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Safe Drinking Water An Issue: Packaged Drinking Water Industry Is In Boom

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Abstract: The quality of drinking water is one of the essential factors which affects the human health. Drinking water quality in most of the countries, basically in developing countries is undesirable as a result of which many water borne diseases occurs. Hygienic drinking water is essential for human health, till yet millions of people worldwide do not access to clean water source. In rural areas it is a major challenge to provide safe drinking water. This paper is based on the analysis of providing safe drinking water through packaged drinking water. The paper also indicates that how the packaged drinking water industries mobilizes the payment for water services.

Index Terms- Packaged, hygienic, fresh water, disease, health, compound annual growth rate, PET, profitable, recycling.

I. Introduction:

World water day 2019, observed on 22 March, focuses the basic right of all citizens to health protection, through access to safely managed drinking water supply. According to Fairobserver.com, “Jessica Budds and researcher at the university of East Anglia water security research centre, United Kingdom, highlights that only about 0.5% of water on earth is usable freshwater, as most of the 1.4 billion cubic kilometres of water on the planet (70% of the plant) is seawater. Water scarcity affects 40% of the world’s population, and water use is predicted to increase by 50% in developing countries and 18% in developed countries by 2025. It is thought that water scarcity will be exacerbated by population growth, expanding agriculture and climate change. However, physical availability of water is not a good indicator of access, with 70% of global freshwater used by agriculture, and only 10% used for domestic purposes”.¹ Today it is not so easy to keep water clean particularly if it is transported from a shared source to the point of consumption. Most of the water borne diseases like intestinal nematode infections, trachoma (a preventable cause of blindness); schistosomiasis, lymphatic filariasis and long term exposure to arsenic contamination of drinking water causes skin, bladder, lung cancers and kidney disease. Due to all these water borne diseases citizens are compelled to pay for safe drinking water in various forms like packaged drinking water, water filter machines etc.

Meaning of packaged drinking water:

Packaged water is the drinking water which is packaged in a variety of forms. Packaged water fall under two categories:

- a) **Packaged natural mineral water (PNMW)**
- b) **Packaged drinking water (PDW)**

Packaged natural mineral water (PNMW): PNMW is the water which contains minerals or other dissolved substance that gives water a therapeutic value. The substances that can be dissolved mostly in the water are salts, sulful compounds and gases. According to national seminar held on “Packaged water industry in India’, PNMW or Packaged natural mineral water (governed under IS:13428:1998, amendment 1-5 upto 15th October 2004), water is drawn from natural sources, conforms to composition listed under the standard and is bottled without altering the composition. Some brands available are Danone’s Evian, Ferrarelle, Nestle’s perrier and San Pellagrino etc they are being retailed in the range of approx Rs. 80-100”²

Packaged drinking water (PDW): PDW is the purified form of water in which the ordinary form of water is treated to meet certain quality standards stored by Bureau of Indian standards (BIS). In this water undergoes various form of treatment process including Chlorination, sand filtration, carbon filter, ultra filtration, reverse osmosis, ozonisation, ultra violet filtration. According to national seminar held on ‘Packaged water industries in India’, “PWD or Packaged drinking water (governed under IS:14543:2004): in this case, any of the processes of filtration/disinfection listed under the standard can be utilized, altering the

composition of subject water and finally bottling. Simply speaking, it is ordinary water treated to meet certain quality standards. Some popular brands are Kinley, Aquafina, Hello, Bisleri, Prime etc. 1 Ltr variants are being sold at approx Rs.10.

II. PURPOSE OF THE STUDY:

The purpose of the study are as follows:

a) To study about the highly profitable business of packaged drinking water:

Now a day's safe drinking water is a major necessity for human beings. In India, bottled water industry of various types is an emerging symbol of new life style. It is found that a large segment of population is striving to get access to safe drinking water, new generation especially in urban areas is getting accustomed to bottled water paying handsome prices.

b) Study about the good market potential for new entrepreneurs to venture into this field:

As it is the basic need of life survival and the failure of government to provide safe drinking water through various sources of water supply to the huge population at every corners of the nation will ensures the new entrepreneurs to work in this field.

c) To analyse and study about the PET bottle market opportunity:

Polyethylene terephthalate (PET) refers to a thermoplastic polymer resin of the polyester family which is used for manufacturing plastic bottles. PET bottles are transparent, durable, lightweight, non-reactive, cost-effective and thermally stable. PET bottles are environment friendly and can be recycled repeatedly which further reduces their manufacturing cost. Today PET bottles are primarily used for packaging of safe drinking water. In developing countries like India and China, the trends of westernization are rising and food patterns of consumers have changed which increased the demand for bottled beverages.

d) Scope of bottled water industry have largely increased to other industries:

Packaged drinking water industry is creating scopes for other industries such as:

i. Business to Business

- Hotels
- Restaurants
- Caterrers

- Hospitals
- Colleges
- Offices and etc

ii. Retail

- Supermarkets and Hypermarkets
- Convenience stores

- Online
- Others

e) To study the prospect of PET bottles recycling industry:

The report released by the Pune-based national chemical laboratory, has revealed that close to 70% of PET bottles get recycled through the organized sector in the country. The report, aimed to answer questions on the afterlife of PET bottles, puts the annual PET recycling business in India at an estimated Rs 3500 crore which is increasing.³

III. STATEMENT OF HYPOTHESIS

It was hypothesized that packaged drinking water is a pioneer for supplying the pure and safe drinking water which protect the masses from various types of water borne diseases. And for entrepreneurs packaged drinking water is highly profitable.

IV. RESEARCH METHODOLOGY

The sources of data to conduct this study mainly include primary data and secondary data:

a) Primary data:

Information gathered through personal discussion held with:

- Customers
- Intermediaries
- Officials of packaged drinking water industries

b) Secondary data:

The sources of secondary data are as follows:

- Annual reports
- Journals and periodicals
- Articles collected from official websites
- Technical books and newspapers.

V. DISCUSSION

A) International scenario of packaged drinking water:

The tradition of bottled water is not very old and in western countries its practice was started in 1950s. The trend of using packaged water has gained momentum from 1950s only. In ancient times people used water from mineral springs for bathing because of its therapeutic values such as arthritis, skin diseases, rheumatism and various other diseases. Just because of these values people living in the surrounding areas started reaping the benefits of spring water. The trend of using mineral water for drinking purpose to exploit the therapeutic value of water started and people started earning money while marketing these water in bottles in other areas. This trend of selling bottled water gained momentum in mid 1970s and since then large quantities of bottled water from mineral springs in France and other European countries are exported every year. In western countries people are greater health consciousness and highly aware about health and hygiene so this concept of bottled water is prevalent and today it has become a necessity of life.

B) International standards for regulating bottled water:

The international standards are very stringent for a particular brand of water to be certified as bottled water to maintain the quality and hygiene of water. In United States, the bottled water industry is regulated as four levels:

- (i) Federal (by the US Food and Drug Administration as a food product).
- (ii) State.
- (iii) Industry association.
- (iv) Individual company.

Standards governing the bottled water industry in US are:

- Bottled water should not contain chlorine.
- Beverages containing more than the one-percent-by-weight flavour limit are classified as soft drinks, not bottled water.
- Bottled water may be Sodium-free or contain 'very low' amounts of Sodium.
- Water is classified as bottled water or drinking water, if it meets all applicable federal and state standards, is sealed in a sanitary container and is sold for human consumption.
- Flavours, extracts and essences derived from spice or fruit can be added to bottled water, but then additions must comprise less than one percent by weight of the final product.
- Bottled water cannot contain sweeteners or chemical additives (other than flavours, extracts or essences) and must be calorie free and sugar free.

C) Indian scenario of packaged drinking water:

This industry of bottled water in India started in 1967 when Bisleri set up a bottling plant for manufacturing and marketing its mineral water but due to lack of awareness about hygiene and health consciousness this industry has failed. Just due to this failure Bisleri was sold off to Parle in 1968-69. So in India mineral water market had started as early as 1968-69 when Parle group acquired the Bisleri brand from Bisleri of Italy for launching Soda water but later launched bottled water also. At that time the concept of bottled water was not accepted by the Indian public. The market remain inactive for a period of 20 years and only the premium brands were available through 5-star hotels. In 1990s when the Indian government has adopted the liberalization policy, then most of the major brands like Cola, Campa, Thumps up, gold spot, Bisleri tested the faith in bottled industry. At this time with the exposure of media and exposure of international lifestyles, increase in water borne diseases, deteriorating levels of water, increase in awareness about health and hygiene etc led to the acceptability of the concept of bottled water by Indian public.

The growth and status of Indian packaged water industry with Western or Asian market is far behind in terms of infrastructure, professionalism and standards. The per capita consumption of packaged water in India is 0.5 liter compared to 111 litre in Europe and 45 litre in USA. In 2003 Indian market is estimated at about Rs, 1,000 Crore and is growing at the rate of 40 %. The industry figures indicate that the sale of packaged water grew from \$189 million (USD) in 2003 to \$599 million in 2008- a growth rate of 216% and is expected that this figure is doubled in the next five years.⁴

According to a nation level study in 2009, there are more than 200 bottled water brands in India and among them nearly 80 % are local brands. The change is very much evident. Once a product found mainly at railways stations, packaged drinking water today occupies a place on the shelf in most superstores, grocers, hotels and even paanwalas. From a mere 60 towns in the year 1997, it is predicted that packaged water is today available in all towns and cities across India. With a compounded annual growth rate of close to 30% over the last decade, the packaged water market has witnessed a large growth in terms of volumes. In the words of Azaz Motiwala "In my view, thanks to all these factors, the Indian bottled water industry will be booming in coming years and Do not be surprise if today's bottles water industry becomes next Oil industry by 2025".⁵

The Indian packaged drinking water market is segmented on the basis of stock keeping units, company, regions and packages. One of the most dominant unit in stock-keeping units is 1 litre as it is very easy to carry, and widely available in the nation. People spend most of their time outside homes and prefer to purchase 20 liter bulk packages of water for home use rather than installing water purifiers. People don't carry water as it is available everywhere, even in the small retail shops. There are 5,735 licensed bottlers for packaged drinking water across India, along with uncountable unbranded ones. The government is unable to provide safe drinking water to the population. Owing to all these factors bottled water industry accounts for about 90% market share.⁶

Variety of packaged drinking water**D) Regulating agencies for water in India:**

In India following agencies are directly or indirectly related with regulating, monitoring and laying down standards of water:

- (i) Ministry of health and family welfare.
- (ii) Bureau of Indian standards (BIS) under the ministry of food and consumer affairs.
- (iii) Ministry of rural development.
- (iv) Ministry of urban development.
- (v) Ministry of environment and forests.
- (vi) Ministry of water resources.
- (vii) Local bodies.

E) Extraordinary profits earned by Packaged drinking water companies:

Up to 40% of bottled water comes from the same source as tap water, but is sold back to consumers at hundreds of times the cost, says the website of the North American "Think outside the Bottle" campaign. Companies earn extraordinary profits by selling water at 10 rupees (24 US cents) or more per liter after a production cost of 25 paise, or 0.25 rupee per litre. It can be shown with the help of Fig 1.

(Fig 1: Estimated Cost of production per litre of packaged drinking water)

Cap cost	Rs. 0.25
Bottle cost	Rs. 1.50 - 2.50
Treatment cost	Rs. 0.10 - 0.25
Label cost	Rs. 0.15 - 0.25
Cartoon cost	Rs. 0.50
Transportation cost	Rs. 0.10 - 0.25
Others	Rs. 0.25
Total cost (excluding labour, marketing & tax)	Rs. 2.84 - 4.25
Selling cost	Rs. 10.00 - 12.00

Source: Compiled from a number of primary sources.

Packaged drinking water, one of India's fastest-growing industries, is a business built on the foundation of bad governance, inequity and blatant exploitation. According to UNDP estimates, around 1.2 billion people worldwide lack access to clean drinking water. Today, there are more people in the world's hospitals suffering from waterborne diseases than any other ailment. Some 6,000 children die of such diseases every day. Providing safe drinking water is the responsibility of the state. It is shocking to know that over 1,600 Indians reportedly die every day because of waterborne diseases. Despite these astounding figures, the Indian state has literally washed its hands of the responsibility of providing clean drinking water to its citizens.⁷

Moreover drinking water, being a human necessity makes best sense to do business in. As a normal human being requires on an average need of 2-3 litres of water every day and world population is more than 780 Crores (growing at 2-3% annually), the business opportunity is great and the potential is largely untapped.⁸

The report, 'Bottled water market in India (2018-2023)' published in March 2019, illustrates that "Increasing health concerns, and unavailability of clean drinking water have led to the growth of the bottled water market in India. The market is expected to reach INR ~403.06 Bn by the end of 2023, from its current value of INR ~160 Bn, expanding at a compound annual growth rate (CAGR) of ~20.75% from 2018. Based on volume, the market is likely to reach ~35.53 Bn liters by 2023, expanding at a CAGR of ~18.25% from 2018 to 2023. The major bottled water brands operating in India are Bislery, Kinley, and Aquafina"⁹

According to the report, India bottled water market' published in April 2021, portray that "The Indian Bottled Water Market is forecast to grow at a CAGR of over 13% in value terms and to reach over USD5000 million by FY2026. The Indian Bottled Water Market is witnessing consistent growth, owing to increasing population and urbanization. Moreover, factors such as rising health awareness, unavailability of safe drinking water, and increasing awareness of the importance of safe drinking water for maintaining good health are further fueling the bottled water market in India"¹⁰

F) Categorization of Packaged drinking water market in Jharkhand:

- Theatres / cinema halls/ multiplexes.
- Corporate.
- Caterers.
- Picnic spots, Clubs, Gymkhanas.
- Hotels, Resorts.
- College canteens.
- General Stores etc.
- Houses.
- Railway stations, Bus stands & airports.

Jharkhand meaning "forest tract" is the ancient name given as a whole, to the forested upland geographically known as the Chotanagpur plateau forming the north-eastern portion of the Peninsular Plateau of India. It is a region of great unevenness consisting of a succession of plateaus, hills and valleys drained by several large rivers such as the Damodar, Subernarekha, Barakar, Brahmani and Baitarani.

The present population of Jharkhand is 3.3 Crores and the estimated consumption of drinking water is around 9.9 Crores litres per day. In Jharkhand the market size of packaged drinking bottled water is very huge.

G) Leading brands of packaged drinking water working in Jharkhand:

- HI-Tech
- Aquavita
- Nirmal Jal
- Kingfisher
- Bislery
- Bailley
- Shikharjee Jal
- Blue crystal
- Himadri Jal
- Rail Neer
- Aquafina
- Atlantic ice

VI. FINDINGS:

The findings of this study are as follows:

- A) The market of packaged drinking water is huge and untapped.
- B) As the literacy rate is growing so the awareness of safe drinking water to avoid the diseases is growing along with it.
- C) Rural population is not using the packaged water.
- D) Plastic bottle pollution is a growing alarm towards pollution.

VII. CONCLUSION:

Water is one of the significant part for the survival of life on our planet. And from several decades it has been found that masses are struggling for getting safe drinking water to avoid from the water borne disease, so today the need of the hour is towards the consumption of packaged drinking water especially in urban areas. Due to several factors the bottled water industry in India is booming and in the future most of the people becomes reliable to packaged bottled water due to its easy availability, portability, safe and hygienic features. But on the parallel side we all should have to be very much serious about the plastic bottle pollution which is a very big threat towards our environment.

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