

## **Case Study – Business Strategy**

### **PORTER'S FIVE FORCES FOR DRY WASTE MANAGEMENT**

as a part of– **Summer Internship 2012 with me2green NGO, Mumbai**

By

***P R Sirekha***

*(1<sup>st</sup> Year-PGDM, K J Somaiya Institute of Management Studies and Research, Mumbai)*

## BACKGROUND

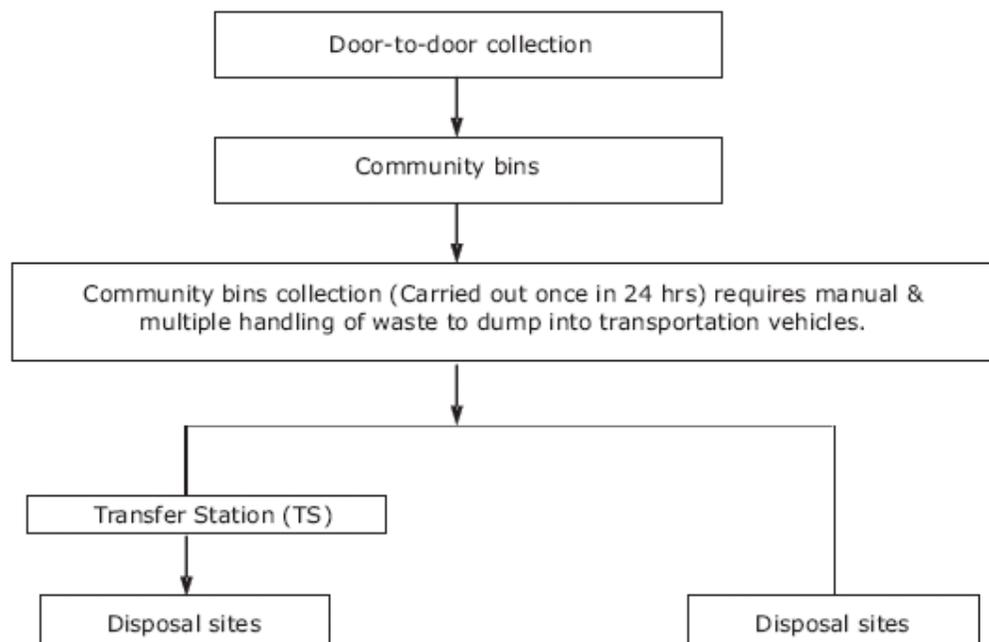
According to a recent news report in Barrons Online (<http://eco-wise.blogspot.in/2010/07/bill-gates-warren-buffet-invest-in.html>), Mr. Bill Gates and MR. Warren Buffet have invested in two of the biggest waste management companies in America. This shows that the garbage industry has a huge potential for growth in America.

We wanted to know if the same applied to India.

For our study, we decided to focus on urban city of Mumbai where the daily waste generation is 8,000MT. The disposable friendly lifestyle and ever increasing population of Mumbai made an attractive target study.

## SOLID WASTE MANAGEMENT IN MUMBAI

Solid Waste Management (SWM) comprises of the following steps:



In Mumbai, the door-to-door waste collection is carried out by privately hired sweepers while the other steps of the above process are carried out by BMC workers or contractors hired by BMC.

The 8,000MT of solid waste generated in Mumbai typically comprises of:

1. Construction waste
2. Medical waste
3. E-waste
4. Wet waste
5. Dry waste

## PROFITABLE WASTE MANAGEMENT

At present collection and disposal of waste in Mumbai is undertaken by BMC. The amount of waste is increasing day by day and it requires a herculean effort to control the waste. The municipal authorities do not have resources to control or manage increasing waste. Also the landfills are getting saturated.

One way to reduce the load on landfill is to segregate the waste at source and divert useful waste, like wet compostable waste and dry recyclable waste, away from landfill.

In order to optimize recovery and diversion of reusable waste, the authorities are looking towards the private sector to provide them with some respite in this matter because BMC has limited resources like manpower and material.

On the other hand, private stakeholders like Corporate, NGOs and ALMs stand to gain by involving themselves in this operation:

- The wet waste can be used for terrace gardening, urban farming, biogas generation
- The dry waste can be further sorted to recover recyclables such as -paper, plastic, metal and glass – for selling to the recycling factories

## DRY WASTE MANAGEMENT

### Business Strategy

For our evaluation, we decided to concentrate only on dry waste management because management of all other kind of waste – wet, medical, e-waste, construction –need special knowledge, skill and infrastructure.

The dry waste consists of recyclables items such as paper, plastic, glass, metal and non-recyclable items such as styrofoam, food soiled paper, chip wrappers.

The dry recyclable waste items can be sold to recycling factories.

The objective of the business is to make money out of recyclables recovered from dry waste.

### Market Study: Operation and Players

The recovery of dry recyclables from collected waste is done at various levels:

- inside household by owners, maids
- outside households by sweepers, facility management staff
- near community bins and transfer stations by BMC workers
- at street side and landfill by rag pickers

The recovered recyclable items are sold to many intermediate vendors before they reach to the Recycling Factories:

#### Local Recycling Vendors

- Known as *Raddiwala* (paper waste) and *Kabadiwala* (plastic, glass, metal)
- Shops known as *Paper Mart / Paper and Metal Mart*
- Shops found all over Mumbai
- Operate in neighborhood area
- Typically collect from households and small commercial establishments
- Buy in less quantity (1kg- 200kg)
- Transport it to *Mart* shop
- Sell it to Wholesale Recycling Vendors

#### Wholesale Recycling Vendors

- Mostly clustered in areas such as Dharavi, Saki Naka
- Operate all over Mumbai
- Typically collect Dry waste from large commercial establishments such as Malls, Hotels, Offices
- Also collect Recyclables from Local Recycling Vendors
- Buy when in large quantity (200kg-2 tones)
- Transport it to *godown* where the waste is sorted as per color, thickness, type, quality and sometimes even processed further by breaking / cleaning
- Sell it to Recycling Traders

#### **Special Recycling Vendors**

- Collect specific Recyclables. For Example, Tetra Pak
- Sell it to Recycling Traders

#### **Recycling Traders**

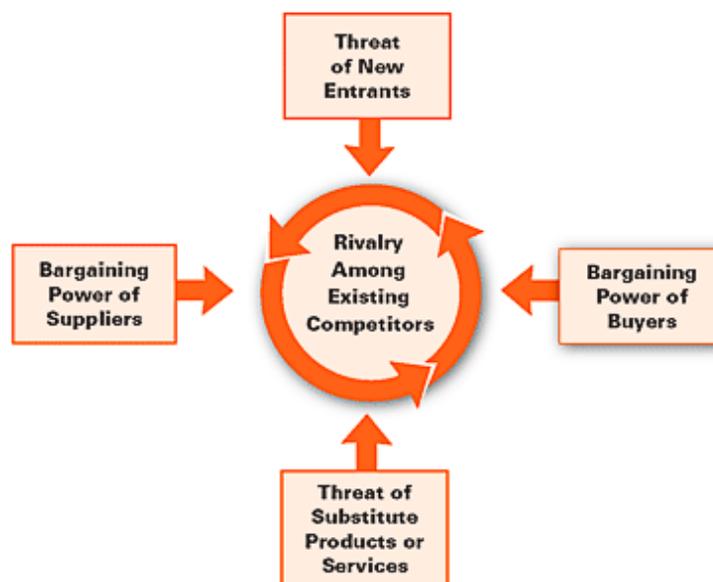
- Operate all over Mumbai
- Typically collect from Wholesale and Special Recycling Vendors
- Buy in bulk quantity (more than 2 tones)
- Buy only of specific type, quality and in some cases, partially processed
- Transport it to *godown*
- Sell it to Recycling Factories

#### **Recycling Factories**

- Buy Recyclables from Recycling Traders
- Convert it into new product

### **PORTER'S FIVE FORCES MODEL**

We use the Porter's Five Forces Model to analyse the strength of industry's five distinct competitive forces:



### Rivalry among Existing Competitors:

The competition in dry waste industry is intense. People like housemaid, sweeper, facility management staff, recycling vendors / agents and rag pickers are already established players in this industry. Most of them are illiterate. Some of them work illegally. Although part of informal sector, they are well-organized and connected. They will not allow any new entrants to come in. Hence, the competition is **high**.

### Bargaining Power of Buyers:

The ultimate buyers in this industry are the recycling factories who want the best quality recyclable waste that is available. To get the best quality recyclable waste, the whole chain which is ultimately providing them with the waste, has to function efficiently. Each stage of the chain is a buyer and at every stage, the quality of recovered recyclable waste improves (as explained in the *Business Market Study* section). Without the proper functioning of the process chain, the buyers will not have access to the best quality recyclable waste, but at the same time if the buyers don't demand the best quality waste, the process chain will never improve. Hence, the bargaining power of the buyers is **moderate**.

### Bargaining Power of Suppliers:

Suppliers are the people who are involved in segregating, recovering, improving and supplying recyclable items. There are many suppliers in this industry and hence their power is diluted. This is because every player in the chain is again a supplier as was the case with the buyers. Hence, the bargaining power of suppliers is **low**.

### Threat of Substitute Products or Services:

For our business, we need dry recyclable waste. This typically consists of plastic, paper, glass and metal. In future, individuals and organizations may decide to switch to greener lifestyle which may reduce overall waste and hence also dry recyclable waste. For example:

1. use ceramic mug instead of plastic disposable cup in offices
2. use cloth bag instead of plastic bag for shopping
3. use e-documents instead of paper documents in offices

However, this kind of substitution will take years before the impact of change can become a threat to business.

Hence, the threat of a substitute product or a service is **low**.

### Threat of New Entrants:

Though there are a lot of competitors in this business, there is still a lot of scope for new players to enter this industry and make money. This is because the population of Mumbai is growing rapidly and so is its waste. Mumbaikars prefer quick and easy disposable lifestyle. This ensures that the dry recyclable market will keep expanding in coming years and will accommodate all kind of new entrants (Government agencies, NGOs, ALMS, Corporate). Hence the threat of new entrants is **moderate**.

## CONCLUSION

Overall, the attractiveness of the industry is **Moderate**. This means, we can start our business as a private enterprise in the dry waste industry with moderate risks involved.