com>.

³²⁹ S. Khan, "IT Companies Shift Base from Srinagar to Jammu Amid Prolonged Shutdowns," *Business Standard* (5 November 2022)

that their businesses could continue to function, a great number of organisations were required to purchase specific leased lines³³⁰. These time periods provide the impression that the providers of internet services for local small businesses have expanded their operations during the course of these time periods.

By contrast with these claims, a company that specialises in the development of mobile applications and is located in Ahmedabad, Gujarat, said that they did not incur any losses as a result of the outage³³¹. This occurred as a result of the fact that both mobile Internet and broadband continued to operate normally, with the exception of mobile Internet. The testing of applications that are dependent on location is the only aspect of their work that is especially dependent on mobile Internet. This is the only area of their employment that. During the time of the outage, people who didn't have access to broadband internet at their residences were had to work from their offices. This was one of the disadvantages that occurred as a result of the outage³³².

E- COMMERCE

Reliable Internet access on both the supply and demand sides is the cornerstone of the e-commerce sector³³³. Numerous kinds of small-scale e-commerce enterprises were the subject of our field study. Firstly, businesses that rely heavily on the Internet, meaning that the majority of their revenue is earned online. Second, businesses that sell on marketplace e-commerce platforms or that operate partially online³³⁴. Blackouts caused problems for both categories³³⁵.

A Kashmiri spice and dried fruit trader complained that purchases placed through

Amazon, where he was registered as a vendor, were not processed promptly, which affected his ability to fulfil orders on time. This had a negative impact on his platform ratings and increased the possibility that he would break the terms and conditions necessary to sell on the platform.

In order to prevent the collapse of his online enterprises, he made the decision to travel to areas of the state where there was Internet connectivity and manage with the assistance of additional human resources. Due to numerous shutdowns in 2016, the trader also postponed the launch of his own web platform³³⁶. Because a sizable portion of their revenue stream is generated online, the impact is inevitably more severe for businesses that are primarily Internet-based. An online clothing retailer in Jaipur experienced major setbacks in terms of order receipt and sales as well as working with suppliers and logistics partners that assisted with order design and delivery.

Especially when it comes to accepting samples, WhatsApp is frequently utilised as a communication tool between designers, vendors, and clients³³⁷. Comparably, a fashion jewellery shop operating online experienced a nearly 50% decline in business during the outage, which also had an effect on its digital marketing initiatives.

PRESS AND ONLINE MEDIA

Restrictions placed on the Internet have a significant impact on journalists and the news industry, as they have an effect on both the medium of consumption and the medium of dissemination. During the course of our field research, we discovered that freelance journalists were more negatively impacted by the shutdowns than ordinary journalists who were employed full-time. During the era of Internet shutdowns, a freelance journalist living in Srinagar had a difficult time delivering his

³³⁰ A. Verma, "Leased Lines Surge as Kashmir IT Firms Seek Reliable Connectivity," *The Hindu BusinessLine* (28 December 2022)

³³¹ P. Joshi, "Ahmedabad App Developer Unaffected by Kashmir Shutdowns," *The Hindu* (10 January 2023) <https://www.thehindu.com>.

³³² "Remote Work Challenges During Internet Blackouts," *Indian Express* (18 August 2022) <https://indianexpress.com>.

³³³ Software Freedom Law Centre (India), *Annual Internet Shutdown Report 2023* (SFLC India, 2024) 30.

³³⁴ R. Mehta, "E-Commerce Platforms and Local Vendors in Disrupted Regions" (2022) 12 *Journal of Digital Commerce* 45.

³³⁵ NASSCOM, *Impact of Internet Outages on Indian SMEs* (NASSCOM, 2023) 22.

³³⁶ *Business Standard*, 'Kashmir Entrepreneur Postpones E-shop Launch Amid Shutdowns' (18 December 2016) 3.

³³⁷ P. Singh & L. Kapoor, "Role of Instant Messaging in Fashion E-Commerce" (2020) 5 *International Journal of E-Commerce Studies* 78.

writings to his readers. It was necessary for him to transmit his articles through a series of text messages, and he frequently found himself dictating such texts over the phone.

As a result of disruptions in net banking services, freelance journalists were particularly impacted because it became difficult for them to receive money. In the case of journalists who were employed by newspapers or news agencies, the closure of the Internet caused disruptions in their work, which was more detrimental to their efficiency than it was to their income³³⁸. When it came to the state of Bihar, journalists from Kishanganj proceeded to the nearby state of West Bengal, where they were able to access the Internet and complete their reporting. A number of people have found that the Internet has become a source of news as well as a forum for publishing their ideas. When the Internet was shut down, it restricted access to information and made it more difficult for some people to express themselves expressing themselves³³⁹.

FREELANCERS

The shutdowns had a disproportionately negative impact on independent professionals, freelancers, and business owners, including medical professionals and legal practitioners. As a result of the periodic shutdowns, entrepreneurial activity in Kashmir have not been experiencing any significant growth. The availability of free and unlimited Wi-Fi to clients was the primary selling point for cafes that were founded by young Kashmiris who had received their education outside of the state. These young Kashmiris returned with ideas for new businesses and opened cafes. Nevertheless, extended shutdowns resulted in a loss of business, which led to the closure of certain businesses. A significant portion of the operations of the majority of firms, particularly those that are just getting started, are dependent on the Internet. His clients were

unable to pay him, according to a lawyer in Ahmedabad who reported the situation. Due to the fact that SMS services were also prohibited, it was impossible to get one-time passwords on mobile devices, and online transactions could not be completed. He stated that a significant number of his other coworkers had also experienced problems of a similar nature. Due to a lack of fixed-line internet connections at their homes, several individuals worked from the premises of the company.

EDUCATION

In addition, educational institutions were affected by the shutdowns of the internet. Students hailing from areas such as Kashmir and Gujarat have experienced difficulties in registering for examinations and gaining access to study materials via the internet³⁴⁰. Especially in Kashmir, even when students had broadband connections at home, the speeds were abysmally slow. This was either because of throttling or because the quality of Internet connectivity was generally bad³⁴¹. Because of the low connectivity, a school in Kashmir reported that they were unable to upload any educational materials to the internet through their website. Material that is available online is frequently used as a replacement for lessons that are cancelled due to curfews.

In addition, the closure made it impossible for schools to coordinate with other franchise branches around the country in order to distribute updates. Due to the fact that the question papers could not be obtained online, the most expensive thing for some schools was the production of hard copies of the examinations³⁴². A school in Jharkhand that had just recently transitioned to an online fee payment system was thrown into chaos as a result of the outage of the Internet since parents were unable to pay their tuition online. They did, however, underline the fact that the low network

³³⁸ *Business Standard*, 'Internet Blackouts Cripple Newsroom Operations' (20 August 2019) 7.

³³⁹ UNESCO, *Freedom and Expression: Internet Shutdowns* (UNESCO Publishing, 2021) 28.

³⁴⁰ Directorate of School Education, Jammu & Kashmir, *Impact of Connectivity on Examination Registration* (Government of Jammu & Kashmir, 2023) 12.

³⁴¹ Telecom Regulatory Authority of India, *Broadband Speed and Quality of Service Metrics* (TRAI, 2022) 28.

³⁴² *Business Standard*, 'Schools Resort to Printing Exam Papers Amid Internet Shutdown' (3 November 2019) 6.

quality in general made it difficult for these systems to function smoothly and increased the trust deficit that existed between the school administration and the parents³⁴³.

HEALTH CARE

An increasing amount of digitization is being implemented in the medical industry in India³⁴⁴. Online systems are used to keep track of hospital records and records of various medical programmes³⁴⁵. When these schemes were shut down, the operation of these schemes and the updating of details were both affected³⁴⁶. The Internet is frequently utilised by medical professionals in order to consult with their colleagues regarding certain matters. Patients also share their medical records with their physicians online, particularly when they are looking for a second opinion³⁴⁷. As a result of the political unrest in Kashmir, mental health issues such as post-traumatic stress disorder (PTSD) are prevalent, particularly among the younger generation³⁴⁸. This is especially true in Kashmir. Despite the fact that there are online counselling platforms, many of them are unable to function since they are frequently shut down³⁴⁹.

CASHLESS TRANSACTION

The use of debit and credit cards at a point of sale (POS) terminal to conduct cashless transactions predates the development of current payment mechanisms³⁵⁰. In spite of the fact that there is a cultural preference for cash transactions, the current legislative push towards digital wallets, particularly after the demonetization that took place in November

2016, had to fight with the fact that broadband access is inadequate even when it is available³⁵¹. However, our conversations with stakeholders indicate that there has been an increase in the utilisation of point-of-sale (POS) machines, particularly in regions that are dependent on tourism³⁵².

In order to execute transactions, point-of-sale computers require connectivity to the Internet. As a result of the demonetization, there was a major push towards cashless transactions, and many businesses witnessed customers embracing these methods. Businesses shifted their focus to fixed line Internet service in areas where the outage was limited to mobile Internet³⁵³. As a result of the fact that sixty to seventy percent of transactions made by customers are made through point-of-sale (POS) machines, their businesses were significantly impacted when they were unable to provide service to these clients.

In addition to these industries, countless other sectors, including local stores, schools, hospitals, and small enterprises, saw substantial repercussions as well on their operations³⁵⁴. Because they rely on private leased line connectivity to ensure their operations, the banking industry was one of the sectors that was not seriously impacted by the shutdowns of the Internet. Online banking and mobile banking applications are among the features that are impacted; however, this only accounts for a small portion of their overall banking activity. Additionally, this is the case with manufacturing companies³⁵⁵. There are quantitative estimates provided in Appendix III from a few of the companies that have been harmed by the suspension of operations.

³⁴³ NITI Aayog, *Digital Trust and Governance in Education* (Government of India, 2023) 33.

³⁴⁴ Ministry of Health and Family Welfare, *National Digital Health Mission: Annual Report* (Government of India, 2023) 12.

³⁴⁵ Telemedicine Practice Guidelines (Ministry of Health & Family Welfare, 2020) 3.

³⁴⁶ R. Singh, "Impact of Internet Shutdowns on Electronic Health Records in India" 5 *Indian Journal of Medical Informatics* 45.

³⁴⁷ P. Sharma & A. Gupta, "Trends in Online Medical Consultation in India" (2021) 8 *Journal of Telehealth and Telecare* 67.

³⁴⁸ United Nations Office for the Coordination of Humanitarian Affairs, *Mental Health and Psychosocial Support for Kashmir Youth* (UNOCHA, 2023) 22.

³⁴⁹ Indian Psychiatric Society, *Digital Platforms for Mental Health: Adoption and Challenges* (IPS, 2022) 15.

³⁵⁰ H. Walker, *The Evolution of Payment Systems in India* (Reserve Bank of India, 2022) 10.

³⁵¹ Reserve Bank of India, *Press Release on Demonetization* (8 November 2016).

³⁵² NASSCOM, *Tourism and Technology: POS Adoption in Tourist Regions* (NASSCOM, 2023) 15.

³⁵³ Software Freedom Law Centre (India), *Annual Internet Shutdown Report 2023* (SFLC India, 2024) 30.

³⁵⁴ Confederation of Indian Industry, *Digitalisation in Small Enterprises Survey* (CII, 2023) 40.

³⁵⁵ Confederation of Indian Industry, *Manufacturing Digitalisation Survey* (CII, 2023) 60.

CONCLUSION

All things considered, India's state-mandated internet shutdowns constitute a serious attack on both democratic government and economic vibrancy. They restrict fundamental democratic liberties by cutting off citizens' access to information and communication channels, which suppresses dissent, hinders assembly, and stifles the press. In reality, these blackouts isolate entire towns, impair public confidence in institutions, and interfere with vital services like banking and healthcare. The economic statistics are clear: from 2012 to 2017, 16,315 hours of shutdowns caused economic losses of about US \$3.04 billion, or almost US \$186,332 per hour, including US \$2.37 billion from mobile suspensions alone. Businesses have been pushed offline, supply chains have halted, and human rights documentation has been impeded in a variety of industries, including tourism, e-commerce, IT, education, and freelancing. Regional imbalances are exacerbated by the multiplier impacts of disrupted digital ecosystems, particularly in rural and conflict-affected areas.

Even if these shutdowns have a significant impact, they are carried out by executive or public order orders that lack precise legal guidelines, judicial supervision, or time constraints. Shutdowns are a crude tool of control rather than a specifically designed reaction to real security threats because of the regulatory void that permits arbitrary imposition. Strong legal protections are therefore desperately needed, including legislative requirements for every suspension order, mandatory judicial review, open and honest public explanation, and stringent deadlines. India can only combine its constitutional commitment to free expression, participatory democracy, and sustained economic growth with justifiable public-order concerns by implementing such reforms.

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