

Networks and Norms: Evidence from India's Digital Expansion  
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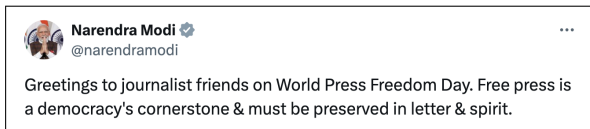
## Summary | TLDR

- ▶ **Goal:** We want to build a rich dataset of **Indian newspapers** in order to:
  1. Preserve the local history and culture reflected in print newspapers *across all* states and union territories in India over the period from 2005 - present.
  2. Compile an unprecedented resource to study the shifting culture, norms, and institutions in India throughout the early 21st century.
- ▶ **Research Question:** We intend to study the effect of *competing/parallel technology shocks* (including the rollout of **internet access**, **social media**, and **electricity**) on local newspaper discourse. Specifically:
  - ▶ Does newfound access to globalized mass media increase the convergence of local newspaper discourse towards more prevalent global values?
  - ▶ What shifts do we observe in coverage relating to women's rights and religious/caste minorities? How does this vary over space and time?
  - ▶ How does newspaper coverage reflect the political economy of Indian institutions? How are the BJP vs. INC parties framed in the news?
  - ▶ How do these normative shifts translate to behavior change?
- ▶ **Note:** We understand this is a massive undertaking which will take many years. A large portion of these local newspapers are unavailable, or cannot be digitized. Nevertheless, we hope to capture the broadest universe of newspapers as we can in a scalable and high-quality fashion. [Details on Our Approach](#)

## Why India?

- ▶ **Demographics:** India's heterogeneity across caste/class, religion, gender, and languages lends itself to a study examining trends in social norms.
- ▶ **Newspapers:** India has the largest circulation of print newspapers in the world. The influence of this medium in India is widely acknowledged.
- ▶ **Social Media Usage:** India has one of the most widespread usage rates of traditional social media platforms. Indians compose the world's largest user bases on each of Facebook, Instagram, and WhatsApp.
- ▶ **Government Policies:** The Union government has recently funded large-scale development projects which directly affect both media markets, and information flows more broadly. This includes massive efforts to extend Internet access and electricity to rural areas for the first time.
- ▶ **Personally:** Sameer (one of the authors) was born to Indian immigrants to the U.S. and has worked on previous studies in the Indian context.

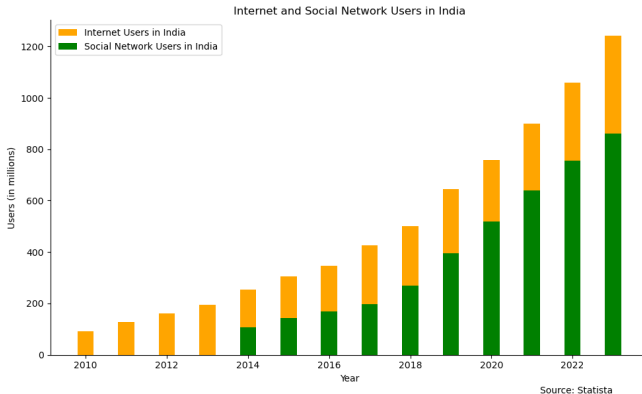
## Newspapers in India



- ▶ During the financial year 2021-22, 33,927 publications claimed a total circulation of 391,712,282 copies per publishing day [12].
  - ▶ **Language diversity:** Hindi publications claimed the largest share of circulations (48%). Other language shares: Marathi (9%), English (9%), Urdu (6%), Telegu (6%), Gujarati (4%), and Malayalam (3%).
  - ▶ **Relevance of smaller publications:** 54% of the total circulations come from publications categorized as “Small” (up to 25,000 copies per day). “Big” publications (more than 75,000) account for 28% of the total circulation.
- ▶ Numerous studies have identified the large role news outlets can play in politics: increased political participation and electoral competitiveness [5, 8], informed voting [2], and political polarization [4].

## Usage rates: Internet and social media in India

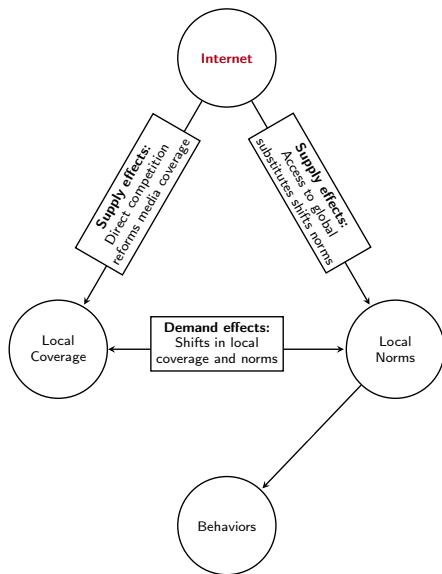
- ▶ The penetration of the Internet in India has increased steadily in the last decade. Social network usage has followed a similar trend, reaching half of the nation's population by 2023.



## The Internet effect: Competition and information

(1) Using newspapers as our guide, we want to study the **impact of the Internet on norms and behaviors**.

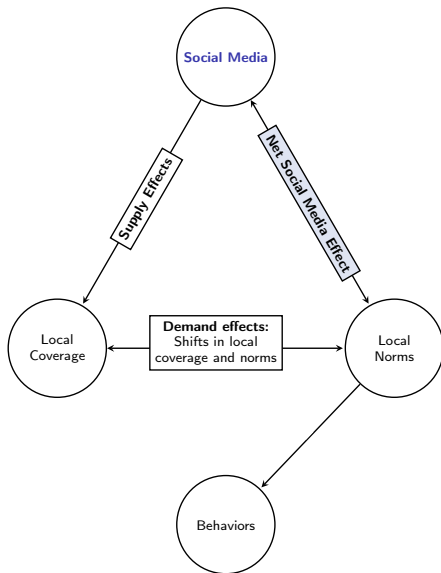
- ▶ **Supply:** Sharp declines in the cost of mass media production and expanded access to global media providers serves as a large shock to traditional media (i.e., print newspapers). Newspapers may remain insular to these changes, or try to adapt to survive [10].
- ▶ **Demand:** Access to new information can shift preferences and demand for content. Readers may demand new content from local media, given the changing preferences delivered through global media [9].



## The Social Media effect: Social capital and network connectivity

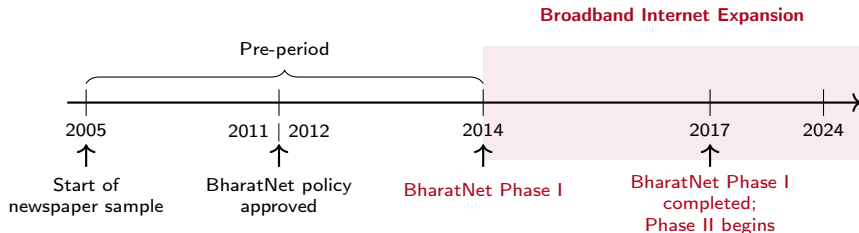
(2) We want to study the **impact of the rollout of social media platforms on norms and behaviors**. Unlike the broader internet, the content in social media experienced in a community is influenced and influences local norms. Its net effect comprises:

- ▶ **Positive welfare effects:** Social capital; Access to information, ideas, & discourses; Market access; Political engagement [1, 6].
- ▶ **Ambiguous:** Coordination (protests or violence) [7].
- ▶ **Negative welfare effects:** Misinformation and hate speech; Polarization and echo chambers; Mental health [3, 11].



## Tracing India's Digitization: Internet

- ▶ **BharatNet**: Staggered expansion of internet connectivity to all Gram Panchayats (GPs) in rural India. Rollout is not random, but sequenced.
- ▶ One of the largest rural telecom projects in the world, sponsored and heavily publicized by the Modi government. Frequently discussed in press.
- ▶ Feb. 2024: govt. claims  $\approx$  **220,000** GPs connected,  $\geq$  **680km** cable laid.

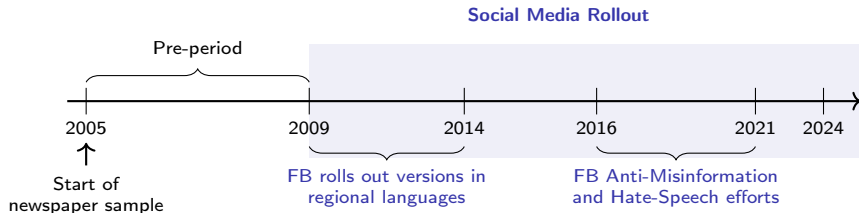


- ▶ *Note*: In an alternative strategy, we will also leverage the rollout of **electricity** through another policy, during roughly the same period.



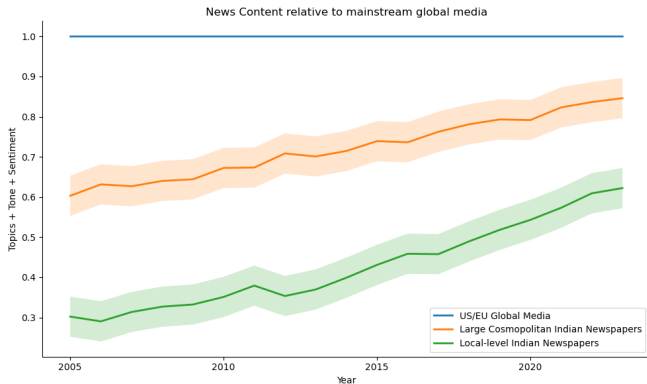
## Tracing India's Digitization: Social Media

- ▶ **Introduction of Facebook:** Facebook (FB) was expanded globally in 2007. In 2009, FB introduced a web version of their platform in Hindi, Punjabi, Bengali, Telugu, Tamil and Malayalam.
- ▶ **Expansion to regional languages:** In 2012, Facebook was extended to Gujarati, Tamil, Malayalam, Kannada, Punjabi, Bengali, and Marathi. FB partnered with telecom companies to offer free access to their platform.
- ▶ **Misinformation and hate speech:** Meta has partnered with fact-checkers and implemented tools to reduce hate speech since 2016. These partnerships and classifiers have been extended to regional languages.



# First Order: Do we see a convergence towards “global values”?

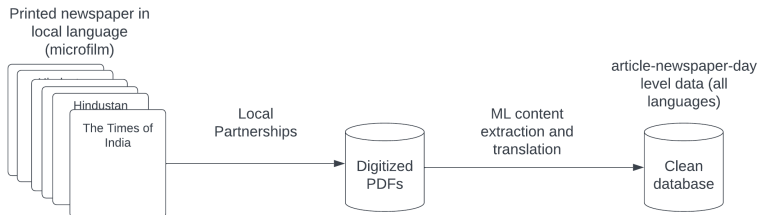
Main figure (simulated data):



## Our approach: Target universe of newspapers

- ▶ We want to avoid collecting a “selected” sample of newspapers. We need to construct a *representative sample* of newspapers across all regions, in multiple languages, with coverage throughout our sample period (2005 - ).
- ▶ As a **first step**, we plan to collect newspapers from the “big players” nationally and regionally. These compose the orange line in the plot above, and include sources such as the Times of India (national) or Mathrubhumi (Kerala). If these newspapers exist only in print, we will digitize them.
- ▶ **Eventually**, it is *essential* that we collect and digitize local newspapers, which cater to specific communities. These compose the green line above.
  - ▶ *Note:* We will primarily focus on newspapers servicing the GPs which have been targeted by the BharatNet program or are likely affected by the rollout of FB. However, the more newspapers we collect in this category, the better.
- ▶ **To achieve this ambitious goal, our first priority is to foster strong partnerships with librarians, civic groups, and local community members.**

# Our approach: Production pipeline



**30 dogs found dead in TN garbage dump**  
Carcasses of 30 stray dogs were found beneath a pile of garbage in Chennai's Madambakkam locality on Sunday morning. Residents suspect they may have died after consuming milk from a bowl lying near the garbage. No complaint has been registered so far. **P 15**

**'Touch me not' Mum auto drive for women**  
The Mumbai Autorickshamen's Union on Sunday announced that it has added a women's security feature for those travelling in shared autos daily. The union has decided to sensitise all drivers to protect women by launching a social media campaign called "Touch Me Not". **P 15**

**Woman's testimony sends son to jail for life in Tripura murder case**  
Agartala: A woman's testimony against her son played a pivotal role in his and his friend's conviction during the trial of a widow's murder at the district court in Tripura's Sepahijala on **Sunday**. **ts Biswendu Bhattacharjee.**  
The court handed down rigorous life imprisonment sentences to Suman Das (24) and Chandan Das (26) for murdering 55-year-old widow Krishna Das, who worked as a cleaning staff at the Bishalgarh Municipal Council.  
The crime took place in April 2020 when Krishna Das, who lived alone in Sepahijala, was brutally assaulted and killed. Police said the convicts raped her in her home before strangling her. "Later, they dumped her body in an abandoned well. After the body was found, the daughter-in-law of the deceased, Sumitra Das, lodged an FIR," police said.

**SOUGHT DEATH**  
► Suman Das and Chandan Das were convicted for **2020 murder of a 55-year-old widow**  
► Police's charge of rape couldn't be substantiated as medical test wasn't possible  
► Suman's mother testified against him in court, sought capital punishment for him  
► Both the men were handed rigorous life imprisonment sentences by a district court in Tripura's Sepahijala

Police registered a case and during the course of their investigation, both accused were arrested and a chargesheet was filed based on their confessions. Police recorded statements from 25 people, including Suman's mother who testified against her son.  
"The case turned after Suman's mother Namita Das took the right side to ensure her guilty son and his friend were punished during the trial about a month ago when police presented the confessional statement of the accused persons," said Goutam Giri, additional public prosecutor at the district court.

► Court orders RI, P 10

Times of India (Sept. 4, 2023)

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