



***Aimoni Tumung has been a strong pillar at Parijat Academy since 2011, playing a key role in its success and expansion. In addition to her work at the Academy, she founded the Joonbai Handloom Foundation in 2019 with a mission to uplift Assam's artisans and preserve the region's rich textile heritage. Aimoni's dedication extends beyond education and craftsmanship—she is the driving force behind Project Janani, a grassroots initiative aimed at promoting menstrual hygiene and women's health. By advocating for the use of sanitary cloth pads, she has been working to break taboos and bring positive change to local communities.***



***Uttam Teron, Pamohi village, Kamrup district, Assam, has been a beacon of hope and change since 2003. Driven by his belief that every child deserves a strong educational foundation, Teron founded Parijat Academy, starting humbly with just four children in a cowshed. Today, the school has grown to educate over 500 students from nine tribal villages, offering classes up to the 10th standard. What began as a small learning initiative has evolved into a state board-affiliated school, driven by Teron's passion to instill a love for learning in children. His goal was simple: to make education engaging and accessible to children in his community, many of whom were dropouts.***

***The Academy offers free education and relies solely on donations, with students only needing to manage their uniforms. Parijat Academy's success has transformed local perceptions of education, making it a valued institution in Pamohi and surrounding villages. With a focus on holistic development, the school provides basic computer knowledge, a library, health check-ups, and food assistance programs. Through collaborations, programs like Lordsai.com's Milk Programme ensure that young students receive daily nourishment. Despite the challenges of running a non-profit school, Teron remains committed to empowering children to pursue further education, instilling values of kindness and responsibility. His work, built on deeds rather than words, has turned the dreams of poor parents into reality, ensuring a brighter future for the next generation.***



***Dilip Bharatee is a software Industry veteran from Bangalore. He joined software Industry after completing his Masters from Indian Institute of Management Mumbai in 1986. He was first employee of Sonata software limited and handled Business development for European Market. Mr. Bharatee was one of the Key stake holders, when Sonata software went public in 1998. He along with his wife Ms Archana Bharatee started their IT consulting services company EcomScience Consulting Private Ltd. in the year 2000. He works with several start-up software companies to provide the Sales and Marketing direction and advisory.***

***He has keen interest in social sector and have been volunteering for Parijat academy for the last 12 years. Parijat Academy is a school for underprivileged children in Guwahati, Assam. He also volunteers with another school, 'Vidya the living school' at Dhemaji, Assam. He along with few entrepreneurs in Assam established a social enterprise, 'Joonbai Handloom Foundation'. Through this Section 8 company they have been promoting a reusable, washable sanitary pad named 'Janani'. He has also established multiple centres for producing Janani pads in Assam and now expanding their activities to northeast states starting with Mizoram and Tripura. He is also instrumental in establishing Banana fibre extraction unit in 'Vidya the living school'. This Banana fibre provides an excellent training in entrepreneurship for the youth.***



***Archana Bharatee has more than three decades of experience in engineering technology products and building technology teams. An industry veteran, Archana has built and deployed industry leading technologies for a range of enterprise in various sectors and domains. Her expertise in AI and ML and her understanding of complex business scenarios enables us to deliver unique and robust solutions at lightning speed irrespective of the problem area.***

***Archana is passionate about rural education and is spearheading STEM education at grassroots through her initiatives. She is an industrial engineering and management graduate from IIM Mumbai.***



***Sharmistha Banerjee, PhD, Assistant Professor, Department of Design & Associated Professor, Centre for Disaster Management and Research, Indian Institute of Technology Guwahati***

# The Business of Menstruation: A Period-Distributed Economy

*Compiled by Dr. Sharmistha Banerjee from a series of stories she heard from the pad woman of Assam, Ms. Aimoni Tumung, her collaborator and husband Uttam Teron, and two visionary leaders supporting the Janani Pads initiative, Mr. Dilip Bharatee and Ms. Archana Bharatee.*

## 1.38. Introduction

It was the second beautiful day of this year when we all sat together, our little ones adding playfulness to our discussions. Aimoni Tumung, cherished here as the pad woman of Assam, started talking about how the lack of awareness amongst rural girls and women about menstrual hygiene and the lack of discussion around this taboo topic moved her. We have a celebration in Assam when a girl reaches womanhood and then post that menstruation becomes taboo, and the same women and men live in utter period ignorance. Such an irony!



*Figure 11: A memory from our first meeting*

Initially, Aimoni and Uttam started giving free disposable pads and

raising awareness among both men and women regarding menstruation and menstrual hygiene. However, they soon realized the unsustainability of the disposable solutions. So, they ventured into what we now know as Janani Pads here locally. Janani Pads is a project started by the Parijat Academy, a non-profit organization that they initiated a decade back to provide holistic education to children from disadvantaged tribal communities of Assam. Their goal is to empower girls living in rural areas of Majuli District through the Janani Pads. Janani, meaning mother, does this in two ways. First, provide safe and hygienic menstrual hygiene through product and awareness, and second, provide employment opportunities where girls can make up to INR 18,000 per month while being in their villages.

### **1.39. The Janani Pads Model: A Community-Based Distributed Economy**

The Janani Initiative is a grassroots project that integrates environmental sustainability, economic empowerment, and social innovation. It operates within the framework of a distributed economy, focusing on localized production and resource utilization. The initiative is structured around several key components:

- 1. Empowering Women through Training and Skill Development** - Women in Majuli are trained in sewing techniques, fabric selection, and quality control to produce reusable cloth pads. This skill development fosters personal growth and creates opportunities for entrepreneurship. Women and girls in the village who stitch the pads can earn up to ₹18,000 per month, given that they can comfortably make 30 pads per day. This provides both financial independence and a sustainable production model. They can live in their communities

and not need to migrate to cities to live an alien and uncomfortable life in congested situations.

- 2. Decentralized Production Units** - Local production units are established in community centers, fostering collaboration, ownership, and cooperation. These decentralized hubs serve as focal points for training, production, and community engagement. The approach ensures resilience by reducing dependency on centralized systems. Janani Pads sources the raw materials centrally to reduce the price and ensure quality.
- 3. Sustainable Sourcing and Quality Assurance** - Materials are sourced from local suppliers to ensure ecological compatibility, while quality control measures like centralized procurement by Janani and then distributing it amongst the girls maintain product credibility.
- 4. Environmental Sustainability** - By transitioning to reusable pads, women have significantly reduced plastic waste. This transformation is a step toward achieving circular economy principles, where resources are reused and environmental impact is minimized. The pads are designed to have a life of 3 years. The pads are available both with plastic and metal buttons, each having a different lifecycle and suitable for different kinds of environmental conditions. Unlike the conventional reusable pads available on e-commerce websites, the Janani pads are composed of two parts. This makes it easier to dry in the sun, making it more hygienic than its competitors.
- 5. Market Access, Distribution, and Affordability** - The initiative taps into local markets to distribute reusable cloth pads, engaging community leaders, NGOs, and schools. This strengthens local economies and builds a support network for the initiative's goals. Reusable pads are priced affordably at ₹80-



₹110 per unit, ensuring accessibility for low-income families. While some pads are sold, free samples are distributed to underprivileged women in neighboring areas like Garbhanga village. Collaborations with organizations amplify distribution efforts and help sustain the initiative financially.

## 6. Breaking Taboos through Education and Awareness -

Menstrual hygiene remains a sensitive topic in rural areas like Pamohi, where Aimoni started. However, public gatherings spearheaded by leaders like her have normalized discussions around menstruation. Men now actively participate in these conversations, fostering a cultural shift. Educational workshops break taboos surrounding menstruation, promoting sustainable menstrual hygiene practices. This cultural shift is crucial for long-term behavioral change and acceptance.

Janani Pads is breaking the Period Capitalism in a small but strong way in Assam. To appreciate the impact of the approach, let's have a closer look at what Period Capitalism has done to us.



*Figure 12: The colourful Janani Pads in different sizes. These pads are made of*

*two parts to make it easy to clean and dry and carry the soiled pads*

#### **1.40. The Business of Menstruation: Period Capitalism**

**Menstruation, a natural biological process experienced by half the global population, intersects with environmental sustainability, economic disparity, and health risks, revealing an urgent need for systemic change. Let's look at it only in terms of India and then you can imagine what happens when we add the entire globe's women to this equation. India's sanitary napkin market was valued at \$499.8 million in 2019 and is dominated by disposable products. There is little to no mainstream advertising for sustainable alternatives such as reusable cloth pads or menstrual cups, even though they are more affordable and eco-friendly. Currently, these are sold through e-commerce channels only. In India and in many other nations across the globe, products like menstrual cups and tampons are still taboo.**

**Did you know that, according to WaterAid India, someone who uses disposable sanitary pads goes through about 6,120 pads over her lifetime? On the other hand, if you choose reusable cloth pads, you would only need around 136 pads during that time! And for those who opt for menstrual cups, it's even less—just about 7 cups for a lifetime. It makes you think about different options, doesn't it?**

**Menstrual hygiene management in low and middle-income countries faces significant challenges, including limited access to sanitary products, lack of education, and inadequate disposal infrastructure (Ahmad et al., 2020; Kaur et al., 2018). The widespread promotion of disposable pads, as well as free distribution schemes, has led to environmental concerns due to their non-biodegradable nature. Sustainable alternatives are being explored to address both hygiene and environmental issues (Ghosh et al., 2020; Hand et al., 2023), but cultural taboos and lack of awareness hinder the adoption of these alternatives (van Eijk et al.,**

2016). Improved education on menstruation, access to diverse product options, and proper disposal methods are crucial for enhancing menstrual hygiene practices (Harrison & Tyson, 2022). Additionally, policy changes and community engagement are necessary to promote sustainable menstrual hygiene solutions and reduce the environmental impact of menstrual waste (Elledge et al., 2018; Supriya Garikipati et al., 2019).

#### **1.40.1. The Environmental Challenge**

Conventional disposable sanitary pads, composed largely of plastic, pose significant environmental challenges due to their non-biodegradability and long decomposition time (Mogale et al., 2024). These products contribute to substantial waste generation, with an estimated 113,000 tonnes of menstrual waste produced annually in India, as per an estimate by the Central Pollution Control Board of India in 2017 (PATH, 2017). The environmental impact extends beyond waste, as the production and disposal of these products result in greenhouse gas emissions and water pollution (Shah et al., 2008; Stefanini et al., 2024). Moreover, sanitary pads contain higher levels of phthalates compared to common plastic products, raising potential health concerns (Park et al., 2019). To address these issues, researchers are exploring eco-friendly alternatives such as super absorbent polymers made from polysaccharides and reusable sanitary products (Mahajan, 2019; Mogale et al., 2024). Shifting towards sustainable menstrual products could significantly reduce waste and environmental impact while promoting better menstrual hygiene management. India eliminated its "luxury tax" on menstrual products in 2018. This was surely a step forward, but subsidies for sustainable products remain absent. So is awareness of the environmental challenges, proper disposal, and sustainable alternatives. For example, in my village, people still throw their disposable sanitary waste in the village ponds as there is no waste

collection, and people are scared that if someone finds their pads, they will be used for black magic. Just imagine the state of the pond, which also provides water for washing and cleaning to the villagers.

#### **1.40.2. Period Poverty**

Recent studies indicate that the use of disposable sanitary products among women in India has increased, but significant disparities persist. Nationwide, approximately 37-77% of young women use disposable absorbents exclusively (Karjee et al., 2023; Ram et al., 2020), with estimates varying on the basis of the region where the study is conducted, the socioeconomic factors, with lower rates among scheduled castes, rural residents, and those with less education and wealth (Garikipati & Boudot, 2017; Ram et al., 2020). Urban areas, particularly slums, show higher adoption rates of 56-64% (Garikipati & Boudot, 2017). Government initiatives have improved access, especially for school-going girls, but utilization remains lower among out-of-school girls (Garg et al., 2022). Notably, there's growing interest in sustainable alternatives like reusable cloth pads and menstrual cups (Babbar & Garikipati, 2023; Mehta et al., 2022). Factors influencing product choice include awareness, cultural norms, media exposure, and interaction with health workers (Chakrabarty, Singh, Let, et al., 2023; Chakrabarty, Singh, Singh, et al., 2023; Ram et al., 2020). Period poverty, defined as inadequate access to menstrual products, education, and sanitation facilities, is a significant public health issue affecting millions of women globally (Jaafar et al., 2023). In India, socioeconomic inequalities contribute to disparities in menstrual hygiene management, with wealth, education, and rural-urban divides being major factors (Rossouw & Ross, 2021). The COVID-19 pandemic has further exacerbated these challenges, negatively impacting menstruators' mental

health in India (Rohatgi & Dash, 2023). As per a study in the United States, period poverty is associated with an increased risk of depression among college-aged women (Cardoso et al., 2021). Several studies across the globe show that period poverty leads to school absenteeism and dropout (Michel et al., 2022). While disposable pads are commonly promoted, sustainable alternatives like menstrual cups are gaining attention, with awareness and cultural factors influencing their adoption (Babbar & Garikipati, 2023). Addressing period poverty requires improved access to affordable products, education, and sanitation facilities (van Eijk et al., 2016), as well as increased provider awareness and public health initiatives (Miller et al., 2024).

Another rising global concern these days is regarding women's economic subordination due to the current business of menstruation management solutions (James, 2022). A period tax is an example of this. It is a tax on menstrual products. In 2018, India removed its 12% tax on sanitary products, which was known as the "tampon tax". The tax was eliminated after a year of lobbying by celebrities and advocacy groups who argued that these products are not a luxury but a basic need. However, just removing this tax or making it freely available is not going to solve the entire problem, as has been shown in research by several researchers (James, 2022). It rather requires a multifaceted approach, including education, improved infrastructure, and policy changes to ensure access to affordable and sustainable menstrual products (Bridget & C, 2017; Pednekar et al., 2022). For example, in the place where Aimoni started her work first, half of the women did not even own panties, and we are talking about making menstrual hygiene products available to them.

### **1.40.3. The Health Challenge**

My aunt, who used pads made of old sarees, was told by my

grandmother to hide and dry them. If her husband happens to see them, then he will become blind as these clothes are cursed. The naïve 18-year-old woman created a small nook behind the grain storage area that we had under the staircase. Rats were a constant visitor, and the sun and the breeze couldn't make their way in there. This is not a unique story. Research in Orissa by Das et al. (2015) shows it's not just what the menstrual absorbent product is made of but also how it is cleaned, dried, and stored, where it is changed, and women's awareness of intimate hygiene determines the chances of urinary tract infections and bacterial vaginosis. A 2020 survey of disposable feminine hygiene products in the US market revealed that they had volatile organic compounds (VOCs) like benzene and 1,4-dioxane, posing a risk of cancer (Lin et al., 2020). These findings have sparked social movements advocating for women's health rights and safer menstrual products (Kim, 2023). So, on the one hand, it is the chemicals from disposable pads, and on the other hand, there is a need to have good hygiene practices with reusable pads. Hence, the need for talking and awareness is the key. Women need to be made aware that they need to wash and dry the reusable pads well. Men and women also need to be culturally sensitized to make it ok for them to see these pieces of laundry drying beside regular pieces of laundry.



*Figure 13: The Janani pad( left) as compared to other reusable pads is earlier to dry , making them more hygienic*

#### **1.41. It's time for A Period-Distributed Economy**

So why were we meeting on the very 2<sup>nd</sup> day of this year? The Janani team wanted to discuss the possibility of increasing the productivity levels of these rural entrepreneurs who were stitching reusable pads. Using the current mechanical sewing machines, generic sewing tools like scissors, and templates for cutting the cloth, the girls can make a maximum of 30 pads per day and make INR 20 per pad. If the girls can make more pads, they can make more money. The Janani team was very clear that they were not looking to replace the girls, as Janani's biggest strength is its capability to generate employment and a sustainable lifestyle. Productivity can be increased by bringing in mechanization, and a handful of girls can produce thousands of pads. They, however, wanted interventions that could help the girls make 60-90 pads per day comfortably and maintain the distributedness of the system. This can bring economic benefits to a large number of girls. As each girl will be producing small numbers, they will not be trying to exploit the market with exorbitant pricing, and Janani's aim will be

met.

**Several African countries (Elledge et al., 2018; Supriya Garikipati et al., 2019; S. Garikipati et al., 2019; Ghosh et al., 2020; Hand et al., 2023; Harrison & Tyson, 2022; Kaur et al., 2018; Kim, 2023; Lin et al., 2020; Shaikh, 2020) have achieved a lot in making Periods a Distributed Economy, and let's also walk that path in India and take this movement of Aimoni and Uttam to every corner of the country! A big salute to this power couple!**





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