

Springhealth and the Paisa-Economics: the challenge to make the last mile distribution of safe water profitable

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Authors

- Urs Heierli, *Antenna Technologies Foundation, Geneva, Switzerland*, uheberli@antenna.ch
- Kishan Nanavati, *Springhealth Social Enterprise, Bhubhanesvar, India*, kishan.nanavati@springhealth.in

Abstract/Summary

This paper is about the challenge to deliver safe water to customers at the base of the pyramid in Orissa, India and make aspirational home delivery of chlorinated water profitable and affordable. Springhealth is a promising business model to deliver chlorinated water in attractive jerry cans to villagers in rural Orissa at a fraction of the price of bottled water. Home delivery has proven to be an attractive and aspirational proposition: Getting safe water delivered daily at home with an auto-rickshaw raises their prestige of a family and raises their willingness to pay even if they are not aware that drinking contaminated water is a health threat. Many families in Orissa drink water from open wells and either think it is safe or they know it is unsafe and think, diarrhoea is part of daily life.

Introduction

Springhealth is a promising business model to deliver chlorinated water in attractive jerry cans to villagers in rural Orissa at a fraction of the price of bottled water. Home delivery has proven to be an attractive and aspirational proposition: Getting safe water delivered daily at home with an auto-rickshaw raises their prestige of a family and raises their willingness to pay even if they are not aware that drinking contaminated water is a health threat. Many families in Orissa drink water from open wells and either think it is safe or they know it is unsafe and think, diarrhoea is part of daily life. Springhealth (SH) is a social enterprise aiming at delivering safe water to BOP customers in India and making profit, so that it can go to scale. For the moment, Springhealth is only operating in Orissa. It has reached 260 villages and; it sells daily around 17,000¹ chlorinated 10 litre jerry cans, mostly home-delivered to some 31,000 customers (155,000 people).

Context, aims and activities undertaken

Only few people are boiling the water regularly and the awareness to treat the water before drinking is very low. Springhealth has promoted its branded safe water through social marketing campaigns in schools, but the most attractive solution is to deliver safe water as an aspirational product or converting the delivery into a prestigious service that is at the same time affordable. The present price of 5 Rs per day (for 20 litres) is affordable for most villagers.

Many users in rural Orissa are not very conscious about safe water and drink contaminated well water without any treatment. They are used to this water for generations, some know that it is contaminated but consider diarrhoea as part of daily life and nothing to be worried about, not even for their children. Springhealth has initiated awareness creation programs in schools, has organised so called “water testing melas” where villagers can bring their water for testing, and after 48 hours the petri-dishes with the bacteria cultivation on their own water are shown to them. This is effective, but it may take a long time to

¹ Some customers do take the jerry can only every alternate day and some schools take 4 jerry cans and serve up to 150 pupils.

change the mind-sets and behaviour of traditional village people.

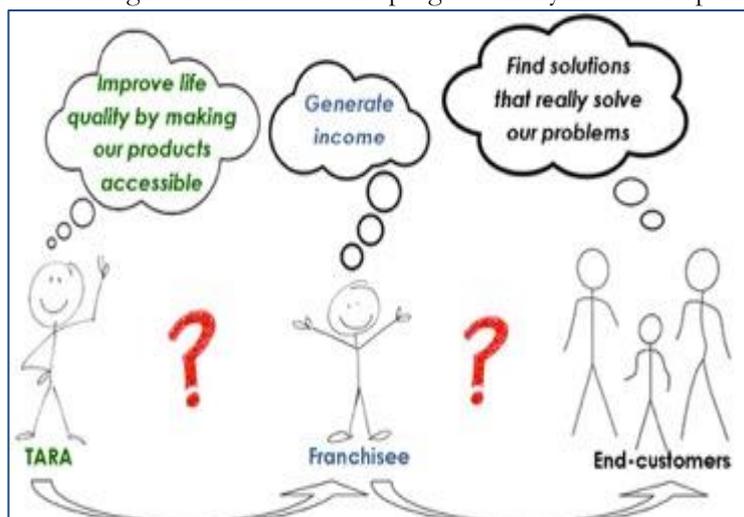
The other strategy to overcome this hurdle is **making safe water aspirational** and include a status raising element into the product: such a differentiator is the “home delivery service” of safe water. When the delivery boy knocks at the doorbell every day, it raises the status of a family when the neighbours see that this family gets the water delivered at home – especially if it comes with an auto-rickshaw, a motorized tricycle. This is why almost 98 % of all SH customers are subscribed to home delivery; originally, this service was conceived as a special service for a few customers. The original pricing structure was 3 Rupees for collecting a jerry can at the water kiosk and 4 Rupees for the water delivered at home. Home delivery has thus become a kind of “packaging” safe water as an aspirational good just as a perfume is put in a nice bottle and wrapped in a luxury box.

However, the business model of SH is presently challenged in profitability; it still struggles to break-even, and this paper analyses some of the reasons for this.

Main results and lessons learnt

Rural wages have significantly increased in the last 5 years in India – from 100 Rupees to over 200 Rupees per day² – and this makes home delivery challenging because the delivery boy needs to make at least 250 Rs per day, today, compared to 100 Rs in 2010. The paper shows different ways how Springhealth has adapted its business model to these new circumstances.

At the outset, not much has changed in rural India: the villages still look more or less the same, and one may get the superficial impression that nothing has changed. Poverty seems to prevail among the majority but small signs also indicate some progress: many houses are painted in bright colours, and mobile



This drawing shows the different objectives of the key players very well: while the agency (left) wants to supply safe water and “do good”, customers want an attractive solution: but the key is the person in –between, the delivery boy, dealer: he simply needs to make enough money.

phones, TVs and even fridges are more common, even in villages. This does not mean that poverty is eradicated and the gap between the poorest and the rural lower middle classes may certainly have increased. But undoubtedly, rural wages have significantly gone up: In Orissa from 76 Rupees per day in 2010³ to more than 200 Rupees today.

While we assumed originally that a SH delivery boy would need to make at least 100 Rupees per day, this situation has dramatically changed now: not even 200 Rupees may be enough as a daily earning today. I met during my visit a rural entrepreneur whose business was to collect hair by going from house to house and asking women to sell him small balls of hair: he makes with that business 200 to 300 Rupees per day as he had proudly told me.

Pushing a tricycle through the village roads with 200 kg of water loaded is a much harder job than collecting hair.

² This fact may not be so visible in official statistics as it was a gradual increase over the last 5 years. The analysis by T.N.Ninan: „The Turn of the Tortoise – the Challenge and Promise of India’s Future“, shows the complex change of the rural realities and the impact of the State unemployment schemes. Delhi 2015, page 167ff.

³ Government of India: „Wage Rates in Rural India, 2008 – 2009“, (no page numbers) showing that average wages were all over India less than 100 Rs, and in 2016 the Government of Odisha wanted to increase the minimum wage to 200 Rs, See Indian Express: „Revised MGNREGA wages puts States in a quandary“, April 3, 2106

On the other hand, prices for many things have gone up as well. Competing products such as bottled water (Bisleri Water) was priced in 2010 at 12 Rupees per litre and now at 18 to 20 Rupees; a 20 l jar has gone up from 40 to 60 Rs.

It was therefore necessary to overhaul the entire delivery policy of Springhealth. While bicycles – as originally planned – have soon shown not to be viable as they can only carry 6 to 8 jerry cans in one trip, the introduction of tricycles seemed to be more productive. The assumption was that if a delivery boy could deliver 100 jerry cans in a day and earn 1 Rupee per can, it would be feasible. However, earning 200 Rupees per day and delivering 200 cans is simply not possible. I have walked behind the tricycle and can now understand how demanding it is to push – not ride – a 200 kg tricycle through the narrow and bumpy roads of a village, especially when it is more than 40 °C hot. For this reason, SH introduced auto-rickshaws that can carry 80 jerry cans at a time, but an auto-rickshaw has also higher operating costs.

What is clear: home delivery is the very backbone and success factor of the Springhealth model, but making it profitable is really a logistical challenge. It is a task of *paisa-economics* and requires an extremely efficient delivery system. The solution may be to increase the price to 6 Rs per jerry can. However, such price adjustments are like an open heart surgery: if the price increase is too high, sales could drop dramatically.

Conclusions and Recommendations

Delivery of safe water must be aspirational, affordable but before all profitable, if broad masses can be reached and business models can go to scale.

Springhealth is a very promising business model for safe water. Even if people are not aware that drinking contaminated water is bad for their health, they can become customers because of the **status value of the water**, especially due to the prestigious home delivery, a true innovation in rural villages. Springhealth – as every sustainable safe water delivery model – cannot go to scale unless it is profitable. No organization can deliver safe water at scale while losing money on each jerry can delivered. This is very simple and basic.

We have also to keep in mind how important it is to reach break-even in each village: as mentioned before, Springhealth needs in each village at least 85 customers (850 litres per day). In order to reach so many customers, it may be needed to increase the awareness creation and social marketing in achieve a higher market penetration. Social marketing activities should be financed with public money and not from the margins of the water, as health education is a public task and a public good.

Safe water at the doorstep versus piped water – an intermediate solution?

When people are not aware that treating the water is necessary, the aspirational value of home-delivered jerry cans can jump over this barrier as a smart marketing strategy. But is this solution of delivering 20 litres per day (4 litres per person) really worth 5 or 6 Rupees? Obviously, it would be preferable if safe piped water were available in every household and Springhealth is not meant as an alternative to communal piped water systems. However, out of 157'000 villages in Orissa, only 35,233⁴ have piped water so far and it may take decades until full coverage is achieved. And this option is also not free: there is also a fee of 150 Rs per month, but no doubt it is better to have a piped water access in the house providing much more water than Springhealth does. We should, however, also consider that often piped water is not safe at the point of use⁵ and especially if piped systems are not always under pressure, recontamination can take place, also in the house. The Hystra study has also clearly shown⁶ that different solutions need to be chosen for different situations such as population density, amount of water consumed. In this sense – similar to rural electricity – household water treatment solutions are most appropriate for rural areas with a low population and a low consumption capacity per capita. Water

⁴ Odisha Sun Times Bureau: „55'000 Odisha villages go without safe drinking water“, February 18, 2016

⁵ See Urs Heierli: „Marketing Safe Water Systems - Why it is so hard to get safe water to the poor – and so profitable to the rich“, SDC Bern, 2006, page 25ff (<http://www.poverty.ch/safe-water.html>)

⁶ Hystra: “Access to safe water for the base of the pyramid”, Paris 2011, page 6ff (<http://hystra.com/safe-water>)

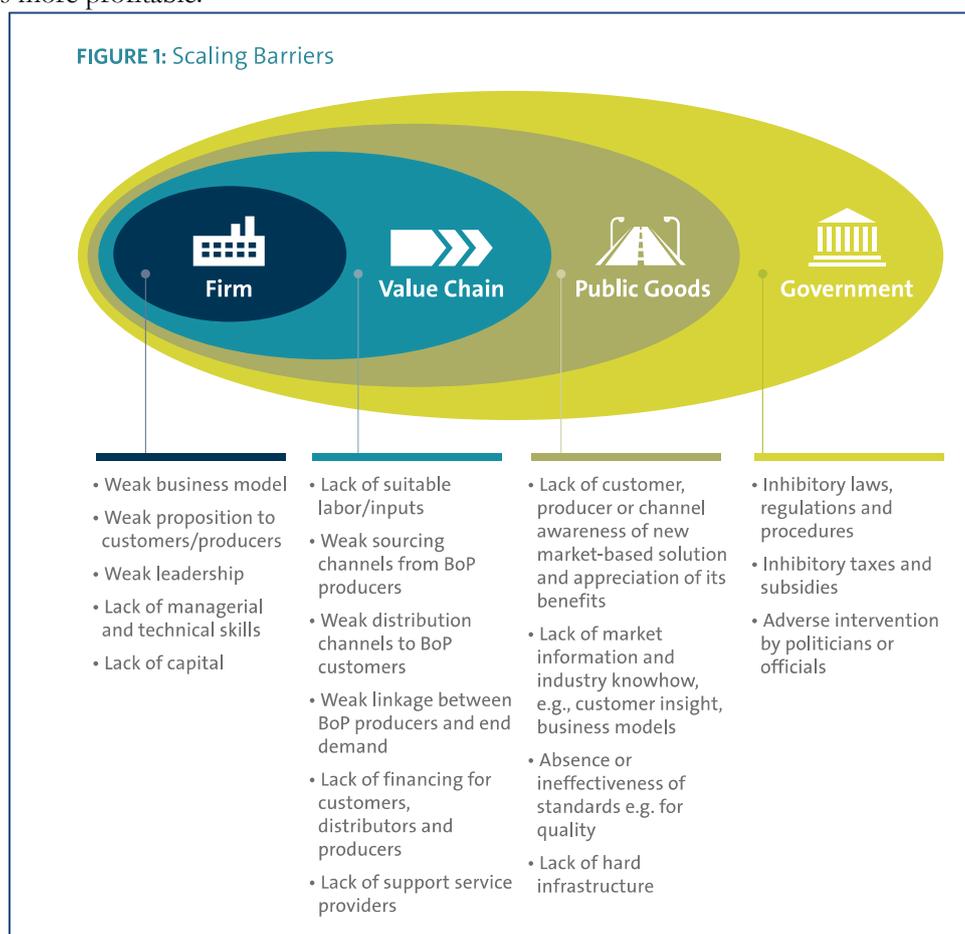
supply systems are clearly subject to economies of scale.

Also, the Gram Vikas model is a very attractive vision: it forces the villagers to agree to total sanitation (no open defecation anymore) before a community water supply is established. We have not yet analysed the comparative costs of these different options, but it is a fact that Gramvikas has reached 190 villages in some 10 years of work and is covering 95’000 people. Springhealth has reached 234 villages with 150’000 people in only 4 years, and it can go to scale fast, if break-even is achieved. What is the better solution cannot be treated in this paper, and we do not argue that Springhealth would replace community based water supply system, delivering the entire water a household needs (40 litres per day). Springhealth is an intermediate and fast solution to make the drinking water safe at affordable prices, it is better to have a bird in the hand than two in the bush.

Going to scale: the need to be profitable and for hybrid funding

It is important to observe good practices in using subsidies mainly for public tasks – all measures to increase market penetration and adoption through social marketing – and not subsidize the operational costs. Only then can the operation go to scale. However, there is no harm in using subsidies for awareness creation and social marketing efforts.

One of the challenges for scaling – as the report “Beyond the Pioneer”⁷ points out – is that some of the barriers to scale do not lay within the firm but one has to look at the entire chain. The following picture shows that not only the firm has to be profitable, it must also have a viable value chain (last mile delivery), but for example awareness creation is a public good. There should indeed be social marketing activities that are implemented with public funds and not use the money of the social enterprise. We strongly plea for such social marketing campaigns that would increase the market penetration and make the marketing operations more profitable.



⁷ Harvey Koh et al: “Beyond the Pioneer – Getting inclusive Industries to Scale”, Deloitte www.deloitte.com

It may even be a very interesting and attractive option to subsidize social marketing activities as the social impact of such subsidies may be very high. At a first calculation, we arrived at around 100 Rs (US \$ 1.60) to reach one new beneficiary in existing villages. If we count 60'000 Rs needed for a repeated social marketing package per village (including marketing blitz, door-to-door visits, water testing mela, school program) and if this leads to 120 new customers (600 beneficiaries), we could estimate the cost of an additional person reached at 100 Rs. Such an impact may be too optimistic: but even if it is 300 Rs to reach out to a new regular customer, this would be a high-impact investment.

Springhealth and Antenna will now test such a strategy and undertake a measured experiment with different types of social marketing activities. The experiment will measure the cost of different activities in isolation and several activities combined and measure the impact these activities have on convincing new customers.

We should find out what works best as effective social marketing campaigns. We can distinguish between two major lines of social marketing:

- Above the line marketing: Above the line promotion activities are more rational activities such as water testing melas.
- Below the line marketing: these forms of promotion are more social activities that influence people through trusted persons. In this sense, word to mouth campaigns are more effective to influence people socially.
- What should be determined is what the right social marketing mix is and combine below the line promotion with above the line measures, massively.

Conclusions and recommendations

The first priority is to strive for break-even and profitability. It is clear, however, that going to scale may need a combination of public and private investments in a mix of hybrid funding. Once social marketing activities are capable of creating sufficient market volumes, the rest should be a profitable operation, although challenged by wafer-thin margins, a high degree of efficiency and with a high quality of services. Then, we should be able to go to scale in the following 3 dimensions:

1. **Growth:** Increase numbers massively and reach in every village more than 85 customers. Expansion could then go to new villages and gradually scale-up the entire operation;
2. **Market penetration:** With better social marketing activities, we should also be able to go deeper and increase market penetration to 50 % or more
3. **Poverty:** By being viable and able to scale, the model should also become more inclusive and reach out to poorer households. This should not be done by subsidizing the operations, but results-based subsidies may especially target a better inclusion.

By no means would it mean to leave the aspirational path: we should not create a product for the poor. Maybe a price differentiation and product diversification can be the solution to breaking-even in a more challenging economic environment.

Strategies to get back on the path to break-even again

Doing business at the base of the pyramid has several challenges to face. Customers have low purchasing power, they are reluctant to pay for safe water, and the cost of doing business in rural areas is high. In order to overcome these challenges, Springhealth has now undertaken massive changes in their business model, such as: a) increase the price from 4 Rs to 5 Rs per jerry can, b) increase sales volumes and market penetration in the villages (break-even in each village is achieved with 85 customers), c) reduce staff cost by increasing the productivity of each field staff, d) involve Self-Help Group women as distributors and

e) optimise the logistics of the home delivery. With all this, they have achieved almost break-even by end of April 2016. Springhealth has also been accepted by the Gold standard for voluntary carbon emissions.

There are very promising growth perspectives available for the business model of Springhealth. The model is almost at the brink of being scalable. It is now fully tested and has been able to withstand major environmental changes such as a duplication of the rural wage structure. If it can overcome the present challenges, it may well become very soon ready to go to scale.

And, there are millions of people waiting for safe water.....

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Contact Details

Name of Lead Author: Dr. Urs Heierli
Email: uheierli@antenna.ch

Name of Second Author: Kishan Nanavati
Email: kishan.nanavati@springhealth.in