## Water Resource Management: A New Bottom-of-the-Pyramid Value Chain in India

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## India and China onto a Better and Cleaner Society in the Future

This is a typical story in India or China, every morning, you wake up and you turn on the water tap only to realize that the water coming out of it is yellow in color. Okay, it does not matter. People will then take out an old-fashioned kettle, old enough to reflect the metallic stain on the bottom due to year-long heating on the stove. Then after a while when the water boils, a brisk alarm will come off, indicating the end of the purification process and then that starts the whole day of that person's life.

I am writing this story to illustrate how often it is to get polluted water in developing nations. A story brought up by my friend while we attended a lifesaving course on snow mountaintops is, if lifesaving needs to happen in Canada, one of the things is DON'T bring water purification tablet because there is no use. The whole idea sounded totally bizarre to us considering where we come from, but it is true that such a story would come off as a bleak contrast to a normal person's life in India or China, and it is only going to worsen as the economy continues to accelerate and develop rapidly in both countries.

So there comes Dr. Mariwala's bright solution: to start a water purification business in India. What is amazing in his endeavor is that he not only started a company, he started a whole value chain altogether. Scientific Precision (the company he started) not only purifies water but also conducts installation and service amongst other things. The success factor? He understands Indian peoples' needs well.

As he mentioned, the current Indian society is comprised largely of skilled technical personnel, many of who have moved to the city to make a living. And as living standards improve, more people with disposable income will have the needs for a better lifestyle: cleaner water. As one of those people who moved to bigger cities in India, Dr. Mariwala chose to see the problem and develop a solution for it. Target customers have been people from the suburbs who have the consumption power but lack of devices to make pure water. One example he mentioned was rural resorts, which are in need for softened water to cater to the travelers with the ability to pay.

Such an innovation serves to solve or ameliorate Indian water purification problems. At current stage when there is not a complete system in water management rules in India, his company saw the opportunity to develop and cater to the growing number of population. However, I would like to propose something bold and ask the question: Does this model work in China where there is already much regulation in place and if not, what can we do about it?

As many people know, China also has a severe water pollution problem. Though regulations are tight both on the national and the provincial level, the effect is simply not there. One of the reasons might be that the governmental rules are not re-enforced, and definitely the other reason is inter-provincial collaboration is weak given the water pollution issues, just like security issues to a company, is attributed as a cost and not a profit source. Everyone is trying their best to avoid such problems and definitely be on top of big corporation's benefits, those rules are not implemented effectively. To give some figures at hand, 80% of China's land is arable and there are more than 10 large rivers that carry water drinkable to the population.[1] So there is great opportunity and great ease to develop water resource management in China with a reasonable price.

Indeed, the government is putting in a lot of effort to solve the problem of water purification with an aim to encourage startups in this field. Lots of subsidies are given to smart companies who target those environmental issues. Here, only small companies could be impartial and interested to give it a try at the clumsy Chinese environmental regulations and water and air pollution issues. Suppose if we develop a water resource management startup, there might be 2 ways; one on the large level of catering to the water management plant (of course, that is belonging to the state) or targeting the specific customers who could install the device back at home. In general both methods could work, but in the first method, since the government is the customer as well as the judge, it is hard to find out where the interest lies. However, in the 2<sup>nd</sup> situation, there is huge market opportunity.

Here are some figures to the Chinese water purification market: As of Jan, 2013, the percentage of households using water purification devices is below 1% and each year, the adoption level is increasing at a rate of 30%-50% and in larger cities, it has reached 100%. And looking at the market, the top 3 players have a combined market share of 25%, which means that the barriers to entry are extremely low. At in the current situation, with support from the government and the increasing interest by the customers and cities dwellers in such a device is huge. It is therefore up to the new market entrant to develop something that is able to distinguish from other players in the market.[2]

And the most important bottleneck is the technology behind it. Just like food safety issues, more advanced technology has to develop before a reasonable standard could happen. Nowadays, there is not a confirmed standard of what would be a good water purification level, and it is certainly worth exploring more in this field.

[1]http://huanbao.qudao.com/news/3924327.shtml [2]http://www.58cyjm.com/wenda/kdcy/7606.shtml