

Sanitary Napkin In Rural India: Test Of Sustainability

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KEYWORDS

Sustainability,
Menstrual Hygiene
Management,
Self-Help-Group,
Sanitary Napkin.

ABSTRACT

The case describes in detail how UNICEF and NGO SACRED worked for the improvement in rural livelihood by addressing Menstrual Hygiene Management in villages of Jalna district, Maharashtra. The Case talks about how the office of SACRED in Aurangabad developed a plan to distribute "Nirmal" sanitary napkins in the villages coming under the Bhokardan Taluka. The case revolves around the protagonist, Mr. Jayant Deshpande who is the secretary of NGO SACRED and highlights the dilemmas faced by him in executing this project. Deepshikha's were village women mostly in the age group of 15 to 25 years, some of whom were married, with no prior selling experience apart from creating awareness in the villages about menstrual hygiene. The Case showcases how they played a major role in a business model which not only included dealing with the customer at a very personal level and selling the sanitary napkins, but also included educating them about the usage of the same. The Case also talks about how a sanitary napkin production unit was set up by the women self-help group (SHG) of Kedarkheda village to provide employment to the people in that area and a pilot project was launched to test the sustainability of the designed business model.

INTRODUCTION

Mr. Jayant Deshpande sat in the office of SACRED in Aurangabad on April 2, 2012 looking at the plan laid out before him. It was a very elegant plan developed to distribute "Nirmal" sanitary napkins in the villages coming under the Bhokardan taluka. During his tenure at SACRED as secretary, never before had he had the slightest doubt about implementing a project. SACRED, which stands for Society for Action in Creative Education & Development, had implemented various projects since its inception in 1982. Being an NGO, it was always difficult to gather funds for its operations. Its tie up with UNICEF fourteen years ago had been fruitful. Both of them together could implement the project efficiently with the funding from UNICEF & effective implementation strategies of SACRED.

Today, Jayant thought about the Deepshikha project started one and half years back at the Bhokardan taluka office. The project was aimed at improving rural livelihood by creating awareness about menstrual hygiene in the villages, abolishing child marriages, abolishing child labor and promoting child education. The plan that lay down before him would now form a part of this project. All projects were handled by the NGO staff with minimum support by the villagers, mostly when it involved creating awareness. The plan of distributing sanitary napkins banked totally on the Deepshikhas.

Deepshikhas were village women mostly in the age group of 15 to 25 years, some of whom were married. With no

prior selling experience apart from creating awareness in the villages about menstrual hygiene, they were now going to play a major role in a business model which included dealing with the customer and selling the sanitary napkin. Though this was a major concern, Mr. Jayant thought about the effect that this project could have on the business model. The outcome of the selling exercise would be used to analyze the feasibility of setting up a sanitary napkin production unit in Kedarkheda village. The production unit would be set up by the women's self-help group of Kedarkheda village and would provide employment to people in the area. SACRED would be responsible to create awareness of the product and distribute the sanitary napkin to the Deepshikhas under this project. The self help group operating the production unit would also sell the sanitary napkins through commercial and institutional outlets.

Most importantly, the pilot project banked on the quality of the sanitary napkins that were hand made by the women working in the Solapur sanitary napkin production unit. Mr. Jayant wondered, "Was the customer aware about the sanitary napkin? Will the customer accept the quality of the product? Is Deepshikha ready to accept this challenge? Can the model sustain with Deepshikha as the backbone? If the pilot project is a success, will the Kedarkheda sanitary napkin production unit be competent enough to supply this demand?" From his years of experience in the field of rural livelihood, Mr. Jayant knew that he had to move

quickly as the project and improvement in the self sanitation practices of rural women banked on his decisions.

ABOUT THE ORGANIZATION

UNICEF (United Nations International Children's Emergency Fund) has been working with the Government of India since 1949. It is the largest UN organization in the country. Following are its goals:-

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

UNICEF's presence in India is unique. It has a network of 13 state offices that enables the organization to focus attention on the poorest and most disadvantaged communities, alongside its work at the national level. UNICEF relies on contributions from governments and private donors.

Under the guidance of UNICEF different NGOs work in different blocks of various districts of Maharashtra as partners of UNICEF. SACRED is one such organization working in Bhokardan block in Jalna district. SACRED (Society For Action In Creative Education & Development) is an educational, developmental & service Non-Governmental Organization (NGO) registered under the Societies Registration Act (XXI) of 1860, The Bombay Public Trusts Act 1950 and the Foreign Contribution Regulation Act 1976. The NGO's headquarter is in Aurangabad and Dr. L. J. Aherwadkar is its President. Its genesis is the founding of Institute of Management & Research (IMTR) on January 10, 1975 at Aurangabad which itself was a registered organization. However, due to expansion of activities of various types, SACRED was registered as an independent organization in 1982 of which IMTR became a unit. The various projects carried out by UNICEF & SACRED as partners included:

1. CDD-WATSAN project (Imparting training in safe drinking water, environmental sanitation & personal hygiene to children in primary schools)
2. Micro Planning of villages
3. Total Sanitation Campaign in villages
4. Rural Entrepreneurship Development Project (REDP)
5. Jalswarajya Project
6. Village Development Programme
7. AplePani (Our own water) Project

8. Farmers clubs

9. Deepshikha Program (A recent program undertaken to empower adolescent girls and women in villages).

Other donors of SACRED included NABARD and MISEREOR (Germany). Mr. Jayant Deshpande had been the Secretary of SACRED since its inception and had played a major role in the NGO operations in the Aurangabad, Jalna and Beed districts of Maharashtra.

SANITARY NAPKIN INDUSTRY

Function

Sanitary napkins are designed to absorb and retain menstrual fluid discharges. When used they are applied inside an undergarment with a press-on adhesive fixing strip. Main functions/key elements of sanitary napkins are to absorb and retain menstrual fluid, isolate fluids from the body, no leakage, no unaesthetic appearance, no odor, stay in place, comfortable to wear. The key criteria for success are hygiene, performance, comfort, convenience and aesthetics.

Different types of Sanitary napkins available in market with details are as follows.

Product designs, full size pads:-

This type of pad have 3 main sub parts, the top sheet is of non woven type or an aperture film type. The absorbent core has a pulp which makes it thick core which can be classified as fluff core with SAP or air laid core with SAP. The back sheet is a thin film acting as a covering.

Product designs, Ultra-thin pad:-

This type of pad is manufactured in refined manner with 5 main sub parts. The top sheet is of nonwoven type or an aperture film type. The next portion is a transfer layer which acts as a film between top sheet and absorbent layer. The absorbent layer and absorbent core form the crux of the pad and they are usually thin in nature. The absorbent core has a pulp which makes it thick core which can be classified as fluff core with SAP or air laid core with SAP. The back sheet is a thin film acting as a covering.

Product shape could be either flat or curved with/without wings to secure the pad in place and add additional leak protection. It is available in various pattern designs with perfume (deodorant) added to cover or absorb odor. Packaging is done either folded or single wrapped or packed flat and unwrapped.

Although India has had a high population, the awareness and usage of sanitary napkins amongst women is very low (See Exhibit 1 for country wise per capita consumption). The penetration of sanitary napkins in rural India especially has been very low. Only 12% of total 355 million menstruating women in India use sanitary napkins. 75 percent of the women respondents were not psychologically prepared for menstruation and

68% of Indian rural women cannot afford sanitary napkins hence they ended up following unhygienic sanitary practices like cloths, sand and ash which made them vulnerable to infections and diseases. The scenario was severe in eastern parts of India where the percentage of non-affordability increased to 83%.

The major players in the market included Johnson & Johnson, Procter & Gamble, Kimberly Clark Lever Ltd., Gufic Bioscience, Dima Products. They served the under tapped market. As seen there was a huge potential especially in rural Indian market but the major problems that these manufacturers were facing was creation of awareness & reach of product to customers and efficient distribution cycle.

Considering the major problem of awareness, choosing the sanitary napkin without wings was the better option for UNICEF as then the cost of the product would be low and also additional effort in creation of awareness about the winged pads could be avoided.

In order to reach those women and more importantly to create awareness, UNICEF was continuously working with various NGOs in different blocks. Main motive of the Deepshikha program was to make adolescent girls and women aware of self sanitization, motivate them to use better sanitation products like sanitary napkins and be open about this body process. In order to help these women, many production units of localized sanitary napkin brands (e.g.Sakhi, Nirmal etc.) had been started by various agencies like Jalswarajprakalp in association with UNICEF.

After the successful running of production unit at Jehur unit in Solapur district (the unit was run by enterprising women of Self help group), UNICEF & SACRED wanted to start a similar kind of unit in Bhokardan block. The unit, if successfully started & efficiently run by selected Self Help Group, would be able to serve the demand created through awareness meetings (mahilamandals, kishorivarg etc.) in 125 villages of Bhokardan as well as act as a production hub to cater to the demands in other blocks where programs of UNICEF were being undertaken and run by different NGOs.

The initial task was to select the location for production unit setup and then selecting Self Help Group who would be ready to take this task forward.

SELECTION OF PLACE AND SELF HELP GROUP (SHG)

Jalna district is basically known for scarcity of water (because of geographic conditions and lack of mountains around). The major requirement for starting a production unit for sanitary napkins is that of water. Kedarkheda is geographically located at 20.27°N

75.77°E and is situated on the banks of confluence of Girija & Khelna Rivers. Also the two public wells usually have had good amount of water. Major crisis was faced during months of May & June during which government and private tankers were the only options. Also, its proximity to highway, proximity to Rajur which is a famous pilgrimage place and one of the biggest markets as well as good connectivity to Bhokardan made it an ideal location as far as production of sanitary napkins was considered.

After finalization of place, during visit to Kedarkheda in the month of January, Mr. Jayant held talks with 2 SHGs in order to gauge their interest and ability in undertaking this task of set up & running of production unit. The SHG who would be working with SACRED in this project was "Sant Muktabai Bachatgat". The SHG had 20 members attached to it. Out of these 20 members 8 members would be working for this production unit. This self help group had all like-minded women who were ready to take challenges and were keen to deliver. Though they did not possess any technical knowledge or domain expertise of the production unit, Mr. Jayant felt that by imparting specific trainings related to work & behavior these women would be able to make the production unit a success.

RAW MATERIAL SOURCE

The Raw material would be sourced from Coimbatore from the existing supplier who procured material in bulk from US and Canada so as to serve more than 50 similar napkin manufacturing machines that had been installed all over the country. Tie up with a transporter company like Professional courier (present in Jalna) of Indian Postal office who had recently launched a scheme of bulk transport for business units, needed to be done on priority in order to maintain steady transport of raw material & avoid shortages while also taking care of the hygiene requirements. The cost of transporting the material from Coimbatore to the manufacturing site has been incorporated in the cost calculation as shown in **Exhibit 2**. Jalna has been predominantly a district known for cotton production & hence locally available cotton could be used for production of pulp but for that to be incorporated the pulp making machinery and technology was needed to be installed. This could be considered depending on demand at a later stage. The local suppliers that had been identified proved to be expensive. Yet alternate raw material sources were being looked into so as to reduce the transportation costs as well as the risk of a single supplier source. (See Exhibit 2 for costing details of the raw materials used for production.)

MACHINERY SOURCE & PRODUCTION SETUP

The two options available were:

1. The machinery available in one of the sick units could be obtained from Government with the intervention of UNICEF & SACRED. This would help in discounting the burden of machinery cost & hence SHG would need to pay minimum government rent as per the regulations. But the option would be very time consuming as the government documentation would take at least 10 months to obtain NOC (No Objection Certificate) & transfer of machinery (as per discussion with BDO of Bhokardan). Hence the option did not appear to be lucrative.
2. The second option would be to procure machinery from the known source who had earlier supplied to units. The machinery details have been mentioned in **Exhibit 3**.

PRODUCTION SETUP INVESTMENT

The 30 ft X 20 Ft space in Grampanchayat office premises would be taken on rent by SHG group, the lighting connection, water supply connection & interior construction needed to be done on priority. As per initial assessment of the site & discussion with village authorities & local builders, the investment was estimated at around Rs. 30000. This investment would be a part of investment made by SHG. The village authorities would help in pipeline provision under SME (SME: - Small & Medium scale Enterprise) development scheme. It was required to be taken up in regular monthly Gramsabha in order to arrive at consensus. Considering the total expenses, the initial investment for the SHG would be Rs.255861.

MANUFACTURING PROCESS

The process of manufacturing is given in **Exhibit 4**.

The product must be clean and free from foreign matter due to its use in sensitive areas. The sanitary napkin obtained through the above process would be subjected to sterilization to ensure a germ-free and safe product. This would be done using a UV Sterilizer before packing. Each napkin has standardized dimensions of 20 cm X 6.25 cm X 0.6cm.

During the production of Sanitary napkins following care had to be ensured:

1. The napkin manufacturing place should be clean. All work to be done on work table only (like QC, packing, etc.)
2. While making napkins, worker should wear work coat, hand gloves, head cap and mouth closer.
3. No foot wear allowed while making napkins.
4. Visitors would not be allowed (they sneeze or touch the

napkins). If necessary, visitors could be allowed in workers uniform.

5. Everyday production would be packed and stored; no napkins would be kept open after production.

TEAM COMPOSITION

As per analysis & study of Jehur unit the following team composition was needed:

1. One member to take care of purchase & dispatch activity
2. Two members to take care of Quality control at final stage & packing. The product needed to be checked as per the laid down parameters & then only would be passed.
3. Four members to take care of the production. The production to be done as per the laid down machine parameters.
4. One member to take care of administrative needs. That member would preferably be the head of SHG in order to keep the discipline on the shop floor at unit.

After final production, the final packing into required lot size(8 packets in one lot) needed to be done by all women in order to avoid the dispatch becoming a bottleneck. As per the study of production unit, in 1 day 180 pads could be produced by working for 6 hours daily. The details of production are mentioned in financials. The financial calculations for first two years based upon the study of Jehur plant & assumed efficiency attained are mentioned in Exhibit 5.

OPTIONS FOR FUNDING THE PROJECT OF STARTING THE PRODUCTION UNIT AT KEDARKHEDA

NABARD is the major agency which grants loan to the self help groups to start their own business. The self help group would need to register in the panchayat samiti office & should have a registration number allocated to it. The loan facility would be available with various banks also but with a higher interest rate as compared to NABARD. Secondly SACRED could work out the option, with the help of fruitful intervention from UNICEF, of acquiring the machinery lying unused in sick units in Maharashtra & get it rented for the production unit at Kedarkheda. That would help in significant reduction in initial investment and hence boost the confidence level of the self-help group.

Till the time the unit would be set up based upon the feasibility, the supply from Jehur unit to SACRED would continue. SACRED office at Bhokardan would act as a distribution hub from where Deepshikhas would be collecting the sanitary napkin packets and would be selling & distributing in their own villages. Details of a

market study in the context of menstruation is given in **Exhibit 6**.

ECONOMIC ENVIRONMENT

According to findings of the latest study “Sanitary Protection: Every Woman's Health Right” undertaken by AC Neilson in 2010, the biggest barrier to use sanitary napkins was affordability. Around 70% of the women in India complained that their family could not afford to buy them. The same was reviewed and endorsed by Community Development Organization Plan India. Bhagyashree Dengle, executive director, Plan India said, “This study reveals the dismal state of feminine hygiene care in India and shows rampant unhygienic sanitary practices. In comparison, 100% women in Singapore and Japan, 88% in Indonesia and 64% in China use sanitary napkins.”

As already stated earlier, only 12% of India's 355 million menstruating women use sanitary napkins (SN). Others resort to alternatives such as cloth, ash and husk sand. This compared to the 96% rate seen in developed countries, like the United States, and India's statistic seems pitiful. Incidents of Reproductive tract infections (RTI) are 70% more common among these women. Inadequate menstrual protection causes girls aged 12 to 18 to miss around 5 days of school per month, or approximately 50 school days per year. Even more startling is that around 23% of the girls drop out of school once they start menstruating.

On 15th June 2010, the Union Health and Family Welfare Ministry approved a scheme for providing highly subsidized sanitary napkins to adolescent girls in the rural areas to promote menstrual hygiene. The scheme was to be launched in 150 districts across the country in the first phase. Approved by the Mission Steering Group, the highest decision-making body of the National Rural Health Mission, the scheme envisaged covering 1.5 crore girls in the age group of 10-19 years every month. Of this, the approximate number of Above Poverty Line (APL) girls is 105 lakh while that of the Below Poverty Line (BPL) category is 45 lakh. The napkins would be supplied to the BPL girls at a nominal cost of Rs.1 per pack of six while the APL girls will have to pay Rs.5 per pack.

A. Muruganatham had created a sanitary napkin making machine that operates on a small scale. Contrary to a large-scale production model which requires Rs.3.5 crores as initial investment, Muruganatham's sanitary napkin making machine could be made available to a buyer for approximately Rs.75,000. This allowed smaller players to adopt the business model of producing and selling sanitary napkin especially in the rural areas.

POLITICAL ENVIRONMENT

Bhokardan is a multi-religious taluka with 125 villages.

Gram Panchayat headed by the Sarpanch is the decision making body in these villages and forms the political environment of the village. Mr. Jayant, based on his past experience in implementing projects in rural India, knew that the Panchayat committee would be neutral to any project being implemented in the village. It neither supported nor criticized such projects being implemented by the NGO's. When it was decided that Kedarkheda was chosen for analyzing the feasibility of setting up a sanitary napkin production unit, the Gram Panchayat readily allowed SACRED to use a two room facility for the production unit. However, any Panchayat committee usually got ridden with internal politics which thus hampered the prospects of the village.

CONSUMER MARKET

Sanitary Napkin Awareness

Feminine care was introduced globally over 100 years ago. India claims the lowest usage of feminine hygiene products in the world.

Feminine hygiene products can be defined as “hygiene absorbent products engineered to absorb and retain body fluid without causing any leakage. The user should always feel dry and comfortable. It consists of an absorbent pad sandwiched between two sheets of nonwoven fabric.” There are 3 major types of products, (a) Thick sanitary napkins. (b) Ultra thin sanitary napkins. (c) Panty liners being used in the market. The size of each and their content vary from market to market.

UNDERSTANDING THE CONSUMER MARKET

A survey carried out by leading global information and measurement company AC Nielsen revealed the dismal state of feminine hygiene care in India. The penetration of sanitary napkins in India has been extremely low and there has been tremendous potential for players to gain decent market share. Urban women make up 20% of the country's sanitary napkin market. In 2008, there were 96 million women in urban India and, at that time, it was projected that number would increase by 17% to 1.2 billion women in 2013. With this predicted population growth, the sanitary napkin market could potentially be valued at as much as USD \$365m in 2013, up from US \$166.1m in 2008. Currently it is estimated to be worth around USD \$270m.

Some key highlights of the survey were:

- ✓ 75 percent rural women lacked adequate knowledge on menstrual hygiene and care
- ✓ 81 percent rural women used unsterilized cloths since they are cheaper
- ✓ 68 per cent could not afford to buy sanitary napkins available in the market.
- ✓ Adolescent girls in rural India were unable to attend up

to 50 days of schooling in a year due to inadequate menstrual care

- ✓ 23 per cent (aged 12-18 years) discontinued studies due to inadequate sanitary facilities in schools

CONSUMER SURVEY

SACRED conducted a survey in Bhokardan and Nagbid talukas. The sample size for both locations was 120. These females were aged between 14-45 years. With the help of Field coordinators, a questionnaire was prepared in the local Marathi language and women from different villages were surveyed to get an overview of the village mindset. The questionnaire attempted to gauge the financial situation, awareness, hygienic condition, mindset and the openness to use sanitary napkins. An analysis of the data revealed that 79% of the women were not aware of the causes of Menstruation. Cloth users felt that price for a sanitary napkin packet should not exceed Rs. 20 and should be in the range of Rs. 15-18. Sanitary Napkin users did not have an issue with price but quality was a significant criterion since matching brands like Whisper or Stayfree was a tedious task for "Nirmal". [Refer to **Exhibit 6** for charts]

POSITIONING OF NIRMAL SANITARY NAPKINS

"For Menstruating women "Nirmal" Brand was looked upon an affordable and quality Sanitary Napkin that was easily available in every village through the Deepshikhas because every woman had the right to maintain her hygiene." [Refer to **Exhibit 7** and **Exhibit 8** for Perceptual Map and Laddering].

Mr. Jayant felt, making sanitary napkins available to village women through their own member of village (Deepshikha) was their USP (Unique Selling Point) for Nirmal Sanitary Napkins. The personalized selling would take care of efficient distribution of the sanitary napkins. Maximum reach to village women could be achieved. This would be also be very helpful in imparting knowledge of self sanitation to those women and could be achieved in line with the main motto of UNICEF.

IN THE FACE OF COMPETITION

A variety of brands were available in the market. Apart from the branded ones manufactured by reputed companies, there were a number of local brands too. These were made locally by women through self run enterprises. Thus it could be said that the industry comprised a few organized players and a few unorganized players. Since the focus market for study was rural India, there were a few players that competed on price as the major parameter. [Refer to **Exhibit 9** for List of brands available in the rural market]

DEMAND

Market Mapping was a way in which the locations and individuals to whom the packets could be sold was identified. They could be sold to Public Health Centers (PHCs), Hospitals, Medical Shops. They could also be sold through Anganwadi workers, Self Help Groups etc. Anganwadi workers provided care for newborn babies as well as ensure that all children below the age of 6 are immunized. They were also expected to provide antenatal care for pregnant women and post natal care to nursing mothers. But Anganwadi women were involved in several other empowerment activities which could be a source of distribution. The Deepshikhas would anyway be a strong unique channel that was not currently used by any other brand for selling.

In general, the rural women between the age group of 15-44 years in the chosen blocks were the target customers. [Refer to **Exhibit 10** for Female Population in the blocks]

DISTRIBUTION

The local NGO would work as a depot from where the packets would be distributed to the Deepshikhas. Money collected after selling of the packets was to be deposited in the bank once every month by each Deepshikha. Initially, 100 packets would be provided for each village. Based on the demand and sale, 50 additional packets would be further supplied to the Deepshikhas. The commission from the sales would go into the common pool and could not be claimed for a certain period of time decided upon by each Deepshikha. The Deepshikhas could give innovative or inexpensive methods to give update on sales. The time for replenishment would be when the sales hit 50%. UNICEF would draw up a MOU with the two host NGOs. [Refer to **Exhibit 11** for figure]

PRODUCT COST BIFURCATION

- UNICEF would purchase the sanitary napkins at Rs. 19 per packet of 8 pads + transportation as per actual
- A fixed price had been chosen for the selling cost instead of a price band to help monitoring and avoid confusion in the market for the particular brand that is going to be sold. That was decided to be Rs. 22 per packet of sanitary napkin.
- The Deepshikha would get commission from the sales which would be Rs. 2 per packet.
- The local NGO would receive Rs. 1 per packet for warehousing, stock keeping, accounting and reporting back to UNICEF
- Bulk Selling: In case of selling a customer 50 packets or more at one time, the packets could be sold at the rate of Rs. 21

If the Deepshikha sold 150 at the end of two months, each Deepshikha group at the village level would have:

- Rs. 2850 as part of their rolling fund
- Rs. 300 or less (in case of bulk selling) as part of their earnings/commission from selling the packets

At the end of the two months the facilitating NGO at the block level would have earned the following for their services:

- Rs. 14400 for the NGO of Jalna
- Rs. 16350 for the NGO of Chandrapur

CONCERNS

A lot of work being carried out for pilot project related to marketing and selling of sanitary napkins in villages and the starting of production unit were in the offing. Mr. Jayant, sitting in his office, tried to gather the kind of concerns that this project might face. In the past the handmade sanitary napkins produced by similar self help groups had critical quality issues like improper sealing at ends, uneven sized pads being produced and insufficient glue resulting in less adhesion which made the product inferior to product of the competitors both in terms of

quality and price. Shockingly low level of awareness about menstrual hygiene amongst village women coupled with lack of prior personal selling experience of Deepshikhas was also a major cause of worry. He was also in a dilemma whether the value chain that he had created through this pilot project of selling the sanitary napkins would be sustainable in the longer duration or not. Also the thought of starting the production unit in future in Kedarkheda (based upon the demand generation) would require certain capabilities and financial capacity to be available with Self Help group (SHG) to make it successful, which would be putting a lot of mental stress on him.

Hence Mr. Jayant now was thinking about the role for short term as well as for long term that he might have to play in order to make this project a grand success.

To request Detailed Teaching Note pertaining to this Case Study, feel free to write to samvid@spjmr.org with your full credentials & purpose.

EXHIBITS

Exhibit 1: Country wise per capita consumption

Country	Population	GDP/ Capita, US \$	Consumption Hygiene products/ Capita, US \$
Brazil	186.4	4,289	10.5
China	1,293	1,533	3
Germany	82.7	33,800	24.2
India	1,103	726	0.13
Japan	128.1	35593	39
Russia	143.2	5,349	8.3
USA	298.2	41,768	35
Total world	6,465	6,879	N/A

Exhibit 2: Costing details of raw material

S. No	Description	Unit	Rate	Total
1	Core Material	300Kgs	65/kg	19,500
2	Top Layer	5000mts	1.72/mt	8,600
3	Back Layer	10kgs	250/kg	2,500
4	Release Paper	2 Ream	1050/-ream	2,100
5	Gum	20 Kgs	150/- Kg	3,000
	VAT 12.5%			4463
	Packing and Handling charges			4,000
	Installation and Training Fees			5,000
	Total			49,163

Note:- This Material would be sufficient to produce 30000 (3750 packets comprising 8 pads each) Sanitary Napkins making the cost per sanitary napkin to Rs. 1.63.

Exhibit 3: Details of machinery & costing details

S. No	Description	Unit	Rate	Total
1	De-fiberation Machine	1	25525	25525
2	Soft touch sealing Machine	1	33695	33695
3	Pneumatic Core forming Press	1	48925	48925
4	Air Compressor	1	24925	24925
5	Core Dies	2	2495	4990
6	U V Treat Unit	1	14560	14560
	VAT 12.5%			19078
	Packing and Handling charges			5,000
	Total			176698

Hence initial investment for machinery will be Rs. 1,76,698.

Exhibit 4: Sanitary napkin manufacturing process

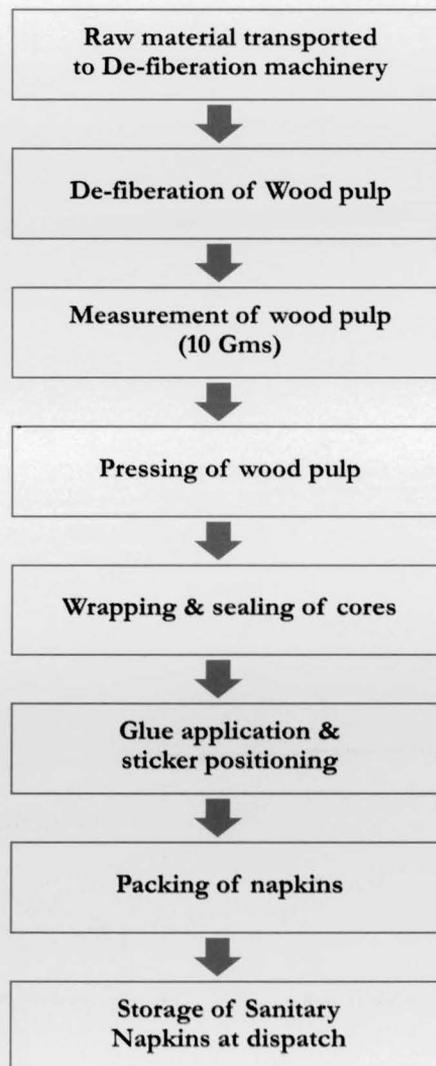
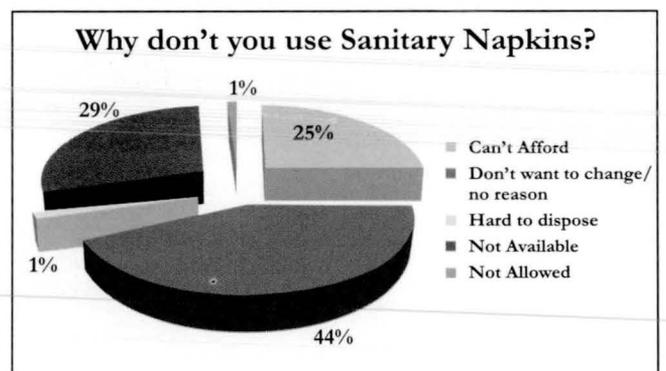
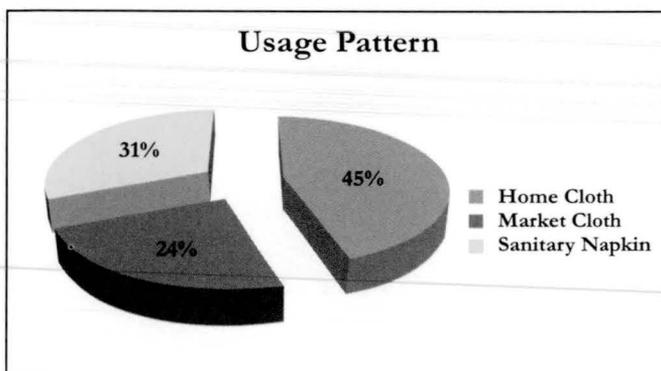


Exhibit 5: Financial Calculations for first two years

Unit Heads	Year 1 (80% efficiency)	Year 2 (100% efficiency)	
1 Pad			
Cost of production	1.4	1.4	
Number of pads in pack	8	8	
Pack of 8 pads			
Total cost of production	11.2	11.2	Assuming Production demand & bulk ordering of raw material remain the same
Packaging + miscellaneous costs	5	5	
Total Cost	16.2	16.2	
Manufacturing			
No. of women	5	5	
Pads/woman/day	288	360	
Total pads/day	1440	1800	
Total packs/day	180	225	
Total packs/month	4680	5850	Assuming 1 holiday/ week
Selling price of pack	19	19	
Profit/pack	2.8	2.8	
Total profit per month	13104	16380	
Total profit per year	157248	196560	
Machinery cost/ month	14724.83333	0	
Machinery cost/year	176698	0	
Transportation Cost/Day	100	120	20% increase assumed
Transportation cost/month	3000	3600	
Transportation cost/year	36000	43200	
Other Costs	30000	30000	Buffer
Net Profit	-85450	123360	
Net profit per woman	-10681.25	15420	

N. B.:- Based upon the experience of first two years, demand sustained & raw material as well as maintenance cost the calculations can be revised.

Exhibit 6: Survey results on Menstrual Hygiene among Cloth Users



For Cloth Users

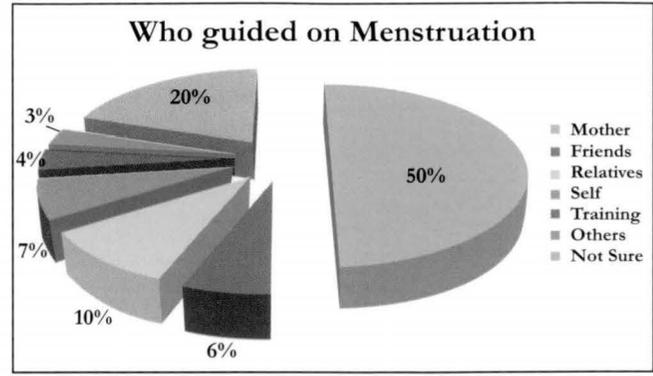
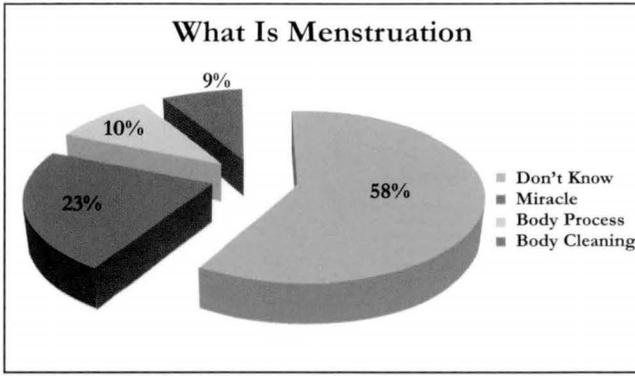


Exhibit 7: Perceptual Map

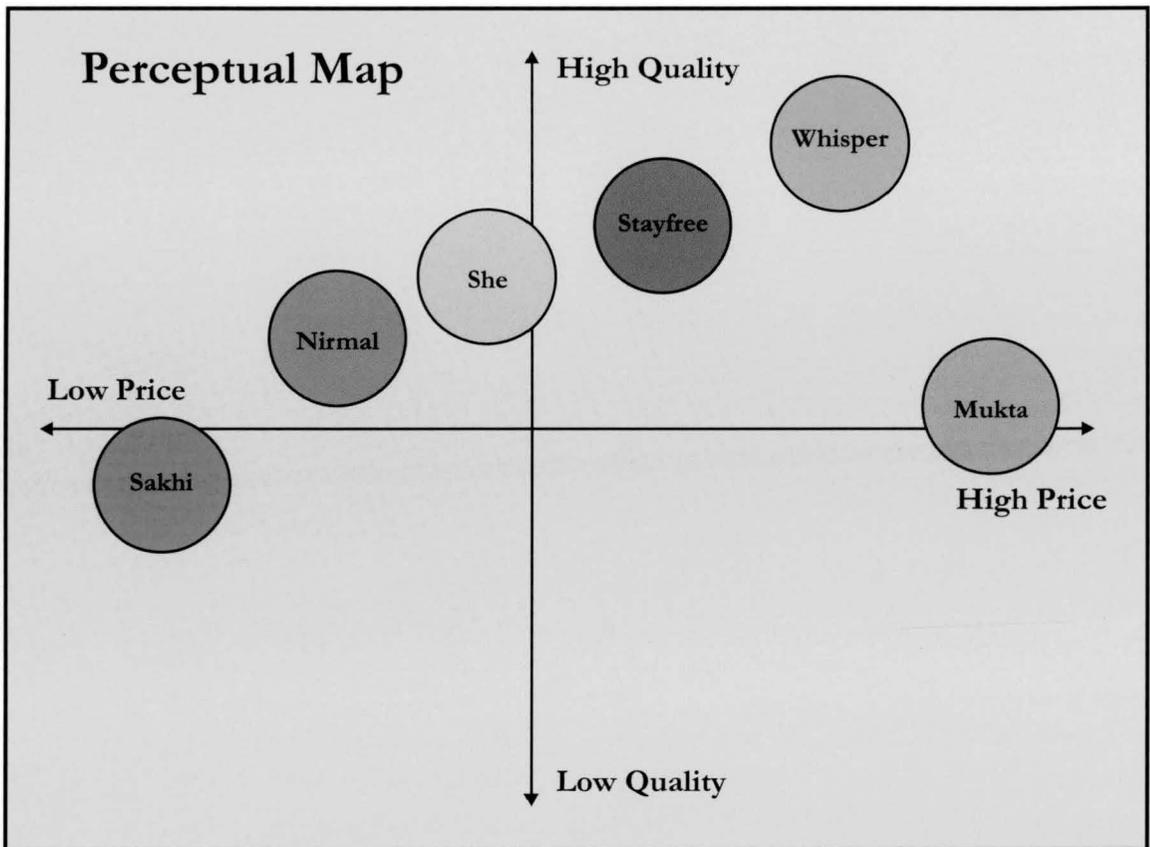


Exhibit 8: Laddering- “Nirmal” Sanitary Napkins

Laddering	
Value	Confidence, dignity, sense of pride and empowerment
Emotional Benefit	It will help in avoiding health hazards and instil confidence among women. Also, since it is prepared by self-help group women, it brings in a feeling of togetherness
Functional Benefit	It contains less glue and more wood pulp compared to any standard sanitary napkin. It passes stringent quality tests and is hygienic to use
Attributes	Extremely hygienic compared to alternatives like cloth, ash etc. A very good absorbent that keeps you dry and free from any leakage

Exhibit 9: Available Brands of low cost Sanitary Napkins initiated by Water Supply and Sanitation Department of Maharashtra

Name of the Brand	Company/ Manufacturer's Name	Pads in the Packet	Type	Cost
She Comfort Select	Royal Hygiene Care Pvt. Ltd.	8 pads	Without wings	Rs. 20
		8 pads	With wings	Rs. 24
Kotex Soft and Smooth	Hindustan Unilever	8 pads	Without wings	Rs. 22
		8 pads	With wings	Rs. 24
Whisper Choice	P&G	8 pads	Without wings	Rs. 22
		8 pads	With wings	Rs. 26
Stayfree Secure cottony soft	J&J	8 pads	With wings	Rs. 22
Stayfree Secure Dry		8 pads	With wings	Rs. 24
Sakhi	HLFPPT	6 pads	Without wings	Rs. 15
		10 pads	Without wings	Rs. 20
Mukta	Pune, DRDA; Yashada; SHGs based in various parts of Pune district		Without wings	Rs. 30

Exhibit 10: Population of Female between 15-44 years of age group

Total population female	Nagbid	Bhokardan
	67836	139099
15-19	6893	12712
20-24	6943	12166
25-29	5843	10774
30-34	5247	9459
35-39	4950	9273
40-44	4583	8246
Total Population Female (15-44 years)	34459	62630

Exhibit 11: Product Cost Bifurcation

