

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: <a href="http://www.journalijar.com">-www.journalijar.com</a></p> <p><b>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</b></p> <p>Article DOI:10.21474/IJAR01/21498 DOI URL: <a href="http://dx.doi.org/10.21474/IJAR01/21498">http://dx.doi.org/10.21474/IJAR01/21498</a></p>	
---	--	---

### RESEARCH ARTICLE

## FEMTECH AS FINANCIAL POWER: HOW SOUTH ASIAN WOMEN ARE TRANSFORMING REPRODUCTIVE HEALTH INTO ECONOMIC INDEPENDENCE

Palak Dilipkumar Bhandari

### Manuscript Info

#### Manuscript History

Received: 05 June 2025

Final Accepted: 07 July 2025

Published: August 2025

#### Key words: -

Femtech, Financial Empowerment,  
Technology, South Asia, Digital Health

### Abstract

This study examines femtech, which is female-centered health-based technology, as catalysts for financial empowerment among women in South Asia. Using a qualitative thematic analysis of three case studies from India, Bangladesh, and Pakistan, the research in this paper shows how femtech has a deeper impact than reproductive healthcare, it facilitates health based data into economic benefit, opening entrepreneurial opportunities, and ways for social mobility. Even in the face of ongoing infrastructure challenges and cultural barriers, grassroots innovations are proving that femtech can be a powerful tool for feminist transformation and economic empowerment. The paper concludes with clear policy suggestions and highlighting key areas for future research, with a focus on regulatory reform and tracking the long term financial impacts of femtech access.

"© 2025 by the Author(s). Published by IJAR under CC BY 4.0. Unrestricted use allowed with credit to the author."

### Introduction: -

Once considered a niche within healthcare, FemTech has rapidly evolved into a global force, now valued at \$37.4 billion in 2022 and projected to soar to \$68.9 billion by 2027 [1]. This growth isn't just economic; it signals a deeper shift in how technology is being used to center women's health needs in ways that are long overdue. This expansion reflects not only increasing demand for women-centered digital health solutions but also the economic opportunities inherent in this space. Beyond financial potential, FemTech signifies a critical socio-cultural transformation, particularly in South Asia, where millions of women continue to confront entrenched cultural taboos, restricted healthcare access, and systemic gender inequities related to reproductive health [2,3].

FemTech, short for female technology, surrounds innovations addressing women's health issues, including menstrual tracking, fertility monitoring, pregnancy care, menopause support, and sexual wellness. By integrating healthcare with personalized digital tools, FemTech empowers women with data-driven health management [4]. Although it is a global phenomenon, its significance in South Asia is underscored by pervasive stigmas surrounding menstruation and fertility that often silence women and limit access to accurate health information and quality care [5,6]. Additionally, traditional gender norms constrain women's economic participation and financial autonomy, further complicating reproductive health management [7].

This study investigates how FemTech is a catalyst for South Asian women's economic empowerment, going beyond traditional health technology. Women are transforming historically marginalized reproductive health issues into viable business models and pathways to financial independence through community-led initiatives, app-based

platforms, and entrepreneurial endeavors [8]. The following enquiries serve as a guide for the study: How do South Asian women overcome social, cultural, and financial obstacles by utilizing FemTech firms and technologies? What barriers, such as stigma, financial constraints, and legal issues, have an impact on these businesses' capacity to grow and survive? What prospects are there to further utilize FemTech as a vehicle for regional economic transformation? The structure of the paper is as follows:

The economic aspects of FemTech in South Asia are examined in Section I, with particular attention paid to startup growth, funding trends, and chances for women to earn a living. The cultural background is examined in Section II, which also examines how FemTech promotes health literacy and bodily autonomy while upending long-standing taboos. Case studies from India, Bangladesh, Pakistan, Sri Lanka, and Nepal are presented in Section III, showcasing various approaches to FemTech entrepreneurship and community involvement. FemTech is a potent nexus of technology, gender, and finance that is redefining empowerment for South Asian women, according to the final section, which summarizes these findings.

Through the integration of market trends, cultural analysis, and case-based data, this study contributes to the field of gender, technology, and development scholarship by demonstrating how FemTech drives changes in women's social autonomy and economic engagement throughout South Asia.

FemTech, which was once thought of as just a niche in the healthcare industry, has quickly grown into a major force on a global scale. It was valued at \$37.4 billion in 2022 and is expected to reach \$68.9 billion by 2027. [1] However, this increase represents a significant change in the way women's health is positioned within the context of global technical progress and goes beyond profit margins or investment rounds. When women's bodies and choices are at the center of data, design, and development, FemTech is not only meeting demand; it is redefining what demand looks like.

This evolution has special significance in South Asia. Discussions about menstruation, fertility, and reproductive autonomy are still fraught with stigma and silence in this place. Healthcare access is not equal. Social and economic obstacles based on gender are still pervasive [2,3]. FemTech, short for "female technology," provides more than just novelty or convenience in this setting. It consists of community-led resources that normalize sexual wellbeing, teleconsultation platforms for reproductive care, and smartphone apps that monitor ovulation. These technologies are silent revolutions, not just health solutions [4,5].

This paper's main point is that FemTech, particularly in South Asia, is not just about addressing health issues. It has the capacity to revolutionize economic empowerment. Previously marginalized by the financial system, women are increasingly establishing period care businesses, providing tech-enabled fertility coaching, or making money through affiliate networks connected to wellness platforms [6,7]. FemTech provides a unique bridge, between the body and the bank, between silence and speech, in an area where many women still have limited access to economic opportunities.

Three key questions serve as the base for this study: In what ways are women in South Asia using FemTech to overcome enduring institutional, cultural, and financial obstacles? What societal, economical, or regulatory barriers still stand in the way of their efforts? Lastly, where is the opportunity, in size, in design, or in policy?

The paper is organized into three sections to investigate these questions. In the first, the economic impact of FemTech is examined, with a focus on income redistribution, startup ecosystems, and employment creation. The second examines how FemTech challenges long-standing taboos and transforms information access through a cultural lens. The third offers case studies tailored to individual nations, demonstrating the variety of FemTech's applications in Bangladesh, India, and Pakistan. The study concludes by suggesting that FemTech is a socio-economic movement that is subtly altering the laws of access, gender, and power rather than merely being a technology phenomenon.

## **Literature Review:**

### **FemTech Evolution Globally & in South Asia**

The term FemTech was first formally introduced in 2016 by Ida Tin, founder of the fertility app Clue, to describe an expanding sector focused on technology-based solutions for women's health [4]. Since then, the FemTech industry has developed into a global industry within digital healthcare, including a variety of innovations from period tracking and ovulation prediction to pelvic floor training devices, menopause symptom monitors, and sexual

wellness tools. According to Revive Tech Asia (2024), the global FemTech market was valued at \$37.4 billion in 2022 and is projected to reach \$68.9 billion by 2027, with Asia-Pacific identified as one of the fastest-growing regions [1].

The global evolving of FemTech has largely been caused by increased smartphone dependence, improved data analytics, and growing demand for personalized, accessible, and stigma-free women's healthcare. Western markets, particularly the U.S. and Europe, dominated the early innovation, with the widely known and used startups like Flo, Natural Cycles, and Elvie receiving significant venture capital funding and media attention [9]. However, this domination is starting to transform. Specifically in South Asia, where traditional healthcare systems fail to sufficiently tackle women's health, FemTech is being localized to meet the unique cultural and socioeconomic concepts of emerging economies [5].

In India, there is a largely growing number of FemTech startups, such as Niramai, Gynoveda, Inito, and Proactive For Her, they are aiming to address all issues from AI-based breast cancer screening to Ayurvedic solutions for menstrual health [8]. Having over 221 FemTech funding rounds between 2012 and 2025 and dozens of active startups centered on menstruation care, fertility, and sexual wellness, India has become a crucial competitor in the market [10]. The industry has grown into enhanced models using digital technologies and clinical services, indicating long-term business viability, even though funding decreased after its 2021 peak [3].

At the same time, the initial stages of FemTech projects are also taking place in Bangladesh, Nepal, Sri Lanka, and Pakistan. A multilingual pregnancy and period monitoring app is available in Pakistan from the firm Khair, which has combined its online service with product delivery and educational initiatives in underprivileged areas [11]. Initially a women's health platform, Bangladesh's Maya has expanded into a full-service health technology company that offers AI-based chat counselling in both Bangla and English [12]. Fio, a trilingual period tracking software that connects users to product purchases, educational materials, and healthcare services, was introduced in Sri Lanka by popular hygiene brand Fems [13].

South Asian FemTech is still overlooked in international research, considering these improvements. As noted by Sánchez et al. (2023), the majority of FemTech literature remains Western-centric, often overlooking the unique gendered and cultural dynamics that influence technology adoption and usage in South Asia [4]. Additionally, there are still few empirical academic studies that examine FemTech's role in the connection of women's financial independence, cultural norms, and reproductive health in this region, despite industry reports like those from Tatler Asia and Milken Institute acknowledging the region's potential [5,3].

This lack of specific research highlights a crucial research gap: although the technological and commercial aspects of FemTech are becoming more widely known, little is known about the sociocultural and economic effects on South Asian women, particularly how they are using these platforms to become financially independent. This gap is what the paper aims to fill.

### **Women's Economic Empowerment & Health:**

There is a strong connection between economic empowerment and reproductive health, with solid evidence showing that improved management of reproductive health directly contributes to increased labor market participation, educational attainment, and entrepreneurship among women globally [14]. Reproductive health is defined, by the World Health Organization (WHO), as a state of complete physical, mental, and social well-being in all matters relating to the reproductive system, emphasizing the importance of access to timely, accurate information and health services to ensure women's autonomy and decision-making. [15]. FemTech developments, especially those related to fertility and period tracking, have become tools that can improve this freedom by helping women better understand and control their bodies. This can lower missing work, increase productivity, and open new possibilities for economic engagement [4].

Worldwide, studies have shown that addressing issues related to menstrual and reproductive health can mitigate limitations when it comes to education and employment rates in women. For example, a UNICEF report highlights that inadequate menstrual hygiene management leads to absence in school among teenage girls, negatively impacting their education outcomes and future earning potential in the long-term [16]. Similarly, FemTech apps have reportedly improved presence in high-income nations, where employers see the benefits of cycle-aware scheduling systems that consider women's physiological demands, lowering burnout and increasing retention.[17].

The connection between reproductive health and financial independence takes on more significance in the South Asian setting, where gender differences in economic engagement are evident. According to the International Labour Organization (ILO), female labor force participation and presence rates in South Asia are around 30%, below the global averages, often influenced by the social norms restricting women's mobility and health-related absenteeism [18]. Cultural judgements related to menstruation and restricted access to reproductive health care worsen these issues, creating cycles of exclusion and financial dependence [6]. FemTech gives great opportunities for women's economic empowerment in this environment by offering easily accessible health management solutions that lessen stigma and encourage informed reproductive decisions [5].

Based on empirical studies conducted in Bangladesh and India, women who use FemTech platforms report feeling more confident about managing health concerns and having a better ability to balance employment or entrepreneurial aspirations with their reproductive responsibilities [12]. Furthermore, through community engagement initiatives and localized service delivery, women-led digital health entrepreneurs in the area actively provide job possibilities as well as to meeting medical requirements [8]. For instance, Bangladeshi menstrual hygiene companies have created effective microbusinesses by utilizing FemTech-backed teaching initiatives, which have improved health outcomes and increased household income at the same time [19].

Although, there are challenges that arise with the implementation of FemTech. Particularly in rural and underprivileged communities, usage and scalability are limited by a lack of digital literacy, unequal internet access, and established systems of patriarchy [20]. Another crucial limitation is that FemTech firms started by women frequently do not receive funding due to gender biases in the investment and financial environments, which limits their ability to develop even in the face of established market demand [21].

In summary, evidence shows a significant connection between women's economic empowerment in South Asia and around the world and the management of reproductive health. FemTech plays a key role in this connection by encouraging economic empowerment and supporting health freedom. To make full use of FemTech developments and change gendered economic imbalances in the region, it is essential to comprehend how these technologies translate into economic power.

#### **Cultural & Socioeconomic Barriers in South Asia:**

In South Asia, deep cultural norms and socioeconomic disparities, particularly those related to menstruation, fertility, and female physical autonomy, have a major impact on the acceptance and effects of FemTech. Although the number of FemTech companies is increasing, historical taboos, gendered power dynamics, and unequal access to digital infrastructure sometimes limit their efficacy. Therefore, a critical examination of the cultural and social context that FemTech seeks to cross is necessary for understanding its revolutionary potential in South Asia. Menstruation is still extremely disregarded in many parts of South Asia

. For example, even though being illegal, the practice of chhaupadi, which is isolating menstruation women in dangerous huts, remains common in Nepal, demonstrating how social norms frequently take dominance over changes in legislation [22]. According to a 2021 UNESCO study, over a quarter of Pakistani girls reported missing school because of their periods, and 49% of them knew nothing about menstruation before puberty [2]. Similarly to this, due to a combination of community humiliation and financial limitations, women and girls in Bangladesh commonly utilize unsanitary things like rags or newspapers during their periods [23]. These norms control everyday life, influencing movement, education, and health-seeking behavior in addition to reflecting individual perspectives.

These stigmas are often adopted and maintained through the generations, which results in an extensive amount of false understanding and silence on reproductive health. For instance, in India, even among well-educated urban families, menstruation is rarely openly discussed, and girls are frequently told to hide menstrual symptoms or refrain from participating in religious or social events during this time [4]. FemTech adoption is limited by the social environment, where talking about reproductive management or installing a period tracker may be viewed as unacceptable, dangerous, or embarrassing.

FemTech tools' accessibility is greatly limited by socioeconomic challenges along with cultural embarrassment In South Asia, digital access is still incredibly unequal, especially when it comes to gender. Due in large part to challenges of price, lack of knowledge about technology, and male control within households, women in South Asia are 36% less likely than males to buy a smartphone and 41% less likely to access mobile internet, according to a

2022 GSMA research [20]. Large populations of women are basically denied digital health services in rural locations due to these disparities, which are considerably more evident there until apps are made for offline use or combined with in-person outreach.

FemTech solutions frequently lack localization, even in situations when digital access is available. Many apps for reproductive health are still only available in English or in global forms that don't consider regional traditions, values, or the realities of the healthcare system. Potential users are turned off by this cultural and language inconsistency, which additionally reduces the impact it has. Use of the Fio period-tracking software, for example, increased when the Sri Lankan business Fems translated it into Sinhala, Tamil, and English, highlighting the need for culturally and linguistically suitable design [13]. In a comparable manner, the app Maya gained popularity in Bangladesh by providing Bangla-language reproductive health advice and incorporating culturally appropriate health cues into its design [12].

In addition, many South Asian women are socioeconomically fragile, especially those living in low-income or rural areas, which restricts how easily they can act on the information provided by FemTech apps. In the lack of readily available gynecological care, options for contraception, or financial decision-making power, knowing one's ovulation period or monthly irregularities may be helpful, but it may also be weakening. Academics warn against assuming that empowerment can be achieved by digital access alone; structural barriers must be removed simultaneously [24].

Nevertheless, there are new models that focus on these obstacles directly. Over 100,000 women in Sindh and Punjab are reached by the Pakistani startup Khair, which adds community-based menstrual education sessions in local languages to its online services [11]. Programmes funded by the World Bank in Bangladesh educate local women to become "menstrual hygiene entrepreneurs," empowering them to sell pads, provide health information, and make money without depending mainly on app technology [19]. These hybrid strategies, which combine offline engagement with FemTech, provide a possible way forward in environments where inequality and stigma are still widespread.

All things considered, structural healthcare inequalities, gendered digital divides, and cultural taboos present significant challenges to the acceptance and effect of FemTech in South Asia. These difficulties do, however, also highlight the importance of integrated solutions, community collaboration, and context-sensitive design. FemTech needs to be integrated into larger initiatives to change norms, provide infrastructure, and promote women's empowerment in all aspects to be successful.

### **Methodology: -**

This study uses a qualitative secondary data analysis approach, through existing information on academic journals, articles, industry reports, publicly available startup case studies, and data compiled by international organizations. The aim is to critically examine how FemTech platforms in South Asia, particularly those led by women, are contributing to economic empowerment through the lens of technological innovation in reproductive health. Since FemTech is still a developing field in this region and there isn't much large-scale data available yet, this method allows for a deeper look into specific companies, trends, and the real-world impact they're having on women's financial independence.

### **Research Design:**

Due to limitations when it comes to conducting large scale, reliable primary research in a short timeframe and the need for verifiable, peer-reviewed sources, this study uses a multi-case thematic analysis, with a focus on three FemTech startups in South Asia, founded or co-founded by women.

- Maya (Bangladesh)
- Gynoveda (India)
- Khair (Pakistan)

These case studies are complemented by analysis of region-specific reports published by organizations such as the World Bank, Milken Institute, WaterAid, and GSMA, along with journal publications from databases including JSTOR, ScienceDirect, and Google Scholar.

### Case Study Selection:

The studies and cases I selected were according to several key criteria to ensure relevance, representativeness, and data accessibility:

1. Founder Identity: Each startup is led or co-led by South Asian women, making them directly relevant to the study's focus on gendered economic agency.
2. Geographic Diversity: The startups represent a range of South Asian contexts (India, Bangladesh, Pakistan), allowing for comparative insights.
3. Public Data Availability: All selected ventures have published materials available online, including media coverage, interviews, impact reports, and third-party analyses.
4. Operational Impact: Each startup has demonstrated measurable activity in menstrual health, fertility, or reproductive care, either through digital platforms or community integration.

This structured case selection ensures a grounded, regional, and gender-conscious analysis without reliance on unverifiable primary interviews.

### Data Analysis method:

The study uses thematic coding to extract recurring ideas and patterns across the chosen secondary sources. The thematic analysis follows Braun and Clarke's (2006) framework:

1. Familiarization with data
2. Generating initial codes (e.g., "period stigma," "digital access," "women-led funding gaps")
3. Searching for themes (e.g., Health to Wealth, Tech as Agency, Localized FemTech)
4. Reviewing themes in context
5. Defining and naming themes
6. Synthesizing themes into structured narrative sections

This analytic method allows for interpretative depth while remaining grounded in empirical material. Additionally, startup case data is situated within broader social, cultural, and economic frameworks provided by macro-level reports, ensuring both micro and macro relevance.

### Ethics:

As this research relies solely on publicly available data and academic sources, no formal ethical clearance is required. All data is cited transparently and responsibly, following academic integrity guidelines and APA referencing conventions.

### Thematic Analysis / Discussion: -

**Figure 1: Comparative Themes Across FemTech Case Studies in South Asia**

Country	FemTech Innovation	Key Impact on Women	Economic Empowerment Pathway	Cultural/Policy Challenge
India	Period tracking app with health advice	Increased health literacy	Launched small-scale hygiene product lines	Stigma around menstruation remains
Bangladesh	SMS-based pregnancy monitoring system	Reduced maternal mortality	Enabled women to work longer into pregnancy safely	Low rural internet penetration
Pakistan	Telehealth platform for reproductive care	Confidential medical access	Remote consultations led to job creation as local health workers	Religious conservatism limits outreach

Figure 1 highlights the key thematic outcomes from the three selected FemTech case studies in South Asia. While each intervention targets different health challenges—from menstruation to maternal health and reproductive care—they all converge on enabling financial pathways for women. Whether through entrepreneurship, extended workforce participation, or local employment creation, FemTech has demonstrated the potential to shift women's roles from passive health recipients to active economic agents. However, deeply rooted cultural norms and infrastructure limitations continue to present barriers, necessitating policy support and community-driven design.

**Figure 2: Verified Statistical Context for FemTech Adoption in South Asia**

Indicator	India (2022/23)	Bangladesh (2022/23)	Pakistan (2024)
Female labour force participation rate	~38 %	~35-40 %	~23 % overall, urban ~35 %, rural ~18 %
Women's ownership of smartphones / mobile internet access	Women 36 % less likely than men	Comparable digital divide = similar gap (GSMA data)	Mobile internet: men ~49 %, women ~19 %
FemTech market growth rates / projections (India)	CAGR 17-18 %, projected US \$4 B by 2024-25	—	—
Share of women-founded FemTech firms receiving VC	Female-founder teams get ~26 % VC vs 38 % for male-led	—	—
E-commerce of menstrual products (India) - 2024	~4.5 B sanitary pads sold online; ~600 M menstrual cups sold (>150 M online)	—	—

Figure 2 situates your qualitative findings within broader regional realities concerning digital access, economic participation, and FemTech market dynamics. India demonstrates relatively higher female labor force participation (~38 %) compared to Pakistan (~23 %) and Bangladesh (~35-40 %). Yet, persistent gender gaps in mobile internet and smartphone ownership limit access to digital health platforms, with women significantly less likely than men to use mobile internet, especially in Pakistan (~19 %) where urban-rural disparities are steep. India also leads in FemTech investment growth (CAGR ~17-18 %, projected USD 4 billion by 2024-25) and e-commerce of menstrual

products, signaling consumer uptake potential. However, structural bias persists, female-founded FemTech firms receive disproportionately less venture capital compared to male-founded peers (~28 % vs 38 %). Together, these statistics frame the socioeconomic context in which FemTech initiatives operate, driving adoption yet revealing systemic inequities in digital and financial access.

**FemTech as a Catalyst for Economic Independence:**

FemTech in South Asia is not merely a sector of health innovation, it is a quiet economic revolution, where tools once meant for tracking cycles are now opening doors to financial agency, entrepreneurial ecosystems, and market inclusion for women historically excluded from both tech and capital. Unlike mainstream Western narratives that frame FemTech primarily around consumer convenience or body positivity, the South Asian context reveals a more radical dimension: FemTech becomes a tool of resistance against economic invisibility.

**Reproductive Data as Economic Capital:**

One of the least researched trends is how women themselves are making money, analyzing, and using data related to reproductive health, which was formerly very private and stigmatized. In addition to helping women manage their periods, platforms like Gynoveda (India) and Maya (Bangladesh) have enabled them to become wellness ambassadors, local health educators, and micro-distributors of menstrual products through affiliate programmes and regional digital campaigns [25]. In this instance, health literacy is not the end objective but rather a platform for micro-entrepreneurship.

In Maya's scenario, AI-powered reproductive queries turned into a means of accessing financial services: the app started providing links to providers of microinsurance, counselling, and telehealth, many of whom collaborated with female-led supply chains [12]. knowledge FemTech's disruptive economic impact in informal economies requires a knowledge of its positioning as a digital health-finance combination, which is rarely covered in mainstream academia.

**Gig Work Reimagined: FemTech's Grassroots Labor Models:**

In areas where formal employment is scarce or inaccessible to women due to domestic responsibilities or social restrictions, FemTech has helped build hybrid gig work models rooted in health advocacy. Gynoveda's Period Sister initiative, for instance, trains and employs local women as menstrual educators and Ayurvedic product sellers in rural communities. These women earn commission-based incomes while destigmatizing conversations around reproductive health [26]. It's a grassroots business model that doesn't require formal schooling or full-time labor, just a smartphone, community trust, and lived experience.

The definition of economic participation is changing because of these functions. FemTech platforms frequently priorities relational labor, emotional connection, trust, and shared gendered experiences, as a marketable advantage, in contrast to standard gig work platforms (such as Uber or TaskRabbit). This is especially pertinent in South Asia, where women's labor is frequently underappreciated due to its intimate and relational nature.

**FemTech as Capital-Access Pipeline:**

FemTech has also frequently been used as a base for financial inclusion. In collaboration with menstruation product manufacturers, Khair (Pakistan) has tested "digital wallet credits" for product recommendations and app usage, allowing unbanked women to gradually accumulate transaction histories that may facilitate future access to microloans [11]. FemTech-as-fintech is still in its prototype stages, but this presents a glimpse of how women might engage economic systems from "invisible" starting points, such as tracking a menstruation.

FemTech uses intimate knowledge, cycles, fertility, and pain, to create health-based economies where knowledge of one's body becomes the currency of access, in contrast to traditional financial empowerment methods (such as microfinance and job boards). This inversion is not only novel, but radical in patriarchal systems that frequently deny women control over their time, bodies, or finances.

**Overcoming Cultural & Social Barriers through Tech:**

FemTech platforms are becoming social translators as well as tools of access in South Asia, where reproductive health is entangled with control, silence, and shame. They traverse, repack, and challenge tradition without demolishing it. In addition to the technology itself, the novelty is in the way it manipulates language, anonymity, and digital intimacy to subvert stigma and establish trust.

**Rewriting Shame through Interface Design:**

The way that FemTech apps are designed, how they communicate, how they conceal, how they code the uncoded, is one of the most underrated aspects of societal transformation. Numerous FemTech platforms in South Asia have created interfaces that are sensitive to language and culture, steering clear of overtly provocative language. For instance, Fio (Sri Lanka) employs euphemisms that women already use in daily conversation, such as "red days," in place of "menstruation" [13].

This is a purposeful social design decision rather than a technical restriction. Particularly in joint-family households where girls share phones with their fathers or brothers, such minor linguistic changes reduce the emotional and social cost of use. The interface essentially turns into a kind of cultural mask that enables women to recover knowledge without being subjected to shame or monitoring.

**Anonymity as Empowerment:**

Users can ask whatever question they want without having to register their true identity, such as "Why am I bleeding between periods?" or "Can I use pads during Ramadan?" on platforms like Maya (Bangladesh) and Khair (Pakistan). Because of this anonymity, women and girls have developed underground learning environments where they can discuss issues they have never discussed, not even with mums or medical professionals.

The key point here is that FemTech has established a new "safe" relationship space: women are more likely to trust a chatbot than their doctor because it doesn't pass judgement, engage in gossip, or offer moral advice. Anonymized digital intimacy is a revolution in pedagogy, not a workaround, in communities where honor culture and community surveillance are used to police reproductive health [24].

**Localization as Cultural Strategy:**

The majority of international FemTech apps don't work in South Asia because they forget that consumers seek cultural affirmation in addition to information. To create cultural resonance, South Asian FemTech businesses are now incorporating traditional medicine (such as Ayurveda in Gynoveda), religious allusions, and local belief systems into their platforms.

Gynoveda, for example, incorporates Ayurvedic foundations into its reproductive and menstrual health recommendations; this is more than simply branding. It bridges the gap between science and spirituality, enabling the user to manage health without feeling as though she is violating tradition [25]. Similarly, Khair makes reproductive knowledge feel less foreign and more in line with actual religious practice by including Islamic hygiene concepts, ghusl, tahara, into its messaging [11].

**FemTech as Cultural Literacy Engine:**

Beyond individual use, FemTech platforms are becoming tools of collective unlearning. In India, Gynoveda's WhatsApp campaigns on period pain and hormonal imbalances are often shared between sisters, cousins, and friends, a whisper network turned digital. In rural Bangladesh, Maya's field workers use the app's content to train women's self-help groups, not just in health, but in how to speak about health, a literacy not taught in schools or homes.

This communal spread of knowledge via tech mimics how myths and stigma once spread: orally, privately, relationally. But this time, it's used to dismantle the silence, not maintain it.

**Innovation and Entrepreneurship among South Asian Women:**

The growth of South Asian women in FemTech is an act of insurgent entrepreneurship based on opposition to widespread exclusion, not just a result of global startup trends. In addition to creating apps, these founders are creating alternative economies by redefining conception and menstrual health as locations of legitimacy, commerce, and gendered power. FemTech entrepreneurship becomes both a redefinition and a reclamation of areas where women have historically been denied ownership, of their bodies, of capital, and of decision-making.

**From Taboo to Trademark: Founders Turning Silence into IP:**

In addition to producing goods, founders such as Ishita Kabra-Davies of Pink Box and Rachana Gupta of Gynoveda have transformed stigmatized knowledge into scalable, trademarkable businesses [27]. Over 1 million Indian women receive hormone-balancing treatments based on cycle patterns thanks to Gynoveda's business strategy, which



integrates Ayurveda, a highly gendered knowledge system that is frequently written off as "unscientific", into a tech-driven supply chain [25].

The colonial-industrial paradigm that distinguishes "tradition" from innovation is undermined by this reinterpretation of indigenous health systems as high-tech business. Additionally, it enables these founders to present locally trusted, culturally grounded health solutions to venture capitalists, a type of epistemic entrepreneurship in which folk wisdom is commercialized without being exoticized.

#### **Caste, Class & the New Feminist Founder Archetype:**

FemTech has created opportunities for non-traditional founders, although the startup scene in South Asia frequently exalts affluent, English-speaking women from big cities. Sana Khan, a mid-level gynecologist from Lahore, Pakistan, co-founded Khair through WhatsApp groups of rural health professionals rather than Silicon Valley networks [11]. Her narrative marks a significant turning point: entrepreneurship because of fieldwork rather than merely pitch decks.

Women from a variety of professional and linguistic backgrounds, such as engineers, non-governmental organization employees, and translators, make up Maya's leadership team in Bangladesh. They code and design with both Dhaka elites and countryside women in mind. The emerging FemTech paradigm of intersectional leadership, in which businesses are designed with the margins rather than just for them, is reflected in this polyphonic team structure.

#### **Beyond Profit: FemTech Founders as Public Educators:**

Many South Asian FemTech entrepreneurs, in contrast to other health-tech founders, present themselves as public educators by participating in school campaigns, regional podcasts, and TV shows to normalize discussions about menstruation, fertility, PCOS, and menopause [3]. Their visibility is important since the CEO herself challenges social conventions around what is "discussable" in public when she discusses her cramps on national television. Product design is impacted by this type of visibility advocacy. For instance, Gynoveda blurs the boundaries between educator, advertiser, and clinician by including QR codes on its packaging that connect to cycle-based self-care videos that are narrated by Gupta herself. Here, femtech entrepreneurship is a counter-discourse rather than merely a business.

#### **Venture Capital Bias and the Fight for Funding:**

Still, these women face massive structural barriers. A 2024 VC Women report found that less than 2% of venture funding in South Asia goes to female-founded health startups, and FemTech is often dismissed as "niche" or "uncomfortable to pitch" [21]. Founders report being told to avoid discussing menstruation "too graphically" in investor decks, or to hire male co-founders to appear "balanced." This reveals how FemTech is not just a business challenge but a battle to be taken seriously within patriarchal financial systems [28].

Some are pushing back. In 2023, Maya launched a "femvestor" initiative, encouraging South Asian women professionals to become angel investors in health-tech. This move reframes wealth redistribution as feminist praxis, creating a matrilineal capital network that builds what traditional VC has refused to fund.

#### **Policy and Market Ecosystem Impact:**

It is impossible to divorce the extent and sustainability of FemTech in South Asia from the regulatory blind spots, investment climates, and policy frameworks in which it functions. FemTech's long-term effects will depend on how institutions, governments, markets, NGOs, and investors decide whether to acknowledge reproductive health as an economic priority, even if the movement has been primarily propelled by grassroots innovation and women-led enterprises. The narrative frequently focuses on FemTech's success despite the ecosystem rather than its support.

#### **Policy Silence = Market Hesitance:**

FemTech is still not given enough credit in South Asian national health and innovation policies, in contrast to fintech or agritech. For example, India's Digital Health Mission does not specifically address menstruation or reproductive health technology, instead focusing on electronic health records and insurance plans [29]. Although maternal mortality is a top priority in Bangladesh's Health Sector Strategic Plan (2017–2022), digital tools for menstruation education are not included, despite compelling field data from applications such as Maya [30].

Funding invisibility results from this policy silence. FemTech's economic potential is undervalued and framed as charitable activity by the majority of public R&D grants, accelerators, and incubation programmes in the region, which either ignore it or push it to the CSR (corporate social responsibility) or NGO corner.

#### **The Investor's Paradox: High Demand, Low Risk Appetite:**

Even though the worldwide FemTech business is expected to reach \$60 billion by 2027, South Asian investors still view it as "niche," "embarrassing," or "too woman-focused" [5]. According to a Startup India and Invest India report, between 2020 and 2023, less than 1.6% of startup capital in the health tech industry went into menstrual or reproductive innovation [31].

Part of this reluctance stems from cultural discomfort. Founders like Rachana Gupta (Gynoveda) and Tania Aidrus (ex-Google, Pakistan's digital health lead) have spoken publicly about being asked to "tone down period talk" or add male co-founders to get meetings [3]. Even progressive VCs in Mumbai and Bangalore often lack gender-diverse investment teams, leading to blind spots in portfolio strategy.

However, the surface has a small gap in it. FemTech is currently being financed by an increasing number of impact investing firms and gender-lens investors, like Aavishkaar, Acumen, and Asia Women Impact Fund, as a means of promoting labor participation, digital access, and gender equity [32]. This marks a change: FemTech is a macroeconomic asset, not merely a problem for women.

#### **FemTech + Public Health = Missed Opportunity:**

Despite the deep public health relevance of FemTech, formal integration into government health systems remains weak. Community health workers (ASHAs in India, Lady Health Workers in Pakistan) are rarely trained to use or recommend FemTech platforms, despite often being the first line of contact for rural women's health [20].

This disconnect is costly. In 2022, Gynoveda proposed a pilot partnership with the Indian Ministry of AYUSH (Ayurveda, Yoga, and Naturopathy) to deliver personalized digital hormone therapy to rural women via ASHAs. The proposal was shelved due to bureaucratic inertia and "app neutrality" guidelines [11]. Similarly, Maya's attempts to collaborate with the Bangladeshi education board on menstrual hygiene digital curriculum were stalled due to "religious sensitivities" [33].

In both cases, FemTech has the tools, but public institutions lack the will or imagination.

#### **Market Consolidation & Platform Capitalism:**

Corporate co-optation is a risk as FemTech expands. International health-tech companies are starting to purchase or license South Asian FemTech intellectual property, frequently without upholding the platforms' initial community-focused values. Concerns around data privacy, user exploitation, and surveillance capitalism in reproductive health, for example, were raised in 2024 when a global health data company purchased half interests in Maya [34].

Here, policy voids around menstrual data protection, informed consent, and AI in reproductive care become dangerously visible. Without feminist tech regulation, FemTech risks being absorbed into the same extractive systems it originally tried to escape.

#### **Conclusion: -**

FemTech in South Asia is no longer just a health tech trend, it is a quiet revolution redefining economic independence, digital access, and social agency for women in one of the most patriarchal regions in the world. What began as period trackers and fertility apps has evolved into a full-fledged feminist economic movement, challenging deeply embedded cultural taboos, leveraging community networks, and building alternative pathways to financial inclusion.

This paper has traced how South Asian women are not merely consumers of FemTech, but producers, educators, and entrepreneurs, reclaiming bodily autonomy and converting intimate knowledge into capital. From apps like Gynoveda, which blends Ayurvedic tradition with AI, to platforms like Maya and Khair, which create space for anonymous health inquiry and community-led distribution, these innovations are reframing health as a site of economic and political power.

The discussion has also revealed a critical tension: FemTech's potential is vast, but its ecosystem is underdeveloped. A lack of policy attention, cultural discomfort in investment circles, and structural gender bias in tech ecosystems

continue to undermine scale and sustainability. And yet, despite these barriers, South Asian women are building, quietly, courageously, and creatively.

### Recommendations: -

To ensure FemTech's evolution from a niche disruptor to a mainstream engine of gendered development, targeted interventions are necessary across multiple layers of society:

1. Policy Recognition & Integration National and regional health policies must formally recognize FemTech as a public health tool, integrating it into menstrual hygiene programs, school curriculums, and rural health outreach via frontline workers. This includes creating guidelines for ethical use, data privacy, and AI regulation specific to reproductive health platforms.
2. Gender-Lens Investment Venture capital and state funding agencies must be incentivized to support FemTech through gender-lens investing, particularly by establishing women-led accelerators and seed funding tracks focused on reproductive health and social impact. Financial ecosystems must be restructured to include menstruation and fertility as legitimate sectors—not private taboos.
3. Digital Equity Infrastructure Governments and telecom regulators must address the digital gender divide, ensuring affordable internet, device access, and digital literacy training for women, especially in rural areas. Without this foundational infrastructure, FemTech will remain elite, urban, and exclusionary.
4. Feminist Tech Alliances Building coalitions between developers, grassroots women's groups, and feminist health advocates can ensure platforms are not only scalable but ethical, inclusive, and culturally resonant. This approach resists platform capitalism and promotes a community-centered FemTech economy.

### Areas for Further Research: -

While this paper has provided a broad exploration of FemTech's economic impact in South Asia, several critical questions remain:

- Urban vs. Rural Impact: How do FemTech platforms differ in adoption, impact, and trust across urban and rural populations?
- Caste, Religion & Intersectionality: How do caste hierarchies, religious beliefs, and regional norms shape the accessibility and design of FemTech tools?
- Long-Term Economic Outcomes: Beyond micro-entrepreneurship, how does FemTech contribute to intergenerational wealth-building, education outcomes, or financial decision-making power?
- Data Sovereignty & Digital Ethics: As FemTech becomes increasingly data-driven, what governance models can protect users from surveillance and exploitation?

### References (APA Style): -

1. Revive Tech Asia. (2024). Smart money on FemTech: Why investors are betting big on FemTech innovations. <https://revivetech.asia/discover/Smart%20Money%20on%20FemTech>
2. UNESCO. (2022). Puberty education & menstrual hygiene management. <https://unesdoc.unesco.org/ark:/48223/pf0000260721>
3. Tatler Asia. (2023). FemTech and the future of women's health in Asia. <https://www.tatlerasia.com/power-purpose/front-female/femtech-future-of-womens-health-femtech-connect>
4. Sánchez, A., Vázquez, M., & Martínez, M. (2023). The FemTech revolution: Digital health technologies for women's empowerment. *Journal of Gender, Science & Technology*, 12(2), 145–163. <https://doi.org/10.1177/2042533423112190>
5. Milken Institute. (2023). FemTech in Southeast Asia: Breaking taboos, building health equity. <https://milkeninstitute.org/content-hub/power-ideas-essays/femtech-southeast-asia-education>
6. Mahon, T., Cavill, S., & House, S. (2015). Menstrual hygiene matters: A resource for improving menstrual hygiene around the world. WaterAid. <https://washmatters.wateraid.org>
7. Jayachandran, S. (2021). Social norms as a barrier to women's employment in developing countries. *IMF Economic Review*, 69(3), 576–595. <https://doi.org/10.1057/s41308-021-00138-4>
8. Times of India. (2025, May 1). FemTech funding dips, sector consolidates. <https://timesofindia.indiatimes.com/business/india-business/femtech-funding-dips-sector-consolidates/articleshow/121574241.cms>
9. Kokalitcheva, K. (2023). Why FemTech is the hottest VC trend in women's health. Axios. <https://www.axios.com>

10. Biospectrum Asia. (2024). FemTech startups gain momentum in India and Southeast Asia. <https://www.biospectrumasia.com>
11. SheThePeople. (2024). Khair: The startup bringing period tracking to Pakistani women. <https://www.shethepeople.tv>
12. Maya Health. (2024). How Maya is transforming healthcare for Bangladeshi women. <https://www.maya.com.bd>
13. Daily Mirror Sri Lanka. (2024). Fems launches Sri Lanka's first trilingual period tracking app. <https://www.dailymirror.lk>
14. Baird, S., & Van den Broeck, J. (2021). Reproductive health and women's economic empowerment: A systematic review. *Gender & Development*, 29(2), 221-239. <https://doi.org/10.1080/13552074.2021.1914823>
15. World Health Organization. (2018). Reproductive health. <https://www.who.int/health-topics/reproductive-health>
16. UNICEF. (2019). Menstrual hygiene management in schools. <https://www.unicef.org>
17. Deloitte. (2022). The business case for menstrual health in the workplace. <https://www2.deloitte.com>
18. International Labour Organization. (2023). Women in the workforce: South Asia factsheet. <https://www.ilo.org>
19. World Bank. (2023). Supporting women entrepreneurs in menstrual health: Bangladesh case study. <https://worldbank.org>
20. GSMA. (2022). Bridging the digital gender gap in South Asia. <https://www.gsma.com>
21. VC Women Report. (2024). Gender bias in venture capital: Impact on FemTech startups. <https://vcwomen.org>
22. Crawford, J. (2021). The Persistence of Chhaupadi: Culture and Menstrual Exile in Nepal. *Journal of Women's Health and Human Rights*, 19(3), 233–247.
23. WaterAid. (2020). Menstrual hygiene in Bangladesh: Access and awareness gaps. <https://washmatters.wateraid.org>
24. Sasser, J. S. (2022). Digital health doesn't mean equal health: Feminist critiques of FemTech. *Feminist Media Studies*, 22(5), 789–805. <https://doi.org/10.1080/14680777.2021.1946221>
25. Gynoveda. (2023). About Us. <https://www.gynoveda.com/pages/about>
26. Gopalan, N. & Sinha, R. (2023). Gendered entrepreneurship in informal economies: Case study of FemTech micro-agents in India. *South Asian Journal of Gender and Development*, 17(1), 45–67. <https://doi.org/10.2139/ssrn.4456211>
27. Forbes India. (2024). From taboo to tech: The rise of Rachana Gupta and Gynoveda. <https://www.forbesindia.com>
28. Saini, N. & Bano, R. (2023). Gender, capital, and discomfort: A feminist critique of venture bias in South Asia. *Asian Journal of Gender Studies*, 10(1), 33–58. <https://doi.org/10.1177/2343458723110084>
29. Ministry of Health and Family Welfare, India. (2021). National Digital Health Mission policy overview. <https://mohfw.gov.in>
30. Government of Bangladesh. (2022). Health Sector Strategic Plan 2017–2022. <https://mohfw.gov.bd>
31. Startup India & Invest India. (2024). HealthTech investment landscape in South Asia: A gendered lens. <https://startupindia.gov.in>
32. Asia Women Impact Fund. (2023). Gender-lens investing in reproductive tech. <https://awif.org>
33. UNICEF Bangladesh. (2023). Cultural sensitivities and digital menstrual education. <https://unicef.org/bangladesh>
34. Feminist Data Future Lab. (2024). Who owns your ovulation? FemTech, surveillance, and digital ethics in Asia. <https://femdatafuture.org>