Gender Perspectives on the Digital Economy

Essays from IT for Change's
National Gender Fellowship Program, 2022

ACKNOWLEDGMENTS

CONTENTS

EDITORIAL

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The digitalization of India's economy has led to an unprecedented proliferation of intermediary platforms, the latter often cited as agents that are disruptive and transformative of the informal economy. Despite these long-standing beliefs, platform work and digital labor have not contributed to the formalization of informal work; in fact, existing precarities are re-established within the taxonomies of platform and digital labor, and more often than not, are mutated and magnified, posing significant challenges to women from the margins of the Global South.

These inequities affect women across the paradigms of productive work, reproductive work, and rest. As women now straddle the line between formality and informality, the externalization of market risks by platform companies has forced women to absorb the consequences of both the formal and informal sector, while foregoing any of the advantages.

On the one hand, women platform workers work full-time, while being paid wages that are determined by a Big Tech-owned platform company, excluded from the legal and social benefits of being full-time employees. On the other, digital labor has continued to blur the boundaries between income-generation, labor-power regeneration, and leisure, where women across the globe and cultures continue to work a 'double day', further entrenched by the logics of the digital economy.

As the taxonomy of labor, women's work, and informality undergo significant change within the innards of adverse inclusion as a necessary facet of platform capitalism, there is a compelling need to expand our existing methodologies and renderings of women's experience as workers within capitalism. Platformization as a phenomenon has now begun extending its arms into more traditional sectors such as agriculture and small-scale manufacturing, where women do not have substantial access to the technological and financial support needed to make necessary gains from the digital economy. They also continue to face precarities of informalization within and outside of the digital sphere – women from the Global South often engage in microwork, the lowest rung of the ladder driving global artificial intelligence (AI) systems. Additionally, these women are also subject to surveillance and algorithmic work management, producing new concerns for women in the labor market.

In an attempt to inspire and highlight research endeavors that capture these newly-emerging modalities of work-life in India, IT for Change invited proposals from scholars of all genders to study women's digital labor. In this compendium of longform essays, published under IT for Change's project, 'The Feminist Observatory of the Internet' (supported by the World Wide Web Foundation), we look at eight succinct discourses that capture the story of digitalization and women's experiences, trials and tribu-

lations, and affordances and constraints across the varied terrains of gendered caste and class marginalizations. Through comprehensive journalistic research and theory-building, our fellows illustrate the systematic shortcomings of current digital platforms, existing by design to aid monopolistic Big Tech's accumulation of power and capital. By highlighting the limits of existing means of inquiries of digital labor, our researchers, as part of IT for Change's National Gender Fellowship Program, 2022, aim to also underscore new modalities of research, as well as emerging alternative paradigms that can meaningfully and advantageously improve women's economic participation and gains.

We begin this compendium with the works of Mitali Nikore and Vijayeta Rajkumari, who explore the ways in which **traditional sectors and small-scale industries are undergoing a technology-driven transformation**, and in the process, replicate and amplify existing gender dynamics in India's manufacturing sector. Mitali's essay expands on the barriers of digital adaptation among women MSME entrepreneurs in India, and examines avenues through which women can become more embedded in the digital ecosystem. Vijayeta, through a profile of the highly-feminized sector of weaving in Assam, brings forth the intentions and experiments of adopting digitalization by weaver collectives, highlighting the complex experiences of women in India's North East in the face of macroeconomic shifts.

As e-commerce continues to dominate the retail market, women not only face unique barriers to entry, but significant forms of gender inequality across the digital market value chains. Eisha Choudhary and Svetha Venkatram place a spotlight on the tribulations of **women entrepreneurs in the digital market** through their essays, critically appraising India's apparent digital revolution. Through a series of interviews with Muslim women entrepreneurs who largely sell in the digital space, Eisha underscores the crucial self-negotiation between aspirations and limitations that Muslim women must reckon with as they embrace digitality. Concurrently, Svetha's essay on women tech entrepreneurs highlights similar systemic battles, narrating the realities of highly-skilled women in tech, who often face 'non-tech' obstacles as innovators.

Bringing in a much-needed **Global South feminist perspective to the future of work and its precarities**, Intifada P. Basheer and Malavika Parthasarathy capture the rapid changes to the nature of work brought about by rapid technological innovations within and outside of the paradigm of formal labor. Intifada's work on the distinctive challenges of job loss driven by automation in the Business Process Outsourcing sector emphasizes the gendered dynamics of low-paying, bottom-of-the-ladder nature of women's labor in the tech industry. On the other hand, Malavika's essay on women influencers narrates a story of what labor over social media platforms looks like, and the emergence of 'authenticity' and 'aesthetic' labor as new means of selling labor-power.

Expanding on the means of **techno-surveillance in the workplace**, our last but one standalone essay by Nadia Nooreyezdan traces the ways in which surveillance – in and out of the workplace – only continues to affect women's privacy, while reinforcing the false dichotomies of public-private lives of women.

To close out our compendium, we bring to the readers Maduli Thaosen's work on **feminist digital media** and the lost voices of the North East Indian identities, a critical meta appraisal of feminist digital media and the capitalist logics that play into the politics of visibility, often sidelining true intersectional approaches to equalizing the media space.

Technology-driven Transformation in Traditional Sectors and Small-scale Industries
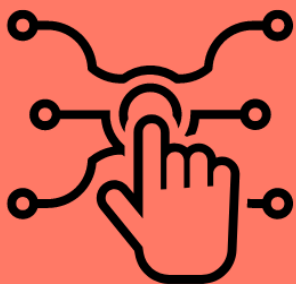
Women Entrepreneurs and the Digital Economy: Analyzing Exclusion from Digital Marketplaces during Covid-19

MITALI NIKORE*

1. Women's Labor Force Participation in India and the Impact of Covid-19

Indian women's marginalization from labor markets is a pervasive, long-standing phenomenon, worsened by the impact of the Covid-19 pandemic. Only a fourth of Indian women participate in the labor market, amongst the lowest in the world. A time series analysis of labor force data reveals a consistent 40 percentage point difference between the proportion of Indian men and women in the labor force between 1970 to 2019. The female labor force participation rate (15 years and above) declined steadily from 47.1% in 1987-88 to 30% in 2019-20.

Over the past five decades, India has seen significant national advancements in not only economic growth, but also social welfare. This presents a queer conundrum: why is a country experiencing considerable gains in women's education and nutrition and decreases in fertility rates not seeing greater participation from women in the workforce? The answer is rooted in five key trends. First, women have remained confined to low-productivity, low-growth sectors such as agriculture, unlike men who moved out of agriculture into secondary and tertiary sectors – such that between 1994-2010, women received less than 19% of new employment opportunities generated in India's 10 fastest-growing occupations. Second, the increased mechanization of various sectors displaced women as they typically performed labor-intensive roles. Third, with increasing household incomes, the need for a "second income" reduced, and families withdrew women from labor as a signal of prosperity. Fourth, gender gaps in higher education and skill training continue to alienate women from fast-growing sectors, particularly in science, technology, engineering, and management (STEM). And finally, social norms to prioritize unpaid work, absence of institutional support for care work, mobility restrictions, and lack of safe public transport facilities deter women from stepping out of their homes.

Moreover, despite forming a far smaller proportion of the workforce, women were disproportionately impacted throughout the Covid-19 pandemic and the subsequent national lockdowns. Analysis of monthly data on labor market outcomes from the Centre for Monitoring the Indian Economy reveals that women were disproportionately impacted at three levels.

First, women bore the immediate impact of both the first and second Covid-19 waves. About 37.1% of women lost their jobs (15 million) versus 27.7% of men (98.2 million) between March to April 2020, immediately after the national lockdown. Following the onset of the second wave, about 12.9% of women lost their jobs (5.4 million), versus 0.5% of men (1.9 million) in April 2021.

Second, women's employment was slower to recover, with urban women having the slowest recovery following both the Covid-19 waves. In December 2020, women's labor force was 14% smaller than in December 2019, versus 1% for men.

Third, the prolonged pandemic situation is discouraging unemployed women from seeking work, signaling a longer-term impact. The proportion of unemployed women actively seeking work rose from 28% in April 2020, to 51% in January 2021, but reduced to 39.6% by November 2021.

Given this context, the aim of this essay is to critically examine how the gender digital divide may become a key driver for women's continued exclusion from the labor market in the decades to come.

The essay focuses on analyzing the digital exclusion of women entrepreneurs in India, as they are amongst the biggest group of working women in the country. The essay defines the parameters of digital adaption for women entrepreneurs and examines barriers preventing women entrepreneurs from optimally utilizing digital platforms. Finally, it seeks to posit recommendations on how to support different types of women entrepreneurs in transitioning to the online sphere for policymakers, government agencies, the private sector, and community-based organizations.

2. The Emerging Gender Digital Divide

Exponential advances in digitization during Covid-19 have expedited automation and the use of technology across sectors, even in developing markets. Accessing emerging job roles created in the fourth industrial revolution (4IR) economy necessitates not only basic digital literacy, but also familiarity with advanced technologies. These skills are difficult for women to obtain as they are systematically denied access to technology. Indian women are 15% less likely to own a mobile phone, and 33% less likely to use mobile internet services than men.

This gendered digital divide manifests through a triple disadvantage for women in India. The rural-urban gap in broadband penetration is the first barrier. Rural broadband penetration in India is only 29% against a national average of 51%. Moreover, across states, women in rural areas are less likely to own mobile phones.

Figure 1: Infographic depicting the triple disadvantage of the digital divide for women
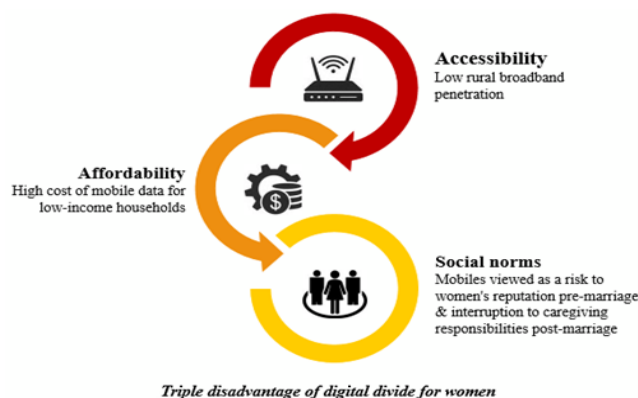
Source: Nikore Associates

The next obstacle is an income-based digital divide, wherein high data costs prevent the purchase and subsequent use of data packs. The average price for data is INR 53/GB in India. According to estimates by Nikore Associates, each GB of data costs low-income households 3% of their monthly income, versus 0.2% for middle-income households.

Finally, intra-household discrimination and social norms prevent women from equitably accessing digital services both personally and professionally. Women's online activity is often governed by male relatives, and phone use is viewed as an interruption to caregiving responsibilities. Thus, even if women

have the ownership or permission to occasionally use devices, this does not constitute full access. These social norms lead women to be excluded from online schooling, skill training, entrepreneurship, work opportunities, and the digital economy at large.

With post-pandemic growth driven by the digital economy, the gender digital divide may emerge as one of the primary barriers resulting in women's exclusion from labor markets in the coming decade. The impact of the digital divide is likely to be the hardest on women entrepreneurs for whom unfamiliarity with digital tools and platforms can be a deterrent to moving to online marketplaces to start business-es, accepting digital payments, or deploying digital marketing strategies, further alienating them from the labor force.

3. Women's Entrepreneurship in India

Out of 61 million micro, small, and medium enterprises (MSMEs) in India, only about 20% MSMEs are owned by women. Nearly half of these enterprises are rural, and an overwhelming majority are sole proprietorships, such that the entrepreneur does not have any full-time staff in the enterprise. This results in a greater likelihood of women-led enterprises being in the informal, unorganized sector.

Women-owned enterprises remain concentrated in certain "feminized" sectors such as personal services, apparel and textiles, and food services. Lack of access to networks, finance, and institutional support emerge as significant barriers when they try to break into non-traditional sectors.

Despite having higher profit margins than male-owned enterprises, women entrepreneurs face double the rejection rate and receive merely 5% of total MSME lending from public sector banks. Covid-19 has widened the financial access gap for women entrepreneurs. In a July 2020 survey of women-led enter-prises, nearly three-fourth reported a drop in revenue, and almost 90% had to utilize personal savings as they could not access formal sources of finance.

Nikore Associates' consultations with women entrepreneurs, SHG members, and women-led organi-zations between August 2020 to December 2021 revealed that most of them were unable to make loan repayments despite moratoriums due to the slow revival in business activity. As several MSMEs began pivoting towards new businesses, particularly by leveraging digital tools, female-owned enterprises found themselves at a disadvantage.

A crucial observation gained from consultations is that different types of women entrepreneurs are at different stages of their digitization journey. Therefore, it is important to analyze the gender digital divide differentially across different categories of women entrepreneurs. For this, we are deploying a simple 4X4 framework based on two key parameters:

   i.   Location, i.e., whether women entrepreneurs are in rural or urban areas

   ii.   Extent of formalization, i.e., whether they are in the organized or unorganized sector

Table 1: Categorization of women entrepreneurs across location and extent of formalization		
	Organized	**Unorganized**
Rural	**Rural; Organized** (e.g., Self-help Groups, NGOs, CBOs, federations, collectives, women's institutions, etc.)	**Rural; Unorganized** (e.g., street vendors, home-based solopreneurs, etc.)
Urban	**Urban; Organized** (e.g., Start-up Founders, Independent Businesses, etc.)	**Urban; Unorganized** (e.g., street vendors, home-based solopreneurs, gig workers, platform economy workers, etc.)

4. Examining Digital Adaptation Amongst Women Entrepreneurs in India

4.1 Understanding digital adaptation for entrepreneurs

Digital adaptation can be understood as the ability of entrepreneurs to identify, adopt, and adjust to technological tools to suit business needs in a dynamic digital economy. This concept is broken down to the following five parameters.

Figure 2: Pyramid of digital adaptation parameters
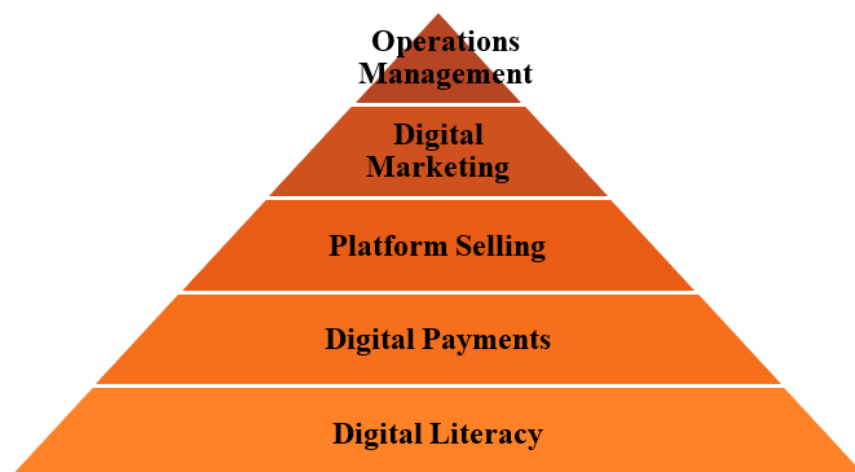
Source: Nikore Associates

i. **Digital literacy:** This can be understood as the knowledge required to use basic functions and applications of a mobile phone – calling, WhatsApp, SMS, using the web browser, etc.

ii. **Digital payments:** It pertain to whether an entrepreneur has established systems to accept or make online payments, either using mobile applications (e.g., PayTM, UPI, PhonePe, and others) or net banking.

iii. **Platform selling:** It refers to whether an entrepreneur has established mechanisms for online selling, either via their own web or mobile platforms, or via third-party online marketplaces (e.g., Amazon, Flipkart, etc.).

iv. **Digital marketing:** It is defined as the ability to leverage tools such as social media-based marketing and digital campaigns.

v. **Operations management:** It refers to how far an entrepreneur's system of accounting, inventory management, and other operational functions have been digitized.

As discussed above, the four categories of women entrepreneurs described in Table 1, are on different stages of their journey towards digital adaptation. In this essay, we examine how women-led enterprises from these four categories perform on each of these five parameters of digital adaptation.

4.2 Barriers to digital adaptation among women entrepreneurs in India

Consultations undertaken by Nikore Associates helped identify the key barriers to digital adaptation for women-led enterprises. To begin with, four common barriers to digital adaptation across rural/urban and organized/unorganized enterprises are discussed below.

Figure 3: Barriers to digital adaptation
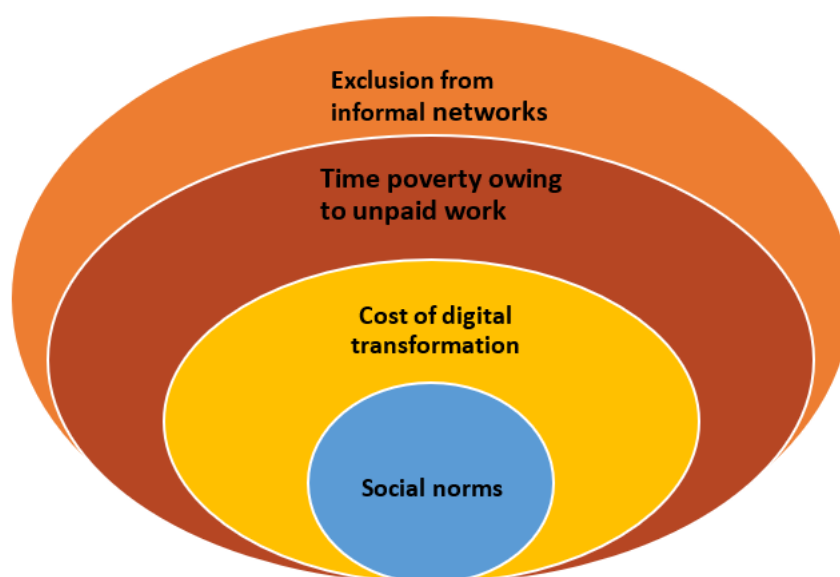
Source: Nikore Associates

First, exclusion from informal networks. Women-led enterprises cited the lack of awareness and training in digital tools to be a key barrier to adaptation. During consultations, it was noted that male-led enterprises found out about new digital tools and platforms, and shared knowledge of how to use these in their informal networks. Women were often excluded from these networks, especially in rural areas. While some were struggling at the basic digital literacy level, others found adaption to higher order skills like social media or WhatsApp-selling a barrier.

Second, time poverty owing to unpaid work. Owing to prevailing social norms, several women-led entrepreneurs shared that their families expected them to continue managing domestic and unpaid work, despite the long hours required to establish and sustain a successful business. This often prevented them from devoting additional time post-work towards training in new digital tools.

Third, cost of digital transformation. As previously noted, women are less likely to own a mobile phone, especially a smartphone. Additionally, women-led entrepreneurs are more likely to be constrained by lack of access to finance and loans for their business as compared to male entrepreneurs. Consequently, the decision to invest in digital platforms is taken in a resource-constrained environment for women entrepreneurs.

Fourth, women entrepreneurs face mobility restrictions leading to difficulties in visiting training centers. The existing social norms lead to a lack of female trainers and creches for women in these centers, placing restrictions on their learning opportunities.

Consultations also helped map the heterogeneity of digital adaptation amongst the four categories of women entrepreneurs as seen in the table below. It can be observed that urban, organized enterprises were the furthest along their digital adaption journey, with entrepreneurs showing high levels of digital literacy, adoption of digital payments, and use of third-party sales platforms. Urban, unorganized enterprises demonstrate lower adaptation than urban, organized enterprises, particularly on platform selling and digital marketing. In rural areas, organized enterprises fare better than unorganized ones on digital payments and platform selling. The digital adaptation levels of rural, organized enterprises are slightly lower than urban, unorganized enterprises, on average. However, some rural self-help groups (SHGs) are leveraging digital marketing and platform selling to boost sales. Notably, across all four categories, uptake of operations management software remains very low to absent.

Table 2. Level of digital adaptation amongst market segments of women entrepreneurs

Parameter	Skills	Rural & organized	Rural & unorganized	Urban & organized	Urban & unorganized
Digital literacy	WhatsApp/ Basic mobile apps	Low adaptation	Low adaptation	High adaptation	Medium adaptation
Digital payments	Accepting or making digital payments (mobile/net banking)	Medium adaptation	Low adaptation	High adaptation	Medium adaptation
Platform selling	Have own website and social media accounts	No adaptation	No adaptation	Medium adaptation	Low adaptation
	Listed on third-party platforms	Low adaptation	No adaptation	High adaptation	Medium adaptation
Digital Marketing	Digital marketing via online advertisements and social media	No adaptation	No adaptation	Medium adaptation	Low adaptation
Operations management	Accounting	No adaptation	No adaptation	Low adaptation	No adaptation
	Inventory management	No adaptation	No adaptation	Low adaptation	Low adaptation

No adaptation	Low adaptation	Medium adaptation		High adaptation	

Note: The grading of digital adaptation is relative, not absolute. It provides a comparative grade for each quadrant, ranging from no adaptation (the lowest possible grade indicating no usage of given skillset) to high adaptation (indicating relatively high usage of given skillset).

4.2.1 Digital literacy

Nearly 75% of women in rural areas and 48% in urban areas have never used the internet, compared to 51% and 28% of men respectively. In India, significantly more women report sharing a mobile device than men, with a large proportion stating mobiles are too complex to use. The intensity and frequency of women's use of basic mobile applications (such as SMS, voice calls, watching video content, etc.) is significantly less than men.

The Government of India launched the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) in 2017 with an aim to bridge the digital divide between rural and urban areas. The scheme aims to make 60 million persons in rural areas digitally literate, i.e., 40% of rural households, covering at least one person from every eligible household. However, the scheme implementation was halted during Covid-19. This amplified the barriers to digital literacy.

As seen in Table 2, digital literacy is low amongst both organized and unorganized sector enterprises in rural areas. Low ownership of mobile devices and laptops, lack of awareness of basic applications, high

cost of devices and data, unavailability of mobile applications in local languages, and lack of training opportunities emerged as the leading barriers to adaptation amongst rural women entrepreneurs.

Within the urban unorganized sector, it was observed that several women-led enterprises had gained basic digital literacy skills (calling, SMS, utilizing WhatsApp, and other basic applications) and were also deploying these tools for their businesses. One of the key drivers of adaptation was the availability of digital literacy training. This was especially effective when the digital literacy training was linked with entrepreneurship development, and provision of finance to women entrepreneurs, as this allowed them to utilize the digital literacy training immediately in their day-to-day operations.

4.2.2 Digital payments

Digital payments enable access to quick, low-cost transfer of money for entrepreneurs. India's digital payments marketplaces have witnessed an exponential expansion with the advent of several new mobile based platforms such as BHIM UPI, PayTM, PhonePe, and Google Pay. The Government of India has also taken several measures for women's financial inclusion. Most notably, the PM Jan Dhan Yojana resulted in increased women's bank account ownership. Of the 4.3 million bank accounts opened under the scheme till August 2021, 55% belong to women. However, gender norms, low levels of digital literacy, lack of awareness, and distrust in technology continue restricting women from using digital payments.

Adoption of digital payment platforms expanded across India during the pandemic as virus transmission fears drove customers to shift from physical to digital forms of payment, especially, but not only, in urban areas. In line with this trend, most urban, organized women entrepreneurs shared that they had increased usage of digital payments during the pandemic, especially through net banking and mobile payment applications.

On the other hand, despite the availability of good quality digital infrastructure and awareness of digital tools, for urban, unorganized entrepreneurs the cost of data and services emerged as a barrier to adaptation. Consultations with several associations of informal women entrepreneurs illustrated that financial constraints during the pandemic led to a de-prioritization of digital devices. Most families found it difficult to afford basic necessities, and thus mobile phones and internet connectivity did not receive precedence.

Rural women entrepreneurs in both the organized and unorganized segments are also unable to fully benefit from this transition to digital payments. For instance, consultations with women SHG members across states revealed that though their members utilized phones for personal use, they were unable to make financial transactions online, and did not use phones for their businesses. On the other hand, several rural, unorganized women entrepreneurs consulted had not even heard of most digital payment platforms and were reluctant to experiment with these methods.

4.2.3 Platform selling

India has witnessed a sharp increase in online marketplaces and digital sales channels. A structural shift in buying behavior during the pandemic, in both the B2B as well as B2C market segments, prompted large entrepreneurs as well as MSMEs to explore online selling, either by establishing their own web-

sites or listing on third-party platforms offered by large e-commerce websites.

Even rural, organized entrepreneurs require support from government agencies or community-based organizations (CBOs) to enlist onto third-party platforms or establish their own online presence. An increasing uptake of third-party platforms, such as Amazon's Saheli or Flipkart's women's entrepreneurship platform, was observed especially amongst rural SHGs.

Urban, organized women-led enterprises, especially those operating on a smaller scale, were more likely to set up their own websites or social media accounts than to use platform selling options. Unlike rural SHGs, for urban, organized sector enterprises, the benefits of these platforms do not outweigh their high commissions and charges. As a result, several enterprises and collectives reported exiting these platforms, migrating to their own websites and social media accounts. A consultation with a small arts and handicrafts business based in Delhi revealed that a combination of lack of funding and digital illiteracy made them reluctant to sell on third-party sites. Further, they stated that social media sites such as Instagram are more efficient in driving sales, as features like location tagging and hashtags increase their publicity.

Table 3: Consultation experience with platform selling

During consultations with a start-up selling imitation jewelry established in 2020, the founder revealed that while they initially sold merchandise on e-commerce websites like Amazon and Myntra, the company lost a large chunk of its profits (25%) due to high commissions. Vendors also charged additional fees if products were stored in their warehouses. Due to the combination of high commissions and additional fees, they shifted to advertising and selling on Instagram and Facebook.

As can be observed from Table 2, women-led rural unorganized enterprises have been excluded from platform selling owing to a lack of awareness and digital skills. Consider the example of a group of women: *Jhuri*-makers (bamboo artisans) in West Bengal. During consultations they stated that despite a nearly total loss of their incomes due to cancellation of physical fairs and exhibitions during Covid-19, they were reluctant to move to online platforms. This was due to limited knowledge of social media and digital marketing channels, combined with high costs of data and mobile phones.

Urban, unorganized enterprises also continue to face barriers to onboarding onto third-party platforms owing to documentational/compliance requirements, lack of access to personal gadgets, and unstable power supply. According to a CBO that works across 13 Indian states supporting rural capacity-building and women's entrepreneurship, women microentrepreneurs or solopreneurs are less likely to possess identity cards, GST certificates, incorporation certificates, and PAN cards than male entrepreneurs. This documentation is necessary for platform selling. Moreover, women entrepreneurs are deterred from marketing their products on e-commerce platforms and social media by extensive paperwork and certification.

4.2.4 Digital marketing

The falling cost of data, and increasing popularity of social media platforms, content-streaming portals, e-commerce, and gaming has significantly increased screen-time. Digital marketing allows entrepreneurs to target their advertisements to an audience spending more hours online, communicating with existing and future customers in a manner that goes beyond traditional marketing channels.

Consultations show that across different market segments, women entrepreneurs struggled to adapt to digital marketing vis-à-vis men. Women entrepreneurs were more likely to be constrained by cost, and therefore less likely to be able to hire professional design, content writing, copywriting, and other digital marketing services. Moreover, even when women entrepreneurs purchased digital marketing services, they were less likely to be able to optimize their use of these services owing to their lower baseline awareness.

In rural areas, be it in the organized or unorganized segment, women entrepreneurs have little knowledge of digital marketing tools. While those in the rural organized segment were more aware of social media platforms like Facebook, Instagram, and WhatsApp for Business, and some had recently begun using them for online selling, they were not using paid promotion features on these sites. The lack of skill training and professional advisory services – be it in the public or private sector – to help them with product placement, promotions, and other professional digital marketing campaigns results in their exclusion from these platforms.

While urban, unorganized women entrepreneurs are more aware of digital marketing tools, they are constrained by the cost of these services. During Covid-19, it was observed that both large sellers and MSMEs drove up the demand for digital marketing solutions, resulting in an increase in the cost of these services, especially in urban areas.

Despite having a native understanding of social media platforms and online marketplaces, women entrepreneurs in the urban, organized sector still face difficulties in deploying digital marketing strategies, as it is a niche field requiring specialized skills and training. For instance, a textile recycling start-up founder shared that her organization struggled with setting up digital marketing, despite having years of corporate marketing experience. The founder had to upskill herself individually on social media marketing to optimize her expenditures.

Table 4: Best practice under digital marketing and digital payments

Khwaab, a community-led collective of women microenterprises in the textile and hand-made products sector, proceeded with online selling starting with platform sales under Amazon's Saheli program. During consultations, Khwaab shared that while third-party platforms charge heavy signage fees, they are crucial for effectively promoting their products and increasing online presence. In 2018, Khwaab set up their own website, which allowed them to reduce costs and ensure a greater share of the revenue reaches women entrepreneurs. Khwaab also implemented digital payments training, creating Paytm wallets for all entrepreneurs and providing them with financial literacy training, so that they could accept online payments via their portal.

4.2.5 Operations management

Digitizing business functions, such as inventory management, accounting, book-keeping, and others can lead to operational cost efficiencies and increased labor productivity. In India, there has been an increased uptake of digital tools in recent years, for instance Zoho for inventory management, Tally for accounting, and QuickBooks for book-keeping. However, the uptake of these tools has largely been concentrated in urban areas, and amongst larger firms, as opposed to the MSME sector.

During consultations, women entrepreneurs from both rural organized and unorganized segments, largely expressed complete lack of awareness and technical know-how of digital tools for inventory management and accounting. Only women entrepreneurs from the organized sector had any awareness of these technologies, however, even amongst this group, there was a reluctance to invest in these tools. For instance, a woman entrepreneur running a small art-based business in Delhi shared that they had no plans to invest in digitizing their accounts, as they felt comfortable with the traditional means of book-keeping. Fear and lack of knowledge regarding digital payment systems has led this business to operate utilizing physical pay checks, visiting bank branches in person, and requesting physical copies of bank statements.

5. Recommendations for Strengthening the Digital Ecosystem for Women Entrepreneurs

Ensuring that different types of women entrepreneurs throughout the country are made meaningful actors in a digital economy requires an ecosystem-based approach, wherein interventions are grounded in an incentives-based demand-driven framework. The analysis presented throughout this essay yields three key high-level policy considerations, which should underpin this approach.

First, the policy, regulatory, and legal support required by women entrepreneurs needs to be tailored to the market segment. This must be done through a prioritization of data that reflects the on-ground reality for women entrepreneurs, such as qualitative and quantitative consultations data as displayed above. While for rural, unorganized entrepreneurs, more interventions are required for base-level skills to improve digital literacy, other segments require more focus on advanced digital adaptation parameters.

Second, both the public and private sectors have key roles to play for supporting women entrepreneurs transcend the digital divide. Public private partnerships can be explored as a vital service delivery mechanism for implementation.

And third, interventions and support to women entrepreneurs should be offered in a phased manner. Digital adaptation is a long-term process, and unless women entrepreneurs adapt to basic skills, gaining digital literacy or using digital payments, it may be difficult to take up more advanced functions like platform selling or operations management.

Notably, a number of interventions can be considered to strengthen the digital ecosystem for women entrepreneurs.

The Government of India could consider expanding the PMGDISHA scheme to cover up to 60% of rural households and mandating that, at least, one woman from every eligible household avails the training to raise the digital literacy among rural women. In phase 2 of the scheme's expansion, a PPP model can also be employed, wherein the training and allied costs can be funded by the government, but the implementation can be taken care of by the private sector. In the medium term, the scheme can also be expanded to cover urban poor, at least women.

The Ministry of MSME's development institutes, tool rooms, technology centers, and other training institutes spread across the country could also launch basic digital literacy training targeted at women entrepreneurs. While these schemes can begin by targeting women in rural SHGs, it can subsequently be expanded to unorganized women entrepreneurs in both rural and urban areas.

The National Skill Development Council could devise new qualification packs (QPs) and training modules covering basic concepts of digital literacy for entrepreneurs, in partnership with the Management, Entrepreneurship and Professional Skills Council. These QPs could then be offered by public/private training providers under the PMKVY scheme. Governments can offer these courses at lower cost to women entrepreneurs and offer higher incentives to private training providers for enrolment of women for these trainings.

State Rural Livelihood Missions (SRLMs) could partner with e-payment providers to transition their members to digital payment platforms. For instance, an SRLM could give exclusive access to a single digital payment provider and mandate all its SHGs to create mobile wallets only of that provider, if they offer trainings, back-end support, and offer some discount on transaction charges. Flash sales and preferential training slots can be offered to incentivize women to enroll.

Given the monopolistic nature of the platform selling market, both in India and globally, regulators in several developed economies are studying a variety of policy measures to curb the monopolistic market power of e-commerce players. Indian regulatory agencies, such as the Competition Commission of India, can undertake a study on whether there is sufficient competition in the e-commerce market in India, and if the commissions and charges levied on MSMEs amount to predatory pricing. Regulations to fix price ceilings can then be considered by the Government if necessary.

The Government of India could raise preferential procurement from women-led MSMEs, currently at 3% of the overall 25% target set for the MSME sector. Additional fiscal incentives can be introduced for women entrepreneurs to enhance their participation on the Government E-Marketplace platform. In addition, a new Centrally-sponsored scheme could be introduced to incentivize private sector firms to increase purchases from women-led enterprises through a list of eligible online platforms (both public and private). MSME Development Institutes can be directed to set up dedicated help desks to support women entrepreneurs register onto the GeM portal, and onto other online platforms.

The Ministry of MSME, Government of India, presently offers a marketing assistance scheme which provides grants to MSMEs for attending buyer-seller meets, trade fairs, and exhibitions. This scheme can be expanded to offer financial assistance for digital marketing, with additional assistance for women entrepreneurs.

The Government of India can launch a ring-fenced fund such as the 'Women's Digital Adaptation Fund', which can provide women-led enterprises with grants (in case of rural/unorganized enterprises) or concessional loans (for urban, organized enterprises) to upgrade to digital operational management solutions.

Private sector vendor companies and industry associations can partner with government institutes to offer tailor-made trainings for women entrepreneurs, especially for the rural, organized segments like rural SHGs in the first phase, and unorganized segments in the medium term, as part of their CSR initiatives. In addition, private companies can also create mass media campaigns highlighting the success stories of women entrepreneurs and promote their ventures. For instance, e-payment companies such as Paytm, Google Pay, PhonePe, etc., can offer digital payments trainings; Amazon, Flipkart, WhatsApp, Facebook, and other platforms can offer trainings on online selling, social media marketing, and product placements; and firms such as Zoho can offer trainings on inventory and operations management.

6. Conclusion

To conclude, exclusion from digital marketplaces is a pressing issue for women entrepreneurs that further alienates them from the labor force. Digital adoption is an extensive process that entails not only the procurement of digital devices and internet services, but also the ability to utilize applications and websites, and then optimize these basic skills. The expansion of existing government schemes such as PMGDISHA and PMKVY to increase digital literacy programs in rural areas, as well as public-private partnerships for the creation of training courses are crucial. Creating an awareness of these schemes and vocational training opportunities, as well as reducing charges from e-commerce platforms and digital payment systems are also essential to encouraging the digitization of women's entrepreneurship. As the world increasingly turns to the digital sphere, women entrepreneurs must not be excluded from the digital conversation.

Gender and the Digital Divide: Handloom Weavers in Assam

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1. Introduction

Handloom products, particularly in the North East, are tricky goods to market in a digitalizing economy: the detailing of each product differs from the other, a common issue in the handmade goods sector. Moreover, most weavers come from rural, digitally-disconnected areas of North East India. In addition to logistical issues such as lack of transportation and communication infrastructure, unavailability of raw materials and market linkages, and the economic divide between the urban-based handloom industry proprietors and the rural weavers only serve to exacerbate the plight of weavers who work on the loom seasonally. For several of these marginal weavers, accessing the digital economy and competing in the global market is nothing short of a herculean task.

My own involvement with the weavers in North East India has brought me face to face with the harsh realities they face and has led me to explore why indigenous weaving communities still face numerous challenges while attempting to go digital. Having grown up in the North East, I was exposed to the work of native weavers at a very young age. My mother was a weaver and so was her grandmother. On most occasions, the weavers created products for household consumption. My mother still treasures a few of the handloom textiles she wove that have now found a special place in her old trunk. However, the demand for North Eastern handloom products boomed only much later, when these subsistence weavers eventually began to sell their products in commercial markets. As weavers entered markets, exploitation by middlemen was not uncommon, as the latter purchased products from the weavers at a very minimal rate.

In the last few years, we've seen a proliferation of e-commerce platforms, presented as a viable alternative to physical markets. The reliance on these platforms only intensified as a consequence of the Covid-19 pandemic; selling online became the easiest, and oftentimes, the only option for sellers to reach their customer base. However, weaving communities in the North East faced significant challenges to going digital, and even when they managed to access digital infrastructure, they continued to be dependent on middlemen to sell their crafts.

Through this essay, I aim to explore the limitations and challenges that weavers face while attempting to access and navigate digital markets. Through my research collaboration with three weaver-based capacity-building organizations in Assam – the [North East Network](#), Mulberry, and [Ava Creations](#) – I found that adopting competitive e-commerce marketing strategies came with a steep cost for these organizations and their primary beneficiaries, ultimately increasing the burden borne by all the stakeholders.

[The Handloom Census of India (2009-2010)](#) states that more than 50% of weavers in the country, most of them women (90%), belong to the North East. The knowledge of this intricate labor is acquired generationally, where women from the indigenous communities, often the sole bearers of this craft, transfer their knowledge to the next generation.

The experience of trade and craft among indigenous women is embedded in local cultural values. Therefore, within the Indian feminist movement, the struggles of indigenous women need to be looked at with a different lens. Keeping this in mind, this essay attempts to understand the gender and digital divide vis-à-vis the handloom sector from a feminist framework that isn't based on the mainstream feminist narrative prevalent in India.

My primary focus during data collection was to interview the leaders of weaver cooperatives and handloom organizations, as they have been instrumental in paving the way for weavers' growth in rural Assam. To probe the gendered aspects of handloom weaving, the leaders I interviewed were all women. Primarily, I aim to capture the struggles weavers and community leaders face while building digital resources and linking handloom products to the digital economy. I chose to focus on the areas surrounding Guwahati as the majority of women who run handloom organizations lived in and around the city. Additionally, I chose to study organizations that focused on indigenous handloom and craft, with a majority of the weavers being indigenous women. Therefore, throughout this essay whenever I use the word 'weaver', I mean 'women' weavers.

2. Marginalization and Gendered Economic Inequality

The struggles of indigenous women have always involved protecting their land, resources, and knowledge from expropriation. The push to rapidly digitize the region's economy as a project of development, therefore has many repercussions on the handloom economy, which consists of extremely intricate commodities of trading. Handloom weaving has historically been part of a heritage-based knowledge system in the North East, where every state has its own unique methods. The assertion of this subaltern identity emerges through the creation of handloom textiles, which are one of the few forms of art recognized by the Indian state as unique and region-specific. For example, the _Muga_ silk from Assam and the _Naga_ Unity Shawl woven by the _Naga_ community have both received a Geographical Indication (GI) tag, a label on products that are produced in a particular geographic origin and possess qualities or a reputation that are due to that origin. This assertion of textiles as unique to communities of a specific region indicates that handloom has an important role to play in scaffolding the cause of an indigenous identity/ies.

3. Need for a Gender-inclusive Digital Economy

In the current era, processes of digitalization have touched everyone in different capacities. In this context, the struggle of indigenous women to cope with the marketing strategies of the digital economy come with significant challenges and shortcomings. For instance, this research brief, points to the gaps in institutional mechanisms that enable one to go digital and promote citizens' interest, with the inherent belief that technology can solve every inadequacy in society. The opening up of the market and the creation of platforms for selling traditional products by e-commerce giants do not necessarily empower local communities. The North East does not only lack basic digital infrastructure; poor network, irregular electricity supply, and logistical and transportation issues also hamper communities from participating in the digital economy. Therefore, on the one hand, the world is starting to largely depend on digital platforms to view, select, and purchase artisanal products facilitated by many e-commerce businesses, and on the other hand, it continues to exclude rural artisans from the race due to lack of adequate resources and (digital) infrastructure. In order to attain digital awakening, first, there has to be a realization of the social and economic rights of the people in such regions.

According to UNCTAD, the global share of e-commerce vis-a-vis retail trade went from 14% in 2019 to 17% in 2020, as the lockdown pushed for businesses to go digital. The importance of the digital has grown manifold in the last decade and the current government's emphasis on a digital India has been seen through many cashless and paperless initiatives. In a 2017 survey conducted by the International

Trade Centre for Businesses, it was found that small and medium enterprises had to agree to unfair commissions (as high as 40%) in order to survive. For women who run small businesses in developing countries, it becomes an impossible task to break this barrier. With the popularity of e-commerce growing daily, women-run businesses are at risk of incurring crucial losses or getting bulldozed by e-commerce giants.

The weavers in the North East who are dependent on middlemen to reach the market, and on the government for subsidies, are fast losing their voice and their fair share of bargaining power in this shift from the traditional to the digital marketplace. In this regard, digitalization has only added an additional layer of economic marginalization. As more and more consumers prefer to purchase traditionally-made items from online marketplaces, marginal producers, who have no digital accessibility, find it harder to survive. As a result, the weavers sell their products at throw-away rates to the urban 'collectors', who then resell them on e-commerce platforms for a sizable profit. The direct producers (weavers) have neither the resource nor the knowledge to create an online platform for themselves. Additionally, e-commerce giants like Amazon and supposedly artisan-friendly platforms such as Etsy extort high fees and commissions during several stages of the onboarding and selling process that most marginal handloom producers are unable to afford. This digital divide not only hampers traditional livelihoods but continues to reinforce the dependence indigenous communities have on middlemen and traders to reach the point of sale.

4. Impact of the Pandemic

During the pandemic, the livelihoods of many artisans, including indigenous weavers, were immensely jeopardized due to the Covid-induced lockdowns. Even though the world at large witnessed a pandemic-aided surge in e-commerce, such developments couldn't transform the livelihoods of the weavers in the North East due to the lack of basic digital infrastructures and resources in the region. These challenges in access to digital infrastructure need to be recognized by the government in order to mitigate the issues faced by small-scale producers. The UNCTAD report also suggests that governments must exhibit a sense of digital preparedness at the national level so that smaller players such as marginal weavers can enter the digital economy. Local producers can benefit from such endeavors only if local digital economies are enhanced.

Motivated to alleviate the plight of the indigenous handloom sector in the North East, women's rights organizations like the North East Network came forward to train their grassroots leaders to be digitally empowered. They also focused on enhancing traditional knowledge of weavers in order to meet market demands, and exposed weavers to the nitty-gritties of demand and supply.

During the first Covid-19 wave, the North East Network managed to train their pool of grassroot trainers in select districts of Assam in order to improve their capacities to use digital platforms to market and sell their products, as well as to stay in touch with members of the collective. This not only enabled the artisans to keep buyers updated about their progress, but helped them get regular guidance from the master trainers who couldn't visit their locations due to the state-wide lockdown. However, this in itself wasn't enough as weavers still had to develop their capacities to compete in the digital market.

[Brahmaputra Fables](#), a local e-commerce platform developed in Guwahati, established a digital platform for artisans and weavers of the North East. Brahmaputra Fables began its journey enabling and empowering local producers to reach an extensive online customer base. However, their ability to expand operations was limited by supply chain shortages caused by the lockdown. For local e-commerce platforms, the digital divide that already exists between them and the digital giants requires huge resources to mitigate, and structural challenges of electrification and internet availability hamper any significant participation in the digital economy.

5. Need to Strengthen Digital Infrastructure as a Precursor to Digitalization

[Saneki Weaves](#), an enterprise created by the North East Network, initially began working with survivors of domestic violence in order to provide them a livelihood. The enterprise supports products of its home-based weavers by facilitating market linkages, as well as providing free services to promote their goods. However, the enterprise struggles with the primary challenge of creating an online presence. According to Anurita Hazarika, a state coordinator at the North East Network, the regions where they work not only face network issues, but also regular electricity outages. In the face of such extreme adversity, the producers have no option but to sell their products directly to middlemen at suboptimal rates. Despite these challenges, the North East Network stepped in to create an enterprise for the weavers where the producers not only have the option to enhance their weaving capacity but also engage in livelihood-generating activities.

The weavers began working from home using the training and tools provided by the North East Network. Thereafter, the enterprise took on the responsibility to market their finished products. The home-based model was created in order to eliminate the additional burden and costs incurred by traveling to and from weaving centers. Women weavers are victims of the "[double burden](#)"; several of them reported that they could only begin working after they've completed household chores. Working from home, therefore, provides them with a certain amount of flexibility.

In this model, monitoring work is routinely done by the master trainers through home visits in order to maintain the quality and standard of products. "Despite a boom in e-commerce, small organizations like us still have a problem," says Hazarika. Since the weavers work in sync with agricultural seasons, they inadvertently have to discontinue some products due to lack of raw materials, even though they are in high demand. As a small aggregator, Saneki Weavers also faces issues of dead stock, which leaves both the organization and the weavers in a lurch of low revenue.

During the Covid-induced lockdowns, Saneki Weaves also trained their weavers to use video conferencing platforms to stay in touch with their head office in Guwahati. This helped the master weavers to monitor the work of the artisans. However, poor network and electrification interfered with the conferences many times. The lack of infrastructure such as digital services, internet services, and electricity makes it difficult for organizations like Saneki Weaves to usher in digital transformation in such areas.

6. Subcontracting in the Digital Economy

Along with infrastructural issues, weavers are also dependent on external agents to solicit orders and market their products. The external agents or middlemen for most part in North East India are 'connoisseurs' or 'curators' of handloom products who gather handloom products from rural weavers and post them on Instagram or Facebook and sell the products at an inflated rate. They are generally equipped with data regarding product demands and commissions, and this data is never shared with the weavers. Distanced from the buyers, the weavers only receive a meager wage from these middlemen, as the latter keep a good margin of profit. Moreover, as per the Handloom Census of 2019-2020, 67% households earn less than INR 5000/month, making most weavers small-scale and marginal producers. This propels the weavers to supplement their income with daily wage work; migration to nearby urban centers to work as maids and unskilled labor are the most accessible means of livelihood.

Knowledge on navigating digital platforms and digital marketing is concentrated in the hands of the middlemen; as a result, rural weavers are yet to break ground and reap the benefits of digitalization for their own benefit. A lot of emphasis has been laid on the need for a vocation-specific digital intervention in the handloom space in order to enable digital empowerment among weavers, where decisions on selling and marketing are taken by the producers themselves. In the context of the North East, training can focus on the collectivization of weavers (forming potential weaver-producer organizations), supply-chain management, and usage of digital technologies for doing business. Organizations like the Digital Empowerment Foundation have already begun to address these gaps; they provide workers in Assam access to low-cost internet connections and digital education. One of their flagship programs, called 'Digital Cluster Development', empowers weavers through digital literacy.

7. Weavers' Organizations Battle E-commerce Giants

Ava Creations, another weavers' cooperative, was set up by Anu Mandal in 2001 to mitigate handloom-related wastage and promote natural fibers to enhance the livelihoods of women weavers in rural Assam. With over 500 weavers working in its community weaving centers, Ava Creations continued to sustainably run its business throughout the pandemic, relying on a customer base that they had traditionally built over the years. Ava Creations has managed to expand their operations online; however there remain significant challenges in the process. According to Mandal, one of the primary concerns is the plagiarism of designs and patterns that happens when products are listed online. Additionally, there is a fear of the organization's data getting absorbed by e-commerce giants.

Handloom cooperatives like Ava Creations also face competition online, where products that claim to be handloom get sold at lower rates on large e-commerce platforms like Amazon and Flipkart. However, these products often do not carry any mark of authenticity, and are of sub-standard quality. Small enterprises can trademark and patent their products to prevent others from copying their products, however, patenting handloom patterns and designs is particularly difficult, as they don't fall under the ambit of inventions but are rather categorized as cultural reproduction being produced generation after generation. In order to be considered inventions, the government must reclassify the status of handloom products.

On several occasions, listing handloom products online is incongruent with the production techniques used by weavers. For example, dying fibers with natural dyes, like the yellow from turmeric or pink derived from onion skin, produce vast variations between each product and across seasons. There-fore, the product details and specifications even under the same design category may vary from one piece to another, and one season to another. This is a major barrier for not just Ava Creations but also for other handloom units as customers find that their products vary from the listed photograph on the websites. In fact, Mandal says, "handmade products have variations even at the level of the weave, as each weaver uses a different kind of pressure while working with the handloom". Selling on e-com-merce platforms contributes to the loss of the individuality of each handloom product; additionally, it is logistically impossible to upload photographs for every product sold online. This heterogeneity has the potential to garner negative reviews, which can significantly impact small, cooperative businesses like Ava Creations and Saneki Weaves. Only those familiar with handloom products and their unique ways of production are aware of the fact that these variations are not mistakes, but are in fact, default and desirable traits of handloom goods.

As e-commerce platforms continue to levy high seller fees, the price of authentic handloom products – already high due to input costs of production – skyrocket dramatically reducing the size of the custom-er base. Selling only to niche customers is not enough to sustain these enterprises, as their goal is to provide a sustainable livelihood system for marginalized weavers. On the other hand, mass production of handloom goods is antithetical to the philosophy of handloom production and the intentions and desires of women belonging to various indigenous communities.

As a result, these organizations, including Mulberry, a craft-centric NGO based in Guwahati, increase product prices at the risk of losing customers and potential revenue. Additionally, there are both emotional and financial attributes attached to each product and lack of significant sales can be demo-tivating to weavers. "While online platforms come with the promise of the possibility to connect with a wider audience, it is accompanied by the fear of competing with global markets," says Rakhi, the found-er of Mulberry. According to her, smaller organizations such as Mulberry need to rethink their strategies of going digital.

Saneki Weaves continues to rely mostly on the physical market – Hazarika feels it is easier to sell prod-ucts at exhibitions and fairs rather than on online platforms. "Customers can touch the material and relate to the value of the products while shopping in-person, versus online," she says.

8. Capacity-building and Establishing Digital Infra-structures

It is also quite apparent that the penetration of the internet among the masses without the scaffold-ing of capacity-building does not lead to an increase in productivity. As the North East Network, Ava Creations, and Mulberry maneuver the digital tide, it is pertinent to analyze how productively these or-ganizations can utilize the internet for their benefit and empower their weavers, as most of the weavers from North East India are from rural areas and the end buyers are from cities and towns. Even though digital interventions can bring remarkable changes in the business models of weaver organizations, these interventions could hardly reach the rural weavers, as urban centers reaped most of the benefits.

Usually, reforms in public policy to enhance the digital economy for social inclusion merely create digital infrastructures, leaving marginal groups without the skill to utilize them.

Scholars state that if connectivity is not supplemented with proper training and vocations, digital transformation to promote handloom goods and services will not be achieved. The handloom sector is unorganized with ineffective government policies. "In the absence of robust market linkages, subcontracting has become one of the only avenues through which one can reach a market. This has not been mitigated by the processes of digitalization," says Hazarika.

9. Conclusion

Handloom weaving techniques are passed down by indigenous women from one generation to another, making it a community-based skill. Smaller handloom units cannot fathom to compete with the might of power looms that produce several swathes of textile each day. Additionally, online e-commerce monopolies take advantage of customer bases that cannot make out the difference between handloom and mass-manufactured textiles, attracting customers due to their cheaper rates, while levying high onboarding charges on indigenous handloom sellers. To mitigate these market conditions, organizations like Ava Creations, Saneki Weaves, and Mulberry have stepped in with the goal of providing a source of dignified income to weavers in rural areas of the North East. However, these organizations themselves have become victims of the structural barriers of the digital world, which oftentimes is a replication of existing unequal economic dynamics present in physical markets.

The promise of digitalization is to reduce the barriers between sellers and buyers, but this is not the case with marginal indigenous weavers in the North East. The suppliers here procure products from rural weavers and resell them on online platforms. The efforts toward shifting the traditional markets to online ones should also focus on enhancing the digital literacy of the weavers. Organizations like Digital Empowerment Foundation are working to make digital businesses accessible to the weaving community. Such efforts should be recognized by the state governments in order to propagate more digital education among the artisans and weaving community. It will not only build skills but also bring better control in the hands of the weavers to look after their own online endeavors. The government of Assam on January 2022 announced that they would procure traditional handloom products from weavers that remained unsold due to the pandemic through the scheme, 'Swanirbhar Naari' (Self-reliant women). The state cabinet also announced training facilities and online marketing support for weavers to facilitate the export of their products. While initiatives from Saneki Weaves, Ava Creations, and Mulberry are commendable in advancing the cause of the weavers, issues regarding the regulation of seller fees imposed by e-commerce giants, building capacities of indigenous weavers at large scale, and developing digital infrastructure in rural areas will require government intervention. The policies should be planned in such a way for the weavers that the digital route becomes a more viable option going forward for the indigenous weavers of the North East.

Women Entrepreneurs in the Digital Market

Muslim Women Negotiating Identity, Religion and Entrepreneurship across Digital Spaces in India

EISHA CHOUDHARY*

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1. Introduction

On a summer evening, I virtually met Saba[1], a woman in her mid-twenties. Saba started an online enterprise along with her sister in September 2019. After two months of venturing into the business, the anti-Citizenship Amendment Act (CAA) protests started in Jamia Nagar, a Muslim-dominated colony in southeast Delhi, where Saba lives with her family. Amid the massive demonstrations against the allegedly discriminatory law, and the mental toll the new proposed legislation took on the Muslim community at large, Saba found it difficult to focus on her business and decided to shut it down temporarily. Additionally, she did not get many orders for *Halal* (items that are free of alcohol and pig fat) organic cosmetic products that she was selling. Subsequently, she took a break and resumed her entrepreneurial work after the protests ended in 2020. Since then, Saba's online enterprise has garnered popularity among young Muslim women who are conscious of Islamic rulings on the usage of permissible and forbidden things.

This essay dwells on several Muslim women's stories, including Saba's – stories of survival, work, and negotiation of their rights across digital platforms. While there are no data, statistical figures, or quantitative indicators to highlight the increasing inclination of Muslim women to venture into online entrepreneurship, the rising visibility of Muslim women-owned online enterprises definitely points to it. As a Muslim woman actively using social media, I have seen many young women entering this space. My doctoral research with Muslim women entrepreneurs also points towards their increasing and active usage of social media platforms to propel their enterprises' growth and to reach a wider audience beyond confined geographical locations. From selling modest clothing and accessories, to handmade products, home-baked foods, and cloud kitchens, Indian Muslim women have set up small-scale businesses across social media sites. These online platforms help women pursue entrepreneurship as an alternative livelihood that offers them wide-scale and better opportunities, greater flexibility, and higher returns with minimum investment.

Due to the popularity of social media platforms, many women shared that they prefer to run online businesses over setting up a physical enterprise. In fact, many of them could venture into entrepreneurship only because of their access to internet and social media platforms. The opportunities that these platforms offer women in terms of reaching out to a wide audience in a cost-efficient manner have particularly lured young women to feel confident, driving them to become entrepreneurs. Many of them draw inspiration from other women doing online businesses with the thought that if others can do it, they can too. The motivations are at times in line with the fact that entrepreneurship has always been accorded a special status in terms of livelihood in Islam. It is not only encouraged but considered a *sunnah*, a desirable activity. In fact, women in many Muslim families receive complete support to pursue business. Due to the advancement of digital technologies, entrepreneurial processes and activities are changing, which has further expanded the scope for Muslim women's participation in entrepreneurship.

This essay is based on qualitative interviews conducted with Muslim women engaged in online entrepreneurship in urban locations in India, such as New Delhi, Lucknow, and Mumbai. It adopts a narrative approach to bring forth Muslim women's voices that are often absent from entrepreneurship or digital economy debates. The dynamics of Muslim women's engagement in entrepreneurship using digital platforms remains a yawning gap in academic literature and media articles.

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1 Names of some interviewees have been changed to maintain privacy.

2. Locating Opportunities on Social Media Platforms

My interviews with my Muslim women interviewees revealed that most of them belong to privileged economic backgrounds. How many women from lower economic backgrounds have access to social media and can think of using it for business remains a lacuna beyond the scope of this essay to explore. On the other hand, women from economically privileged backgrounds and the ones who described themselves as neither "hi-fi" (a term used by few interviewees to refer to the upper class) nor poor but somewhere in the middle, not only have access to social media platforms actively, but are also taking advantage of it to venture into entrepreneurship.

While Amazon and Flipkart were the preferred e-commerce websites by a few interviewees, social media platforms, particularly Facebook and Instagram, have dominated online marketplaces since most women find them easy to use and highly accessible. These platforms have enabled women to reach and interact with many prospective clients. Many women shared their experiences of spending money on creating targeted, sponsored posts as a marketing strategy to increase the visibility of their enterprises and promote them. Furthermore, an active online presence proves helpful in expanding the reach of enterprises as people can order from various places and communicate with them anytime, and at times, they also receive international orders through social media. Altogether, prospects to form new connections, expand networks, and the scope to grow their enterprise without investing a hefty amount of money attract women to focus on digital entrepreneurial spaces.

It appears from women's narratives that, at times, accessing social media platforms for entrepreneurship is an experiment, a pre-test that the entrepreneur engages in before setting up the actual physical enterprise. They feel that by venturing online, there is a better chance to assess the response of people towards their products with minimal costs of failure. In this context, Zarina, a woman in her late twenties, left her job at a multinational company to start her own venture. However, as she was not sure about the demand for the clothes she was selling, she started her enterprise online. In her words, "There are many brands now selling ethnic clothes around the area where I live. I was not sure about investing a large amount of money into setting up a store that might end up failing. I was not ready to risk my savings." Zarina has listed her ventures on Amazon, Flipkart, and IndiaMart, helping her locate wholesale buyers for her clothes. Social media platforms hold prospects for women to get a preliminary idea of their clients' preferences, demands, and responses to their products or services in a short time. Furthermore, the use of social media for business has enabled women entrepreneurs to connect with customers in more unique ways – they can now regularly update their clientele with information on new products, as well as encourage customers to use the comments section for feedback and review, which also boosts perceptions of credibility and authenticity of the brand. For instance, Sabina, who runs a clothing brand, shared that it is through social media that she has met some of her best clients who have now become her friends. "During the initial years of starting the enterprise, these few people trusted my work and bought my clothes. They supported my business when it was a difficult phase for me. I have huge respect for them. While initially I was apprehensive of inviting them over to my home for conducting my business, once I met them, I formed a good bond," she added.

Online businesses also help women get their families' approval with regard to their entrepreneurial aspirations, since most women running online businesses do so from home. Few women indicated that their families were initially apprehensive; however, the knowledge that online businesses would not

involve high-investment costs made them comfortable. In fact, families and friends often get involved in promoting the enterprises' social media handles by sharing the same among their networks, contributing to the overall reach of the enterprises.

Digital spaces have also given Muslim women the opportunity to venture into male-dominated entrepreneurial spaces which would have not been possible otherwise. For instance, 29-year-old Noorin lives near Jama Masjid in Old Delhi which is a culinary hotspot. Growing up in Old Delhi, she learned to cook from her parents and wanted to open a restaurant from an early age. But Noorin described that opening a restaurant in Old Delhi – with marketplaces that have several well-established shops – would not have been possible for her. She mentioned that the Jama Masjid market is male-dominated and even the sight of a woman running a restaurant is "impossible" to come across. Noorin then started a cloud kitchen that caters to people living outside the area who want to try *Purani Dilli* (Old Delhi) food. Her sister assists her in cooking and packing the orders.

3. Shaping of the Online Modest Wear Industry

With the penetration of the internet in the everyday lives of people, reduced costs, flexibility, and feasibility, opportunities to venture into niche businesses have expanded. One such example is the prevalence of modest clothing brands that are gaining visibility across social media sites (a few examples include Thread for your head, That Adorbs Hijab, f_Collection.in, etc.). Modest clothing in my interviewees' understanding refers to clothing items such as *hijabs*, *abayas*, *niqabs*, and other women's clothes (maxi dresses, long shirts, etc.) that have a loose fit, do not reveal any part of the body, and are in accordance with Islamic principles of *haya* (modesty). Over the past few years, with Instagram and Facebook promoting new businesses, there has been a sudden influx of these enterprises. Several Muslim women have identified this opportunity to engage in buying and selling modest clothes that are not traditional looking or boring.

The emergence of a new market for modest wear highlights the opportunities created for Muslim women to venture into an entrepreneurial space that they believe is validated by their faith. It helps them enjoy the freedom to work, earn an income, and at the same time, consciously practice religious ethics and values. In academic literature on entrepreneurship, this is referred to as the "individual-opportunity nexus", laying emphasis on the exploration of opportunities to venture into entrepreneurship. In this case: the modest wear industry.

As many young women are looking for fashionable options for headscarves and modest wear, it has led to the creation of a culture-based industry that has a specific audience: women who are adopting modest fashion. These modest wear brands take into consideration the fashion sense and needs of the urban class, young, and professional women. This sight was earlier absent from the public space as modest clothing would often mean a *burqa*, mostly in monotonous colors like black, brown, or grey.

The motivations for Muslim women entrepreneurs starting such brands are a combination of economic and religious subjectivities. Shazia, who started her modest wear online business in 2018, shared that she is driven by the idea of modest clothing and actively promotes its adoption among her circle of friends. For her, modest clothing is an integral part of Islam and the motivation to venture into faith-based entrepreneurship was at the crossroads of religious and entrepreneurial aspirations.

Muslim women's engagement in this faith-based entrepreneurship is shaping the modest wear industry across online platforms. A dialogue on modesty, choice, and women's agency is a recurring phenomenon across social media sites and in online groups. For instance, on the website of a newly found modest wear brand, the story section mentions that it aims to "shift the dialogue, from that of suppression to liberation". Many women shared that they not only sell modest wear clothing but also promote the adaptation of modest wear clothes by collaborating with *hijab*-wearing influencers and promoting the idea of fashion coupled with modesty. For instance, on the Instagram page of a Muslim woman-run modest clothing brand, the collaborations with influencers who pair headscarves with western wear attempt to display a modern and progressive image of *hijab*-wearing women.

What is observed from the discourses unfolding through the setting up of modest wear enterprises is a reversing of the dictation of modest clothing usually done by men. Women are exercising agency and authority to participate in the development of new forms of religious expressions, in this case by designing, embracing, and selling modest wear clothes. In this lies the potential of disrupting the usual discourse on female modesty. With the thriving of online modest wear clothing enterprises, women are also using these platforms to define the meaning of *hijab,* and advocating their right to wear it. Recently in Karnataka, girls wearing *hijab* were not allowed to enter their educational institutions and were even denied to sit for their exams. After several days of protests and debates in the media, a *hijab* ban was imposed in the state-run schools. During this incident, Instagram pages of several modest wear clothing brands posted messages expressing solidarity with the girls. This way, in their personal capacities, Muslim women's enterprises take a conscious position, as they condemn and raise their voices against developments that they view as atrocities, thereby making their followers aware of ongoing events in the country. While most of them have been vocal about violence against Muslims in India, sometimes they also express concerns about the state of Palestine through art, extending virtual solidarities.

The modest wear industry has emerged as a profitable entrepreneurial niche offering new routes to consumers to access clothing styles that are usually not offered by mass-producing fashion companies. This has been possible with social media platforms which have also facilitated women owners of modest wear enterprises to keep track of what other modest fashion brands are selling, and subsequently update their collection, even if it means forming new contacts, reaching out to new networks, or procuring materials from abroad. However, it is not easy for such value-driven enterprises to establish themselves across digital platforms. Many women owners with whom I had conversations shared that they have to collaborate with *hijab*-wearing influencers, import scarves, *abayas,* and fabrics from Dubai, Turkey, and Iran, a task that is not easy without reliable contacts. They are required to compete with the growing online modest wear industry to be able to sustain their enterprises.

4. Unforeseen Encounters

Though entry into entrepreneurship has become easier through digital platforms, the sustenance and growth of enterprises is still a challenge. The new economic vulnerabilities created in the form of managing, pushing the enterprises' reach, and maintaining its visibility often result in women experiencing anxiety and fear of failure. For the growth of online businesses, it is important to have wide social networks that will enhance the reach of the enterprise. The entrepreneur needs to invest time and also make creative efforts. If the enterprise is not active on these platforms, and does not post often, then there is a high chance of getting unnoticed and having a stagnant follower count. Thus, creating contin-

uous content, posting online, and the presence of the entrepreneur influence the enterprise's success on these platforms.

Asra is a 24-year-old woman living in a Muslim-dominated colony in southeast Delhi. While Asra has been passionate about baking since an early age, the thought of a physical setup discouraged her to start a business as it involved high capital investment. After waiting for several years and finishing an extensive three-month course in baking, she started a home-based bakery selling cakes online. However, since there is increasing competition for home-based bakeries on social media, it gets difficult to assert her enterprise's existence. In her words, "The constant need for innovating, following bizarre trends that you know will not work in the long run, getting the right props, and setting up the correct aesthetics takes efforts and investment of time and money." From learning different techniques and presentations of cakes to adapting to the different formats of presenting them online, Asra is upgrading her skills to fit in the neo-liberalized digital system. Like Asra, women who venture into online businesses find it challenging to establish their enterprises' presence because of high competition and also a lack of clarity about how algorithms on tech platforms work, especially using new rolling features. Social media platforms then push entrepreneurs to improve the quality of the pictures they post, shoot videos, improve the aesthetics, adapt to the latest trends, and collaborate with influencers – often paying them high amounts – all to increase the reach of their enterprises, which further adds to the costs that women have to incur on a monthly basis.

In most small-scale businesses where women are either independently managing or have help from a few part-time employees or family members, it is difficult to be constantly posting content. They are more likely to experience the double burden of care work and managing the enterprise, which creates situations where women experience stress and frustration. Few women talked about how their families do not take online business as "serious work" and expect them to take care of household responsibilities without any compromise. Consequently, there is less recognition of the woman's entrepreneurial identity and an increased expectation of performing expected gender roles.

While the challenges in accessing, using, and taking the utmost advantage of social media platforms that Muslim women experience follow a similar pattern experienced by other women, the anxiety of being a woman and belonging to a particular minority religious community add to the layered complexities of digital platforms. Salva, a 28-year-old woman, runs an [online magazine](#) that has over 33,000 followers on Instagram. The content of her magazine is satirical, which is usually based on the developments occurring in the Bollywood film industry. Salva said that she likes to keep her identity anonymous, but sometimes when it is revealed, she has been targeted for her gender and religious identity. Many times, people who do not take her content in the right spirit get offended and send abusive messages to her. Salva feels that while online platforms are a boon for women to venture into entrepreneurship, they are not entirely a safe space for women as anonymous people can send sexually explicit and threatening messages that cannot be reported, and hence no action can be taken against them.

Good accessibility to internet and social media platforms is a prerequisite for women to venture into online entrepreneurship. For a place like Kashmir where [internet shutdowns](#) have been imposed for months, there has been a severe [impact](#) on women engaged in entrepreneurship. Fatima, a young law graduate in her mid-twenties moved from Mumbai to Kashmir after her marriage. Spending time in the valley, she noticed that there were very few online businesses for Kashmiri art, handicrafts, and

dry fruits which have a lot of potential in the Indian market. She said that people do not get authentic and original Kashmiri products because of several fake ones in the market. In order to sell authentic Kashmiri crafts, Fatima started her online enterprise with the help of her husband. Fatima collaborated with local artisans giving them a fair price for their products. Initially, it was her Twitter followers who bought from her and publicized the business. She believes that social media is a powerful tool which has helped her successfully run her business. However, she is aware of the uncertainty of engaging in online business in Kashmir. She said that being in an economically privileged position, she might not be adversely affected in situations of conflict or internet shutdowns, but expressed her concern towards poor women and artisans who work from their homes.

5. Anxiety, Self-Censorship, and Negotiation Strategies

In the changing socio-political landscape of the country, Muslim entrepreneurs fear increased threats of violence, discrimination, and marginalization. This has resulted in many young women switching from formal employment to entrepreneurship. Initially, these women said that they decided to venture into online businesses because of the feasibility, flexibility, and income-enhancement opportunities that entrepreneurship offers. However, later in our conversations, many of them revealed that the feeling of safety and security in running an online business, being able to freely practice their faith which might not be possible in formal employment, and taking care of their families are equally important factors for venturing into online entrepreneurship. It is thus safe to conclude that one of the many reasons why Muslim women are drawn towards accessing digital platforms for entrepreneurship is that online spaces are assumed to reduce the risk of threat and violence owing to the entrepreneur's religious identity. However, the dynamics and complexities involved in engaging in a digital marketplace do not completely offer Muslim women a safe haven.

A report found that Facebook, Instagram, and Twitter are the platforms that have the highest percentage of incidents of harassment. Religious identity-based targeting and harassment, mostly for holding different political views than the majoritarian narrative has germinated its roots in digital India as well. Muslim women who are active on social media platforms and raise their voices against Islamophobia and State oppression are often targeted by right-wing trolls. Of late, sexual and gender-based violence has increased on digital platforms, especially against Muslim women, as it was seen in Sulli Deals and Bulli Bai incidents, where apps were created to "auction" Muslim women by posting their photos and inviting users to "bid" on them. Such incidents have resulted in an ecosystem where Muslim women do not feel safe in actively engaging on social media sites. The repeated hate and gender-based violence against Muslim women point to the stark reality of the growing animosity, hatred, and violence perpetuated by a growing online community that systematically targets Muslim women who are vocal on social media platforms in an attempt to silence them. However, this "tech-mediated misogyny" has not completely deterred women from articulating their concerns and posting opinions online.

The fear and the threat to privacy, including personal data and pictures being circulated without consent, has not only made women conscious of their presence on social media platforms but has also pushed them to adopt self-censorship. Living in Muslim *mohallas* (localities) in India, women have experienced policing of their movements by families and communities mainly because of fear of safety and security. This surveillance is transitioning to digital spaces as well. Many women shared that their family members occasionally police their social media usage and monitor the content they put up

online, at times even asking them to remove a post in case it reveals their identity or location. Subsequently, to feel safe, sometimes themselves, and other times at their family's request, women moderate the content they post online in lieu of the current political climate curtailing the freedom of speech for minorities in India. Altogether, it is getting difficult for Muslim women entrepreneurs to voice their opinion on the social media handles of their enterprises. Many of them shared that they try to avoid posting any political messages on their enterprises' social media pages which might jeopardize any business opportunities.

Irena is a Lucknow-based entrepreneur, who inspired by Islamic art and calligraphy, started her [enterprise](#) in 2017. With its presence on social media sites such as Facebook, Instagram, and Twitter, her enterprise has gained popularity not just among Muslims but non-Muslims as well. However, venturing into a niche enterprise, and convincing people about the value of her entrepreneurial products was not easy. Describing another concern of venturing into this space, she shared, "people would initially tell me to call it Arabic calligraphy instead of Islamic calligraphy as it might make some people hesitant to buy my products". However, Irena believed that using the word 'Islamic art' has two purposes: it is the true representation of the inspiration behind her products, and it is also a way of reclaiming the word 'Islamic' which is often given negative connotations in the mainstream media.

Before starting her enterprise, Irena was working as a full-time journalist who has written several articles highlighting Islamophobia and atrocities against Muslims in India. She also actively uses her Twitter handle (with over 49,000 followers) to voice her opinions because of which she has often been targeted by right-wing trolls. Her enterprise also came under the scrutiny of these same trolls when many of them gave her enterprise's Facebook page a one-star rating, bringing the average rating down from five stars to 3.5 stars. While this incident did not affect the enterprise's sales in any way, Irena feels that the personal attacks she has experienced have affected her mental well-being. This would indirectly affect her engagement in entrepreneurship across digital spaces, the same platforms where these attacks have taken place. For now, she self-censors by moderating her content and, at times, takes a break from social media to focus on her work and spend time with family. Irena's account tells us that it cannot be assumed that online spaces for entrepreneurship will remain as safe spaces for Muslim women when warnings and attempts at curbing their voices have already begun.

6. Conclusion

The narratives of Muslim women engaged in entrepreneurship highlight the opportunities as well as the dependencies that they have to negotiate to establish the presence of their entrepreneurial ventures and survive on algorithm-based platforms that promote certain businesses and restrict others. Muslim women's experiences across social media platforms are diverse. Every entrepreneur's story is laced with emotions of joy, anxiety, hope, and aspirations to actively use social media platforms not just for entrepreneurship but also to assert the right to equal citizenship. They cannot be simply put under homogeneous categorizations.

Muslim women's motivations, barriers to access, and usage of social media platforms are in a way parallel to the [challenges](#) experienced by other women in digital spaces. However, their presence and active engagement in social media's entrepreneurial space is an important factor to put to rest the hegemonic representations of Muslim women being oppressed by Muslim men who do not allow them to work.

Through moderation of choices, taking conscious decisions, and adapting to online cultural practices, Muslim women take part in a highly competitive business environment to gain profits, flexibility, and upward social mobility. Many of them shared that it is important to use digital spaces for their advantage in the larger aim of community self-development. With this self-sustaining community outlook, many Muslim women interviewed for the essay shared that they have consciously ventured into an enterprise that caters to Muslims. In Fatima's words, "the community is showing resilience in these testing times because we are able to support each other through our respective business journeys".

Over the past few years, India has witnessed an unprecedented increase in hate speech targeting minorities, fake news, and online propaganda by right-wing trolls. Muslim livelihoods are under attack. As livelihood opportunities shrink for Muslim women, entrepreneurship seems a viable option to avoid discrimination in the formal labor market, to a certain extent. However, it is important to move beyond any kind of romanticizing of the entrepreneurial work undertaken by Muslim women to understand the layered complexities and vulnerabilities that they experience on digital platforms, especially in the ongoing political climate where hate speech and gender-based violence are on the rise.

Digital spaces have the potential to facilitate dialogue on women's rights, as well as forge and express transnational solidarity and build networks of empowerment. However, in India, the "alt-right digital ecosystem" posits concerns for Muslim women to freely engage on these platforms. Social media platforms must lay out strict policies against gender-based violence. Also, noting the violence being supported and perpetuated on social media platforms by the right-wing, threatening the existence of Muslim women belonging to a particular minority community, while celebrating women's entrepreneurial initiatives and prospects of enhanced development with the participation of women in Indian digital economy seems exclusionary and frivolous.

This essay takes a lead to initiate a discussion on the presence and engagement of Muslim women in entrepreneurship across digital platforms to be able to address the challenges that restrict their equal participation and prospects to grow. In this climate of hate and fear being propagated against Muslims on digital platforms, this essay urges regulatory bodies, civil society organizations, and activists to advocate for improved accessibility, safe online platforms, and digital justice.

Meet the Women Who are Shaping the Digital-inclusion and Tech-entrepreneurship Space in India

SVETHA VENKATRAM*

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1. Introduction

Imagine you're a doctor doing cutting-edge research and your office is located in one of India's largest medical device manufacturing parks. Now, imagine you have a groundbreaking idea that can potentially revolutionize the way others like you operate, create opportunities for your colleagues, and give you and your founding team the chance to be front and center of pioneering change. And because of where your office is located, you have access to every imaginable resource to build, test, market, and scale your idea.

Meet one such doctor. Dr. Sangeeta Aditya is the CEO of Global Women Association for Science and Entrepreneurship (GWASE), India's first MedTech incubation-cum-acceleration platform exclusively for women-led businesses. She works at Andhra Pradesh MedTech Zone (AMTZ) in Visakhapatnam. It took her three months of relentless pursuit, trying to get companies at the prestigious AMTZ to "find" their best women leaders to join her on GWASE's board.

"I was located at one of the leading MedTech zones of India, surrounded by so many medical device manufacturing companies, and not one of them had a woman at the C-suite level to join me at GWASE," says Dr. Aditya.

This is a problem that arises due to the overwhelmingly male applicant pool. There are 69,222 start-ups recognized by the [Department for Promotion of Industry and Internal Trade](#) (DPIIT) [in India](#) as of the first week of May 2022. 100 of these have achieved "[unicorn](#)" status, a term denoting that they are valued at $1 billion or more. With [42 start-ups](#) joining the unicorn club last year alone, India edged out the UK and became the [world's third fastest-growing start-up ecosystem](#). However, it's worth noting that only [four out of these 42 start-ups had a woman](#) as a founder/co-founder.

Media reports suggest that DPIIT has recorded that [45% of start-up entrepreneurs](#) are women. But as of April 2022, out of the 200 or so unicorn founders (co-founders included), only 16 of them are women — that's an abysmal 8%. A study by Credit Suisse revealed that the majority of India's unicorn founders share a [socio-cultural context](#): male, engineers, and specifically backed with a premier IIT education.

Ranjani Raghupathi, a digital marketing specialist has nearly a decade of experience working in various Software as a Service (SaaS) start-ups. She was drawn to the field, she explained, as it is one of the few spaces that doesn't require you to have pre-existing connections or mentors. Raghupati says, "there's a lot of flexibility to experiment, try your ideas, and switch teams." What's the rider? "In my eight years, I've not had a single female boss. Often, I'm the only woman present amongst several men on a call. I think people have trouble taking instructions from women. When women are leaders there's a much larger lens on them, magnifying their failures," she says.

Gnana Lakshmi TC (who goes by Gyan), a serial blockchain entrepreneur agrees that the field is dominated by men. "I had closely worked with a virtual incubation program. We selected 12 teams to participate and only one of the teams had a woman. She was the only woman participant in the entire cohort. What could we have done? Our applicant pool was overwhelmingly male," says Gyan.

Drawing from these conversations with Raghupathi, Gyan, Dr Aditya, and others who are working on diversity and inclusion, this essay traces what's on offer for women in the tech entrepreneurship space in India. It addresses the following questions:

- What are the mainstream government offerings available to promote gender diversity in India's growing start-up space?

- What are the different and specific needs of women who access an incubator's technological support?

- Given that start-up founders, irrespective of their gender, turn to incubation/acceleration programs to achieve certain objectives such as access to mentors or networks, office space and training, how can programs specifically meant to promote female entrepreneurship differentiate their offerings?

- What does inclusive product design look like?

2. The State-sponsored Offerings for Boosting Women's Tech-Entrepreneurship

Step 1: Planting the idea

Startup India, the Indian government's flagship effort to promote entrepreneurship, has an accompaniment in the Atal Tinkering Labs. There are over 10,000 such labs set up in school all over the country, as spaces for experimentation in STEM fields and to foster a tech-entrepreneurial spirit among students. . The labs are fitted with 3D printers, robotics equipment and sensors, amongst other things.

It's hard to get a sense of exactly how many female students are benefitting from this initiative — 70% of the 75 lakh students covered under the program belong to government/government-aided/ girls/ co-ed schools as per the official website but there's no break-down of exact numbers. One of the best-known projects to come out of these labs is an automatic irrigation system powered by solar panels, invented by 14-year-old K Jeevitha from Subbiah Vidyalayam Girls' Higher Secondary school in Thoothukudi, Tamil Nadu.

Meanwhile Telangana IT Ministry's Women's Entrepreneurship Hub (WE Hub)— the first state-government backed incubation center for women— is running WE Alpha, a program that's currently underway in six women's colleges across the state. Selected faculty members from these colleges received training in entrepreneurial thinking and have been passing forward the knowledge to their students. As part of the program, by June 2022, the 20 best student ideas to help Hyderabad Police tackle cybercrime, decongest traffic, and enhance road safety will win mentorship from WE Hub.

Step 2: The digital platform for start-ups led by women

While school and college programs like Atal Labs and WE Alpha aim to inspire female tech-entrepreneurship, the mainstream government offering for adult women looking to get their first start-up off the ground lies as an offshoot of Startup India – The Women Entrepreneurship Platform by NITI Aayog.

It is open to everyone, irrespective of gender or whether they are running a start-up or simply have an untested business idea.

Registration is quick and free. Once signed-up, one gets regular news via emails and texts about opportunities to register for Startup India's various networking events for female-led businesses, invitations to register for specific training workshops (both paid and free), and access to a pool of mentors. The platform also unpacks questions for first generation female entrepreneurs such as, "What are the various government run grants to apply to that support female-led businesses?" or "Where do I find a workshop led by an industry expert in my field?" Limitations of the platform are its assumption that every woman with an entrepreneurial dream has access to internet connectivity and is literate in at least one of nine different Indian languages in order to use its text-heavy interface.

Step 3: Providing end-to-end support

An incubator that says it provides end-to-end support for a start-up is understood to assist founders right from ideation to the point where their offering hits the market. However, specifically targeted end-to-end offerings for women entrepreneurs are still an afterthought beyond the "mainstay" of entrepreneurship programs which are established by governments, whether at the state or central level (Startup India and the Women's Entrepreneurship Platform are examples). The former has a seed fund of roughly $130 million, while Budget 2022 failed to offer specific benefits like tax holidays or interest-free loans to female-led enterprises.

But one of the best examples to illustrate end-to-end support in action is Dr. Aditya's very specific and targeted mission: to deliver India's very first MedTech incubation platform for start-ups led by women. Her team is focused on ensuring GWASE delivers end-to-end support.

That starts with inviting women to propose ideas for newer or more efficient medical devices and identifying ones that could be easily made at the larger AMTZ production ecosystem. Start-ups at GWASE have access to AMTZ's laboratories to build prototypes and conduct experiments, to develop a minimum viable product (MVP), and get fast-track clearances because they receive government backing by the AMTZ. There's a ready-made market of established med-tech companies located within the AMTZ campus itself — so there's potential to tap into buyers and get bulk orders for products.

3. Meeting Specific Needs of Women

The women's only incubator: Customization and filing out knowledge gaps

WE Hub in Hyderabad is India's first brick-and-mortar state-supported incubator for female-led businesses. Its CEO, Deepthi Ravula, lays out how the incubator for women is different. At the outset, it's sector agnostic and doesn't follow a work-from-anywhere model that has been on the rise especially since the onset of the Covid-19 pandemic. WE Hub offers a physical office space. But here's the catch, "Any woman can walk into WE Hub. But not everybody gets to be in our programs. We have a strict 8% acceptance ratio for the applicant pool. We aren't lowering the bar simply to have more women as entrepreneurs — in fact we're raising the bar. We see ourselves as a funnel that is constantly training women to be leaders," says Ravula.

What's paired with the philosophy of keeping the bar high is what Ravula describes as an enabling environment — running community programs for women, training them to be able to meet the high standard. WE Hub is running an entrepreneurship skills project in Ramagundam, 200 kms from Hyderabad. It has a four-member team of WE Hub staff from the city apart from additional hires from among the local community who provide on-ground support to self-employed women in the region — such as accessing local government clearances or interacting with banks.

Ravula takes pains to explain that entrepreneurs cannot be treated as a homogenous group, even if their gender happens to be the same. Not every woman is looking to have her start-up turn into a unicorn. "For many, they're in business not for themselves but for bettering the prospects of their family," says Ravula. Her point is that a woman should not be termed a successful entrepreneur and a recognized leader only if her start-up receives media accolades, awards and is flush with venture capitalist (VC) funds. Between being a bootstrapped start-up and a unicorn is a crucial point of business stability — being a small and midsize enterprise (SME) and creating jobs. So, for start-ups that come through to WE Hub's programs, leveling up to an SME is a crucial step in scaling an idea.

WEHub's services are extremely customized, says Yamuna Sastry, founder of Cab Dost, who went through WE Hub's Community Slate program — a cohort focused exclusively on women developing digital products that benefit economically underserved communities. "Though we were a cohort, the program was designed to meet each of us where we were at. So, if someone needed a market strategy, it was possible to get assistance fleshing one out, or if someone needed to understand how to value their start-up and approach VCs, that was possible," says Sastry.

In fact, mainstream media discourse has focused on the gap between men and women's access to funding in the start-up space, with good reason. But what the narrative misses, notes Ravula, is that a lot of times women simply aren't aware of the schemes targeted at them or the entrepreneurship funding budgets set aside for them by the state. Though policies and budgets may be well-meaning, banks aren't aware of where women entrepreneurs are or what they're seeking. "WE-Hub is committed to closing the gap — running awareness drives and educating women about what the state has to offer for their businesses," says Ravula.

Recognition: Becoming a national success story

Ranjani Murthy of EY is a consultant roped in by the Karnataka government to provide advice on their various programs to support start-ups. She's been associated with one of their flagship initiatives, the Elevate 100 program, since it began in 2017. Elevate 100 is an annual competitive opportunity for start-ups to earn seed capital of up to INR 50 lakh. As the name suggests, 100 start-ups are selected each year.

Murthy breaks down the importance of visibility and recognition, explaining that, "One in every 20-

30 start-ups are led by a woman. So, it's easy for them to get lost in the crowd. I can think of at least 10 successful start-ups led by men. I can think of maybe one, like Nykaa for example, that's headed by a woman. Why? Because there actually aren't that many examples." Murthy's work has contributed to several consultations the Karnataka government held with start-up founders, researchers and incubators specifically for women.

The state has come out with the WO-EN plan which commits INR 50,000,000 over the next two years to ensure 30% of the Elevate 100 cohort is female. "If the applicant ratio itself is heavily marked with men, it's no wonder that as a default, more men are selected by a VC or an accelerator program. Clubbing women alongside men in this scenario doesn't work — you need reservation to begin making women visible," says Murthy.

Perhaps the most prominent initiative for visibility is NITI Aayog's "Women Transforming India Awards." Yamuna Sastry of Cab Dost is one of the few who has WE Hub, Elevate 100 and Women Transforming India in her portfolio. "It opened doors for me and gave me confidence to go up to investors," she says. Jenaan Lilani, who heads Villgro, one of India's oldest incubators that specifically assists start-ups working on improving the lives of the poor, has pointed out that the real value of an incubator or accelerator is the ability to make introductions. "Incubators and accelerators have the ability to make introductions," she said. "Putting a start-up in front of a big company's decision-makers makes all the difference. They are big customers, bringing in big orders. It's good for the start-up's business prospects."

So, when there's a commitment to support women–led businesses, specifically marking out methods of recognizing them — whether through awards or compulsory targets such as WO-EN's 30%, it immediately opens up a pathway for gender-balance in the entrepreneurial community.

Upskilling

Upskilling refers to broadening one's skill set — and almost every woman interviewed for this piece spoke about it as an important step to take if one wants to keep pace with and take advantage of opportunities in tech-entrepreneurship.

Women Who Code is an international platform that's focused on exactly what its name suggests — women who code. It's designed as a community which offers its paid subscribers cross-continental networking opportunities, job offers and upskilling programs. It has chapters across nearly every major tech start-up hub in the world, and has a significant India presence (with chapters in Bengaluru, Chennai, Hyderabad, Mumbai, and New Delhi). In fact, Gyan, who was a former Bengaluru Chapter President, won a fellowship from the organization which kickstarted her journey as a blockchain evangelist. She's a regular on the circuit, conducting workshops, giving talks at international events and has authored a book on how to code.

But Gyan didn't start out as an expert. The fellowship was designed as an opportunity to take on speaking engagements and talk about developments in the blockchain space. The sudden limelight and being thrown into a leadership role were daunting. It pushed her to read up and learn everything she could on blockchain, a subject she previously only had a cursory awareness about.

The benefits of upskilling are clear in retrospect. She went from her regular day job as an engineer at a software firm to getting opportunities outside the conventional work environment from the Women Who Code community to her current life as an entrepreneur (she's founded more than one start-up and is on the board of a handful of others).

"I know how blockchain works. I have built a professional network which gives me confidence. And I've earned respect. I have the freedom to do what I want, when I want it," she says.

4. The World of Successful Inclusive-Tech Products: From Offline to Digital, from Digital to Offline

From offline to digital worlds

Sastry went from using pen and paper to help cab drivers file taxes to creating the Cab Dost app, which does an automatic computation when a cab driver uploads a photo of their Aadhaar card. She and her co-founders are now working on Spark Money, a service available through mobile phones. It aims to connect 11 million blue collar platform gig workers to the various government social security schemes targeted at them. She has absolutely no coding background but is at the forefront of creating one of the country's biggest digital offerings for the platform gig economy.

How did she do it? The sheer volume of work involved in offering manual tax filing services pushed Sastry to think about going digital. She began by submitting her start-up idea to the Elevate 100 program and won her first grant. She's also been through one of WE Hub's incubation programs.

She's a poster child for leveraging state-supported incubation and acceleration programs for scaling up her business. She used the seed grant prize money to build web and mobile apps — because being a winner meant she was given access to a team of engineers and developers who helped her translate her pen-and-paper product into a digital avatar.

There are several ways a digital offering can be made more inclusive. "My co-founders and I realized that for our product to be useful, the text-heavy digitalization route wouldn't work for our linguistically diverse user-base of blue-collared gig workers. So, we opted for an easy-to-use, intuitive app interface to cater to customers as well as collect their data: photo-uploads only and a minimal need to key in text," says Sastry.

Sastry's work is about making tech accessible. Her start-up used radio spots in the early stages to spread product messaging. They now use WhatsApp groups of worker unions as a platform for marketing. Crucially, they have managed to successfully break down the complex subject of taxes, financial literacy and saving methods for a traditionally underserved audience by capitalizing on the lack of information in regional languages. "We create and circulate bite-size videos and have also found that live interactions on intuitive easy-to-use video platforms work well for customers," she adds.

From digital to offline worlds

Sastry refers to her company as an 'offline' start-up that went completely online by creating an app, a web presence and a mobile-banking tool. Interestingly, the women who are building successful inclusive tech businesses using blockchain applications spoke of the reverse — taking online tool like non-fungible tokens (NFTs) or cryptocurrency and making it work for 'offline' communities — such as rural Indian artisans or even Covid-19 patients.

Gyan's learning curve with the Blockchain Fellowship awarded by Women Who Code has been steep. She went on to explore one of the technology's best known use cases – assigning digital ownership rights to real-world physical assets. This led her to found her start-up, Benefit. Benefit uses the blockchain to create NFTs to encourage charitable giving through the purchase of artwork.

This is how it works: Ownership of any asset (house, car, artwork, music — you name it) can be digitally recorded by an NFT, doing away with the need of paper records or certificates. NFTs represent tamper-proof, digital, electronic evidence that the holder of the NFT owns the rights to whatever asset is linked to it. Additionally, NFTs can be transferred digitally from one owner to the next when an asset is sold. Being electronic, NFTs are documentation that can never get lost, get wet, burnt in a fire or destroyed in a natural calamity the way a paper record might. And unlike manually done in-person signatures that can be hard to verify at a later stage, blockchain technology which is used to program NFTs is a foolproof way of ensuring the digital ownership record is never forged.

When an artist signs on with Gyan's upcoming start-up, Benefit, its NFT platform is programmed to ensure that a percentage of the sale from their artwork goes directly towards a charity, without a middleman. It's an option for wealthy buyers to channel their philanthropic efforts and a great way for artists to directly control the value of their work. Gyan is busy trying to figure out how to integrate her offering with CryptoRelief, an Indian platform that began accepting cryptocurrency backed donations for Covid-19 relief efforts.

Her work with artists also meant she was a useful sounding board for Nivedita Vivek and Srilakshmi Barathi, the women who co-founded Naksh. Naksh is a first-of-its-kind NFT marketplace platform for India's rural artisans to engage with a global audience and leverage the benefits of international trade. Interestingly, neither Vivek nor Barathi has an engineering degree, but they're neck deep in using one of the most futuristic technologies of our times to help India's rural artisans reach a wider user base, own the rights of their work and monetize the designs that so often get picked up by larger fashion and retail houses without giving them due credit.

Their biggest challenge is explaining NFTs to a technologically underserved target audience. Their modus operandi is going to exhibitions, scoping out artists and approaching them to talk about their product. The in-person outreach is an important step in building trust. "It's a challenge because this segment of artists has never heard about NFTs, has no idea how the technology works, and we are literal strangers going up to them, asking to collaborate. We don't use big words. We don't use jargon. We have to assure them they have nothing to lose by registering on Naksh," says Barathi.

There's no platform fee charged for rural artisans, making it more appealing for them to register. But Naksh will take in 5% of the artist's sale proceeds — only if a sale is made. "We have to do this," Vivek explains, "We need to be profitable in order to make a larger impact. Profits will help us meet costs of marketing and onboarding more artists." Barathi adds, "When talking to artists, we emphasize that they would get access to a broader audience and get to keep 95% of the final sale amount. It goes directly to the artist and is transferred in real-time to the artist's digital wallet."

5. Competitions: The Biggest Equalizer in a "Skills vs Soft Skills" Setting

With stints at both large and early-stage start-ups all through her working life, Raghupathi has developed a keen eye for spotting systemic patterns. She's got a name for the structural conditions that are a reality for women looking to scale their business ideas. She calls it "Skills vs Soft Skills."

"It's definitely not for lack of skills that women don't dream. It's actually the lack of soft skills," says Raghupathi. "How do I negotiate better?" or "How do I project confidence in front of a VC?" Or more simply, "How do I feel confident about asking for more when an HR manager wants to recruit me?" These are hard won battles. Dr Sangeeta Aditya of GWASE was insightful about the condition of skills vs soft skills, "In their day-to-day lives many women are hesitant to ask even their own family for help. So, it's even harder for them to envision approaching a complete stranger — like a VC — and asking for millions in funding."

What stands out through all the interviews conducted for this piece is the impact that competitions have in propelling women forward. Day-to-day structural inequalities and debates around policy changes are a regular feature of the technology and incubation landscape, but what cannot and should not be obfuscated is the reality that competitions are one of the best levelers available to women looking for ways to break into the traditional "Boys Club" of the digital economy and its burst of start-ups looking for venture capital backing. Winning a competition immediately gets one traction in a setting that is ingrained with structural inequalities stacked against women.

For the founders of Cab Dost, Benefit and Naksh, their inclusive tech start-ups would never have been fast-tracked if they had not entered their ideas into competitions. . While Sastry's charted her path to success by leveraging state grants, Vivek and Barathi simply began by entering multiple ideas for fun at hackathons — and as a result managed to hone their presentation skills and catch the interest of potential VCs. By January 2022, Gyan hadn't yet had a single face-to-face meeting with her co-founder, whom she paired up with at a virtual event where they won $10,000 in funding from Harmony Protocol to develop Benefit's test version.

Here are the ways in which competitions equalize the playing field for women:

- Women interviewed said they got practice speaking up and describing an idea to potential investors — and getting comfortable with one's ambitions, standing out and asking for help.

- Using the prize money to invest in technology to scale-up their business.

- Leveraging the recognition and awards to get mentorship from industry leaders in their field.

- Meet potential co-founders.

6. Strategies, Ideas, and Policy Recommendations to Balance Gender Ratios in Applicant Pools

Incubator or accelerator programs can showcase VCs who have successfully funded start-ups led by women — and have the women themselves talk about it

The importance of this cannot be understated. Gyan believed this could take a woman from thinking, "I don't like what I'm doing [at my office job]. Maybe I'm just supposed to stay at home," to actually thinking about entrepreneurship as a viable option. For Gyan, frustrating corporate culture and office politics had her extremely fed-up and wondering what to do. Indeed, the setting is frustrating — often, men who break out into entrepreneurship have held a traditional corporate job before. There are enough examples of success and inspiration around them that help men make a leap of faith. Joining the Women Who Code network during her early days while still holding a day job was helpful for Gyan, as it gave her access to a network of women in her field who were leading inspiring projects.

Two-tracks of incubation (tech and business) with co-founder matching

An engineer with an idea doesn't always know how to convert their product into a business. A person without a tech background who has an idea won't necessarily also have the tech skills relevant to engineer the product. So, what's most attractive is a two-track incubation program that provides mentorship from established businesses to engineers and provides opportunities for non-engineers to interact with engineers, describe their ideas, and find a co-founder who is ready to build it. While this may be relevant to anyone who wants to scale their idea, it holds special significance for women as they don't traditionally have access to professional networks in the same way as men.

Consciously designed reskilling programs by employers provide opportunities to catch up with rapid developments in the tech-world post career breaks

Flexible hours and on-site creches can assist women in transitioning back to work after a career break, but there is a skill gap between these women and their male colleagues— the women are at a grave disadvantage when they re-enter, no matter how skilled they were at the job before they took time off. "In the fast-paced tech world, nobody wants to work with someone who was the best. You have to currently be the best. But you have to be given the opportunity to be the best" says Gyan. The opportunity would be re-skilling programs, points out Murthy. In her experience, these refresh knowledge as well as help keep women up-to-date with new developments in their field.

Outreach activities with women in tier-two and tier-three cities

As several of the women interviewed pointed out, opportunities are clustered in the urban areas. One way to change it is to get embedded in spaces outside traditional metropolitan confines and begin running entrepreneurship training programs for the women who live in smaller cities — as WE Hub is currently doing. As a way to draw more women from these cities towards entrepreneurial thinking, Dr. Sangeeta Aditya suggested engineering colleges run basic tech-literacy programs for women and offer certificates of recognition to the students who volunteer to teach these skills.

Further research questions on gender inclusivity

Research on the benefits of gender diversity for companies is well documented — and a Google search throws up several insights from the [Harvard Business Review](#), [McKinsey](#), and [Gallup](#).

Meanwhile, India's Entrepreneurship Ministry is interested in [expanding its start-up ecosystem](#) and encouraging founders based outside metropolitan cities.

Against this backdrop, a conversation with Lilani of Villgro was useful for framing prospective research questions to guide policy direction on gender inclusion. She's collaborating with different teams working on the following:

- What are the benefits of having specific design elements in an incubator's programs that promote gender inclusion — along with the benefits of an overt, blanket commitment to simply work with more female-led businesses?

- At which points in a value chain can more women be included?

- And how can micro-enterprises headed by women living outside metropolitan cities be integrated into production teams of metro-based start-ups that have better access to funds, technology and market leaders?

7. Covid-19 and Looking Ahead: Can We Create Time and Space for Ambition?

Through the course of the interviews, it became obvious that creating space and time for ambition demands conditions of mental space — freedom from the intellectual labor of a day job or the emotional labor of household and family responsibilities — as well as literal physical space that an incubator/accelerator can offer, away from the chaos of home and daily office rigor.

The Covid-19 pandemic has meant that many in-person events, including incubation and acceleration programs, have turned virtual. Murthy explained that virtual incubation as a model works well if your product is in the fintech or e-commerce space. But the biggest ask for women who are using incubation/acceleration programs has been physical desk space.

Ravula of WE Hub concurs, "Virtual incubation and acceleration programs are convenient to run but they're not immersive. There is such a huge digital divide between the major metros versus the tier-two and tier-three cities." In a tier-two or tier-three city internet speed is still a factor as well as the fact that entire families share one device. So, it is hard for a woman located in these areas to fully take advantage of a virtual program. Both Murthy and Ravula, who work closely with state-supported female tech-entrepreneurship programs, noted the value of offering physical office space to women. It provides them with dedicated space to focus on growing their business, away from domestic responsibilities.

The co-founders of Naksh were as candid about their experiences in virtual vs physical spaces. They started attending virtual hackathons and speaking to funders in May 2021 — at the height of India's brutal second wave of the Covid-19 pandemic. They're now well-versed in the ins-and-outs of build-

ing virtual connections. Vivek says, "Networking online is really random. You have to ping people on Telegram or LinkedIn and if they have time, they will respond to you. We recently attended an in-person networking event and that led us to build multiple solid connections which have actually been helpful for our business." Barathi says, "With all the technology available around us, eventually, all conversations become virtual. But it's very important to have initial face-to-face meetings. We find that goes a long way in building trust."

Lilani emphasized the value of personal connections that in-person interactions and networking can bring for women. "A significant part of relationship building for business purposes happens in informal settings, such as recreational clubs or golf courses. These informal gatherings are still largely male dominated. Within families too, conversations related to business are largely with and between male members. While this is certainly changing, it remains slow and anecdotal."

Access to physical spaces, in-person connections and one's own geographic location are drivers in how an entrepreneurial dream can play out. Lilani points out, "There are lots of opportunities in tier one cities for women who want to be entrepreneurs. And there's a difference between the socio-economic background of these women and their counterparts in tier-two and tier-three cities where there's a lack of awareness itself amongst women about what options are available and what policies and programs can be taken advantage of to help them scale up."

There's the question of physical space, and then there's the question of mental space and the luxury of time on one's hands. There is definitely funding for ideas or access to scholarships and free upskilling programs available, but as Gyan explains "Often, women don't actively search for opportunities. They don't have the time. When they do have the time, family or household commitments take over. The fear of taking on too much (like running one's own business) is real. There's simply no ambition to have more."

Uthara Iyer, Portfolio and Programs Manager at [Social Alpha](), a Bengaluru based private accelerator investing in start-ups that build technological solutions which benefit the environment or help those in poverty, lays out some nuanced framing, "Incubators and accelerators can try to encourage female founders via initiatives and programs. However, there has to be a point where we as a society work towards providing a conducive environment for women to take charge and grow into leaders. Unless this shift takes place, we won't see enough women taking entrepreneurship seriously. We are seeing many amazing female entrepreneurs in India today, but there is still a long way to go."

In other words: There has to be a point where we collectively stop thinking about a woman developing a business idea as something that she's simply doing on the side as a hobby or something that she's simply doing because family/household duties mean she can't hold a regular job.

Can we really solve the problem of lack of time for ambition? There's no denying that there are several approaches to promote gender-inclusive work environments — flexible work schedules, diverse hiring practices, company sponsored after-hours transport, mentorship opportunities, recognition and awards, and back-to-work training for women who took a career break. Raghupathi was instructive in telling me exactly why there's an urgent need to declutter. "There are several efforts and programs for women, but very few encouraging men. Nobody is telling men to leave office early and participate in household work. Overworking at the office is encouraged for men and they aren't made to feel un-

comfortable about it. And there's a need to collect reverse statistics — for instance, the gender ratios in a company cannot just be a check-box item. How about studying whether mentorship programs are resulting in promotions or better opportunities for women?"

The recommendations for current policy work on entrepreneurship and the ideas around creating space and time for women entrepreneurs provide insightful framing of the challenges that lie ahead. They lay down a map for prospective projects that work with men — and perhaps families at large — that can potentially usher in many more stories of successful women tech-entrepreneurs.

Future of Work - A Global South Feminist Perspective

Gender, Jobs and Robots: Analyzing the Impact of Artificial Intelligence on Women in Indian Call Centers

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1. Introduction

Shweta Jain[1] begins her nine-hour call center shift with a cup of coffee and an exhaustive to-do list that involves resolving problems faced by Amazon customers, identifying patterns and errors in their shopping experience, and providing process training to her juniors. The 22-year-old works as a resolution specialist at Amazon, Hyderabad. She is one among nearly one million youngsters, who are employed in various call centers across India.

Call centers are part of the Information Technology Enabled Services (ITES) sector. According to a report published by The World Bank, "Call center firms manage operations, such as customer service, sales, and technical support for an array of products and companies in multiple sectors. The industry is export-oriented in most developing countries and requires significant government support, especially in the areas of infrastructure, market incentives, deregulation of telecommunications, education, and lowering trade and investment barriers."

The first call center was set up in India in 1998 and less than a decade later, India started handling about 44% of global IT outsourcing, thereby earning the nickname, "the world's best back office". According to surveys published by the Reserve Bank of India (RBI), the export revenue of the Indian ITES sector rose from USD 8.1 billion in 2007-2008 to USD 37.5 billion in 2020-21.

However, in the backdrop of this astounding success, today, the Indian call center industry, like most of its foreign counterparts, is at the cusp of complete transformation due to the advancement of artificial intelligence (AI) technology, which casts a shadow over Jain's and a million other youngsters' futures.

The origin of the Indian retail e-commerce sector can be traced back to the late 2000s when rising demand for home shopping among the middle class gave birth to numerous e-commerce platforms such as Flipkart in 2007 and Snapdeal in 2010. According to reports, "India's consumer-facing e-commerce market (B2C-C2C) grew at a whopping CAGR of 49.1% from 2007 to 2011 to reach a market size of USD 9.9 billion." Since then, the e-commerce sector has been a major employer of call center agents, with Amazon (which entered the Indian market in 2013) establishing itself as one of the giants of the industry. In fact, while many IT companies witnessed a loss of profit during the pandemic, Amazon Seller Services' revenue grew by 43% to Rs 10,847.6 crore in FY20 from Rs 7,593 crore in FY19.

Amid these developments, using a gendered lens, this essay analyzes the call centers serving the e-commerce sector in India, with a particular focus on Amazon. The essay also contextualizes the fears and aspirations of five young call center employees working in Hyderabad (one of India's leading IT hubs) in the backdrop of the pandemic and rising automation.

2. Threat of Job Loss Due to Automation

According to McKinsey, customer-service representatives' roles are one among 15 jobs most prone to replacement due to automation.

While there are many ways to define automation, the National Academy of Sciences' definition of the term lends itself well to the context of this essay. It defines automation as "the technique, method,

1 Names of some interviewees have been changed to maintain privacy.

or system of operating or controlling a process by highly automatic means, as by electronic devices, reducing human intervention to a minimum". So, AI can be considered as one of the "techniques" that can enable automation.

Ever since 1966, when ELIZA, one of the first natural language processing (NLP) computer programs was created, AI has been widely used to design chatbots that can facilitate human-computer interaction. According to Stanford University's 2021 AI Index Report, "Natural language processing (NLP) involves teaching machines to interpret, classify, manipulate, and generate language. From the early use of handwritten rules and statistical techniques to the recent adoption of generative models and deep learning, NLP has become an integral part of our lives, with applications in text generation, machine translation, question answering, and other tasks."

Now, while many may argue that the anxiety of machines rendering people jobless is as ancient as the discovery of the wheel and that new technology has always generated new forms of employment, what is worrying in the call center industry is the rapid pace of advancement of AI-powered chatbots.

According to Rob LoCascio, CEO of LivePerson, "A bot can respond to 10,000 queries in an hour while an efficient call-center representative can answer six." Further, the pandemic only added fuel to the fire. With governments across the world announcing Covid-induced lockdowns, numerous Business Process Outsourcing (BPO) firms turned to chatbots as they furloughed many employees. For instance, IBM's AI bot, Watson Assistant, reportedly witnessed a 40% increase in traffic from February-April 2020.

According to various studies, the period between invention of new technology and its adoption across the globe is drastically decreasing and many of the recent advances in AI are likely to be widely adopted by 2030.

Further, the 2021 AI Index Report indicates that it won't be long before chatbots are able to have comprehensive conversations with human beings, and ChatGPT is just the beginning.

Amid these developments, numerous studies assessing the risk of job loss due to automation have established that this is not a one-size-fits-all development. According to these studies, there is a varying trend across countries. For instance, while only 6% of all current jobs are prone to automation in Norway, the figure is as high as 33% in Slovakia.

So, how relevant is the threat of job loss due to automation in India?

3. Locating the Indian Call Center Industry

Right from banking to e-commerce, education to the telecommunications sector, chatbots are being widely used to cater to customers in India. They are used for customer service, telemarketing, and for providing responses over email and live chat. When it comes to customer service, until a decade ago, human agents were solely entrusted with handling all sorts of queries, but today, many firms rely on AI-powered chatbots to deal with basic questions that customers may have. If a customer is unhappy with the response of the bot, only then their query is transferred to a customer care agent, thereby making call center employees a secondary source of contact.

The Indian call center industry has predominantly been driven by the labor of youngsters between the ages of 20-25. Skills that are most sought after in the industry include: fluency in multiple languages, willingness to work night shifts to cater to American and European clients, technical knowhow, empathy, patience, problem-solving ability, and clear communication. Since 2000, tens of thousands of youngsters have sought jobs in the call center industry in India because of the allure of being a white-collar worker immediately after graduation and because, "wages of Indian BPO workers are nearly double the average wages in other sectors of the Indian economy".

While there is not enough literature to analyze the impact of job loss due to automation in Indian call centers in particular, reports of job loss in the IT industry on the whole, have been worrisome. For instance, an article published by *The Hindu* in June 2021 stated that IT firms in the country are expected to cut down three million jobs by 2022 due to the "impact of robot process automation". Further, according to McKinsey's 'State of AI in 2021' survey, "56% of all respondents (companies) report AI adoption in at least one function, up from 50 % in 2020," with the adoption rate highest among companies based in India.

4. The Pandemic and Man's (Re)Rise as the 'Ideal Worker'

Call centers like many other sectors of the economy are gendered structures with women and men occupying different roles. Further, they are categorized as "flat organizations with agents and managers comprising about 75% and 12% of employees, respectively". In any typical call center, the calling role, which is highly prone to automation, is dominated by women because of the widely prevalent belief that "women naturally possess better social skills than men". Meanwhile, according to reports, "Men tend to migrate faster from customer-facing roles to technical or strategic positions or leave the industry for higher-paying jobs. Female participation lags behind their male counterparts in higher-value technical roles such as help desk and design (about 69%) and stock brokerage (about 59%)."

Apart from societal mindsets leading to feminization of customer-facing roles, "Gender differences in time use, mainly resulting from women's primary responsibility for reproductive work and gender differences in access to productive inputs and resources," are also responsible for women finding it hard to move to managerial positions in call centers. The responsibility of unpaid labor, including domestic work and child care, is disproportionately borne by women, which hinders their participation in the paid economy, thereby restricting them access to better-paying work. This has also resulted in women being restricted to jobs that are highly prone to automation.

The Covid-19 pandemic further blurred the line between time spent on domestic and professional duties for women as numerous BPO firms shifted to work-from-home (WFH) models. According to reports, "In India, 70% of companies had put more than 80% of their staff on work-from-home arrangements a month after the beginning of lockdown (in March 2020)." Further, according to a report by *The New Indian Express*, 27% BPO companies in India plan on switching to WFH models permanently, and this development seems to have accelerated man's rise as the 'ideal worker' in the call center industry.

The concept of the ideal worker materialized during the 20th century when 'office culture' and white-collar jobs emerged in the backdrop of declining jobs in the industrial sector – a trend which was also caused due to automation and rapid advancement of machinery. An ideal worker can be defined as "a [fully-committed, male employee](#) with no non-work responsibilities that constrain his availability for work". Men were typically considered to be ideal workers because by and large they didn't need to partake in unpaid domestic work and they were the beneficiaries of care work carried out by women in the household. Since the mid-20th century, corporate organizations required men to uphold the standard of an ideal worker if they wished to have a financially secure career.

While today, the gender dynamics of labor and unpaid care work are quite different as compared to those prevalent a century ago, corporate and capitalistic culture by and large still feeds on the idea of the ideal worker to generate revenue.

Radhika Thomas (24), a customer service associate at Amazon, Hyderabad is of the opinion that this phenomenon is widely prevalent in the call center industry today. Thomas, who has been an employee at Amazon for the last 2.5 years, has been working from home since April 2020. Currently, she's part of the 'specialty team', where she interacts with customers who purchase bulky and expensive products. "While working from home has been convenient in saving time spent on travel, our workload has increased drastically. This has taken a great toll on my mental health and the uncertainty caused due to the pandemic has only made things worse," she says.

"Also, in terms of growth, men fare better. Most of the group managers and senior managers are men. One main reason for this is that men are able to work longer hours. Even when they are asked to do overtime, they take it up without complaining. They are, in fact, even willing and able to work on their off days. But most women, including me, are unable to do so because we have to balance our work with our household chores. Also, the need to take care of our health stops us from putting in those extra hours which help with promotions," adds Thomas.

While the thorn on Thomas' side is a highly demanding work culture, for Shweta Jain (22) it is the "lack of technical skills", which she feels is hindering her from rising up the BPO ladder.

5. Education and the Void of Technical Skillset

Jain, who has a degree in Business Administration, has been associated with Amazon for the past three years. She started as a customer support associate and currently works as a resolution specialist. While talking about prospects of career growth, Jain says, "Being a part of such a huge organization like Amazon, we have opportunities coming our way every day in the form of new positions and roles in other teams. These roles are way more interesting than the calling ones but due to lack of advanced technical knowhow, including AI knowledge, I haven't been in a position to apply for those roles."

She further adds that while it is easy to get hired for entry-level positions (agent roles), it is hard to grow your career in the BPO industry without advanced technical skills. And this seems to be a global problem, one that's not only plaguing women in India.

While universities across the world have increased the number of AI-related courses on offer, an UNESCO report states that, "Gaps between men and women's contributions to the development and use of AI, and digital technology in general, are not adequately shrinking." Stanford University's '2021 AI Index Report' seconds UNESCO's findings and states, "The AI workforce remains predominantly male and lacking in diversity in both academia and the industry, despite many years highlighting the disadvantages and risks this engenders." Further, studies by the IMF and Women's Policy Research have established that due to lack of AI education and skills, "women are at a significantly higher risk of displacement due to job automation than men".

Even though it is clear that women in the call center industry are more prone to job loss due to automation, it would be incorrect to assume that all women will run out of jobs in the BPO industry in the near future. Further, even if all agents' roles are replaced by bots, new kinds of jobs will inevitably be created, but the question is, will women be able to gain access to skills that are required to take them up or will they be completely sidelined by men?

6. Imparting AI Knowledge in Schools and Colleges

Taking cognizance of the threat of job loss due to automation, the National Education Policy (NEP) launched in July 2020, stated that, "Concerted curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Artificial Intelligence, Design Thinking, Holistic Health… etc., at relevant stages will be undertaken to develop various important skills in students at all levels."

Further, taking cue from India's AI strategy, the Central Board of Secondary Education (CBSE) introduced AI courses as an optional subject in 2019 for students in grade 8 onwards. According to the board's AI curriculum handbook, students will be taught conceptual and technical skills which would involve gaining basic understanding of AI. Anita Karwal, additional secretary and chairperson, CBSE, said that 883 schools across the country are offering these AI courses to about 71,000 students.

Speaking about the AI course, Chetna Patnaik, computer science instructor at Meridian School, Hyderabad says that the course is an introduction to the world of AI and students are taught the basics of NLP, Machine Learning (ML), and Python coding apart from getting an opportunity to conceptualize and create mini-AI projects. "While this amount of basic knowledge is enough for high school students, it is important that we impart technology-based teaching in all higher education institutions, including in arts and social sciences colleges. AI is the future and we can no longer restrict AI education to engineering colleges," she says.

Data Analyst Archit Narang completely concurs with Patnaik. While Narang believes that automation is inevitable, he also claims that we are moving towards a world of "decentralized education", where education is imparted through the internet and thereby, not restricted to only those enrolled in traditional universities/schools.

"People don't rely much on traditional institutions these days. When we talk about AI and coding, a large chunk of information is available online in the form of subject specific courses. Within six months, anyone can go from being a complete beginner to learning intermediate skills. In the world of coding, many people can get away by following a platform approach, i.e., the ability to leverage some kind of platform technology without knowing what's exactly going on inside it. For instance, I could use the

Microsoft API to transcribe a phone call without knowing the neural networks part of it. Attaining this kind of platform knowledge will become highly necessary in the future," he says.

Narang believes that such kind of upskilling and gaining basic technical knowledge through the internet will become crucial for anyone involved not just in the BPO sector but the paid economy in general. He believes that anyone who wishes to have a job in the near future and not be replaced by bot, should focus their energies on constant upskilling so that they can move to non-routine, non-automatable jobs.

7. The Need for Humans to Vent and Correct Bots

Adnan Khezri (25) works as a resolution lead at Amazon, Hyderabad. His job is to help call center agents to deal with customers. He's been with Amazon for the past 4.5 years. While he is aware that AI-powered chatbots are slowly taking over the BPO sector, he isn't perturbed. In fact, Khezri just like Thomas and Jain, is of the opinion that bots are helpful.

"Chatbots efficiently answer 80% of all basic queries that customers have. In fact, they (call centers) don't need us (agents). If today, you contact Amazon, you will first be interacting with a bot. There's a good chance that you'll be satisfied with the answer that the bot gives you and unless you want to vent, you will not request to talk to an agent," he says.

M. Kavya (22), a customer service associate who also works at Amazon, Hyderabad agrees with Khezri. "Customers don't always need a 'yes' or 'no' answer, they need empathy, they need to feel that we understand what they are going through and that we are there to help them. This won't be possible with chatbots as they'll only be able to provide robotic responses," says Kavya.

Call it the need for empathy, venting, getting rid of frustration or just being angry, no matter how advanced technology gets, human beings will always feel the need to be human and express emotion. And this need might not always be satiated through bots. A case in point is the heckling that Pepper, a humanoid social robot in Japan was subjected to in 2015 after it "greeted" a customer. According to a report published by the the _Daily Mail_, a 60-year-old drunk man decided to take his frustration out on Pepper by kicking it at a SoftBank branch located in Yokosuka. Turns out, not everyone gets along with bots.

Further, even though with each passing day, bots are getting better at communicating with humans, they are not free of error, and perhaps, may never be. In the call center industry, this might lead to the creation of new jobs such as chatbot trainers. According to a report published by Frontier Economic, "'trainers' (workers performing tasks useful to train AI systems), 'explainers' (workers interpreting the outputs generated by AI systems so organizations using AI systems can be accountable internally and to others), and 'sustainers' (workers monitoring the work of AI systems to prevent and mitigate any unintended consequences) may all be jobs of the future."

And this is an eventuality that Khezri feels the next generation of youngsters looking for work in the BPO sector should be prepared for. "In the future, we will need people to pick bots' errors. There won't be people needed to talk to customers but we will need people to supervise the bots and solve the errors they make," he says.

However, what's interesting to note is that the reason why Khezri, Thomas, or Kavya are not disturbed by the thought of bots taking over their jobs is that they do not see a future for themselves in the BPO industry. They say that they are in it for the "experience" and "perks" it offers and that they consider their current jobs as nothing more than a "stepping stone".

8. Paychecks, Perks, and a Stepping Stone

The allure of performance bonuses, monthly travel allowance, meal coupons and a free desktop for work, are some of the many benefits that persuaded Moses Anthony (21) to take up the role of Shipping and Delivery Support Associate at Amazon, Hyderabad in October 2021. With an undergraduate degree in Data Science and Data Analytics, Anthony found it hard to find a suitable job in the data science field and the financial crisis caused due to the pandemic made things only worse for him and his family. Unwilling to stay unemployed till the perfect opportunity came knocking on his door, the young graduate decided to enter the call center industry. He first worked as a Connection Representative at US-based firm Synchrony, but soon switched to Amazon because of a better "work environment" and the scope of switching to a technical role.

Anthony's job doesn't require him to deal with customers, instead, he handles calls and queries made by vendors and Amazon's logistics team. Speaking about the work environment in Amazon, he says, "Trainers are very friendly here. I got performance bonuses even during my training period, which is quite unheard of in other organizations. Further, we get night shift allowance here. I am paid INR 150 (USD 2) per night. This is an extra benefit that's not included in my package. I also get monthly internet allowance amounting to INR 1,250 (USD 16), meal coupons worth INR 1,100 (USD 14) and vacation allowance worth INR 2,600 (USD 34). So, in terms of pay and perks, Amazon is quite a good place to work at."

But answering calls was never Anthony's calling. Having realized that "data is the new oil" he aims to put his science degree to use in the near future. But the detour to the BPO sector occurred after he was advised that "call centers will be the best place to start your career but not something to settle in".

"I want to improve my communication skills and be able to speak English like a native speaker. I have a technical background, so it makes no sense for me to continue in the BPO industry. However, I chose Amazon because unlike other firms, here I can switch to other roles including technical ones within six months. Other companies usually require you to stay in the calling role for 18 months. During the next few months, I plan on upskilling, so that when I am qualified to switch to a technical position, I can apply with the required skills. This job is a stepping stone," he says.

Incidentally, apart from Anthony, the other four call center employees who were interviewed for this essay agree that youngsters prefer the BPO industry only as a stepping stone. According to a report published by The World Bank, "In contrast to jobs in other segments of BPO, work in call centers is often considered to be a stepping stone to a more 'meaningful' career. (However) the intensification of the labor process by measuring the quantitative and qualitative productivity of workers; the constant monitoring, surveillance, and disciplinary-based supervision; the fast-paced work structure; competition among teams for monetary incentives; and performance- linked remuneration all lead to high levels of stress."

And it is these factors that impact men and women differently, thereby making women seek a more "meaningful" career in other fields while men eye managerial posts within the BPO sector.

Even as Anthony aspires for a technical role in the BPO sector, Radhika is hunting for a job in human resources. And while Jain is quite enjoying her stint in the call center industry, apprehensions of not being able to move up the ladder have also made her think of a career in human resource as a backup option. The women prefer human resources when compared to other fields because they feel that the kind of affective labor and communication skills that the job demands are similar to the kind of skills they have harnessed as call center representatives.

9. The Way Forward

According to Stanford University's 2021 AI Index Report, the AI hiring rate was 2.2 times higher in 2020 when compared to that in 2016. Firms are most likely to use AI for customer care operations, product service and development, and marketing and sales.

While the evidence presented in this essay highlights the growing importance of AI in workplaces, it is also clear that there's a gender gap when it comes to gaining knowledge of AI with women in the BPO industry at a significant disadvantage when compared to their male colleagues. The rampant pace of automation, gendered role assignment, and lack of technical skills have ensured that female call center employees are most prone to job loss. However, the following measures can be taken to reverse this trend:

- Knowledge of frontier technology, especially AI, should be imparted in schools and universities across the country. For long, arts colleges, which are traditionally dominated by women, have lacked technical programs. However, while hiring, BPO firms hire from arts as well as science and engineering colleges, which has resulted in arts graduates (mostly women) being designated to calling roles while graduates from other streams are preferred for technical jobs, which are more immune to automation.

- BPO firms should provide gender-sensitive training to ensure that female employees are able to upskill and move to non-routine, technical roles.

- Public policy interventions are necessary to ensure competitiveness of labor markets in the BPO sector, which will in turn guarantee better opportunities for workers. As noted in this essay, tech giants such as Amazon dominate labor markets by offering numerous perks to their employees without necessarily providing promotions or higher wages. However, according to various studies including this one conducted by Frontier Economics, it is clear that "sufficient competition in product markets, and limited market power of employers over their employees are necessary for workers to benefit from productivity gains".

Labor, Vulnerability and Agency in the Gilded Age of India's Influencer Culture

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1. Introduction

"The algorithm is always at the back of my head…I always feel that pressure to show up."

–Divya, 22, Tier-1 city

Divya,[1] a fashion influencer with over 30,000 followers on Instagram, is known for her stunning editorial-style shoots. In her early twenties, she has been creating content for the past four years. During our interview, she spoke with assured confidence and maturity; her passion for content creation was evident and almost infectious as she spoke about the joys and peculiarities of being a content creator. However, during the course of our conversation, I discovered that underlying the seemingly enviable life of content creators lie tiny fissures of vulnerability. The "pressure to show up" is just one of the many vulnerabilities facing influencers in a metamorphosing platform economy.

Content creators, colloquially known as influencers, affect our consumer choices, shape our ideas about attractiveness and wealth, and alter the way we interact with the digital economy. They have transformed our lives in profound and irreversible ways. Globally, the development of influencing as a career took place in the 2000s, amidst an environment of heightened economic insecurity and the rise of social media platforms. The influencer industry is a product of late capitalism. Late capitalism, characterized by a post-industrial world where all aspects of our lives are commodified, has given rise to new ways of interacting with media and technology. The influencer industry has emerged from the 'mediatization of culture', where the media commodifies culture through technology. In this context, influencers encourage consumption through the generation of content that is of social, cultural, and economic value. With the rapid growth in the number of internet users, India too has its own share of influencers, with the influencer marketing industry in India currently worth over INR 900 crores.

How do we situate influencers in the platform economy? Are influencers agents with the power to shape the future of the digital economy, or do they occupy precarious, uncertain positions beholden to invisible algorithms?

Through interviews with influencers in the skincare, beauty, and fashion space, this essay will explore agency and vulnerability in the digital economy. I hope to raise and grapple with questions about the kind of labor that is deemed valuable and worthy in a gendered society, the invisibilization of this labor, and the agency and vulnerabilities of Indian influencers in Instagram's gilded age. I started these conversations assuming that influencers were unaware of their embeddedness in the digital economy. However, I exited these discussions learning that there was no one more aware of the depth and breadth of this embeddedness than the influencers themselves.

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1 Names of some interviewees have been changed to maintain privacy.

2. Invisible Work

Instagram is a visual platform that runs on invisible work. Coined in the late 1980s by sociologist Arlene Daniels, invisible work refers to work that is devalued and "disappears from view". Our "commonsense understanding" of work invisibilizes the labor that is traditionally performed by women but that is crucial to everyday life. On Instagram, much of the labor performed by influencers in the skincare, beauty, and fashion space is invisibilized, belying the time, emotional investment, and skill behind each post. Influencers routinely perform three kinds of invisible labor: aesthetic labor, relational labor, and identity work. Importantly, influencers also perform a kind of invisible labor that is critical to their survival: authenticity labor.

3. Authenticity Labor

"I do well on Instagram because I am relatable. I don't show a world that exists only in movies."

-Dolon, 40, Metro city

Unlike the aristocrats of yore and the movie stars of the past century, influencers are especially powerful because they are authentic. Distinguished from fakeness and falsity, authenticity enables influencers to build credibility and inspire trust. By inviting followers into their real lives, delivering balanced opinions, and revealing their flaws, tensions, and joys, influencers perform authenticity.

This deep awareness of the transformative power of authenticity was stark in interviews with influencers. While few used the word "authenticity", words like "genuineness" and "relatability" were frequently used. Almost all the influencers I interviewed identified their authenticity as their unique selling point.

Dr. Falguni Vasavada, who has over 75,000 followers on Instagram, says that "authenticity is the name of the game". A Professor of Strategic Marketing at MICA, Ahmedabad, there is perhaps no one better than Dr. Vasavada to dispense advice on marketing oneself as an influencer. She cites "regularity and authenticity" as two factors that are indispensable for success on the platform.

Authenticity is an intangible quality, and intuitively, one may believe that authenticity is merely being true to oneself. However, within the idea of authenticity lies a deep-rooted "paradox". To enjoy the benefits of authenticity, one may have to "betray" one's true nature. People feel most authentic when they conform to social conventions, and not when they are actually loyal to their unique qualities. This paradox points to the complexity of authenticity. With influencers, there is an additional layer of nuance: this enactment of authenticity – a performative realness – is public. Importantly, it takes work to be authentic. Literature on authenticity in social media suggests that influencers employ "calculated authenticity" to appear more relatable, performing authenticity labor, a process through which they "perform and present genuineness". Aspects of authenticity labor include displaying a passion for one's work, selectively sharing personal details, and displaying a genuine persona. Authenticity labor takes time and effort to perform.

Authenticity labor leads influencers to share small, seemingly insignificant details of their lives with their followers. Sakshi, an influencer with 17,000 followers, said that she once ran into one of her followers at a mall who asked her if she would like to join her for coffee. Sakshi was surprised and

somewhat "creeped out" to find that the follower knew exactly how she liked her coffee: strong, with very little sugar. For Sakshi, it was an odd moment, and she didn't post for a few days after the incident. Authenticity labor thus demands the dissolution of the boundaries between the personal, the professional, and the social.

Influencers must also make sure that they present authentically while working with brands. Nandita, a social media marketer, says that influencers want control over their creative vision, promoting sponsored products in ways that feel most authentic to them. Influencers resist working with brands that impinge on their perceived sense of authenticity. For instance, many currently shy away from promoting products that lighten the skin, as they conflict with their core values.

The correct performance of authenticity labor matters not just to the audience, but also to brands. The monetization of authenticity has given rise to the influencer market, worth over USD 11 billion globally. Content must be "genuine" and "fit the feed" of the influencer. Influencer marketers say that brands must treat influencers as "autonomous creative partner(s)" and cede some creative control to influencers. Organic content tends to do better on social media and it is best if influencers create their own script and concept. The performance of authenticity labor, thus, predicates monetary success on the platform. According to Banet-Weiser, for women, failure to correctly perform such an authenticity labor may have particularly negative consequences. "Fakeness" is viewed as especially abhorrent and may come with consequences for female influencers, who may be caught in an "authenticity bind". When they seem "too real" and express their innermost feelings on social media, they face criticism. However, when their posts appear excessively curated and perfect, they are criticized for being "too fake".

4. Aesthetic Labor

"I will not sugarcoat it. This pressure (to have the perfect body) sometimes impacts me. But I've been in this industry (for a long time). You know what actually goes behind that perfect image…there is a makeup artist, PR agent…we sort of know what happens behind the scenes."

-Pratibha, 32, Metro city

Pratibha's comment went straight to the heart of the intensive labor that influencers perform on a daily basis to create the perfect post. The influencers I interviewed were all women who operated in the skincare, beauty, and fashion space. Instagram was the platform of choice for these influencers. Instagram amassed a staggering user-base within a short time, shifting audiences away from long-form content on YouTube and WordPress, to a visual-heavy medium designed specially to appeal to shorter attention spans.

Influencers are often backed by agents, photographers, video-editors, makeup artists and interns – an entire team is responsible for the brilliantly shot post or reel. Yet, posts often appear effortless, belying the time, labor, and effort of others in creating the post. Aesthetic labor on Instagram is thus invisibilized.

Through aesthetic labor, workers cultivate an appearance and style to conform to a certain image. In the retail industry, for instance, certain retailers require their employees to conform to a dress code that exudes the aesthetic of the brand. Most recently, Netflix's 2022 documentary, 'White Hot: The Rise

and Fall of Abercrombie & Fitch', revealed the rigor with which the brand's look-book prescribing dress codes for its employees was enforced. In the fashion, beauty, and skincare space, influencers pay careful thought and attention to performing aesthetic labor. A perusal of the profiles of the influencers who were a part of my study displayed a carefully cultivated aesthetic.

This aesthetic may extend to the harmonious use of colors and filters in posts, but is most often manifested in sartorial perfection and impeccably applied makeup.

Aesthetic labor is strongly mediated by gender and heteronormativity. Influencers in this space engage in an aesthetic performance of femininity and heterosexuality. Judith Butler's groundbreaking 'Gender Trouble' argues that gender is something that we continuously do; endlessly perform. Influencers perform femininity through aesthetic performance. This performance is rewarded in the form of increased engagement, priming influencers to continue performing this labor. A, an actor who also moonlights as an influencer, candidly acknowledged that revealing photos garner more likes. She said, "It's really sad, but when I post a butt picture, I know I will get more likes." Our conversation took a somewhat pensive turn when she said when she felt low about herself, she would post certain pictures because she knew she would get more likes. The 'correct' performance of femininity elicited more engagement.

5. Relational Labor

By managing their emotional expression in professional interactions, influencers perform emotional labor. Some have pointed to the marked prevalence of emotional labor in jobs that require "service with a smile". This is particularly true for influencers. The 'correct' performance of emotional labor is key to achieving success on the platform.

In addition to emotional labor, influencers perform another kind of labor that is determinative of success on the platform. Relational labor, different from emotional labor because of its emphasis on building ongoing relationships rather than on one-time encounters, constitutes a large part of the labor performed by influencers. Influencers must consistently interact with their audience in order to drive professional success. When influencers build sustained online engagement with their audience, they create a 'community' that interacts regularly with their posts through likes and comments. Social media platforms allow for continuous interaction, creating higher expectations of engagement.

The metric that is most commonly used to measure performance on the platform is 'engagement rate'. The engagement rate refers to the ratio between the average likes and followers of an influencer. It indicates the number of users who actively engage with the influencer's content.

According to Nandita, an engagement rate of 2% is the minimum that brands expect from an influencer. An engagement rate of 5-10% is considered good. Nandita said that interacting with the audience drives the most engagement and increases the engagement rate. "The big influencers Komal (Pandey), Kusha (Kapila) know how to keep up engagement rates…they're constantly replying to comments and engaging with followers," she said. Consistent relational labor thus appears to be the price one pays for professional success.

Interestingly, it appeared as though the performance of relational labor also yielded non-monetary rewards for influencers. Many influencers revealed that they derived satisfaction from having a "close-knit" community and an engaged audience. Some even revealed that they were not interested in growing their followers rapidly. Rather, they wished to grow sustainably and organically by creating an engaged audience.

6. Identity Work

Through identity work, influencers carefully straddle the boundaries between their personal and professional lives. For most influencers, this boundary becomes increasingly muddy. The pressures produced by the labor of authenticity complicates their identity work. In the construction of authenticity, influencers constantly wonder how much to share, with whom to share, and when to share. These tensions are invisibilized, scarcely perceptible beneath the surface of 'candid' photos and 'spontaneous' revelations.

Most influencers in the skincare, beauty, and fashion space are women. They engage in invisible work on a daily basis. Many revealed that because of the fleeting nature of the interaction between the audience and the influencer, the audience was unable to understand the kind of labor that goes behind each post. Most influencers interviewed described content creation as a 24X7 job, with ideating forming the bulk of their work. Many influencers lamented that brands did not recognize this labor either.

Further, influencers in this space largely perform 'women's work', which may point to another reason for its devaluation. The devaluation of women's work, simply means that the work done by women is rewarded less than the work done by men. Men's' work is accorded prestige, respect, and commands a higher monetary value than women's work.

At no place are the consequences of this devaluation of influencers' labor in the skincare, beauty, and fashion space more starkly felt than in the context of barter collaborations. Barter collaborations refer to an arrangement between the influencer and the brand where the brand does not monetarily compensate the influencer. Rather, the influencer is given free products to review or promote.

Only two influencers out of the 10 interviewed were positive about barter collaborations. Barter collaborations with smaller 'indie' (independent) brands did not bother them. The influencers in these cases felt like it was their duty to connect smaller brands with their audience. However, they conceded that they were "irritated" when larger brands did not offer to pay.

Other influencers deplored the practice of brands utilizing their time and labor free of cost. Influencers may agree to these arrangements to obtain visibility. Their positions are precarious, and the failure to accept a particular opportunity could have disastrous consequences for their visibility on the platform. Many influencers referred to these arrangements as exploitative, and report feeling like their labor is underappreciated and taken for granted.

One influencer revealed, "When I started out, there was this brand that offered me hundred rupees for each sponsored post. That is nothing! A lot of work goes into each post. Hundred rupees is quite frankly humiliating, but there are some who do this for visibility." The devaluation of influencers' labor could be responsible for the prevalence of these financially unviable arrangements.

7. Vulnerabilities in Agency

"Teen din nahin post kiya, toh gayab! (If I don't post for three days [I] disappear)."

-Nikita, 30, Metro city

Influencing is difficult work. It takes skill, effort, and consistency, as evidenced by the multiple forms of invisible labor influencers perform on an everyday basis. However, influencing for many also produces a strong sense of agency.

According to Moore, a sense of agency refers to "the feeling of being in the driving seat when it comes to our actions". Through agency, one has the ability to control one's body and external environment. In my interviews, I explored influencers' decisional autonomy and financial independence.

All the influencers I spoke to said that their career as influencers made them more confident. Nikita says that she now feels equipped to speak "before a crowd of 500". She continues, "when you post, you are constantly showing a part of yourself everyday". Divya, all of twenty-two, asserts that she is "way too independent emotionally". She says, "I am more mature and have had to handle more (responsibilities) than others my age." Neha, with a modest following of 1,500, runs a makeup page. She acknowledges that she enjoys the validation that she gets from posting. With a full-time job as an engineer, Neha says that her posts are a form of self-expression. Belonging to a family where makeup was seen as unbecoming, and where she was slut-shamed for wearing makeup to her office, Neha finds her Instagram page to be a safe haven. Since starting her page, she says her confidence has grown by leaps and bounds.

Younger influencers indicated a strong link between financial independence and decisional autonomy. Those who started posting as teenagers began to earn when they were in their late teens, and now identify as being completely independent financially.

However, embedded within this agency lie intricate matrices of vulnerabilities. To many, influencers lead aspirational lifestyles. However, their careers depend on the behavior of all-powerful algorithms; hence their agency is at once both fleeting and vulnerable. While influencers initially held the keys to the monetization of authenticity, the rise of digital capitalism has resulted in a shift in power away from influencers and towards social media platform companies. These social media platforms thrive off the personal information and intimate moments of users, monetizing this data to manipulate their decision-making processes. While influencers play a role in defining the consumption choices of their followers, it is in fact the platforms that truly reap the benefits of the commodification of emotions and choices

Serving as technological 'gatekeepers', these platforms make influencers susceptible to changes in algorithms and the vicissitudes of the phenomenon of virality. It is platforms that are responsible for constructing and destroying influence, with the monetization of the social power of these influencers dependent on the whims of the platforms.

Likes and followers, seemingly innocuous elements of Instagram, may point to a far more insidious practice that platforms across the board employ: gamification. The gig economy runs on gamification. Game elements such as scoring points, competition, and ratings enmesh workers deeply within the

platform. Achieving 'success' in the game stimulates happiness, leading to a sense of accomplishment, while 'mistakes' lead to a firm resolve to do better. The Octalysis Framework, developed by Yu-kai Chou, consists of eight core values that make for effective gamifications. In the context of Instagram, the core values of "Development and Accomplishments", "Creativity and Feedback", "Ownership and Possession", and "Social Influences and Relatedness" drive users to spend increased time on the app. Likes and Followers are accomplishments and serve as feedback. Stickers, filters, reels, and Instagram TV (IGTV) facilitate creativity. Users display a sense of ownership over their profiles, and by engaging with other users on the app, they experience a sense of social connectedness.

Instagram is also equipped with a somewhat sophisticated 'Insights' or analytics feature, which allows users to map in real time how successful they are on the platform and how others engage with their content. Instagram Insights plays a significant role in the lives of influencers, providing continuous feedback about how well their posts are doing, enabling influencers to replicate the content that does well and to produce less of the content that doesn't. Insights is also crucial to advertisers, sponsors, and 'collaborators', who use this data to choose the influencers they work with.

In some ways, the consequences of the gamification of Instagram are more starkly felt by influencers. For regular users, performance in the game may have emotional and social consequences. For influencers, performance in this game serves as a public and easy, though somewhat reductive, metric to measure professional success. Instagram's gamification model pits influencers against each other in an obvious and somewhat gauche way. Successes and failures are there for all to see. Despite the initial nonchalance with which interviewees spoke of their follower count and engagement rate, many candidly revealed later that they did in fact worry about them from an emotional and professional perspective. Nikita, a travel and fashion influencer in her early thirties, said, "some brands see that I don't have enough followers and put a lot of pressure on me to grow my followers. There is constant emotional pressure and turmoil".

"Sometimes it hampers me when I think…why does someone have so many followers? I used to compare myself with others but I'm better now," revealed Pratibha. Taking a somewhat philosophical perspective, Dr. Vasavada said, "I'm sometimes caught up in the game of followers but it is a natural human tendency."

There is a link between gamification and the constant performance of invisible labor. The constant performance of authenticity labor, relational labor, and identity work generates engagement, giving influencers a shot at achieving 'success' in the game. Influencers hope that constant and 'genuine' engagement with audiences will spur engagement rates. Startlingly, none of the influencers could claim with certainty that they understood how Instagram's algorithm worked. Most said that creating a 'successful' post was entirely up to chance. They did not know why or how a post went viral. Rather, they hoped that by consistently producing content, at least some of their posts would resonate with audiences. Influencers are rendered vulnerable in part because they are estranged from their labor, receiving indecipherable, erratic feedback from the Instagram algorithm for their work.

Driving Instagram's continued gamification is its strategic introduction of new features that introduce elements of unpredictability. In August 2020, with the pandemic well underway, Instagram introduced its Reels feature. Instagram Reels are short-format videos, usually running for less than a minute. Among influencers, Reels are a polarizing topic. They take more time and effort to create than picture

posts, and also present a unique predicament. Reels appear to perform better than carousel posts, stories, pictures, or IGTVs. However, an informal experiment found that while followers and engagement increased with every reel posted, the difference wasn't substantial. Most influencers said that Reels take significant time and effort to produce, and that followers may not realize the work that goes into creating a Reel.

Nearly one-third of the influencers interviewed said that if they could change one thing about Instagram, it would be the Reels feature. Many expressed frustrations at the kind of Reels that went viral.

"Sometimes stupid content gets millions of views while aesthetically shot photos hardly get any views…I don't understand Reels," said Dolon, an influencer in her 40s. Several other influencers expressed similar thoughts. There was both a sense of incredulity at the tremendous capacity of Reels to generate virality, as well as growing consternation at its seeming unpredictability. Hence, Reels are at once both inscrutable and powerful. While they appear to be yet another element in Instagram's gamified world, they are a stark example of the kinds of vulnerabilities that entrap influencers in a rapidly evolving digital economy. Gamification also hinders creativity. Many influencers harked back to a time when Instagram Reels did not exist, saying that Reels had "killed creativity". 'Winning' the game required mere replication, driving down the agency of influencers and their ability to produce original content.

No one is more acutely aware of the vulnerabilities produced by platform capitalism than the influencers themselves. They are conscious of the fleetingness of virality and of the constantly metamorphosing pieces of code that determine success on these platforms. In an uncharacteristic moment of silence during the interview, Sakshi reflects that Instagram, like Tik Tok, may not last forever. TikTok, banned by the Indian government in 2020, is a social media platform with a focus on short-form user videos. TikTok found great popularity in rural areas, with some arguing that it empowered rural women in particular. The possibility of something going awry with Instagram hovers over many influencers, who have painstakingly and carefully built a loyal following.

Vulnerability is also reflected in the constant pressure to post content. Many influencers revealed that they regularly post content even when they feel emotionally low. Influencers who did not rely on Instagram for their livelihood had no problem telling followers directly that they were not physically or emotionally equipped to post fresh content. However, those who were full-time influencers felt pressured to push past their emotions and post, lest the algorithm relegate their content to the bottom of the feed. Influencers are also constantly grappling with the phenomenon of virality. The promise of going viral pushes them to produce content in greater numbers, hoping that they someday, somehow, are able to achieve virality.

A study of the vulnerabilities of influencers would be incomplete without placing it in the larger context of platform capitalism. Through the "extraction and commodification" of the data of workers, platforms such as Instagram are able to exercise increased control over their users. Platforms harvest worker data in a bid to enhance their operations. In the context of Instagram, it appears as though its ever-changing features, and elusive algorithm, serve as ways for the platform to collect and extract value from the usage and consumption patterns of users. It is important to situate influencers within this larger context.

Agency in influencer culture, thus, cannot be divorced from vulnerability. The growth of platform cap-italism – where a few large tech companies dominate the digital ecosystem and capture large swathes of personal data – has resulted in a shift in power away from influencers and towards platforms. While influencers may appear to exercise agency, it is, in fact, the platforms that truly reap the benefits of the commodification of emotions and choices. The embeddedness of influencers' lives within the platform economy means that their fortunes are irrevocably bound with that of the platform's and it is from this embeddedness that many vulnerabilities arise.

Techno-surveillance in the Workplace

She Will be Tracked for Her Safety: The Impact of Surveillance on Women's Work

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1. Introduction

Science fiction often plays on our existing fears and the potential dangers of technology. It's an exercise in imagination, building an alternate reality – What if the city had eyes, constantly multiplying, watching people's movements, and calculating the levels of danger that they pose to others? What if we lived in a world where artificial intelligence-enabled cameras predicted citizens' behaviors, and drones policed the skies; while CCTV cameras sent live feeds in central control rooms, and facial recognition tech flagged negative emotions on people's faces? What if the government had a list of suspicious activities like smoking or loitering in public spaces that would automatically place people on blacklists, and cameras could detect 'abnormal behavior' near parks, colleges, train stations, liquor stores, and protest rallies. What if cameras in public transport captured photographs of you, private cabs offered live video feeds for your family members to watch you, and apps on your mobile phone tracked your heart rate, body temperature, and movements and automatically sent video recordings to 'assigned protectors' when anomalies are detected?

With the rapidly increasing evolution and implementation of surveillance tech in India, the extreme scenarios of science fiction are becoming ubiquitous and mundane. These technologies either already exist or have been proposed by both private companies and the state. And the justification for them is a familiar one – "we must keep women safe".

2. The Micro and Macro of Surveillance

The Delhi gang rape and murder in 2012 saw nationwide protests and increasing pressure for the government to take concrete steps to ensure greater safety for women. In response, the Central government set up the Nirbhaya Fund to assist survivors of violence and implement initiatives that would improve the safety of women. However, the key component for most plans to utilize the fund included ramping up of video surveillance through CCTV cameras, despite little evidence that increased surveillance results in a reduction in violent crime. The government's 2015 Smart Cities Mission also ensured further investment in surveillance solutions including large-scale CCTV installations and the development of Integrated Command and Control Centers in many of the 100 Smart Cities. The Safe City project, a Central government scheme under the Nirbhaya Fund, is underway in eight metro cities with more to follow.

Through these schemes over the past decade, hundreds of crores have been allocated to further ramp up police surveillance. As technology has advanced, these plans have escalated. Karnataka plans to install over 16,000 cameras equipped with facial recognition tech. Chennai, Hyderabad, and Delhi are now among the top 10 most surveilled cities in the world. The recent tender from the Uttar Pradesh government included a proposal for cameras equipped with emotion recognition tech that could detect expressions of fear or distress on women's faces in cases of harassment. "If we look at the numbers that have been spent in Delhi, Mumbai, Lucknow, all of these cities, most of the investment (for women's safety) has been in buying surveillance technology," says Anushka Jain, Associate Counsel at the Internet Freedom Foundation. "But that is not the only way you can utilize these funds (the Nirbhaya Fund). They can be used in public awareness, in developing school programs on gender equality, etc. The massive push we've seen on buying surveillance tech because the government is failing to understand and respond to the underlying issue of misogyny and patriarchy."

Innovations in surveillance tech also work on a smaller scale, allowing families to use apps and other wearable devices to keep track of women whenever they leave the house. Safety apps for women include features such as geofencing, i.e., creating virtual boundaries that would trigger alerts if a person ventures beyond them (referred to by one app as an 'e-Lakshman Rekha'), voice activation, live tracking, and live-streaming via the phone camera, and automatic audio and video recording when triggered. Engineering research trends propose plans for women's safety devices that can be activated through parameters such as temperature, heartbeat, vibration, or specific unusual movements detected by sensors – once activated, the system automatically enables tracking of the user. Many of these devices and apps advertise themselves as a way to track daughters, sisters, mothers, and wives as they move about outside the home. For example, on the Google Play Store, Eyewatch SOS for Women asks "Working at odd hours? Or just feeling threatened? Now use Eyewatch women to protect you with the help of your protectors – parents/spouse or friends." Advances in technology have resulted in alarming ways in which the control over triggering an emergency response through these devices is taken away from women and placed either in the hands of the technology itself or in the hands of their "protectors".

Picture 1. Screenshot of Eyewatch SOS app
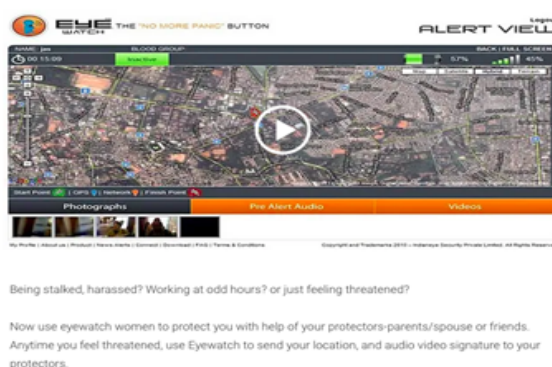
Source: Eyewatch SOS app on the Google Play Store.

Although these new technologies provide different ways to track women, women's bodies have always been under constant surveillance. Technology simply amplifies the patriarchal gaze. Women's movements are often tracked by family members, communities, and authorities under the guise of concerns over safety. However, as Shilpa Phadke, Shilpa Ranade, and Sameera Khan point out in their book, *Why Loiter*, the family's reputation or *izzat* was actually their main concern. They write that despite the fact that women are visible in public spaces in their roles as professionals and consumers, their access is conditional and restricted. Women must have a justifiable cause for their presence in public spaces, and if they do run into trouble or danger, they must first account for their own actions in that space. Phadke argues that the 'good' private woman is always in public with a purpose – education and employment are the more legitimate reasons for women to leave the home.

Advances in surveillance technologies, therefore, offer a dangerous opportunity to monitor women's movement outside of domestic spaces, both by the family and the state. While domestic spaces are monitored by family and community members, Aayush Rathi and Ambika Tandon argue that privacy in public spaces is also shrinking with the rise in surveillance. They note that "Video surveillance, in this

case, is used to enforce cultural behavioral norms by punishing deviance with not only the violation of privacy, but the removal of the expectation of privacy at all." An increase in surveillance of these spaces reinforces the vulnerabilities and fears that many women have already internalized, and ensures that they conform to certain normative behaviors, including expectations around the kinds of neighborhoods they visit, the people they are with, and how long they stay out. "If a woman goes out, she expects some level of privacy, especially in a country like India where in the house, we are so restricted," says Jain, "but this type of excessive surveillance and invasive tech means that women's mobility will be affected. [..] Instead of keeping women safe, it simply creates more hurdles for them."

However, this strategy does not seem like it will abate as news headlines and reports further warn of the increasing dangers of a surveillance state being built on the grounds of women's safety. Indian women now face more complex obstacles and challenges to their mobility, their freedoms, and even their ability to work. In 2021, the Chief Minister of Madhya Pradesh encapsulated the fallacy of surveillance of women for their safety. Instead of offering ways to ensure that public and private spaces are actually safe for women, CM Shivraj Singh Chouhan proposed a system whereby any woman who lived outside her home (i.e. independently) for work would need to register herself at a local police station, so that "she will be tracked for her safety." It seems inevitable that we will see some of these disconcerting sci-fi scenarios actually playing out, and so it is even more critical to examine the possible consequences of this technology on the women they are supposedly benefitting. As Dr. Anja Kovacs notes in the Gendering Surveillance project, "surveillance can also shape what you will do in the future" by incentivizing certain behaviors and discouraging others. So how does constant surveillance pre-emptively control the decisions women make and the way they move through public spaces? What are the consequences and the dangers of being constantly watched? And in this trade-off between privacy and security, will women feel safer, or will it result in more danger for them?

3. Safe Cities – A Law and Order Response

In 2018, the Women and Child Development Ministry recommended that Rs.2,919.55 crores of the Nirbhaya Fund should be used for the Safe City project, which is underway in Bengaluru, Delhi, Mumbai, Chennai, Hyderabad, Lucknow, Ahmedabad, and Kolkata. The UP government's recent tender for their Safe City project gives us a glimpse of the scale of both the state and Central government's intentions to ramp up surveillance in India. 309 crores have been sanctioned, and the proposed timeline promises monitoring of 200 'hotspots' as well as city buses, with CCTV cameras and drones from control rooms across the state. The Safe City project is to work in conjunction with the Smart City and the Drishti Project, which have already established a network of surveillance in Lucknow. All of these feeds will be accessed through 'integrated intelligent control rooms' where live feeds are constantly monitored and AI-based analysis will compare these images to "a database with details of suspicious vehicles/criminals involved in crimes against women." In his reporting about this project for *Medianama*, journalist Aihik Sur notes that the UP government's plans indicate that the citizens of Lucknow are not aware that "they are being monitored and that their data is being scanned around the clock by an AI-based data framework without their consent." Sur also points out the lack of transparency in the UP police's decision to use Jio cameras for this project and questions around the terms of the data exchange policy with Jio. The plans include surveillance cameras inside public buses, meant to take a snapshot of its passengers every 30 minutes and provide 24/7 video recording.

Although the aim of the Safe City project is to ensure the safety of women, the open-ended situations outlined in the tender contradict this, leading to questions about the real motives behind this initiative.

Among a list of 40 scenarios described in the tender, the AI-enabled cameras are meant to detect groups of smokers and drinkers in public places, gambling spots on the street, sexual offenders who have been released from jail, and boys and men 'lurking' in public spaces including garment shops, schools and colleges, or vaguely defined 'shadow areas'. It seems that the scope of this project will really mean surveillance on a massive scale with facial recognition deployed to categorize certain people with labels such as 'employee' or 'blacklisted.' Machine learning algorithms will also use this data to identify suspicious people based on their behaviors, estimate a person's gender, and generate an alert if they are detected in an area where they are not permitted.

Shweta Mohandas, a policy officer at the Center for Internet and Society, points out the obvious flaws in this project. "They say they're going to figure out which people are walking suspiciously or flag when a woman is in distress, but what counts as suspicious or distress?" Mohandas argues that the crores that the government has spent on these systems will mean that the likelihood of them not being implemented is extremely low. If at all, it would be implemented piecemeal, which she says would be even scarier because they might cut corners on things like ensuring that there are data protection officers.

Despite several studies that have proven this kind of surveillance does not correlate to a reduction in crimes against women, many states like UP are continuing to ramp up their plans. In a tweet on August 26, 2021, CM of Delhi, Arvind Kejriwal congratulated officers and engineers for helping Delhi become one of the most surveilled cities in the world, stating, "Feel proud to say that Delhi beats cities like Shanghai, NY and London with most CCTV cameras per square mile." However, the same Comparitech study that ranked Delhi in the top 10 most surveilled cities also found that "a higher number of cameras just barely correlates with a lower crime index. Broadly speaking, more cameras doesn't necessarily reduce crime rates." The Delhi government, however, is continuing to invest in more surveillance tech, even as an audit by the Comptroller and Auditor General of India (CAG) this year stated that there have been no impact assessment studies conducted by the Delhi police to ascertain the effectiveness of the cameras that have already been installed to prevent crimes. Instead, the report suggests that the "heavy surveillance central project of Delhi Police needs to be reviewed," in the absence of any proof of the efficacy of surveillance in preventing crime.

Herein lies the problem, says Jain. "They (governments) only show you how much money they have spent and the number of cameras they have installed, but the next metric that should be there – a reduction in crime – is not there. So, in a way, they are misleading the public," she says. Delhi's current project expenditure is estimated to be Rs 1,184.73 crore. Apart from the irony of promising to keep women safe by constantly surveilling them, the dangers to privacy in public spaces would be most felt by women. Their behaviors and movements, already policed in domestic spaces, would be open to further scrutiny not only by the state but by other bodies as well. For example, the Public Works Department in Delhi permits CCTV feeds to be shared with Resident Welfare Associations (RWAs) and Market Welfare Associations (MWAs), apart from the local police. Members of these bodies are provided with login details, with no real checks and balances in terms of security audits or data protection. In these situations, young women may feel uncomfortable and censor their own behaviors in public spaces as well, for fear of societal backlash or the potential for victim-blaming.

"It's a very law-and-order response, a policing response, rather than a governance response," says Dr. Shivangi Narayan, the author of *Surveillance as Governance*. Based on her research on policing and surveillance, Narayan has found that the bureaucratic and governmental reasons for surveillance being implemented on such a massive scale in India have more to do with providing quantifiable solutions rather than a larger sinister design for a police state. Social messaging, public awareness programs, and educational materials to prevent crimes against women will not make headlines but spending crores on elaborate policing programs will do so. "We're in a very Kafkaesque reality right now, because we have no idea what we're unleashing. Nobody knows what the end results will be," she says.

"The private sector wants to sell this technology, and their biggest consumer is the government because nobody else can pay this kind of money to install large-scale facial recognition tech, for example," says Narayan. "The people who will bear the brunt of these technologies are from marginalized communities who don't have any power and will be marginalized even further." Although the consequences of this kind of tech are not fully known yet, especially in a country like India where it is still in nascent stages, Narayan points to what happened with the Bhima Koregaon case (where hackers planted incriminating files on the accused's computers) as a possible hint of the dangers that people could face because of it. "Right now, the discourse is that these technologies are helping, they enable us to be more efficient, more productive. So, when the insidious uses come in, we don't even realize until it's too late," she says.

4. Trading Privacy for Security

When Vineet Singh, a San Francisco-based entrepreneur, got a call from a close friend who felt unsafe in a cab she was taking in Lucknow, he felt frustrated by his inability to help her. That late night call was a kind of trigger for him to envision a better, tech-based solution that would ensure one's personal safety. As a co-founder of the tech start-up, Lizmotors Mobility in 2017, he says that safety was already at the core of their mission and so their latest edge-based computing device for vehicles is fitted with this ethos. He explains that the camera device uses AI to be more efficient and cutting edge. It can monitor the positions of the driver and passengers in the vehicle, gauge their facial expressions, detect whether the vehicle has stopped, if the road is dark, or if there are other people around. Its sensors can also recognize voice, speech patterns, particular words (in case abusive language is used), and ambient noise like screaming. The device can be fitted in personal vehicles, school buses, private cabs run by companies like Ola and Uber, and public transport. While dashcams and other devices only help post-mortem and don't prevent accidents, Singh argues that his product is very different. If the device detects any anomalies like the car stopping for a long time, abusive language or yelling, the driver not in the correct seat, etc. then a notification is sent to the fleet management (in case of private cab companies) and to the user asking if they are okay. If the user does not reply and input their personal password to deactivate the alert or if the device has been tampered with, then the last location of the car and passenger will be sent to the user's pre-approved family and friends' contacts.

Picture 2. Image of the Lizmotors Mobility Safety Device

Source: Lizmotors website

Users can share their protected passwords with family, who can access their account and request time-stamped images so that they can confirm the safety of the passengers. "For example, if my daughter is going to school, or my parents or spouse is leaving for the airport, rather than calling them constantly I can just check through the device to know that everything is okay," says Singh. "So, if your daughter, spouse, or sister is going somewhere you can request that to keep yourself updated with the location and image and feel comfortable knowing that they are safe. People use baby monitors, nanny monitors, maid monitors, garage monitors – this is similar, but it's using more intelligent technology." When asked about the potential for misuse of this tech, by family members who may be abusive or coercive about being granted permission to track women outside the house, Singh argues that agency still lies in the hands of the user and that, "Anyone can enter your home if you give them the key." He is also adamant that privacy is paramount and that no images or videos will be transmitted to the backend, unless an alert has been triggered in which case consent is taken for the video to be decrypted.

Other smart devices are also on the market or in development – innovations in tracking apps and Internet of Things (IoT) enabled devices are now geared towards cutting down the reaction time between a user triggering an alarm and alerts being sent out to chosen contacts and/or the police. Developers are looking to trigger alerts by detecting anomalies in heart rate, body temperature, variations in voice/tone, and unusual movements, instead of pressing certain buttons or shaking the device particularly. Apps like Life360 and CitizenCop offer geofencing, where an alert will be automatically sent to contacts if the user travels outside a certain geographical area. BSAFE enables alarms through voice activation, following which the user's GPS location as well as real-time videos via the phone's camera are sent to 'guardians' and the phone automatically begins recording both audio and video files which are also shared. Other state-sponsored safety apps for women have also been launched, including the Railway Protection Force's Eyewatch app designed with emergency functions that require access to users' camera, microphone, and location services. In addition to the potential ways that women's mobility

is curbed and surveilled, all of these apps also have glaring flaws: infrastructural limitations, immense battery consumption, poor connectivity, inaccurate location serves, and questions. While ramping up CCTV surveillance offers the state a band-aid solution to women's safety, similarly these burgeoning safety apps and devices are a way for families to feel that women can be watched and therefore safe-guarded.

"Women should be able to safely navigate a city and access all the opportunities available to them. Unfortunately, because of the perception of lack of safety and past incidents, we restrict ourselves, we limit our own behavior, we self-censor," says ElsaMarie D'Silva founder of the SafeCity app. "There's an economic cost to this – women pay more for private transportation, they don't venture too far from their homes, and they compromise on the quality of their education or job opportunities because of fears around safety," she points out. SafeCity is meant to be a preventative tool rather than a restric-tive one, says D'Silva. The app allows people to report incidents of gender-based violence, giving the time, date, location, and nature of the incident. Users can then check maps of particular areas, where 'hotspots' of reporting show up as red dots warning of the potential danger. The data is also shared with different stakeholders including local communities and NGOs, city authorities as well as the police. To D'Silva, one of the goals is to allow women the ability to be situationally aware at an individual level. "If you observe animals in the Serengeti, if a perpetrator or predator pounces on an antelope that's grazing and caught unaware, then that antelope is going to freeze. But if the antelopes are aware that there's a lion in the vicinity, they will be prepared to flee or fight. They would plan their strategies to fight back."

A similar preventative safety app using crowd-sourced information, My Safetipin, allows users to carry out 'safety audits' where they can rate a public place on parameters such as lighting, visibility, public transport, number of other women on the street, etc. In addition, users can also carry out city-level audits. Based on these safety scores, the app can map a 'safest route' for users to travel. They also share their data with government officials, municipal corporations, police, and the transport department, among others. Sonali Vyas, Program Head at Safetipin, gives the example of the police department in Bhopal who used the safety audit data to readjust their patrolling routes and the Delhi police who integrated their data into their own neighborhood 'hotspot' database. Both these apps and others like it fragment the city into 'safe' and 'unsafe' zones and biases inevitably come into play when allocating certain neighborhoods as riskier than others. Women may pre-emptively avoid places or make different choices depending on the perceived danger. The sharing of this 'objective' data with state authorities can intensify the surveillance and targeting of particular neighborhoods or marginalized communities that may have been defined as 'hotspots' of criminal activity.

Picture 3. Screenshot of Safetipin App's 'Safest Route' feature

When you travel to a new place,
choose a safer route.

Skip

Source: Safetipin App

Through her research working with communities in Delhi's Seelampur and Nand Nagri, Shivangi Narayan has found that there are both immediate and long-term consequences of this. "The women living in these areas will suffer because their mobility will be restricted, they will not be allowed to go out, and will always have someone chaperoning them," she says. "And those places will always be ones that are best to avoid. Neighborhoods are living organisms that change constantly but once an area is flagged as criminal, with increased policing and surveillance, then people's behaviors change accordingly." People from Nand Nagri and Seelampur prefer not to venture to other places because they are seen as "troublemakers" by authorities and others don't visit those neighborhoods because it's a "bad area". "When you characterize certain places, even with the help of technology, as unsafe, it's difficult to change. The women of Seelampur are stuck, they will remain the women of Seelampur. They'll never be able to move out," says Narayan. They will modify their behavior and their own mobility based on this label, and other women who are not from Seelampur will do the same. "This is how surveillance changes areas – too many cameras, too much policing and people say, '*Arrey achha area nahi hai*,' (it's not a good area). […] Retailers will not go there, businesses will not go there, credit will not be given to the people who live there – those places become doomed."

These apps and devices create an atmosphere of heightened fear and can accelerate the criminalization of certain geographical areas and communities. Moreover, these apps and devices, with the increased options for surveillance by family members, can serve as a digital leash to monitor and restrict the mobility of women and girls. Due to the constant threat to their safety, women may change their behavior in significant and subtle ways, trading their privacy and freedoms for a sense of security.

A few months ago, Aarushee Shukla, an independent researcher and data journalist, turned down her dream job because she didn't think she'd be safe. It was an offer from a government organization, which would have involved extensive travel to different districts and states. "Because I am a woman, I am being deprived of such interesting work. I think we need to look at society and see what kind of environment they are creating. They are instilling fear in the minds of people that you shouldn't do this, this will be dangerous for you," she says. "I just turned 24, and I have been dreaming about this job for a long time. But in spite of doing so much work in the field of gender, I became very rational, and I gave

up that job." When asked if the latest innovations in safety and surveillance tech would change things for her, Shukla disagreed. "Instead of creating an environment of safety, isn't it creating these unsafe minds? Because if I have an app on my phone that tracks my pulse and then sends an alert, my brain will always keep repeating 'Oh I am a person who needs to be taken care of because society is so unsafe that they can do anything to me at any time.' Instead of empowering me, I am being robbed of power. I do not have any agency and these technologies or AI are going to determine my safety."

5. Who Does Safety Serve?

From Amazon's ring camera to nanny cams, surveillance tech marketed as safety devices have made their way into our everyday lives, and increasingly people are willing to give up their privacy in exchange for a false sense of security. The idea of 'luxury surveillance' – where people pay for devices like FitBits or Apple Watches – is on the rise. Meanwhile, similar devices like GPS watches with motion sensors, heart rate detection, and messaging features for refugees or people on parole exemplify 'imposed surveillance'. In India, surveillance tech exacerbates the existing hierarchies of class, caste, gender, and religion, putting certain bodies at risk for higher surveillance and harassment. For instance, digital innovations are being tested on government sanitation workers who are predominantly Dalit. In Haryana they were forced to wear GPS-enabled smartwatches, i.e., 'Human Efficiency Trackers', so that their supervisors could watch them work. And within gated communities, apps like MyGate give employers the power to track and rate domestic workers and cooks, many of whom are women from marginalized communities. With the skewed power dynamics within these relationships, it's easy for the subjects of surveillance to be further penalized by employers.

With the onset of the Covid-19 pandemic, surveillance has become even more normalized. We report our whereabouts, people we have come into contact with, and other data like our body temperature and oxygen levels, etc. There is an increased scrutiny of bodies in workplaces, from domestic workers to white collar employees. With the added obstacles that the pandemic and subsequent lockdowns have brought about, data shows that more women lost their jobs and fewer women are returning to work than in previous years, in both rural and urban India. Safety is one of the major concerns for women who are reluctant to return to the workforce, as crime rates against women in 2021 increased by 46% compared to the previous year. This perception of danger versus safety directly impacts the kind of choices that women make in terms of their own employment. In a 2014 survey of working women in Delhi conducted by PHD Chamber of Commerce and Industry, almost all respondents said that safety issues in the city have impacted their employment in some way. 64% said that they don't feel secure working late and 43% said that they were willing to compromise financially for their safety and look for jobs in places near family even if it meant a reduction in salary.

Apart from the economic costs, there are also psychological impacts on women when the onus of safety is placed on them. In Meher Soni's paper, 'Rethinking the Challenge of Women's Safety in Indian Cities', she explains the difference between 'positive liberty' and 'negative liberty'. The former is a manifestation of agency and self-governance, and the latter promotes the idea of safety through restriction. Technology-based interventions for women's safety and the increase of surveillance ensures that women's fears in public spaces are heightened, leading to negative liberty and the idea that they will only be safe if they are watched.

Being constantly alert and on-guard also impacts women's mental health and causes them to limit their own behaviors, actions, and routines to minimize the risk of danger – restricting their own movement in time and space. The knowledge that one is being constantly monitored and watched will automatically change the way they behave. That is the precise motive of surveillance: to enable people to police themselves and make certain decisions over others. This might mean complying with the moral codes of the state or the family, or finding ways to circumvent being watched, which may put women in even more danger. In her paper, 'Video Surveillance, Gender, and the Safety of Public Urban Space: "Peeping Tom" Goes High Tech?' Hille Koskela found that women often reduce their spatial behavior because of intrusive surveillance tech. Koskela states, "living a spatially restricted life because of fear constantly reminds women of their relatively powerless position."

For trans women and sex workers, who already have to navigate dangers posed in public spaces as well as by the state, an increase in surveillance would mean that their livelihoods might also be threatened. For example, linking Aadhaar with access to state benefits and subsidies, as well as digital wallets such as Paytm, has meant that there is a risk that the data collected on users' gender and payments could help authorities identify trans women and sex workers, leaving them open to harassment and arrests.

Rather than labeling surveillance tech as either 'good' or 'bad', we need to be critical of our relationship with it and the potential dangers it poses. What does it mean to be safe when surveillance interventions can become threatening to women themselves? In the hands of family members or the police who seek to guard them from harm, these devices place a digital leash around women making them feel like they are never really free even when they leave domestic spaces. As Dr. Shivangi Narayan says, "Someone tracking you or knowing where you are will not necessarily stop crimes from happening. This technology will keep on coming, and in the end, the only person who does feel safe is the heterosexual upper caste man, who was already safe to begin with. That man would never have to tell anyone his location, where he's going, or when he leaves the house," she says. So, what changes with all this security? Who does it benefit?

A Critical Appraisal of Feminist Digital Media
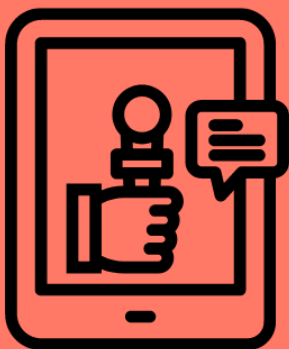
Feminist Digital Media: Where is India's North East?

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1. Introduction

The rise of digital technologies and social media has had profound consequences for feminist activism across the world. Scholars often regard social media as the force that stirred the 'revival' of feminism and ushered in a 'fourth wave' of the feminist movement. With the rise in accessibility and popularity of social media, feminist activists are now able to become media producers even without elaborate professional training and heavy capital investment to advocate for their causes and build solidarities across geographies.

In the last decade, we have seen many feminist digital media publications, activists, and artists from India, gain popularity among internet users. Feminist digital publications such as *Feminism in India*, *She The People*, and *The Swaddle* have gained significant readership over the years, with each having more than 1,50,000 followers on their social media accounts. Their publications explore a wide variety of feminist themes ranging from feminist analyses of pop culture to the lived realities of queerness, caste, race, religion, disability, and much more.

Feminist media plays a significant role in challenging discourses that support oppressive structures. However, there is a great challenge that feminist media faces, which Claire Sedgwick refers to as the 'paradox of feminist media'. In her book, Sedgwick notes that feminist media is likely to be the most accessible for feminists to reach a wider audience and simultaneously does not represent all feminists or feminisms. This straightforward yet critical assertion opens up a much-needed discussion on the marginalizing media practices in feminist media. Through this essay, I aim to explore this 'paradox of feminist media' in the Indian context by attempting to locate the issues of India's North East, especially the voices of indigenous people from the region in the feminist digital mediascape.

I have been involved in feminist media production in various capacities since 2017. Through the years, the absence of voices of indigenous people from North East India in the feminist digital media space has been very apparent in these professional spaces. It is important to note that the 'North East' is a political category that finds meaning only in relation to the 'mainland'. The North East Region (NER) comprises eight states, Arunachal Pradesh, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Tripura, and Sikkim that lie directionally to the northeast of the Indian Mainland, and whose diverse citizens unite in their perception of neglect and exploitation by 'the mainland' (Center). They also share some common problems such as local militancy, economic underdevelopment, resource exploitation, and environmental degradation.

The North East is an immensely diverse region and it is home to nearly 213 tribes. Indigenous women and gender and sexual minorities from this region come from heterogeneous linguistic, ethnic, and religious backgrounds with unique struggles that are tribe and region-specific. Dr. H. Vanlalhruaia asserts that feminist issues in the North Eastern region are rarely conceptualized in specific contexts and mainstream feminists appropriate their knowledge without a genuine contribution to the people of the region.

As an indigenous person from Assam (I belong to the [Dimasa](#) community) who has been in the feminist media space for years, I believe it is important to shed light on the marginalizing media practices that contribute to the invisibilization of North Eastern indigenous feminist issues and voices. In my experience as a producer as well as a consumer of feminist media, I have witnessed a great lack in the representation of North East Indian people as sources, subjects, authors, collaborators, and decision-makers. In this regard, I will explore the following questions in this essay: a) How have North East indigenous feminist issues been represented or misrepresented in mainstream feminist media publications? b) What are the structures and frameworks that govern feminist media practices that engender exclusionary outcomes?

I also seek to foreground the experiences, aspirations, and feminist imaginations of digital initiatives from North East India, and bring forth the diversity of feminist media practices, aims, and value systems. For this purpose, I have interviewed the founders of three digital media initiatives from the North East:

1. *The Chinky Homo Project* – North East India's first digital queer anthology.

2. *The Witches of Arunachal* – the first digital feminist initiative aimed at foregrounding feminist issues from Arunachal Pradesh.

3. *8 Mag* – a feminist media initiative that aims to bring feminist discourses and cultivate feminist solidarities across the eight North Eastern states of India.

2. Representations and Misrepresentations

Feminist digital media publications are a long way from being representative of diverse modes of feminist knowledge production on the internet. However, they are an important organized force in challenging the patriarchal and hegemonic control of the media by dominant groups. In the age of fake news, trolls, and state-sponsored targeting of independent media outlets, feminist digital media publications function as a critical counter-hegemonic voice in a democracy. Media is a critical site of power struggle where actors are perpetually engaged in ideological negotiations. It is a medium of public pedagogy through which the larger public gains knowledge of the world, its people, and its value systems. These knowledge systems that determine 'public opinion' or 'common sense' are mediated by the mechanisms of power that operate in the world.

In India, feminist digital media publications have labored for years to carve a space for themselves amidst the dominance of the right-wing rhetoric that has been normalized in the public realm. The vulnerabilities associated with operating as a feminist media platform in the given hostile digital environment must be acknowledged. Being a feminist media platform in India comes with many challenges and risks, which involve excessive trolling, hate comments, doxxing, and many other forms of digital violence. Therefore, this essay is in no way a dismissal of the efforts of feminist digital platforms thus far. Rather, it is a reflection on the marginalizing practices that limit feminist gains.

Digital media publications such as *Feminism in India, She The People TV,* and *The Swaddle* employ social media to make feminist discourse accessible and cultivate a feminist lens among the public. Although not all of them explicitly identify as 'feminist' media organizations, they all are committed to publishing

media on issues of gender. Each of their websites contains a vast archive of writings on issues that are marginalized in the mainstream corporate media. From a feminist analysis of pop culture to the lived realities of queerness, caste, race, religion, or disability, most of these platforms engage in nuanced discourses on issues of feminist importance through diverse media forms such as blog posts, videos, podcasts, and infographics. It is important to remember that these media organizations differ in focus, popularity, and scale and have heterogeneous followers.

Despite the diversity of publications on these media platforms, issues of India's North East find little attention. A keyword search of the terms "North East India", "Assam", "Mizoram", "Manipur", "Nagaland", "Tripura", "Arunachal Pradesh", "Sikkim", "Meghalaya" "Indigenous", "tribe", "tribal", and "racism" show the disappointing reality of NE's marginalization within these spaces. *The Swaddle* and *Feminism in India* have published over 6000 articles over the years of which less than 1% cover narratives from the North East. On the other hand, *She The People TV* has published over 30,000 articles since 2014 and only about 150 articles (~0.5%) feature the above keywords (based on sitemap data till January 2022). If we look at the type of articles published on *She The People TV*'s website, we will see articles mostly covering women achievers from the region, sports, and political development, or reports of a few cases of gender-based violence. Nuanced feminist analysis of everyday lived realities of gender and sexual minorities from this region barely gets any spotlight. For *Feminism in India* and *The Swaddle*, issues of the North East have mostly been limited to the following: racism, AFSPA, Citizenship Amendment Act, 2020 and National Register of Citizens, and environmental issues in the region. It is disappointing to see the stark contrast in the coverage of racism on such platforms in western countries compared to India, where the experiences of racism of folks from North East India barely get a mention.

The aforementioned issues do get momentary coverage in the mainstream corporate media, but these are only the tip of the iceberg when it comes to the lived realities of marginalization in the region. The Instagram page *The Witches of Arunachal* undertakes this important role of addressing the specific form of patriarchy that manifests itself in the context of Arunachal Pradesh. *The Witches of Arunachal* have regularly addressed the misogynistic protests against the draft Arunachal Pradesh Marriage and Inheritance of Property Bill, 2021; the bill drafted by Arunachal Pradesh State Women's Commission proposes to make polygamy an offense, calls for proper registration of marriage, divorce, and alimony rights, and emphasizes on property rights of women. The opposition to this draft bill took an organized form with several tribal bodies and student unions coming together and reproaching the bill as anti-tribal. The protests were specifically against the property inheritance rights of women married to Non-APST (Arunachal Pradesh Scheduled Tribe) men. The protesting groups even demanded that women married to Non-APST men be stripped off of their ST status and be barred from holding any jobs in the state. Moreover, those women from Arunachal Pradesh who showed support for the bill on social media were subjected to incessant trolling and abuse. Such particular articulations of patriarchy in the North East have barely got any feminist reflections in the publications discussed above. The best we have received is the myth-busting of 'matriarchy' in Meghalaya.

When I interviewed *The Witches of Arunachal* on this subject matter, they expressed their disenchantment with mainland feminist pages that showed no interest in publishing this story:

> "When this draft bill was a burning issue here, I had sent a few articles to the mainland pages. I had reached out to them with my writings. They said they will get back to me on this, but they never got back. I would see them posting about women's land rights in Gujarat and other mainland places, but our stories don't matter to them. I used to follow all these pages and look up to them, but then when it really mattered, our narratives were just brushed off. This, perhaps, is also because Arunachal Pradesh, even in the whole of North East, is hardly in the news."

In mainstream discourses, women from the North East exist in the binary of victims of militarized violence or agents empowered by an egalitarian tribal society. Often, nuanced discussions about the lived realities of patriarchy are obscured by an over-emphasis on the absence of mainstream symbols of women's oppression in the region such as dowry-deaths, 'veiling', and child marriage, etc., Temsula Ao, in her essay 'Benevolent Subordination: Social Status of Naga Women', recalls an incident at a seminar where a prominent Naga political leader launched a defensive tirade against women delegates who spoke of gender inequality in the Naga community. He accused them of purposefully misrepresenting Naga society and went on to angrily ask questions such as: "Who can say that Naga women have an inferior position in society? Do we make them cover their heads, make them always walk behind us? Can they not eat their meals without having to wait for us to finish first?"

The power structures that govern the social life in North East India take region/tribe-specific forms and, as feminist standpoint epistemology tells us: a qualified feminist critique can only be provided by folks from within the community. Intersectional feminist politics requires us to create political economies of knowledge that provide authorship about these manifestations of patriarchy to those who live them. These dominant, mainland feminist digital publications have failed individuals of North East India in that regard, as is evidenced in the surface level engagement with issues of the region and the symbolic marginalization of its people.

Tejas Harad, in *Roundtable India*, problematizes the mere representation of marginalized groups' issues in the mainstream discourse and calls for greater authorship by marginalized people in the media. He argues that marginalized groups ought to be given space in mainstream discourses as active agents and must not be represented by individuals coming from privileged backgrounds from the oppressor group. He adds that these efforts should not remain limited to 'giving space', but should involve "finding new voices, mentoring them, and encouraging them to write and talk about themselves, their communities, and issues facing them."

It is important to reflect on what are the marginalizing media practices that have contributed to the symbolic annihilation of issues of the North East in feminist digital media and how to bring forth the unique and diverse experiences of indigenous women and gender and sexual minorities from the region.

3. Marginalizing Feminist Digital Media Practices

Media are techno-social systems that are deeply embedded in the power structures that govern the material world. The economy of feminist digital media production is also informed by the mechanisms of power rooted in patriarchy, capitalism, ableism, caste system, colonialism, LGBT phobia, etc. In the podcast episode 'Racism in Feminist Media Spaces', host Alison Stewart talks about how feminist media websites, like *Refinery29*, champion inclusivity, while their ex-employees of color have come forward with horror stories of racism by the senior management; the employees allege that they were severely underpaid, racially stereotyped, physically abused, and their credentials questioned. Thus, it is important to remind ourselves that feminist spaces are imperfect and capable of harm and exclusions. As feminist media practitioners who seek to create a socially just world, it is critical to reflect on how the frameworks that mediate our practice and the systems that we inhabit create exclusions and limit our feminist practice.

In India, the organized feminist digital media economy is in its nascent stage, with no previous blueprint to guide us to achieve intersectionality, autonomy, and sustainability together. Developments in ICTs created the possibility for digital feminist media to emerge but, over time, it has internalized the power structures of the offline world, and is now riddled with contradictions. The digital as the primary mode of knowledge production and distribution engenders a diverse set of possibilities and vulnerabilities for feminist actors. To understand the marginalizing practices and limiting frameworks, we first need to examine the political economy of feminist media production. We need to look at questions such as: Who owns/runs feminist media organizations? Who are the content producers? What kind of networks of solidarity exist in this space? Whose voices are represented and whose are marginalized?

A 2019 report by Oxfam and *Newslaundry* titled 'Who Tells Our Stories Matters: Representation of marginalized caste groups in Indian Newsrooms', noted that marginalized groups are absent from leadership and decision-making positions in Indian media, with stories affecting their communities written by those who are privileged and upper caste. Additionally, with respect to the question of representation in digital media, the report said, "as in print and broadcast media, writers from the Scheduled Tribes were almost completely absent".

Similarly, if we look at these large feminist digital media platforms such as *The Swaddle, Feminism in India*, *She The People TV*, the leadership positions are occupied by white or dominant-caste women – Karla Bookman (founder), Japleen Pasricha (founder/chief editor), and Shaili Chopra (founder), respectively. The value systems and interests of the leadership inevitably shape the content creation, organizational culture, collaborations as well as the team composition, to a certain degree. Feminist standpoint theorists have well elaborated on the 'double vision' or 'epistemic privilege' that members of marginalized communities have with respect to the structures of oppression at play. This 'privilege' enables them to "recognize the underlying assumptions and evaluative commitments that drive and shape the dynamics of power" of the spaces they inhabit by virtue of the unique position of the 'outsider within'. Other scholars argue that centering the leadership of marginalized folks is a critical organizing practice in our quest to decolonize the digital.

I interviewed Tanya (name changed for anonymity), a feminist digital media professional who has worked with two of the leading feminist digital media organizations, to get some insights into their

internal workings. Tanya pointed to how the demanding work culture and organizations' priorities of growth work to thwart inclusivity and diversity in hiring. She also underscored how it was her privilege (caste, class, ability) that allowed her to sustain working under such demanding conditions with very low pay. She added:

> "The work culture [in these feminist media organizations] is so fast-paced, we've had people who quit during probation period because they just could not handle the pressure. Many of these organizations have a very high turnover rate, everyone leaves within one, one and a half years. I feel like these organizations are always in a haste to replace… But the applicant pool is not going to have the diversity you want to have all the time. You have to actively make it a point that you wait, that until you get a relatively diverse pool, you're not closing the hiring process."

Feminist media's aims of constructing an authentic feminist self are constrained by the demands of both the audience and capitalism, especially if the media's aim is greater reach and visibility. In the digital realm, large corporations colonize social media and dominate its attention economy, and feminist media organizations and activists have to compete for their political voice by using the grammar of social media. Algorithms dictate content creation, and they are ever-changing. To remain relevant and to gain visibility, digital media platforms need to keep adapting to this ever-changing environment and constantly perform algorithmic work. Moreover, social media platforms advance a 'class-structured attention-economy' that privileges the rich and powerful. Corporate media is able to consistently promote its content on social media by pumping money into ads and hiring expert strategists who are well versed in Social Media Optimization and Digital Marketing. Inevitably, feminist digital media also succumbs to the pressures of social media and its audience and adapts to this ecosystem.

Tanya underscored that large parts of the feminist media content are informed by the mainstream discourse on the internet and issues highlighted on mainstream news platforms. Any issue of feminist relevance that is reported by mainstream news media is given priority and feminist analysis of the issue is provided to its readers. Feminist publications also spend a great amount of their labor producing content on popular culture as that guarantees greater readership. Engaging with popular culture is one way feminist magazines frame themselves as approachable and gain popularity. However, feminist media professionals need to rigorously engage with questions concerning the politics and economies of visibility. What kind of visibility should feminists aspire for and what are the costs to it? Is visibility an end or is it a means to support offline political work?

The kind of feminist visibility that we see on digital media platforms is shaped by market logic and preferences. The market forces not just include the audience, tech companies who determine the algorithm, but also philanthropy organizations, other corporations, and CSRs that many digital media organizations depend on for funding of their work. Sarah Banet-Weiser, in *Empowered: Popular Feminism and Popular Misogyny*, argues that feminisms that are more amenable to capitalism are more likely to be visible– this does not simply refer to collaborations with corporations but also includes the logic, work ethic, and values systems of capitalism that are embodied by the organizations themselves.

4. Subverting the Capitalist Logic: Lessons from the North East

The Chinky Homo Project, *The Witches of Arunachal*, and *8 Mag* hold important lessons for oppositional media as they are counter-hegemonic not only in terms of the content but also in their use of media technologies. First, these media initiatives' media practices reject the dominant logic of social media that insists on conformity. Instead of chasing likes, shares, and greater visibility, they understand impact through non-conventional markers, which may be less visible and not numerically quantifiable. *The Witches of Arunachal* envision their page as a safe space for women from Arunachal Pradesh where they can express themselves, share their lived experiences of patriarchy, and seek assistance and comfort. A great part of their intellectual and affective labor is spent on engaging with people in their DMs as opposed to constant content production and curation. Content comes secondary to the conversational learning and community care that occurs in chat inboxes. Similarly, T*he Chinky Homo Project* serves as a platform where queer people from the North East not only find a space to articulate their feelings, thoughts, and life experiences, but also find a community that walks and struggles together. Here, digital content creation becomes the medium through which offline communities are solidified. Founder, Kumam Davidson Singh elaborates:

> "Many of the photographs and visuals have actually come from a very long, slow process of community bonding, community sharing, relationships and family bonding amongst us, without which some of the stories would have never been told… I think this is at the core of our storytelling - that the stories, the lived realities, the histories come from solidarity and not from work as such."

On the other hand, *8 Mag's* founder, an academic, was motivated by the absence of indigenous feminist voices in the enormous body of feminist literature. She said:

> "There is an overwhelming body of feminist writing and feminist work from the mainland. And as you read more, you realize that there's a great absence of voices from our part. So, as I got deeper into academics, I realized that this is a space I want to fill, as an indigenous feminist."

The founders of *8 Mag*, *The Chinky Homo Project*, and *The Witches of Arunachal*, each have deep personal and political motivations behind their foray into digital media. *The Witches of Arunachal's* founder is an indigenous woman from Arunachal Pradesh, who started the page during peak protests against the Draft of the Bill on Marriage and Inheritance of Property as a means to express frustration and solidarity and to build community. She said:

> "When the draft bill came up, there was incessant trolling, threatening of women online. My cousins, some of whom are married to the non-APST (Arunachal Pradesh Schedule Tribe) men, would call me up and share their anxieties and fear. For a whole week, we were really mentally disturbed. We had our uncles who believed that we should not have the right to property. Everybody's true nature was unraveling around me. And it happened with every other woman, but we did not have a common space where we could talk to each other. So that's when I decided to start this page."

The Chinky Homo Project, founded by Kumam Davidson Singh and Pavel Sagolsem, was born out of the creative self-expression between two friends. Kumam elaborated:

> "The inception of *The Chinky Homo Project* was very organic. It was very personal but also very political outbursts of emotions, anger, and protest. Especially, driven by the need to find our space, the need to talk about ourselves in our own capacities, to create our own platforms and not one that is created by or invited by others, you know? So, I think in a way it's really that- let's create our own spaces. Let's amplify our own voice. Let's archive our own histories. Let's really bring together our own lived experiences. I think this was fundamental to the project."

These platforms also operate from an acute awareness of the structural limitations that come with working in the realm of digital media governed by Big Tech – '<u>the pressure to be quick, to appeal to the broadest possible public, to be sensational, to seek easy celebrity, to be attractive to corporate sponsors</u>' – and work towards subverting these external pressures. They operate outside the capitalist framework of 'growth' measured by reach, likes, engagement, etc., and have their own meanings of what impact and influence are. Kumam is also an ethnographer and an experienced media and publishing professional, he explained to me why *The Chinky Homo Project* has eschewed technical practices like Search Engine Optimization - something that most digital media organizations consider essential to their work:

> "I never for once look at SEO, which I think is something that, uh, let's say, mainstream media houses would take very seriously. They have to justify the funding to the funders. Your content has to be shared more times. It has to be heard here and there, etc. And I think we're completely off that. We didn't want to take that burden. We have a story and it's shared among like-minded people. We have our own kind of network, you know, we have our own circle. So, we work without that burden of SEO and, you know, target reach and things like that."

Both *8 Mag* and T*he Chinky Homo Project* understand that foundation funding comes with several limitations and threatens the autonomy of their initiatives. *The Chinky Homo Project* receives nominated grants every now and then but remains entirely independent and community-driven. *8 Mag*'s skepticism of funding, like *The Chinky Homo Project*, is a political decision, rooted in an assertion of indigenous autonomy:

> "I'm not really interested in getting funding from big donors because, you know, it takes away from you the control that you have, and that is the last thing you want… As indigenous feminists and just as, you know, indigenous subjects, you don't want someone from the mainstream saying, okay, let me tell you how it's done and how we would like you to do things."

For indigenous people and other marginalized groups, challenging the politics and hierarchies of knowledge production is a deeply emotional, cultural, economic, and political undertaking and is the '<u>essence of their own self-respect, self-determination, and dignity as communities</u>'. *8 Mag's* founder told me that as indigenous feminists we should not seek mainstream validation, resist capitalist rationality, and invest in indigenous economies of knowledge production through social media:

"Why, why do you need to keep waiting for some mainstream publication to publish you? Who cares? I think we're very entrenched in this capitalistic way of thinking, where we're only thinking in terms of sales and numbers and promotions, et cetera. By and large everything around the world, all the imperative systems of the world are based on this capitalist assessment. And so, do we really want to give in to this, especially, once we've had a real awakening? Once we've had our eyes opened, do we really want to do things the way that it's been done? Isn't it possible for us to do things differently? And so, in terms of social media, isn't it fantastic? Now we have a space where the rules are a little different, and it allows us to have our voices amplified."

The three media initiatives also pointed to the urban centricity of media production and digital efforts. They acknowledged the privileged positions from which they operated but also spoke of the importance of employing one's privilege to decentralize knowledge production and support offline feminist efforts. There was a collective understanding that the digital is a means to strengthen offline community building and mobilization, and not the primary mode of feminist activism.

5. Conclusion

This essay reflects on the uncertainties, limitations, as well as learnings for feminist media. There are many asymmetries in the visibility of the diverse feminisms that are articulated in the digital realm; some feminisms are more visible than others as a result of a complex interplay of technological, structural, and human factors. Working within the capitalist framework engenders several contradictions for feminist media actors, the primary one being the tensions between the feminist aims of intersectionality and inclusivity and the aim to reach wider audiences. Mainstream Indian feminist media platforms struggle to accurately represent and give space to the diverse feminisms of India's North East. As feminist media consumers and producers, we must not assume feminism's intersectionality. Rather, we should remind ourselves to consciously and persistently work towards it.

The Chinky Homo Project, *The Witches of Arunachal*, and *8 Mag* have well-articulated the challenges that come with acquiescence to the capitalist logic that dominates digital media production. They exemplify alternative practices, value systems, and relationships with digital media for feminist aims. Their work holds important lessons on community building, media production, and autonomy for other feminist media and aspiring media practitioners. Moreover, they pose important questions with respect to the relationship between feminist media and offline feminist activism efforts.

The paradox of feminist digital media needs collective feminist reflection so we can build alternative knowledge economies without misrepresentations and appropriations of indigenous and marginalized narratives. We need to reimagine and redesign technological spaces and media practices in order to democratize knowledge production, for which the leadership and creativity of marginalized people are absolutely critical. Instead of investing in feminist media monopolies, we ought to think of ways trans-local media efforts can be supported and amplified. The journey toward creating equitable feminist media begins with identifying the gaps in current systems, practices, and discourses, and this essay is a contribution to that effort.