

BUS101 REPORT

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**Submitted to: Feihan Ahsan**

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**Topic: Advantages and disadvantages of recycling and propose a recycling plan for our business.**

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April 5th, 2018

Feihan Ahsan,

Lecturer,

BRAC Business School,

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**Subject: Letter of Transmittal**

Dear Sir,

It is our pleasure to submit the term paper on the topic "Advantages and disadvantages of recycling and propose a recycling plan for our business". The term paper covers all the areas that is relevant to the questions that have been asked. Though we are learning in curve, this assignment has enabled us to gain insight into the various parts of recycling process, advantages and disadvantages and also we have learned about why it is necessary in a business. As per your direction, we have tried our best to highlight our findings through this write-up. We sincerely hope that this term paper will fulfill the requirements suggested by you for the course BUS101.

Lastly, we would be thankful once again, if you please give your judicious advice on effort.

Thank You Sir.

Yours sincerely,

From section – 11,

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**Acknowledgement**

Our greatest gratitude goes to our honorable faculty Feihan Ahsan Sir who gave us the opportunity to do our research work on a specific topic, which is - "**Advantages and disadvantages of recycling and propose a recycling plan for our business "**. It was an honor for us to work under the guidance of such an excellent faculty from whom we have learned so many things, which will help us in every aspect of our life.

Finally, we want to show respect to our well-wishers and friends who helped us to get the necessary information. Without their spontaneous response, our teamwork would not have been done successfully.

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# I N T R O D U C T I O N

Recycling is essentially a process of conversion of waste into more useful products. It forms the third spoke in the waste management wheel, alongside “Reduce” and “Reuse”. The extraction of useful products from existing waste in an environmentally responsible way is crucial to efficient waste management, especially in light of environmental concerns raised since the latter half of the 20th century.

It has been employed in cruder forms to manage waste and extract usable materials since the very beginning of human civilization. Largely compelled by scarcity, pre-industrial societies recycled scrap metal and other raw materials for reuse. However, it wasn’t until widespread industrialization across Europe that recycling was adopted as a practice on an industrial scale. Spurred by the demand for cheaper consumer goods, manufacturers were forced to rely on recycling waste products for reusable scraps, eventually giving birth to the modern recycling industry.

Recycling today is targeted at the collection of recyclable material, such as glass, paper, metal, plastics, textiles and electronics, and the subsequent extraction of reusable, useful raw material from it. Technically, the textbook definition of recycling would entail the reproduction of material bearing the exact characteristics of the original waste. That is, a piece of paper would be recycled into another sheet of paper bearing similar qualitative characteristics. However, practically, this is expensive and energy intensive. Thus, most waste materials are recycled into alternative products or materials. For instance, a scrap piece of paper might be recycled into rough paperboard instead.

The exponential increase in human waste production since the beginning of 20th century has necessitated rapid improvements in recycling technology. In developed societies, virtually all waste – domestic or industrial – is re-routed through a recycling process to extract all possible reusable materials from it. This is not only economically efficient, but more importantly, reduces the need for landfills and the environmental stress they cause.

Recycling is a crucial component of modern waste management practices. It forms an integral part of the 3R concept or waste disposal hierarchy of ‘Reduce, Reuse and Recycle’. It can vastly reduce pollution and environmental stress. At the same time, recycling has emerged as a veritable industry in its own right in the past few decades, generating employment for hundreds of thousands of people across the globe.

 The finite quantity of most natural resources and the infinite thirst for the same has made recycling one of the most important movements that promote sustainability in the 21st century.  While recycling is intended to reduce waste and curb pollution, many recycling processes and industries actually end up contributing significantly to environmental pollution. Efficient and effective recycling requires the large-scale participation of the general public to be successful. Any waste management program that does not involve the public is bound to fail.

The export of electronic and biological waste from affluent western countries to poor, developing nations as part of the recycling process is another form of economic imperialism. If the recycling industry is to succeed in its aim of creating a sustainable planet, it needs to arm its workers with adequate safety equipment and training. Thus, the need of the hour is to phase out antiquated recycling technologies and develop cheaper, more efficient recycling processes

Before taking the bold step of recycling, it is crucial to understand the good and bad involved in this process -

**Advantages of Recycling:**

Recycling helps to reduce energy usage, reduce the consumption of fresh raw materials, reduce air pollution and water pollution (from land filling) by reducing the need for “conventional” waste disposal and also reduces greenhouse gases emissions. Additionally it also allows you to do the following:

* **Recycling minimizes pollution:** All forms of pollution in the modern world emanate from industrial waste. Recycling of these industrial wastes such as plastics, cans, and chemicals go a long way towards considerably cutting back on levels of pollution because these waste products are reused rather than just being thrown away recklessly.
* **Protects the environment:** The great benefit of recycling waste material is that it plays a big part in protecting Mother Nature in the most balanced way. While many trees are felled every day, recycled paper manufactured from specific trees is continually utilized to reduce deforestation. This classical example demonstrates that other natural resources can be recycled and made useful this way to conserve the environment.
* **Recycling minimizes global warming:** It is perfectly true that recycling minimizes global warming and its grave impacts. During waste disposal, huge amounts of waste are combusted that lead to emission of vast greenhouse gases such as carbon dioxide, sulfur, and nitrogen, which contribute to climate change and global warming. Moreover, recycling process also involves minimal combustion and waste is transformed into reusable materials with zero or minimal harmful impact on the environment. The whole process of processing and manufacturing products from waste materials emits few greenhouse gases because the very waste recycling industries burn little fossil fuels.
* **Conserves natural resources:** If the process of recycling used and old materials was not there, it means new products will be manufactured by extraction of fresh raw materials underneath the earth through the process of mining and extraction. Recycling is a surefire way of conserving existing raw materials and protecting them for future use. Taking steps to conserve natural resources like minerals, water and wood ensures sustainable and optimal use.
* **Recycling cuts down amount of waste in landfill sites:** Recycling old and used materials into reusable products enormously reduces the possibility of choking of landfill sites. This is beneficial because it helps minimize land and water pollution since landfills contribute mightily to environmental degradation.
* **Recycling ensures sustainable use of resources:** Recycling guarantees that existing resources will be used sensibly and sustainably. The recycling process alleviates the possibility of discriminate use of raw materials when they are obtainable in huge supply. Governments these days have stepped in to encourage recycling from lower levels, for instance, schools, small-sized organizations and also at global levels. This means that manufacturing industries can leave existing natural resources for exploitation by our children in the future without affecting current production.
* **Reduces energy consumption:** A lot of energy is used to process raw materials in the course of manufacture. Recycling plays a big role in reducing energy consumption, which is vital for large-scale production, for instance, mining and refining. Recycling also renders the whole process of production less expensive, which is a great victory for manufacturers.

**Disadvantages of Recycling:**

There can be as many negatives using recycling as there are positives. In particular, you need to consider that:

* **High upfront capital costs:** Recycling is not always cost-effective. Building up a new waste recycling unit takes up a lot of capital. The accompanying costs include buying different kinds of utility vehicles, upgrading the recycling unit, waste, and chemical disposal and schooling the locals by initiating useful programs and seminars.
* **Recycling sites are always unhygienic, unsafe and unsightly:** Go to any waste recycling site, and you will almost always stumble upon unhygienic, unhealthy and unsightly conditions. Locations where every manner of waste is piled provides a nice ground for the formation of debris and spread of infectious diseases. The harmful chemicals from these wastes can also be dangerous. On top of causing massive pollution, the whole recycling process poses health risks for dedicated individuals responsible for recycling these waste products. Also, if such waste products come into contact with water, results in the formation of leachate that ends up polluting water bodies, not to mention drinking water.
* **Products from recycled waste may not be durable:** The quality of products manufactured from recycled waste may not be on par regarding quality. These kinds of products are almost always made of trashed waste material collected from mountains of other waste materials that have been overly utilized and fragile. This makes products of recycled waste less durable and low priced.
* **Recycling might not be inexpensive:** Sometimes, recycling waste may not be less costly as most people think. At times, a need arises to establish another waste recycling unit for processing. This will only drive up the costs related setting up the new unit or upgrading the processing facility, collection of waste materials, acquiring different utility vehicles, educating residents by organizing seminars and other programs etc.
* **Recycling is not widespread on large scale:** Although recycling plays a bigger role in reducing the rate of pollution, the process has not been widely embraced and developed. Unfortunately recycling still is just a small part of long-term success. Recycling is mostly common in schools and homes and has not hit a bigger milestone, for example, it has not been wholly used at local industries or holistically at a global stage. Conservation of trees at school is incomparable to the massive destruction of trees and oil spills happening at industrial levels.

So, After juggling the advantages and disadvantages of recycling, a company can wisely take significant steps involved in recycling process. Knowing the effects of recycling is vital to a larger degree that if carried out effectively, can bring immeasurable benefits to the environment and humans. However, in the following sections we will look at if recycling can be a beneficial aspect to a company or not.

# A N A L Y S I S

The Concept of recycling is not a very old thing in Bangladesh. Now-a-days many organizations are involved in conducting recycling activities for their businesses. The findings can be used for the betterment of recycling & lead management team of our company.

Bangladesh is the ninth most populous country and twelfth most densely populated countries in the world. The urbanization in the country is happening at a rocket speed.

According to 2012 data, Bangladesh generates around 22.4 million tonnes of waste per year. The most dangerous news is that the rate is speeding every day. It is projected to reach 47, 064 tonnes per day by 2025. It is hard to access proper waste disposal system in the most parts of the country. This reality has turned Dhaka into one of the most polluted cities in the world. As urbanization grows rapidly, this challenge will grow further.

The concept of recycling has become an important issue due to the existence of recycling waste management industry. There are many reputed recycling based industries in Bangladesh like Ship Recycling Industry on the shores of Sitakund, Chittagong; Bangladesh Petrochemical Company (BPCL) in Dhaka; Azizu Trading Co. ;Some multinational Company in Dhaka named Clarke Energy ; Waste Concern ; Fichtner GmbH & Co.KG. Recycling is also used in other industries of our country including: Paper merchants company, many Garments Industries, Juice and Beverage Industry etc. It is also being used in manufacturing industries but the intensity of its uses in this industry is not very much significant.

. In the Garments industry, this is basically being used for Loan persuasion, mortgage information etc. But, Recycling activities should not be totally engrossed only with financial it has much more things to do for the prospect of Manufacturing industries too.

The intensity of recycling activities in different industries of Bangladesh is very much important because it is cost effective and supportive to focus on core compliance of the organization in the same time. The procedure, policies, training facilities, practices, operations, and services offered through recycling by the different industries needed to be studied and analysed carefully and effectively. Because the compact and specific information regarding this study will help to reshape and restructure any recycling section of any organization (Ex: Bangladesh Petrochemical Company (BPCL) recycling and lead management section) to perform much more effectively and efficient way. Besides, if recycling can be used properly with effective manner than it will help to increase brand value and ensure brand loyalty. The reason is that rather than focusing too many just on persuading customers to increase sales, after sells services can be used extensively in a better way which will help the organization to gain emotional attraction and faith of the customers towards the organization.

Now we are going to apply SWOT analysis of recycling focusing a lead waste management and recycling industry name Bangladesh Petrochemical Company (BPCL). Founded by Khadem Mahmud Yusuf, the startup recycles discarded plastic bottles to produce PET resins, the raw material for manufacturing plastic bottles and fabric, while saving the environment and foreign currency and creating jobs in the process.

SWOT Analysis of recycling (Bangladesh perspective): **Bangladesh Petrochemical Company (BPCL).**

Strengths:

* Recycling is very much cost effective from the marketers and organizations point of view.
* In many cases, it is easier than any sorts of direct marketing approach.
* It cuts down amount of waste in landfill sites
* The company now produces 400 tons PET resins a month
* One of the first companies to start developing waste management
* Recycling plastic is conservation of petroleum, which is getting scarce.
* It promotes new programs and is leading edge of recycling and waste-to-energy development
* Results in new permanent jobs.

**Description: STRENGTHS**

**Good Ownership Structure:**

Five years down the line, Khadem Mahmud's company -- Bangladesh Petrochemical Company Limited (BPCL) -- is running the country's first and only PET recycling factory in Narayanganj.The factory now recycles 93,000 cubic meters of used PET bottles, which would otherwise be dumped into the environment, and helps reduce emission of 13,500 tonnes of greenhouse gas every year.   The country's PET industry was fully dependent on imported PET resins until the BPCL provided bottle makers with the option of sourcing PET resins locally; thus, helping the country save foreign currency.

They started a trial run at the end of last year and had a formal commercial launch in July this year with a monthly production of a modest 100 tonnes of PET resins,” said Khadem Mahmud, the BPCL managing director.They took the production to 250 tonnes this October and are eyeing to take it to 400 tonnes a month.

**Market Leader:**

Plastic bottle is one of the ubiquitous objects in our environment nowadays. Bangladesh manufactures, uses and discards a staggering 400 core PET bottles a year and spends $ 225 million importing, PET resins, raw materials for manufacturing them. While some of these bottles are refurbished and recycled, a troubling amount of it is discarded just after one-time use and thrown away to landfills around the country. Moreover, plastic bottles are nonbiodegradable and are seriously hazardous to the environment.

This is what [**Bangladesh Petrochemical Company (BPCL)**](http://www.bpcl.com.bd/) in Dhaka precisely doing. Founded by Khadem Mahmud Yusuf, the start-up recycles discarded plastic bottles to produce PET resins, the raw material for manufacturing plastic bottles and fabric, while saving the environment and foreign currency and creating jobs in the process. The company now produces 400 tons PET resins a month and employs 200 people.

**GETTING READY MARKET:**

Within four months of the launch of its commercial production, the BPCL got almost a ready market to sell the recycled PET resins, which are at least 20 percent cheaper than the imported ones.

To name a few; AST Beverage, Meghna Group of Industries and Olympic Industries Limited are already on the BPCL's list of clienteles that procure recycled PET resins for bottling and packaging.

**Financial Soundness:**

Because of effective strategic planning, BPCL is able to earn a healthy amount of revenue, which gives them financial soundness.

**Skilled Human Resources:**

All the stuff, which are related to BPCL are skilled and effective in their own job responsibility. The reason behind this is the Human Resource Department of BPCL follows ethical strategy to recruit new employees

Weaknesses:

* Requires space for the composting facility.
* Problems related to establishment of the facility(area selection , permit, social relation)
* Constant information and sensitization campaigns for quality and quantity assurance
* Cooperation with and training of waste collection personal.
* Requires integrated planning and operation control
* Little marketing about new energy production and recycling techniques

**Description: WEAKNESSES**

* The main weakness identified in the recycling associations are related to financial resource, cultural patterns associations are related to financial resources, cultural patterns of population and labour conditions, which should underline the consolidation of recycling as business and strategy of social inclusion.
* Recycling associations should overcome different obstacles that constrain their growth and sustainability. In general, waste pickers have low levels of education, insufficient financial resources or limited access to credit and minimal or nothing business and public sector to achieve overcome these weaknesses.
* Lawsuits regarding improper waste disposal has hurt the reputation of the company

Opportunities:

* With increasing packaging trend, garbage disposal has enough future scope for sustaining.
* Waste-to-energy is the new area of waste management with opportunities for research.
* Consistent demand for new ways to recycle and reuse west.
* Results in new permanent jobs.
* Active participation of citizens that can become more active in other waste management related issues.

**Threats:**

* New companies emerging in the recycling and green energy sector
* Different laws in different countries makes it difficult to enter global markets
* Numerous government regulations
* Negative reactions forms waste collection personal of municipality.
* Improper participation from people can lead to bad quality compost.

**Waste Management and Recycling Company:**

There are several recycling companies in Bangladesh like Paper merchants company, many Garments Industries, RFL, Transcom Beverages Ltd., Partex, AST Beverage, Meghna Group of Industries and Olympic Industries which uses extensive amount of recycling activities. In fact, BPCL industry is one of the pioneer in conducting recycling.

Industrial waste recycling concept is basically Hauler-Based, Commercial Facility-Based, Manufacturing and Industrial Facility-Based etc.

This companies mostly recycle their own wastes but some companies also collect wastes from surroundings and recycle them. The recycle process –

* Collecting wastes and gathering them in a place
* Sorting them according to recyclable and non-recyclable waste
* Then putting them into the machineries that handles the whole recycling work
* Finally, recreating products from the waste that was produced from previous production processes

That’s how they reduce their produced waste and also increase production from wastes by helping the environment from not getting polluted

## **STARTLING STATISTICS:**

Bangladesh spends $225 million a year on import of more than 1.4 lakh tonnes of PET resins for producing PET products and synthetic yarn.

On an average, 400 crore PET bottles are manufactured every year in Bangladesh and most of them are discarded after being used only one

## **BPCL'S TARGET:**

The BPCL, which started its operation in July 2012, has set up a plant capable of producing 5,000 tonnes of recycled PET resins per year by using used PET bottles as raw materials.

The capacity would be increased to 10,000 tonnes next year and 25,000 tonnes in 2018-19, hoped Khadem Mahmud.

He said the plant, which employs 200 workers, has sludge compactor, a caustic recovery unit and fine particle recovery system for ensuring application of best practices in the industry.

"We reuse 90 percent of our factory's used water after it is treated by a Waste Water Treatment Plant. We practice 3R [recycle, reuse and reduce] principle," said Khadem Mahmud, who served in the past, among others, at the Nokia Siemens Networks, and National Semiconductor Corporation, USA.

# **C O N C L U S I O N**

This study was mainly conducted to understand the overall scenario regarding the recycling concept in the different industries. After this study it can be implied that recycling concept can become the next big thing in Bangladesh if it is used with more dedication and carefulness. Sometimes, the recycled product are not well furnished or they are defective although it’s not like the real one. This thing needs to be carefully analyzed. The production need to be in well-mannered and customer oriented. Everybody related to the field believe that recycling is effective. Although, the structure, policies, procedures are quite different from one another but the perspectives and purposes are quite similar. They prefer recycling due to cost effectiveness. However, Negative Reponses and not finding the right people might be the reason for ineffectiveness of recycling.

Recycling is basically used mostly for effective use of raw materials, making the same thing from the ruined things and the most importantly for cost efficiency. In the end it can be identified that according to RFL and PRAN perspective telemarketing is very much effective. But, the managers also added that it is easier to handle individual person through recycling rather than any organizations or companies. Because, there are lots of things such like chemical balance for producing the products or machinery things these all thing has to be maintained well. Almost it is clear that recycling is useful due to cost effectiveness and it has the highest reach with easiness rather than any other direct marketing plan. Since, RFL, PRAN and other all the companies use recycling concept for cost efficiency, other companies should follow recycling as it will broaden the companies income and cost will be less.

A company can gain a number of benefits from recycling its business waste. However, it should be remembered that a waste activity such as recycling uses energy so the priority should be to reduce waste in the first place. Recycling’s advantages are more commonly known. It reduces our energy consumption on a global scale. It also decreases pollution, slows the rate of resource depletion, and contributes to fighting global warming. The question usually isn’t whether recycling is advantageous, but whether or not it’s worth it. As we’ve learned, recycling comes with high costs. More often than not, the long-term benefits of recycling fail in comparison to the high initial investment. This is also due to the fact that recycling hasn’t yet become the norm. Until the majority of the global population accepts recycling, it’s positive impact on the Earth will continue to be a topic of contention

# **R E C O M M E N D A T I O N**

Finally, for our company, we think recycling should be accepted by all companies. As it helps a company to earn more profit and as well as it creates less wastages with a view to it create less pollution in environment. Recycling can be used in a way that it will help to increase customer benefit. In the study it has been shown that customers prefer those organizations which cares for its customers. It can be done easily by providing the customers with the best products.

It has also been showed that recycling increases brand value of the organization. A positive reaction and feeling grow up within customers mind regarding the company.

Recycling activities should be done carefully so that customers don’t get irritated.

Recycling concept in our country is used extensively only for intangible products or services. But, it can be used for manufacturing sector too. It might create a new era for customer service and satisfaction

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