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Suswastho: An Innovative Approach to Online Doctor Consultation and Medicine Delivery in Bangladesh

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Abstract

Access to quality healthcare remains a significant challenge for many in Bangladesh, particularly in rural areas where doctor availability and access to essential medicines are limited. This paper presents **"Suswastho",** an innovative online platform that combines telemedicine services with medicine delivery to bridge this healthcare gap. By enabling virtual consultations with both local and international doctors and ensuring timely delivery of prescribed medicines, Suswastho offers a comprehensive, cost-effective healthcare solution. The business model leverages a Business-to-Consumer (B2C) framework, with services accessed through a user-friendly mobile application and website. This model addresses multiple pain points in healthcare access, including reducing travel time for patients, offering affordable consultation fees, and providing a reliable medicine delivery network across all 64 districts in Bangladesh. Early financial projections indicate a viable path to profitability, with break-even expected within the first year of operation. Through strategic partnerships with pharmaceutical companies, medical professionals, and logistics providers, Suswastho aims to establish itself as a vital healthcare resource for underserved populations in Bangladesh, enhancing both the reach and efficiency of medical services.

Keywords
Telemedicine, Digital Health, E-health, Medicine Delivery, Healthcare Access.

1. Introduction
Bangladesh's healthcare system has several problems in delivering fair access to medical treatments, especially for rural and marginalized people. This has been further intensified by an unparalleled expansion of internet access and increasing smartphone adoption. This research examines the possibilities of using technology via Suswastho, an integrated telemedicine and online pharmaceutical delivery platform, to enhance healthcare accessibility across Bangladesh.

1.1 Market Insight
Bangladesh, one of the most densely populated nations globally, has significant problems in delivering accessible healthcare, particularly for rural and neglected communities. A population over 165 million necessitates that many individuals reside in remote areas with restricted access to trained medical professionals, prompt consultations, and

essential medications. The healthcare industry in Bangladesh is characterized by under-resourced public hospitals that are perpetually overcrowded, without sufficient medical personnel, and badly maintained, resulting in prolonged delays and a significant decline in healthcare quality. The growing prevalence of smartphones and internet access provide a unique potential for digital health solutions to address these disparities. An estimate from the Bangladesh Telecommunication Regulatory Commission indicates that the number of mobile internet users exceeded 123 million by 2024, signifying an expanding market for telemedicine and online healthcare services (Hoque et al. 2014). The transition to digital has fostered a conducive environment for health-tech entrepreneurs to develop and provide remote healthcare solutions.

1.2 Competitive Analysis

The digital healthcare sector in Bangladesh is progressively developing, with several companies emerging to meet the increasing need for accessible healthcare services. Prominent entities like **Arogga**, **MedEasy**, and **DocTime** have secured a presence by providing services that include online medical consultations and pharmaceutical delivery. Arogga specializes on holistic healthcare solutions, integrating telemedicine with e-prescriptions and pharmaceutical delivery, while MedEasy prioritizes extensive delivery services nationwide. Conversely, DocTime has established a robust telemedicine infrastructure that provides round-the-clock video consultations with qualified physicians.

Table 1. A Competitive analysis of major market holders of Bangladesh

Competitor	Service Description	Strengths	Weaknesses	Marketing Strategy	Aggressiveness	Threat Level
Arogga	Comprehensive health platform including medicine delivery and doctor consultations	High funding, scalability, integrated health services	Limited rural outreach, mainly focuses on urban hubs	Digital ads, partnerships with pharmacies, investor-backed expansion	high	High
MedEasy	Medicine delivery and doctor consultations across Bangladesh	Quality service, widespread delivery network	Limited diagnostics integration, less focus on diagnostics	Social media campaigns, partnership with healthcare providers	Medium	Moderate
DocTime	24/7 video consultations, digital prescriptions	Strong telemedicine platform, secure data handling, easy doctor access	Limited diagnostics, high dependency on urban doctor availability	Aggressive social media and digital marketing	High	High
AmarLab	Home-based diagnostics and sample collection	Excellent sample collection, strategic partnerships with labs	Limited scope in medicine delivery	B2B partnerships, healthcare collaborations, targeted ads	Medium	Moderate
BanglaMeds	Medicine delivery partnered with Chaldal	Strong delivery logistics, well-funded, urban reach	Less focus on telemedicine, limited doctor network	Cross-promotions with Chaldal, online ads, influencer marketing	High	Moderate

Notwithstanding their expansion, these platforms often concentrate on urban marketplaces, resulting in a considerable segment of the rural populace being inadequately supplied. Suswastho seeks to address this deficiency by delivering a comprehensive healthcare platform that encompasses telemedicine and pharmaceutical delivery while emphasizing outreach to rural and isolated regions. A comprehensive competitive analysis is presented in Table 1. A SWOT analysis is conducted for the proposed business model shown in Figure 1.

Figure 1. SWOT analysis for the business model

1.3 Problem Statement

The healthcare system in Bangladesh has challenges in addressing the requirements of its people, especially in rural regions where medical facilities are inadequate and access to skilled healthcare professionals is restricted. Numerous persons in these areas have difficulties in obtaining prompt medical consultations, sometimes necessitating extensive travel to metropolitan centers for fundamental healthcare treatments. The absence of accessibility results in treatment delays, worsening health problems and elevating healthcare expenses. Moreover, the scarcity of vital medications and the widespread occurrence of counterfeit pharmaceuticals in rural markets impede healthcare results. Although digital health platforms have begun to tackle some concerns, a substantial gap persists in delivering complete, inexpensive, and accessible healthcare solutions for rural people.

1.4 Objectives

This endeavor aims to construct and assess Suswastho, a comprehensive digital healthcare platform intended to provide accessible telemedicine consultations and prompt pharmaceutical delivery services across Bangladesh. Suswastho seeks to address the healthcare disparity in rural and neglected areas by using technology to provide a user-friendly mobile application that links patients with qualified physicians for virtual consultations and facilitates prompt delivery of genuine medications. The platform will use a Business-to-Consumer (B2C) approach, emphasizing scalability and sustainability via collaborations with healthcare experts, pharmaceutical firms, and logistical suppliers. This research aims to illustrate how Suswastho might augment healthcare accessibility, mitigate treatment delays, and boost overall health outcomes in Bangladesh.

2. Literature Review

The healthcare system in Bangladesh has considerable obstacles in delivering accessible and inexpensive services, especially in rural regions where resources are few. Digital health solutions, including telemedicine and online medication delivery, have surfaced as effective strategies to tackle these difficulties (Hasan et al. 2018). The increasing use of digital platforms might transform healthcare delivery in Bangladesh by connecting patients with healthcare professionals.

2.1 Digital Health and E-Health Initiatives

In Bangladesh, the state of e-health faces obstacles including inadequate technology infrastructure, insufficient knowledge, and regulatory challenges (Hoque et al. 2014). A deliberate emphasis on infrastructure development and regulatory support is crucial for the expansion of e-health solutions. The deployment of e-prescription systems, emphasizing their capacity to diminish prescription mistakes and enhance healthcare services using information and communication technology (ICT), was investigated (M. A. Khan et al. 2023). These results correspond with the objectives of the Suswastho platform, which seeks to provide safe and fast online medical consultations and pharmaceutical delivery.

2.2 Rule of Telemedicine

Telemedicine has been recognized as an effective remedy for healthcare accessibility challenges in resource-limited environments. The Dhaka University Telemedicine Programme, aimed at underserved rural communities in healthcare, was examined (Rabbani et al. 2019). The program's effectiveness illustrates telemedicine's capacity to broaden healthcare access in underdeveloped regions, thereby diminishing the urban-rural healthcare disparity. A digital healthcare service model emphasizing preventative and basic care in rural Bangladesh was proposed, demonstrating that telemedicine platforms may improve healthcare accessibility and alleviate the pressure on overloaded metropolitan healthcare systems (Rahman et al. 2022).

2.3 Startups and Digital Transformation

The rise of digital companies in Bangladesh is facilitating the change of several industries, including healthcare. The rapid expansion of the digital startup ecosystem in Bangladesh, propelled by rising internet accessibility and a youthful, technologically adept demographic, was emphasized (Adnan & Priyo 2019).They recognized significant obstacles, like restricted access to capital and mentoring, that impede the scaling of companies. The need for institutionalizing crowdfunding as a viable financing solution for businesses to tackle these difficulties was underscored (Hasan et al.2018). Through the use of crowdfunding, entrepreneurs may surmount conventional financial limitations and foster innovation in industries such as healthcare.
The essential success determinants for technology-driven companies, especially those using disruptive technologies, were examined (Karim et al. 2018). Their research revealed that access to initial finance, mentoring, and a conducive regulatory framework are critical for the success of startups. These elements are essential for systems such as "Suswastho," which seek to provide an all-encompassing digital healthcare solution that includes telemedicine, medication delivery, and patient data management.

2.4 Challenges and Opportunities in Digital Healthcare

Notwithstanding the prospective advantages of digital health solutions, certain problems must be confronted to guarantee their effective deployment. The challenges of starting companies in Bangladesh, including regulatory obstacles, inadequate infrastructure, and restricted access to trained labor, were analyzed (Azad 2022). Confronting these problems is crucial for the scalability of digital health platforms such as Suswastho, which aims to enhance healthcare accessibility via technology.The digital transformation of the healthcare industry in Bangladesh, highlighting the need for a detailed path to incorporate technology into healthcare delivery, was examined (Md. M. R. Khan & Al Amin 2021). Their research emphasized the significance of using digital health technologies to enhance patient outcomes and decrease healthcare expenses. The significance of human-centered design in the creation of online medical consultation systems, especially for resource-limited populations, was underscored (Eliza et al. 2024). Their investigation on "eDakterBari" showed how intuitive digital health platforms may improve healthcare accessibility and patient contentment.

2.5 Emerging Digital Healthcare Models

The investigation of digital health models in Bangladesh reveals an increasing inclination to merge technology with conventional healthcare services. Online healthcare platforms have been shown to diminish patient wait times and improve service delivery efficiency (Anjum et al. 2018). These platforms are especially advantageous in metropolitan regions with elevated patient volumes, providing a scalable remedy to healthcare accessibility issues. Bangladesh's startup ecosystem is progressively adjusting to the worldwide transition towards digital healthcare solutions, as shown by the evaluations from (ESCAP 2022). The paper highlighted the need for enabling infrastructure and legislative frameworks to foster digital health advances. Platforms such as Suswastho are advised to capitalize on this burgeoning ecosystem to provide telemedicine and pharmaceutical delivery services, thereby meeting the healthcare requirements of both urban and rural communities.

2.5 Conclusion

Literature indicates that the digital transformation of healthcare in Bangladesh has considerable potential to enhance accessibility and efficiency, especially in disadvantaged regions. Nonetheless, realizing this promise necessitates surmounting several problems, including technical, legislative, and financial obstacles. Through the use of strategic alliances, robust digital infrastructure, and a user-focused methodology, platforms such as Suswastho may significantly influence the transformation of the healthcare sector in Bangladesh. Future research and policy initiatives should prioritize the enhancement of digital literacy, the expansion of internet infrastructure, and the establishment of a supportive environment for digital health advances.

3. Methods

This section delineates the strategic framework and operational architecture of the Suswastho platform, emphasizing the creation and execution of a holistic digital healthcare service. The approach includes the **Proposed E-commerce Model** for providing telemedicine consultations and pharmaceuticals, highlighting a **comprehensive E-commerce Security System** to guarantee data security and safe transactions. The **Business Model of Suswastho** is detailed to illustrate the platform's value proposition, income sources, and scalability. The business model's key components are analyzed, including client segmentation, value delivery, operational procedures, and strategic relationships, which combined empower Suswastho to supply efficient and accessible healthcare services across Bangladesh.

3.1 Logo and Motto

The motto for the proposed business idea is “Your Satisfaction, Our Responsibility.” The logo is added as Figure 2.

Figure 2. Logo for the business

3.2 Services

Suswastho will integrate telemedicine services with pharmaceutical delivery, functioning as a business-to-consumer (B2C) e-commerce platform. The platform will provide access to a diverse array of specialized physicians in several disciplines. Users will have the capability to arrange appointments and chat with physician online. Physicians will provide video consultations, assess symptoms, analyze test results, and then prescribe drugs if necessary. Patients will get prescriptions over email.

Furthermore, Suswastho intends to oversee 64 pharmacies across all regions of Bangladesh, guaranteeing medication delivery within one day according to prescriptions. The platform would provide discounts for frequent clients, so augmenting user loyalty. Users will benefit from a completely secure and intuitive experience on both mobile apps and the internet, facilitating fast healthcare service delivery.

3.3 Suswastho as E-commerce

E-commerce is a business model founded on Management and Information Systems (MIS), enabling the transaction of products and services over the internet. It encompasses four main market segments: 1) Business-to-Business (B2B), 2) Business-to-Consumer (B2C), 3) Consumer-to-Business (C2B), and 4) Consumer-to-Consumer (C2C). The business functions within the Business to Consumer (B2C) sector shown in Figure 3, concentrating on providing goods and services directly to individual clients.

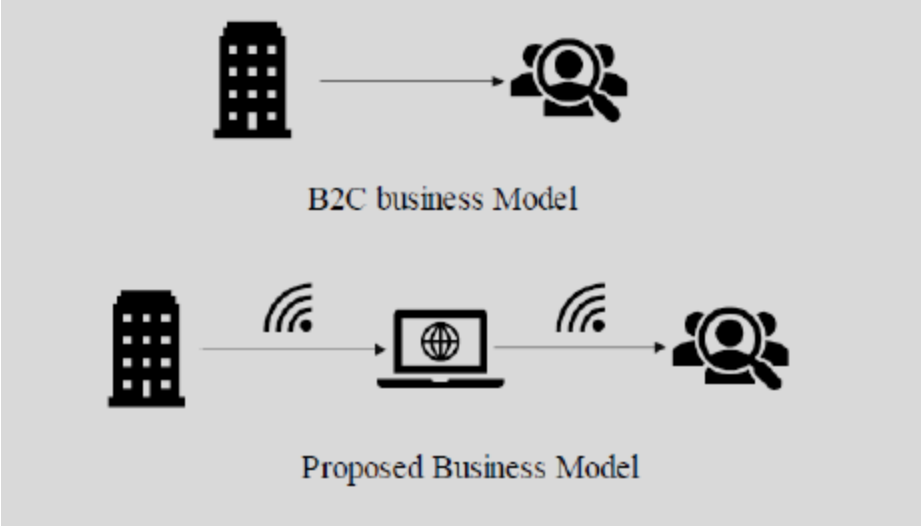

Figure 3. Proposed business model for Suswastho

3.4 E-commerce Security System

To guarantee the system's security, several security measures will be instituted:

- **HTTPS and SSL Certificates:** An SSL certificate will be acquired for Suswastho to protect consumer data. The website will use HTTPS, guaranteeing that all communications are secured using the SSL protocol.
- **Secured Server and Admin Panel**: Robust, intricate passwords will be used for both the server and admin panel, integrating diverse characters to augment security. These passwords will be routinely changed to ensure security.
- **Secured Payment Gateway:** Client credit card information will be retained with stringent privacy measures in a secure database. A reliable third-party provider will manage payment processes, safeguarding sensitive financial information from the website.

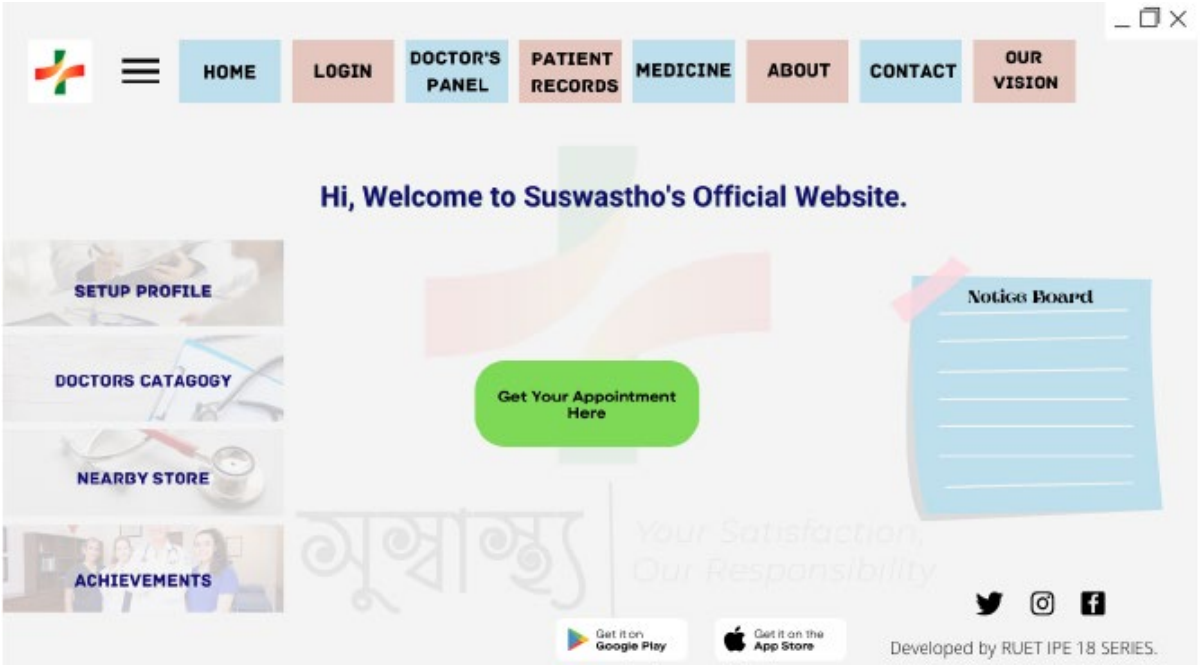

Figure 4. Home page of Suswastho

3.5 Components Of "Suswastho's" Business Model

1. Customer: Who are they?
2. Values: Customers receive what value from the business?
3. Operation: What are the business's operations?
4. Revenue: How does the business make money?

Customer: Who are they?

Suswastho serves patients from all across Bangladesh as a telemedicine service. The service will be available to persons from diverse backgrounds, with 64 pharmacies created around the country. Individuals possessing a Suswastho account will have the capability to order healthcare services and goods, therefore guaranteeing extensive accessibility for everybody.

What value do customers receive from the business?

In the contemporary, rapid-paced environment, individuals often must suspend their significant responsibilities to transport an ill family member to a hospital and face protracted waiting periods for a medical consultation. Such delays may be exasperating and protracted. Suswastho tackles these difficulties by providing an easy solution. Individuals may effortlessly contact leading healthcare providers via video conferencing on the Suswastho platform, which boasts a network of top physicians nationwide. This not only conserves precious time but also diminishes expenses. Furthermore, buyers may get pharmaceuticals at affordable costs from our establishments, with the additional advantage of obtaining delivery within 24 hours.

What are the business's operations?

The key operations of Suswastho are outlined below:

Key Activities

Software Development: The primary emphasis is on developing intuitive and secure mobile apps and websites. Due to the substantial time clients need for consultations and medication prescriptions, collaborations will be established with esteemed software development companies to guarantee best performance.
Scheduling: The platform will enhance physicians' schedules to provide round-the-clock telemedicine services, guaranteeing uninterrupted access for patients.
Pharmaceutical Establishments: Suswastho will create strategically positioned pharmacies to enhance the efficient delivery of medications.
Order Management: Pharmaceutical orders will be processed via the Suswastho website and mobile applications, ensuring a streamlined ordering experience for clients.
Delivery Services: Partnerships with dependable delivery service providers will guarantee timely pharmaceutical delivery to clients. A comprehensive transportation system will be established to provide countrywide coverage, guaranteeing prompt delivery of items to retailers and consumers.
Data Analytics: The platform will use data analytics to derive insights, improve customer interaction, and provide tailored service suggestions.
Marketing: Suswastho will implement focused marketing initiatives annually to enhance brand recognition and draw consumers across Bangladesh.

Key Partners

Physicians: Collaborations will be formed with licensed physicians to provide medical consultations and treatments to clients via the Suswastho platform.
Pharmaceutical firms: Suswastho will partner with prominent pharmaceutical firms nationwide to supply its shops. These collaborations will facilitate standardized transactions, enabling the enterprise to retain whole retail earnings from pharmaceutical sales.
Software Development Firms: The primary emphasis in the early phase will be on creating safe and user-friendly mobile apps and websites. To do this, Suswastho will collaborate with esteemed software development companies. Future onboarding of more stakeholders may occur to facilitate corporate development.
Delivery Service Providers: Contracts will be formed with delivery service providers, presenting appealing profit margins and a positive return on investment (ROI). This partnership will guarantee prompt delivery of pharmaceuticals to clients.

Key Resources
Physicians: Licensed physicians are an essential asset, delivering vital healthcare services to clients via the Suswastho platform.
Pharmaceutical Products: A varied array of pharmaceutical items and medical equipment is essential for fulfilling consumer requirements and providing a full healthcare solution.
Licenses and Patents: Obtaining licenses for the importation of rare pharmaceuticals and collecting patents is a crucial asset that will augment the service portfolio.
Software Developers: Proficient software developers are crucial for delivering an outstanding user experience on the application and website, while also guaranteeing safe and seamless payment processing.
Pharmacists and Delivery Personnel: Proficiency in pharmaceutical administration and prompt delivery by skilled workers are essential assets for guaranteeing customer pleasure and operational efficiency.

Customer Relationship
Consultation: Suswastho will provide on-demand access to physicians, allowing patients to consult healthcare experts as required via the platform.
Timely supply: The service guarantees fast dispatch of medications to customers, offering weekly and monthly supply choices to meet continuous healthcare requirements.
Discounts & Offers: Competitive pricing will be prioritized, with supplementary discounts provided at regular intervals throughout the year to augment client happiness and entice new customers.
Subscription Benefits: Subscribers will get free goods, like bags, band-aids, sanitizers, and tissues, customized according to their selected package.
24/7 Helpline Support: A dedicated helpline will be available around the clock, with additional support provided via email and social media channels to assist customers with any inquiries or issues.

How does the business make money?
The cost structure and revenue stream of Suswastho are detailed below:

Cost Structure
Startup Costs: The most substantial initial expenses include hiring doctors, acquiring store outlets, stocking pharmaceuticals, and investing in software development to ensure smooth operations.

Marketing Expenses: Effective marketing is crucial for customer acquisition and revenue growth. Marketing efforts will encompass social media campaigns, posters, banner ads, and newspaper advertisements.
Administrative Costs: These are fixed costs that cover expenses such as licenses, taxes, insurance, and salaries for administrative staff.
Variable Costs: This category includes utility bills and delivery charges, which fluctuate based on usage and demand.

Revenue Stream
Consultation Fees: Revenue will be generated from fees charged for virtual doctor consultations through the Suswastho platform.
Medicine Sales: Profits from selling medicines through Suswastho stores and online orders will form a significant part of the revenue.
Subscription Packages: Customers can opt for subscription plans that include regular consultations, medicine deliveries, and added benefits, providing a recurring revenue stream.
Partnerships and Commissions: Additional income will be generated through partnerships with pharmaceutical companies and commissions from third-party service providers for handling payment transactions.

This diverse cost and revenue model will help Suswastho achieve sustainable growth while delivering value to its customers. The business model canvas is shown in Figure 5.

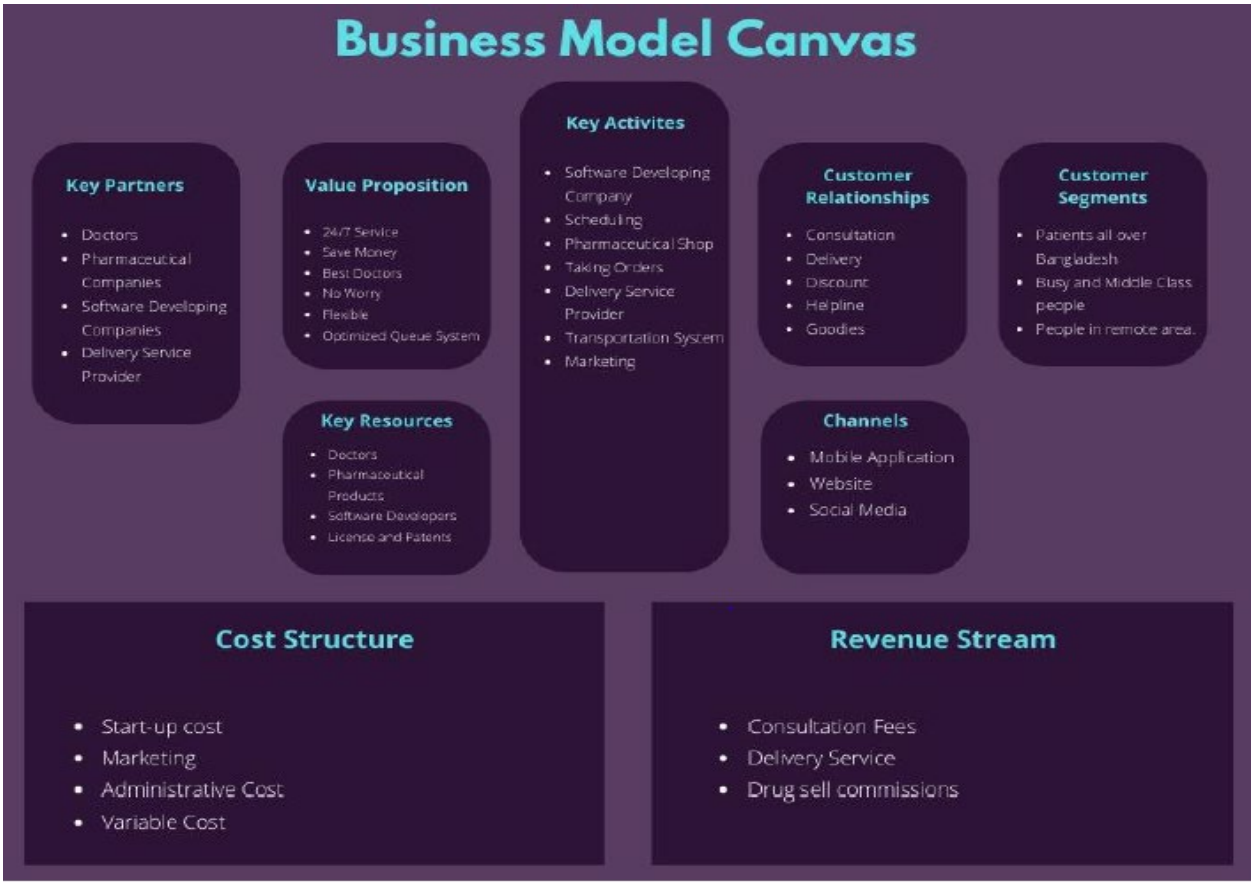

Figure 5. Business model canvas for Suswastho

3.6 Advantages of Suswastho

Providing Immediate Medical Assistance: Originally intended for underprivileged communities, telemedicine today offers on-demand access to healthcare services. Suswastho provides critical healthcare services to individuals requiring immediate attention, guaranteeing prompt treatment.

Enhanced Healthcare Accessibility: Individuals residing in isolated and rural regions are no longer need to traverse extensive distances to reach the closest healthcare institution. Suswastho enables people to consult competent doctors from the convenience of their homes, therefore enhancing access to medical care.

Time and Cost Efficiency: Suswastho provides healthcare services directly to patients' residences, therefore obviating the need for protracted hospital trips. This paradigm enables physicians to attend to a greater number of patients remotely, providing a more adaptable work schedule and enhancing work-life equilibrium.

Reduced Hospital Readmissions: A key indicator of a healthcare system's efficacy is the hospital readmission rate, which generally hovers around 20%. Suswastho mitigates this incidence by facilitating patient condition monitoring and prompt consultations, hence decreasing the need for recurrent hospital visits.

Consolidated Access to Electronic Health Records: Suswastho offers extensive and precise health information available from any place. When a patient contacts another physician, their full medical history is readily accessible. Furthermore, the platform's analytics can anticipate prospective health hazards and assess patients' present status.

Attracting and Retaining Clients: A database of licensed physicians enables people to conveniently make appointments and revisit doctors with whom they have had favorable experiences, so promoting loyalty and retention.

Expedited Pharmaceutical Delivery Service: Suswastho guarantees the delivery of authentic, prescription-required medications within 24 hours nationwide, offering convenience and dependability at affordable rates.

3.7 How does Suswastho work?

For Consulting Doctor:

Patients start their usage of the Suswastho platform by downloading the application or accessing the website to establish a profile and provide a comprehensive account of their symptoms. The platform provides a list of available physicians specializing in pertinent subjects based on this information. The patient then chooses a physician and arranges a virtual consultation at a suitable time. Upon payment completion, the consultation occurs, during which the physician may offer therapies, prescribe drugs, or propose more testing. Subsequent to the appointment, the patient receives the physician's prescriptions over email in a distinct file, facilitating convenient access to their treatment regimen.

For Ordering Medicines:

Customers may access the pharmaceutical department on the Suswastho app or website, where they can make orders by either entering the name and amount of the desired medications or uploading a clear photograph of a prescription. Upon verifying the order information, the client advances to the payment process. The site guarantees rapid delivery, with purchased medications arriving at the customer's residence within 24 hours.

List of Features for Patients

- **Patient Profile**: A detailed profile that retains personal information and notes from prior appointments for convenient access.
- **Advanced Sign-Up Options**: Patients may effortlessly register using social media accounts or email addresses for a streamlined onboarding process.
- **Doctor Search**: Patients may use criteria like specialization, language, location, cost, and ratings to search for physicians. They may also peruse comprehensive profiles of physicians.
- **Appointment Scheduling**: Incorporated with a calendar to exhibit physicians' availability dates, facilitating patients in simply scheduling appointments.
- **Reminders**: Automated notices for forthcoming consultations will be sent by SMS, email, and in-app alerts.
- **Online Consultations**: Suswastho provides safe solutions for remote consultations with high-resolution video, allowing physicians to do comprehensive virtual exams.
- **Secure Payment Options**: Patients may remit payments by credit or debit cards, internet banking, and widely used mobile banking applications such ROCKET, BIKASH, and NAGAD.
- **Feedback and Ratings**: Patients may provide testimonials and evaluate their experiences with physicians, so contributing to the enhancement of service quality.
- **Promotions and Referrals**: Details on discounts and promotional offers will be supplied, alongside chances for patients to accrue rewards via referrals.
- **Emergency Assistance**: The application incorporates a function enabling users to summon an ambulance with a single touch, offering essential assistance during crises.
- **Prescription Medication Orders**: Patients may get prescription prescriptions via the integrated online marketplace, ensuring home delivery within 24 hours.

List of Features for Doctors

Profiles: Doctors can create detailed profiles showcasing their specialties, experience, consultation fees, and other relevant information.

Doctor Panel: Provides access to patients' electronic health records (EHR), past visit histories, prescription details, and upcoming appointments, facilitating efficient patient management.

Scheduling Tools: Suswastho offers doctors robust tools to manage their schedules, helping optimize their workflow and availability.

Appointment Management: Doctors can accept or reject patient appointments directly through the platform, allowing for better control over their schedules.

Electronic Health Record (EHR) Integration: Seamless integration with EHR systems grants doctors access to comprehensive patient health records, supporting informed decision-making.

Treatment Prescriptions: Doctors can easily prescribe treatments and medications through the Suswastho platform, streamlining the prescription process.

In-App Messaging: Secure messaging features enable doctors and patients to communicate directly. The platform ensures 100% secure communication to protect sensitive health data.

Document Scanning and Sharing: Suswastho allows for secure capture and transmission of critical medical information, such as medical images, lab results, and treatment plans, ensuring efficient information sharing between doctors and patients.

3.8 "Suswastho's" Ecommerce Supply Chain Model for Doctor Consultation

Doctor Registration: Physicians may register or explore the web portal, submitting their details, and area of expertise, and establishing their consultation fees on "Suswastho." This enables patients to locate physicians according to certain expertise available on the site.
Patient Registration and Search: Patients may register or use the web portal to establish a profile. Subsequently, they might seek and align with healthcare providers according to their need.
Appointment Booking: Upon identifying a suitable physician, the patient may schedule an appointment by choosing an available time slot and completing the requisite payment.
Doctor's Acceptance: The physician examines the reservation and accepts the appointment.
Admin Monitoring: The platform administrators supervise the whole process, assuring seamless functioning, monitoring reservations, and addressing customer service concerns. Administrators get a commission from Suswastho for every successful consultation they arrange.

This model shown in Figure 6. ensures an efficient, seamless process for both doctors and patients while allowing Suswastho to generate revenue through commissions on consultations.

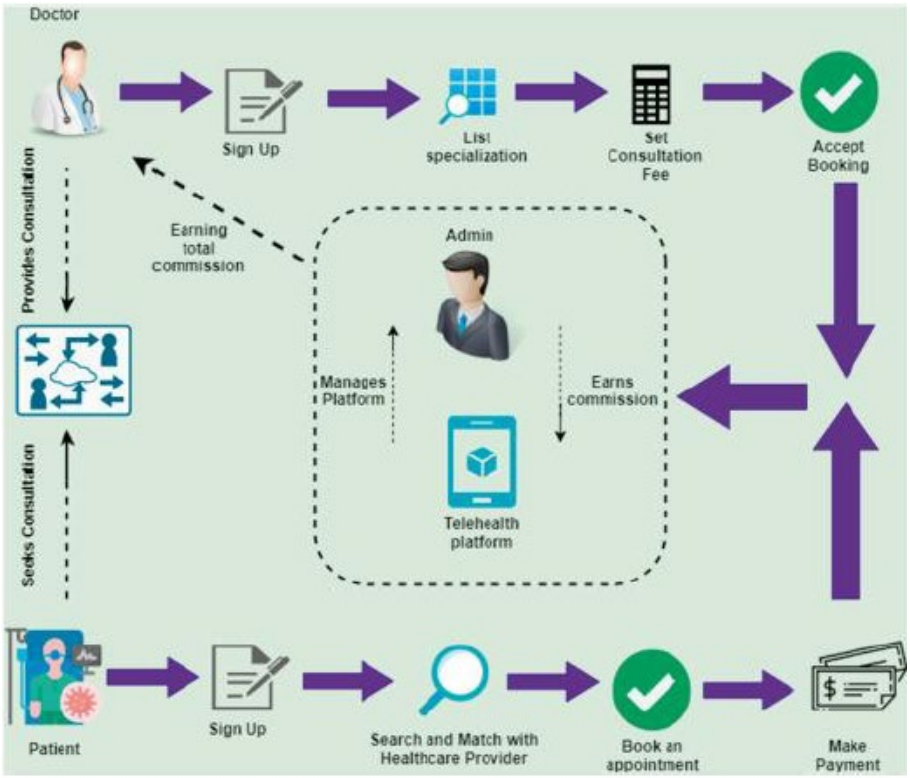

Figure 6. Supply chain of Suswastho for consulting doctors

3.9 "Suswastho's" Ecommerce Supply Chain Model for Delivering Medicines

Pharmaceutical Partners and Inventory: Suswastho partners with pharmaceutical companies and local suppliers to source a wide range of medicines. The inventory is stored in strategically located warehouses to ensure fast and efficient delivery across the country.
Patient Order Placement: Patients can browse and place orders for prescribed medicines via the Suswastho app or website. Orders can be made by typing the medicine names or uploading a prescription for the required items.

Order Confirmation and Payment: Once the order details are confirmed, patients proceed with payment using secure options such as credit/debit cards, online banking, or mobile payment platforms like BIKASH, ROCKET, and NAGAD.
Order Processing: After payment confirmation, the order is processed, and the required medicines are picked from the inventory.
Packaging and Dispatch: The medicines are packaged securely and dispatched to the patient's address.
Delivery: Suswastho works with trusted delivery partners to ensure the medicines are delivered to the patient's doorstep within 24 hours, as per the prescription.
Admin Monitoring: The platform's admins monitor the entire process, ensuring that orders are fulfilled accurately and on time. Admins also ensure smooth communication between suppliers, patients, and delivery services.
Customer Feedback: After delivery, customers can rate their experience, providing valuable feedback to improve service quality.

This supply chain model shown in Figure 7. ensures timely, accurate medicine delivery while maintaining a high standard of service and patient satisfaction.

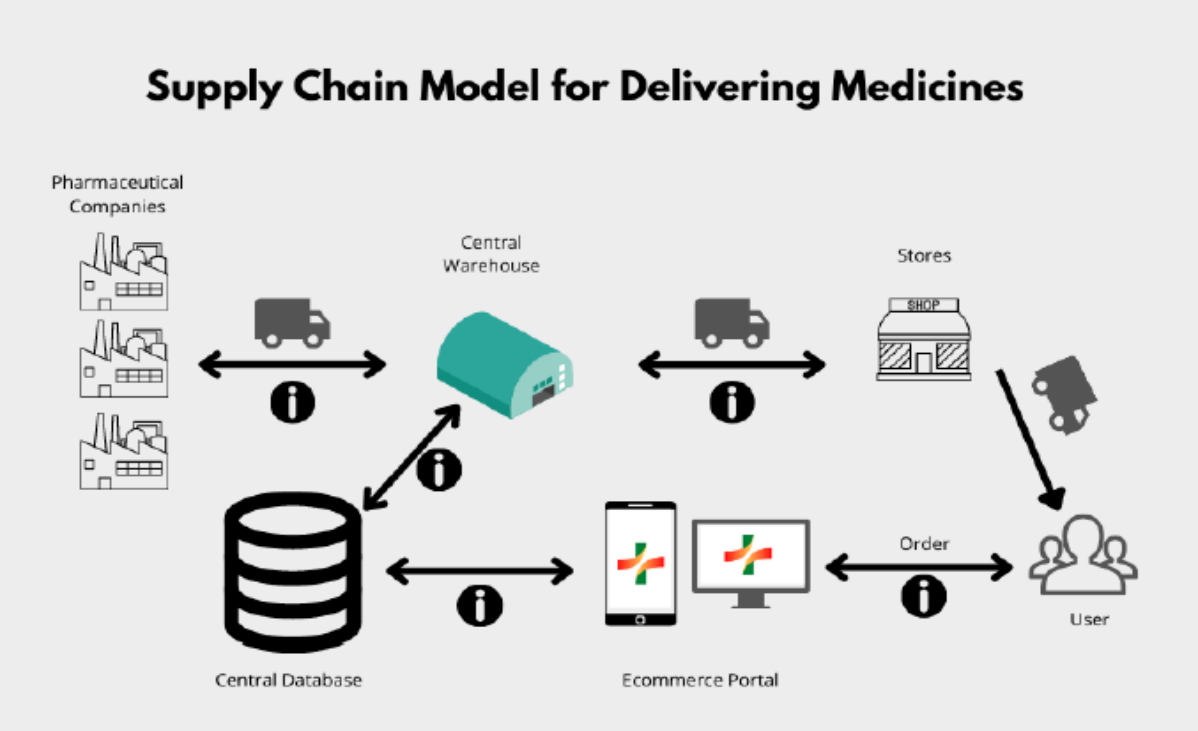

Figure 7. Supply chain of Suswastho for delivering medicines

4. Financial Overview

The financial analysis of Suswastho provides a comprehensive overview of projected costs, revenues, and profitability over a 5-year span. This analysis includes detailed estimations of fixed and variable costs, revenue streams, and break-even points, ensuring realistic assumptions for sustainable growth. By evaluating these metrics, the financial plan highlights the feasibility and long-term viability of the business model.

4.1 Fixed Costs

The fixed costs for Suswastho include app development and maintenance, with an initial expenditure of 50,000 BDT in the first year and 5,000 BDT yearly afterward for updates and maintenance. The rental expenses for office and medical shops include 65 rooms distributed across 64 districts, totaling 1,560,000 BDT annually, calculated at a monthly rate of 2,000 BDT each room. The yearly expenditure for vehicle rentals for deliveries and logistics totals 1,000,000 BDT, whilst utilities, including power and internet, need 300,000 BDT each year. Core personnel pay are established at 7,000,000 BDT per year to provide operational stability. Marketing and advertising expenditures start

at 50,000 BDT in the first year, then decreasing to 40,000 BDT, 30,000 BDT, and ultimately 20,000 BDT in the following years. Finally, insurance and compliance expenses amount to 50,000 BDT per year, facilitating regulatory compliance and risk mitigation. Average fixed costs per year is 9,956,000 BDT. The overall fixed costs are shown in Table 2.

Table 2. Fixed costs for five years

Cost Item	Estimated Fixed Cost (BDT)					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
App Development and Maintenance	50000	5000	5000	5000	5000	
Office / Medical Shop Rent	1560000	1560000	1560000	1560000	1560000	
Vehicle Rent	1000000	1000000	1000000	1000000	1000000	
Utilities (Electricity, Internet, etc.)	300000	300000	300000	300000	300000	
Core Staff Salaries	7000000	7000000	7000000	7000000	7000000	
Marketing and Advertising	50000	40000	30000	20000	20000	
Insurance and Compliance	50000	50000	50000	50000	50000	
Total Fixed Costs	10010000	9955000	9945000	9935000	9935000	49780000

4.2 Variable Costs

The variable expenses for Suswastho are mostly linked to the operational facets of the enterprise. Physician compensation is determined at a rate of 150 BDT each consultation, representing the remuneration for professionals delivering telemedicine services. The cost of delivery logistics is projected at 20 BDT each consultation, including expenses related to the prompt and effective supply of medication. It is presumed that all patients will get their prescribed medications via "Suswastho," resulting in significant expenses for pharmaceutical acquisition that increase in direct correlation with the number of consultations. As consultations rise from 10,000 in year one to 40,000 in year five, variable expenses increase correspondingly, indicating the business's growth in operations and service provision. The overall variable expenses are shown in Table 3.

Table 3. Variable costs for five years

Year	1	2	3	4	5
Estimated Consultation	10000	15000	20000	30000	40000
Doctor Payment	1500000	2250000	3000000	4500000	6000000
Medicine Procurement	40000000	60000000	70000000	75000000	80000000
Delivery Logistics	200000	300000	400000	600000	800000
Total Variable Cost	41700000	62550000	73400000	80100000	86800000

4.3 Revenue Streams

Suswastho employs multiple revenue streams to ensure financial viability and scalability.

Consultation Fees: Different existing telemedicine services charge 200 to 1000 Taka per consultation (*Sebaghar | Telemedicine and Doctor Video Consultation Platform in Bangladesh*, 2024). Consultation fees for Suswastho are illustrated in Table 4.

Medicine Sales Commissions: Retail sales of medicines generate additional revenue.

Table 4. Pricing for doctors' consultancy

Doctor Categories	1st Consultation (BDT)	Follow-up Fees (BDT)
ENT	250	230
Kidney and Medicine	300	280
Neuro-medicine	350	330
Orthopedic Surgeon	250	230
Gastroenterology	250	230
Urologist	250	230
Cardiologist	300	280
Chest and Medicine	250	230
Venerologist and Dermatologist	200	180
Medicine	200	180
Pediatrics	250	230
Gynecology and Obstetrics	300	280

Each consultation generates an average income of 250 BDT, leading to a consistent rise in revenue from consultations as the patient count escalates from 10,000 in year 1 to 40,000 in year 5. Furthermore, income from pharmaceutical sales is a substantial portion, quantified at 1.15% of the whole medication procurement expenditure. This presumes that all patients would acquire their prescribed medications from "Suswastho," using the platform's dependable distribution mechanism. Total revenue rises annually, reaching 102,000,000 BDT by year five, indicating the scalable characteristics of the business model and its congruence with the expanding client base. Table 5 illustrates the revenue of this business.

Table 5. Revenue of Suswastho

Year	1	2	3	4	5
Revenue from Consultation	2500000	3750000	5000000	7500000	10000000
Revenue from Medicine Sales	46000000	69000000	80500000	86250000	92000000
Total Revenue	48500000	72750000	85500000	93750000	102000000

4.4 Break-even Analysis

The break-even study for Suswastho illustrates the business's path to profitability over a five-year span. Table 6 shows that in year 1, overall cost (fixed and variable) totals 51,656,000 BDT, however the total revenue earned is 48,500,000 BDT, leading to a shortfall. The disparity diminishes progressively when income rises at a rate surpassing total expenses. In the second year, revenue exceeds total costs, reaching the break-even threshold and signifying the beginning of profitability. Beginning in year 3, Suswastho continuously produces a surplus, with earnings rising year. This research illustrates a sustainable growth strategy, highlighting the business's ability to pay expenses and generate profits in a short period. The break-even chart is attached as Figure 8

Table 6. Table for Break-even analysis

Year	1	2	3	4	5
Fixed Cost	9956000	9956000	9956000	9956000	9956000
Variable Cost	41700000	62550000	73400000	80100000	86800000
Total Cost	51656000	72506000	83356000	90056000	96756000
Total Revenue	48500000	72750000	85500000	93750000	102000000

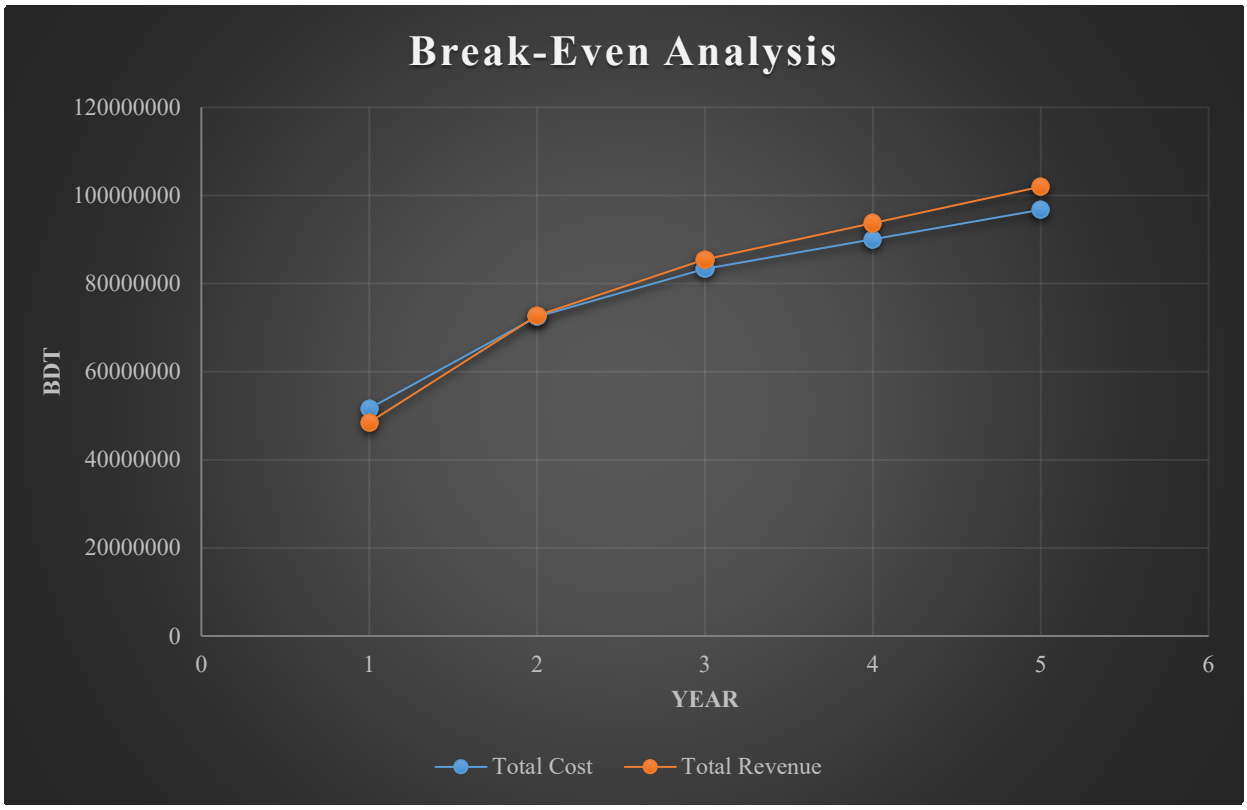

Figure 8. Break-even analysis for 'Suswastho'

5. Risk Assessment

In the future, Suswastho will likely face several financial risks that could impact its long-term sustainability and profitability:

5.1 Challenges in Patient Acquisition

Maintaining an expanding customer will be critical. Resistance to telemedicine in remote regions, competition from new healthcare platforms, and inadequate awareness campaigns may hinder the acquisition of new patients.

5.2 Rising Future Operational Costs

Inflation and rising expenses for acquiring pharmaceuticals and logistics are anticipated to escalate. Furthermore, personnel pay, increased utility prices, and unforeseen maintenance costs for digital infrastructure may exert pressure on financial resources.

5.3 Delays in Break-Even

The forecasts suggest early profitability; however, market factors like increased competition or more stringent regulations may postpone this timetable. New entrants providing novel healthcare solutions or regulatory changes necessitating expensive compliance procedures may affect future financial stability.

Proactively mitigating these risks via comprehensive marketing strategies, efficient cost management, and flexibility to market and regulatory shifts would assist "Suswastho" in attaining sustainable development in the future.

6. Visions

Between 2025 and 2029, Suswastho aims to achieve substantial growth and innovation to enhance healthcare accessibility. In 2025, the emphasis will be on expanding reach through the establishment of new hubs and the introduction of localized language options to serve underserved areas. By 2026, advancements in technology, particularly through the integration of AI and IoT, will improve diagnostics and automate operational processes. In

2027, the company plans to diversify its offerings by introducing chronic disease management packages, wearable health devices, and establishing partnerships with diagnostic laboratories to create a comprehensive healthcare ecosystem. In 2028, Suswastho intends to integrate with national healthcare initiatives, collaborate with NGOs, and align its operations with government policies to enhance rural healthcare. By 2029, Suswastho intends to lead the Bangladeshi market and extend its reach to neighboring countries, positioning itself as a standard for accessible and innovative telemedicine solutions.

7. Conclusion

Suswastho seeks to transform healthcare in Bangladesh by tackling significant issues such as restricted access to excellent medical services and inefficiencies in the distribution of drugs. The platform integrates telemedicine with a comprehensive e-commerce drug delivery network, providing a user-friendly, secure, and cost-effective alternative for patients in both urban and rural regions. Utilizing technology, Suswastho facilitates prompt consultations with qualified physicians, fast medication distribution, and thorough health monitoring, therefore alleviating the challenges associated with conventional healthcare. Suswastho has significant potential for financial sustainability and scalability via a solid business strategy centered on customer value, multiple income streams, and strategic alliances. The 2029 strategy prioritizes growth, innovation, and integration within the national healthcare system, ultimately leading to regional outreach and market dominance. Suswastho aims to become a reliable platform that revolutionizes the healthcare sector by addressing disparities in accessibility, price, and service quality, while establishing a standard for comparable projects.

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