

Publication History

Received: 2026-01-30

Reviewed: 2026-02-18

Accepted: 2026-02-23

Published: 2026-02-24

DOI:

<https://doi.org/10.70042/eroth/1001238>

All articles and content published in Erothanatos are made available under the terms of the [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/), unless otherwise stated. This license permits users to copy, distribute, display, and perform the work, and to make derivative works, for non-commercial purposes only, provided the original author(s) and source are properly credited. Authors retain the copyright to their work. In cases where a special issue is properly declared to be published in book form with an ISBN, the copyright and licensing terms for that publication will be specified separately and communicated to contributing authors in advance.

Theme Area:

Bloodlines of the Sacred: Menstruation, Myth, and Cultural Memory in South Asian Traditions

Beyond Bollywood: Padman, Grassroots Innovation, and the Market Competition between Micro-Enterprises and Multinationals in Menstrual Hygiene

Abstract: *This paper investigates the multifaceted impact of Arunachalam Muruganatham's grassroots innovation—the low-cost sanitary napkin machine—as depicted in the Hindi film Padman (2018). It analyses the disruptive challenge this innovation poses to established market forces in South Asian menstrual hygiene management (MHM). Despite significant advancements in public health discourse, affordable access remains restricted due to high product costs and deeply entrenched socio-cultural taboos. This study examines how Padman functions as a cultural catalyst for entrepreneurship education, deconstructing myths of "overnight success" and highlighting the grit required for social ventures. Furthermore, the paper analyses the decentralised economic model against the centralised, high-cost strategies of multinational corporations (MNCs) like Hindustan Unilever (HUL) and Procter & Gamble (P&G). By integrating market data and examining the competitive landscape—with a specific focus on the strategic importance of the Maharashtra market—this research demonstrates how grassroots innovation provides a sustainable solution to the affordability crisis while fostering local economic empowerment and challenging corporate hegemony.*

Keywords: Sanitary napkin machine, Padman, menstrual hygiene management, public health discourse, socio-cultural taboos.

Beyond Bollywood: Padman, Grassroots Innovation, and the Market Competition between Micro-Enterprises and Multinationals in Menstrual Hygiene

Chandresh Chakravorty¹

1. Introduction: The Socio-Economic Silent Emergency

The Menstrual Health Management (MHM) crisis in India is not merely a biological challenge; it is a profound intersection of public health, economic disparity, and cultural repression. Historically, menstruation in the Indian subcontinent has been shrouded in a "culture of silence" that manifests through restrictive practices, social isolation, and a systemic lack of education. For decades, this silence served as an invisible but impenetrable barrier to health equity, impacting the lives of over 350 million menstruating women and girls in the region.

To understand the scale of the economic barrier, one must look at the historical pricing of hygiene products. In 1998, a pack of eight high-quality sanitary pads cost approximately 20 Indian Rupees. While this figure may seem nominal in a contemporary global context, at that time, it represented the equivalent of three days of grocery shopping for a rural family living below the poverty line. This forced an impossible choice between basic nutrition and basic hygiene—a choice that was invariably resolved in favour of the former. Consequently, millions of women were relegated to using unhygienic materials such as ash, husk, sand, or old rags (Sultana). These practices led to chronic reproductive tract infections (RTIs), pelvic inflammatory diseases, and significant educational setbacks, as adolescent girls frequently stayed home during their cycles, eventually dropping out of school altogether.

The arrival of Arunachalam Muruganatham, the real-life "Padman," marked a structural shift in how this crisis was addressed. Rather than focusing on charity or government subsidies—which had historically been inconsistent and prone to supply-chain leakages—Muruganatham focused on the mechanical and economic supply chain. He identified that the high cost of napkins was not a result of material complexity, but a byproduct of the centralised, high-overhead manufacturing and branding models utilised by global multinational corporations. His invention of a low-cost, semi-automated machine designed for village-scale production represents a landmark in "frugal innovation." The 2018 film *Padman* serves as the primary cultural vehicle for this narrative, translating complex socio-

¹ An Assistant Professor at Mandsaur University: Mandsaur, Madhya Pradesh, India.

economic disruption into a digestible, aspirational story that has significant implications for both social change and business education.

2. Detailed Literature Review: A Multidisciplinary Perspective

The academic landscape surrounding Menstrual Health Management (MHM) in South Asia is multidisciplinary, spanning public health, sociology, gender studies, and development economics.

2.1 The Sociology of Silence and Taboo

Sultana's meta-analysis of menstrual hygiene practices in India highlights that the primary barrier to adoption is rooted in "shame-based" cultural narratives. In many rural South Asian contexts, menstruation is associated with "pollution" (*ashuddhi*), leading to the exclusion of women from kitchens, religious sites, and social gatherings (Sultana). This sociological construct of "impurity" has long served as a market deterrent, as the purchase of sanitary napkins involves a public transaction for a "private shame."

2.2 Cinematic Intervention and Public Pedagogy

The role of Bollywood as a tool for public pedagogy is well-documented. Pandey notes that films like *Toilet: Ek Prem Katha* and *Padman* represent a new genre of "policy-narrative cinema" that aligns with national missions like *Swachh Bharat* (Pandey). Sharma and Gupta argue that *Padman* specifically performs a "subversive" act by making the sanitary pad a visible, non-taboo object on screen (Sharma and Gupta). They contend that the film's biggest achievement is the "normalization of the object," taking the sanitary pad from behind the black plastic bag used by pharmacists and placing it in the spotlight.

2.3 The Economics of Grassroots Disruption

In the realm of development economics, the focus has shifted from "charity models" to "sustainable market models." Mishra's research into the political economy of MHM suggests that government subsidies (like the *Suvidha* scheme) often fail due to the inability to compete with the quality perceptions created by MNCs (Mishra). This gap catalysed the study of "frugal innovation." Radjou and Prabhu describe this as a "bottom-up" innovation process where entrepreneurs in resource-constrained environments "jugaad" solutions that are specifically tailored to local infrastructure (Radjou and Prabhu). Muruganatham's machine is frequently cited as the gold standard of this theory, as it reduces capital expenditure by over 90% compared to industrial machines.

2.4 Entrepreneurship Education: Diversifying Case Studies

In the field of business education, there is a growing movement to diversify case studies away from the "Silicon Valley Hero" narrative. Yousafzai's work on "Bollywood and Business" argues that students in the Global South need "relatable entrepreneurs" whose challenges—such as a lack of electricity, social ostracism, and a lack of venture capital—mirror their own potential realities (Yousafzai).

3. Expanded Theoretical Framework: The Triple Barrier Model

To analyse the disruptive potential of grassroots innovation, this paper utilizes a "Triple Barrier" theoretical framework, examining the Cultural, Economic, and Structural obstacles to MHM access.

3.1 The Cultural Barrier: Sociology of Stigma

The foundational theory here is the Sociology of Stigma. Menstruation is treated as a "discrediting attribute" that forces women into "concealment behaviour." The Theoretical Framework posits that innovation cannot be successful if it only addresses the physical product; it must also address the "stigma-cost." Muruganatham's model addresses this by utilising local women (SHGs) as producers, which gradually normalizes the conversation within the village social fabric, effectively lowering the cultural barrier through peer-to-peer exposure.

3.2 The Economic Barrier: BoP Theory and Frugal Engineering

We apply the Bottom of the Pyramid (BoP) Theory, which suggests that the poorest socio-economic groups represent a vast, underserved market. However, MNCs often fail at the BoP because their "Margin-Driven" models require high prices to cover urban marketing and global overhead.

- **The Theory of Frugal Engineering:** This framework suggests that "removing features" (de-layering) and "simplifying mechanics" is a strategic choice. Muruganatham didn't just make a "cheap" machine; he re-engineered the process to remove the need for high-voltage electricity and specialized labor, which are the primary cost-drivers for MNCs.

3.3 The Structural Barrier: Decentralization vs. Centralization

This paper employs Centralization Theory to explain market failure. In a centralized model (HUL/P&G), a factory in a metro city must transport products 1,000 miles to a rural village. The "last-mile" logistics cost often exceeds the manufacturing cost.

- **Decentralized Production Theory:** By moving the "factory" to the village, the structural barrier of logistics is eliminated. The framework argues that for high-volume, low-margin products like sanitary pads, a "network of micro-units" is more resilient and cost-effective than a "single mega-factory."

4. Cinema as a Pedagogical Catalyst: Deconstructing the "Overnight Success"

In the field of business education, *Padman* serves as a critical tool for deconstructing the "Silicon Valley" myths of entrepreneurship. As Dr. Shumaila Yousafzai explains, the media often amplifies the spectacular rise of so-called "overnight global sensations" like Mark Zuckerberg or Elon Musk (Yousafzai). While these stories are inspirational, they do little to represent the realities of entrepreneurship for students in developing nations.

4.1 Debunking the Fairytale

The film highlights that successful entrepreneurship can stem from diverse, even hostile, environments. It shows that innovation is not always a high-tech app; it can be a mechanical solution to a social crisis.

By showing Muruganatham's years of social ostracisation and technical failure, the film teaches that "grit" is more essential than "genius." This process of "debunking" is a step towards helping students believe that they have what it takes to be a successful entrepreneur without requiring elite resources. It shifts the focus from "venture capital" to "social capital."

4.2 The Role of Failure and Iteration

Students are often afraid to embark on entrepreneurial careers because they fear failure. *Padman* provides a transparent look at the iterative process of innovation. The protagonist's early prototypes were unhygienic and ineffective, leading to public ridicule. However, the film emphasizes that failure is a data point in the path to a solution. This pedagogical shift encourages students to view entrepreneurship as a marathon of resilience rather than a sprint to an IPO.

5. The Competitive Landscape: Micro-Enterprises vs. The Giants

The Indian sanitary napkin market is currently a dynamic battlefield between indigenous grassroots innovators and foreign multinational competitors.

5.1 MNC Defensive Strategies: The Cost of Centralization

Multinationals like HUL and P&G utilize centralized mass production and massive marketing overheads. Their business model is built on high-volume, high-margin sales supported by celebrity endorsements. While they offer high-performance products, their price point remains a barrier for rural consumers. To counter local competition, they have attempted to introduce "economy packs," but their high distribution costs through modern trade channels maintain a floor price that is still higher than local alternatives. Their reliance on "modern trade" (supermarkets) means they struggle to penetrate the "kirana" (local mom-and-pop) stores in remote villages.

5.2 The Grassroots Offensive: Innovation through Empathy

Industry players at the grassroots level emphasise design innovation through the use of organic and biodegradable materials. These products have gained popularity among health-conscious and environmentally conscious consumers. Strategic product bundling and localised pricing—particularly in rural and semi-urban areas—increase accessibility and customer retention. Local micro-enterprises bypass traditional marketing by establishing credibility through direct community interaction. They do not need a billboard if the woman selling the product is the same woman who made it and who lives next door.

6. Regional Focus: The Maharashtra Market as a Laboratory for Change

Maharashtra serves as the strategic hub for the sanitary napkin industry in India. It is a prime platform for product introduction and test-marketing because its market constitutes a unique amalgamation of rural requirements and urbanisation.

6.1 A Model State for Awareness and Infrastructure

NGOs and the private sector commonly utilize Maharashtra as a "model state" for awareness and

education in menstrual health. The state's progressive social infrastructure and higher-than-average literacy rates make it an ideal environment for introducing new health concepts. The state witnesses rising investment in domestic production and packaging, which sustains affordability.

6.2 Logistics and Economic Synergy

By localising the supply chain within the state, transport costs are minimized. Maharashtra's robust road network and the presence of industrial hubs like Pune and Nashik allow for a hybrid model where raw materials can be sourced regionally and distributed locally. These combined efforts make Maharashtra a strong and progressive player in the Indian sanitary napkin market, providing a blueprint for other states like Uttar Pradesh or Bihar to follow.

7. Challenging Corporate Hegemony: The Path to Universal Access

The true power of Muruganatham's model lies in its ability to circumvent the corporate hegemony of global supply chains. By moving the "factory" to the village, the model eliminates the "last-mile" logistics costs that typically account for a large portion of a product's price.

7.1 Prosumerism and Empowerment

The model transforms the rural woman from a mere "consumer" into a "prosumer"—a producer and consumer. This generates local employment (typically 10-15 women per machine) and ensures that the financial benefits of the trade stay within the community. This decentralized model is far more resilient than the centralized MNC model, as it is not dependent on complex global logistics or international raw material price fluctuations. It empowers women not just physically, but financially, giving them a stake in the local economy.

7.2 The Impact of "Appropriate Technology"

The machine itself is designed to be repairable. Unlike MNC equipment that requires specialised technicians, a village mechanic can fix a Muruganatham machine. This is the essence of "appropriate technology"—it serves the community rather than forcing the community to serve the machine.

8. Conclusion: The Future of Frugal Social Ventures

The story of *Padman* is a landmark case study in frugal innovation. It proves that the most effective way to challenge corporate hegemony and dismantle social taboos is through community-owned technology. By integrating the pedagogical lessons of entrepreneurship with the strategic market data from progressive states like Maharashtra, we can see that the future of menstrual hygiene lies in the hands of the grassroots innovator.

For universal access to be achieved, policy must shift from supporting centralised corporate distribution to empowering local micro-enterprises and Self-Help Groups. The democratisation of technology, as evidenced by Muruganatham, is the only sustainable path to health equity in the Global South. *Padman* is not just a film about a man making pads; it is a manifesto for an economic revolution led by those at the very bottom of the pyramid.

Works Cited

- Avasarala, Sumit, et al. "Beyond the 'Pad': Challenges and Strategies for Sustainable Menstrual Hygiene Management in India." *International Journal of Environmental Research and Public Health*, vol. 17, no. 18, 2020, p. 6659.
- Balki, R., director. *Padman*. Sony Pictures Releasing, 2018.
- Mishra, Praveen Kumar. "The Political Economy of Menstrual Hygiene Management in India: From Taboo to Technology." *Journal of Health Management*, vol. 23, no. 1, 2021, pp. 108-25.
- Pandey, Rahul. "Decoding the Bollywood Influence on Public Health Discourse: A Case Study of Padman." *Studies in South Asian Film and Media*, vol. 10, no. 2, 2019, pp. 173-90.
- Radjou, Navi, and Jaideep Prabhu. *Frugal Innovation: How to Do Better with Less*. The Economist / PublicAffairs, 2015.
- Sharma, Anjali, and Meenakshi Gupta. "Stigma and the Silver Screen: Analysing the Representation of Menstrual Taboos in Padman." *Feminist Media Studies*, vol. 20, no. 4, 2020, pp. 589-604.
- Sultana, Abida. "Menstrual Hygiene Practices in India: A Systematic Review and Meta-Analysis." *International Journal of Adolescent Medicine and Health*, vol. 29, no. 1, 2017.
- Yousafzai, Shumaila. "Bollywood and Business: What Padman (2018) Teaches Us about Entrepreneurship." *Venture Growth Analysis*, 18 Apr. 2019.