

Economic Impact of Recycling and Reusing of Used Clothing in Global Market

Md. Rafiqul Islam Manik^{*}

Lecturer, BGMEA University of Fashion & Technology, Uttara, Dhaka, Bangladesh

Email: rafiqulislam@buft.edu.bd

Abstract

People around the world spending billions of dollars to buy their clothing and it will increase with the growth of population and more demanding and consuming users. The accelerated pace of clothing consumption among the consumers in the world has led to an increase in clothing disposed of in the landfill rather than being reused or recycled. But there is a sense growing among the people that disposal of clothing in the landfill will have severe environmental consequences which are fatal for the world. Also the recycle or reuse of used clothing can create a considerable amount of business and employment in the world. The purpose of this article is to point out to the fact that global market is extremely potential for this business and it can enlarge more.

Keywords: Clothing; Reuse; Recycle; Disposal; Consumer.

1. Introduction

According to Rutland Council, reuse is often confused with recycling and considered to be the same. However, they actually concern entirely different processes. Recycling refers to convert waste into reusable material [1]. It also involves turning an item into raw materials which can be used again. This is an energy consuming procedure. It is described as a process, in which waste material is transformed into reusable material or items. It is a great substitute to the traditional waste disposal, which saves material and also reduces the release of greenhouse gases. Reuse refers to use again or more than once [2]. It is using an object as it is without treatment. This reduces pollution and waste, thus making it a more sustainable process. The reusing process is not just about re-purposing materials, but the object as it is. This includes buying and selling used goods and repairing items rather than discarding them.

^{*} Corresponding author.

Reusing is better than recycling because it saves the energy that comes with having to dismantle and re-manufacture products. It also significantly reduces waste and pollution because it reduces the need for raw materials, saving both forests and water supplies. It is an eco-friendly technique of saving money, time, energy and resources. Further, when we reuse something, it adds to its function and also lengthens the product's life. Clothing recycling involves recovering old clothing for sorting and processing. End products include clothing suitable for reuse, scraps or rags as well as fibrous material. Interest in clothing recycling is rapidly on the rise due to environmental awareness and landfill pressure. For entrepreneurs, it provides a business opportunity. In addition, various charities also generate revenue through their collection programs for old clothing.

2. Limitations of the Study

The limitations of the study are getting limited information from different sources, unavailability of accessing different websites, less research articles to study related to clothing recycle and reuse.

3. Literature Review

The consumption of clothing products has increased in the world during the last few decades parallel to the development of the consumer society [3]. Consumption is nowadays a significant social marker for showing who you are and what you want to be. The average lifetime of a clothing item is approximately three years [4]. Textiles represent one of the untapped consumer commodities with strong reuse and recycling potential [5]. Textile waste consists of pre- and post-consumer materials. Pre-consumer textile waste (factory waste) is generated during textile manufacturing and is recycled into new raw materials. Post-consumer textile waste consists of used clothing and household articles, which can be reused but typically are disposed of into the trash which goes to municipal landfills. Clothes are often discarded when much of their potential lifetime is left [6]. Consumers are regarded as the main culprit for throwing away their used clothing as only 15 percent of consumer used clothing is recycled where more than 75 percent of pre-use clothing is recycled by the manufacturers [4]. Consumers dispose of clothing for a number of reasons such as poor fit, outdated style, and boredom and/or wear-out [7]. In order to get rid of their no-longer-needed clothing, consumers have several options: discard, donate, reuse, trade or sell [8].

Rather than disposing clothing, reusing and recycling them would be more environmentally sound. Consumer has three general choices when contemplating disposition: keep the product, get rid of it permanently, or dispose of it only temporarily. When getting rid of it permanently, the consumer can throw it away or abandon it, give it away, sell it, or trade it [9]. According to a U.K. industry source, about 50% of collected textiles are reused, and about 50% are recycled. About 61 percent of recovered wearable clothes are exported to other countries. In some African countries as many as 80% of people wear used clothing. The issue of sending used clothing to Africa has generated some degree of controversy as to the benefits of such initiatives, where it can have an adverse impact on local textile industries, native dress, and local waste generation. As per the Council for Textile Recycling, near about half of used clothing is given to charities by mass people and charities distribute and sell these clothing free or in discounted price. In Canada, an estimated 90% of donated fabrics (including clothing) go to textile recyclers. The importance of recycling textiles is increasingly being recognized. Over 80

billion clothing are produced annually, worldwide and more than 70 percent of the world's population uses secondhand clothing. As such, clothing recycling is a significant challenge to be addressed as we strive to move closer to a zero landfill society [4]. Recycling of used clothing is very important due to economic, social and environmental reasons [10].

4. Recycling Process of Clothing

Garment recycling involve a series of sequential activities as outlined below:

5. Donation

It has been noted that low priced and low quality garments do not provide adequate justification for recycling and are difficult to recycle [11]. Cheap garments are not of high enough quality to be recycled, and collection costs typically exceed revenue generated [12]. Further, the cost of reverse transportation and recycled fiber production is high, though, so, few companies have participated [13]. Creating awareness of garments recycling could be done by

- Website information- A common step for garment recyclers is to raise public awareness with information about the importance and benefits of donating used items like garments. As such, recycling companies often provide educational materials at their websites regarding garment recycling and its importance. They may also explain what items they accept for recycling.
- Informative bins and truck signage- Other approaches to raising awareness truck and bin markings. Colorful bins help describe what articles of garments are accepted and what charity benefits from the contribution. Truck signage can be useful in raising awareness, for example, of home pickup programs for old garments.

6. Collection

Garments recyclers use a variety of strategies for picking up garments. Post-consumer garments are picked up generally from bins placed in public places, as well as from garments drives and door-to-door collection. Bins are typically placed strategically in public places like parking lots in business centers and shopping malls. Colorful bins are positioned in high traffic, high visibility locations to help maximize donations.

7. Sorting

Once collected, garments are classified into three groups: reuse, rags, and fiber. Typically this is a manual sorting process that requires expertise in identifying various types of material. The process can be aided by such mechanical systems as conveyor belts and bins to segregate various grades of material. There is, however, at least one initiative to automate the sorting process, known as Textiles4Textiles. Recyclers report that about one-half of donated garments can be reused. Some recyclers bale this garments for export to developing countries, while some garments are used domestically for sale in thrift shops. Industrial cloth rags and wipes are another important residual of the recycling process. Additionally, garments may be reduced to fibrous material.

8. Processing

Textile fabric and garments commonly consist of composites of synthetic plastics and cotton (biodegradable material). The composition will influence its method of recycling and durability. Collected garments is sorted and graded by highly experienced and skilled workers. These sorted items are sent to different destinations as outlined. For natural textiles, incoming items are sorted in terms of color and material. By segregating colors, the need for re-dyeing can be eliminated, reducing the need for pollutants and energy. Then the garments is torn into sloppy fibers and combined with other chosen fibers, conditional on the planned end use of the recycled fiber. Once cleaned and spun, fibers can be compressed for use in mattress production. Textiles which are sent to the flocking industry are used to produce filling material for furniture padding, panel linings, loudspeaker cones, and car insulation. The recycling process works somewhat differently for polyester-based materials. In the case of polyester-based textiles, garments are shredded and then granulated, and processed into polyester chips. These are subsequently melted and used to create new fibers for use in new polyester fabrics. As the textile industry continues to grow, it will be challenged to devise ways to boost recycling rates as well as to develop technologies that will help maximize the value of recovered material.

9. Global Business of Used Clothing

Consumers around the world are spending thousands of dollars to purchase their clothing. Figure-1 shows per capita expenditure on apparel worldwide in 2015.

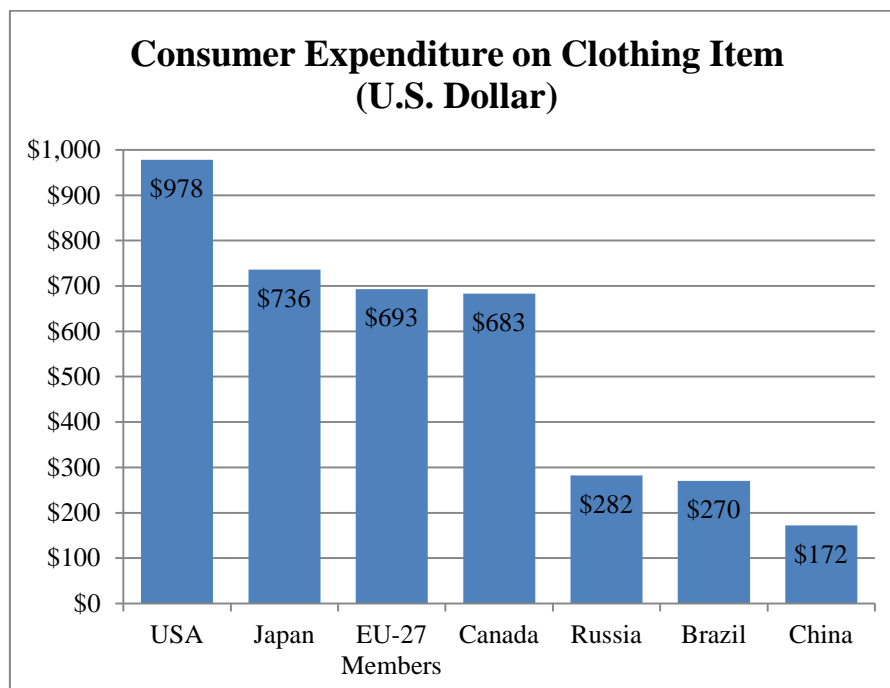


Figure 1: Consumer Expenditure on Clothing-2015

The markets for second-hand garments are large, and there is a considerable demand for unwanted, second-hand garments in developing and poor countries. The main destinations for exported second-hand garments are much

of Africa, the Middle East, Pakistan and Eastern Europe. Figure-2 shows the amount (Billion U.S. Dollar) of used clothing business in the world.

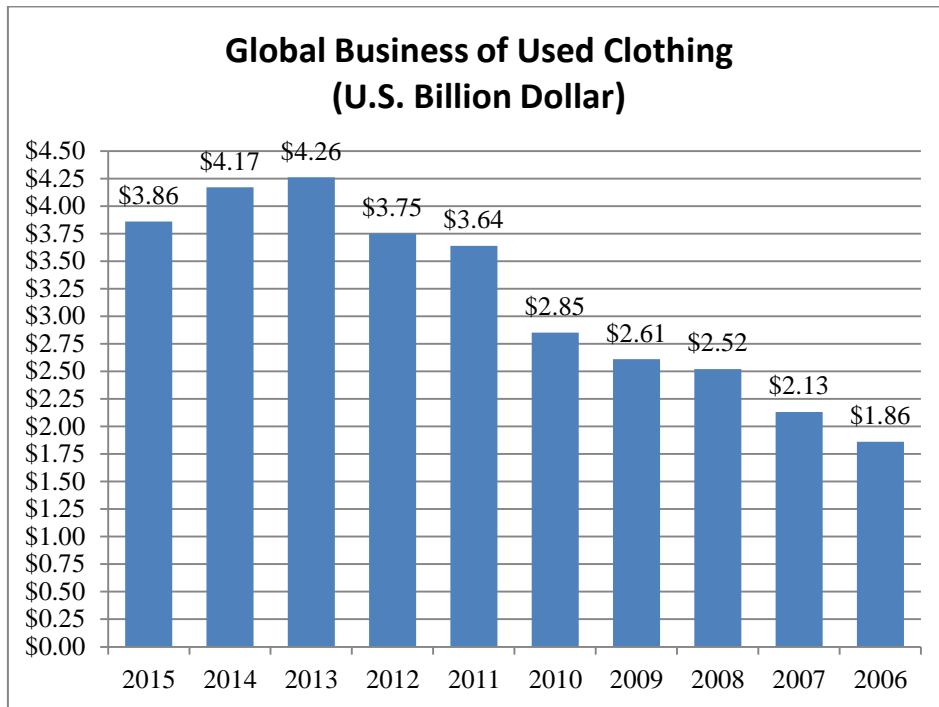


Figure 2: Global Business of Used Clothing

Different countries are exporting used garment items and some countries are importing those items and selling those in different parts of the world. Figure-3,4,5 and 6 shows the export value of used clothing in the world.

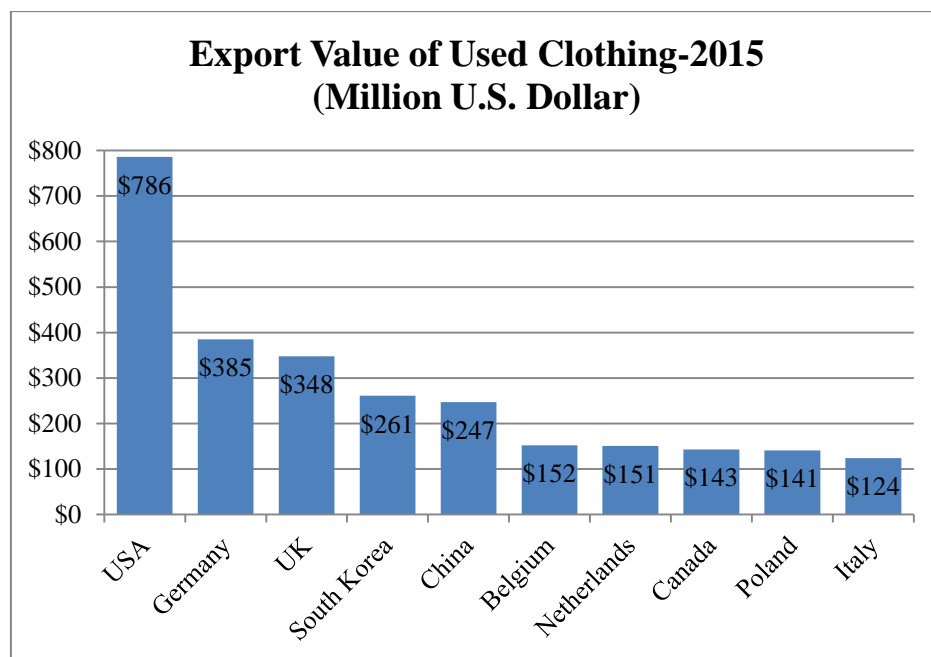


Figure 3: Export Value of Used Clothing-2015

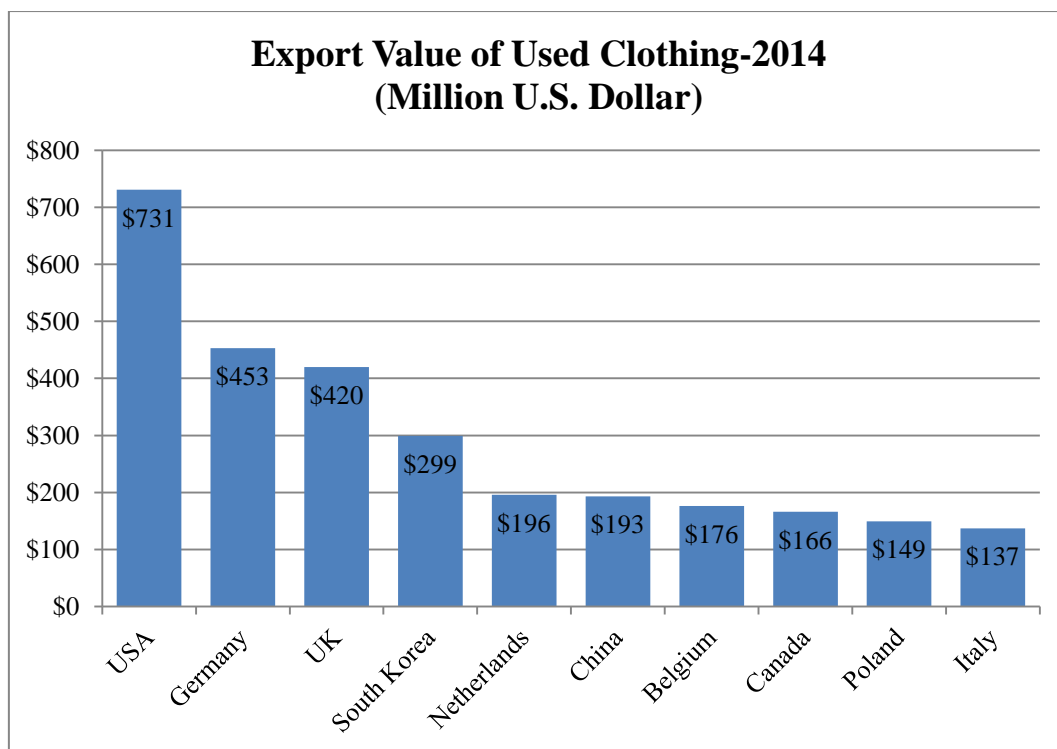


Figure 4: Export Value of Used Clothing-2014

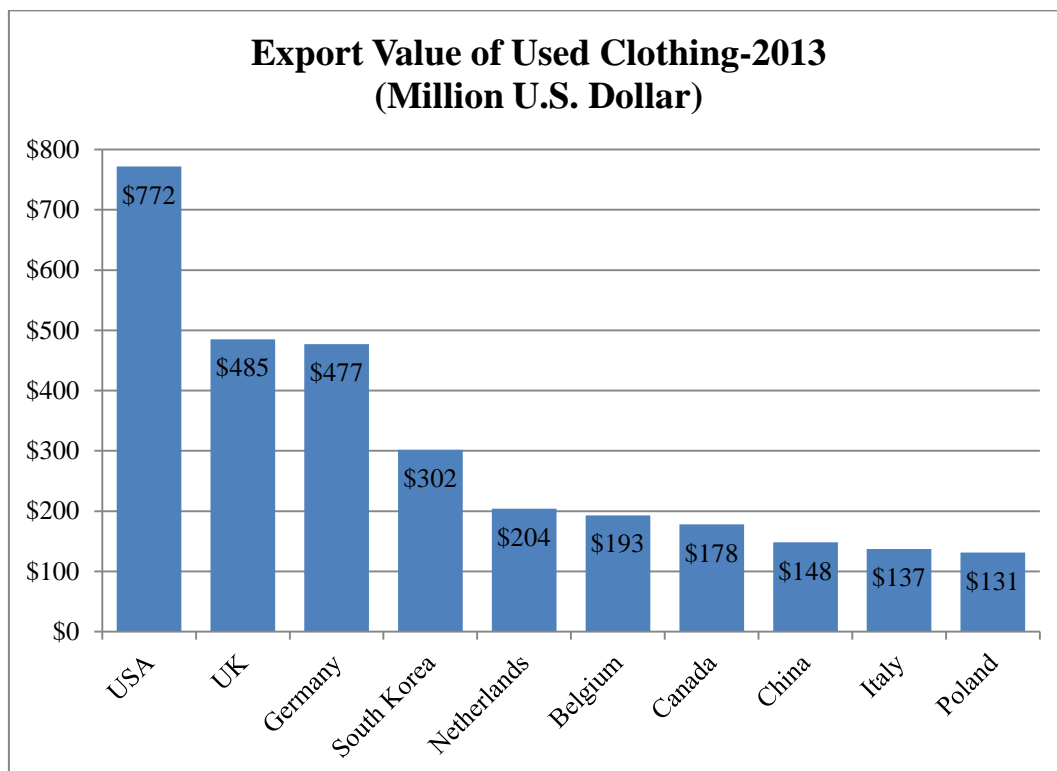


Figure 5: Export Value of Used Clothing-2013

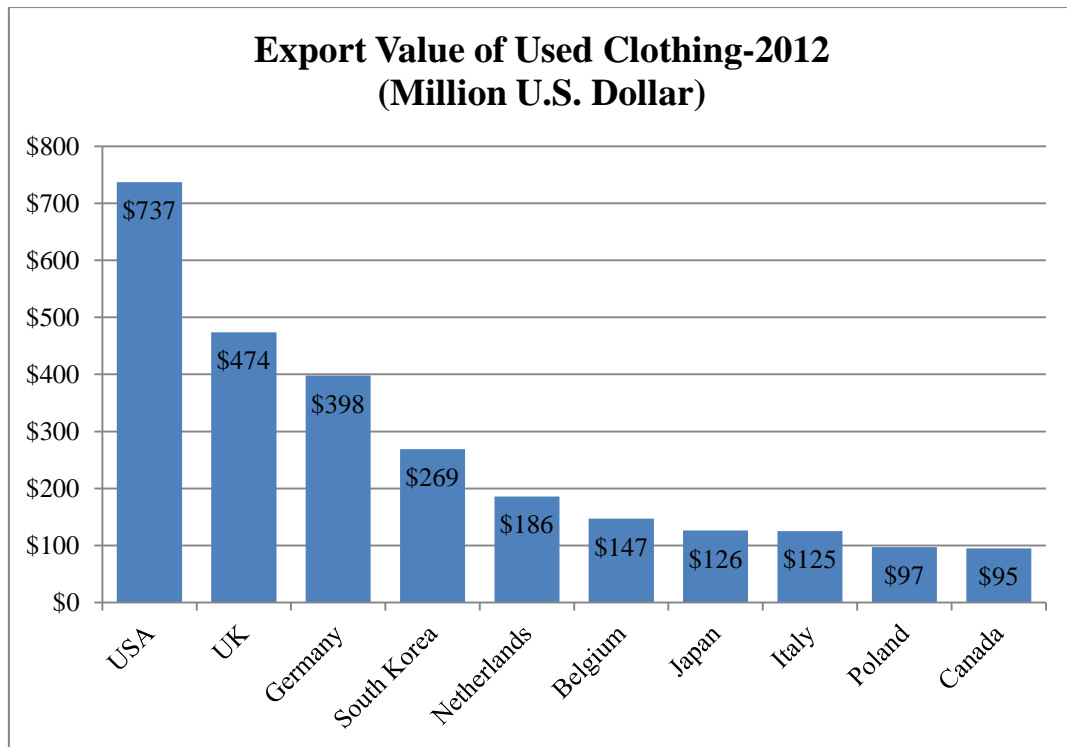


Figure 6: Export Value of Used Clothing-2012

Different countries are importing those used clothing for recycle and reuse purpose. Figure-7,8,9and 10 shows the import value of used clothing in the world.

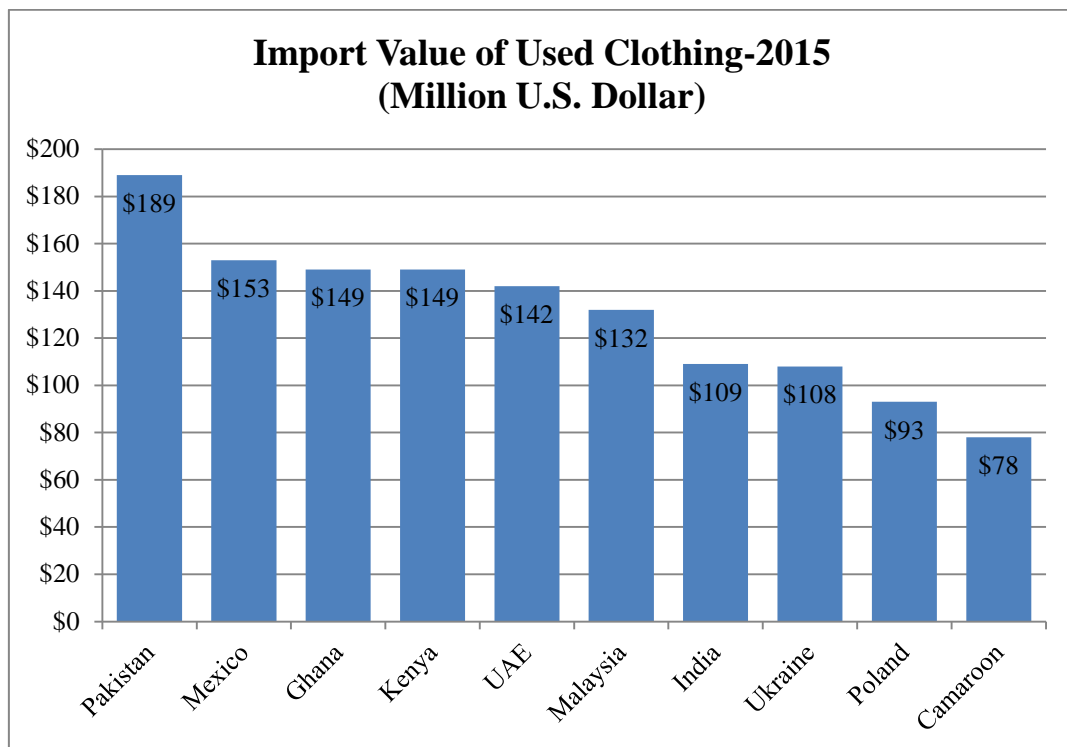


Figure 7: Export Value of Used Clothing-2015

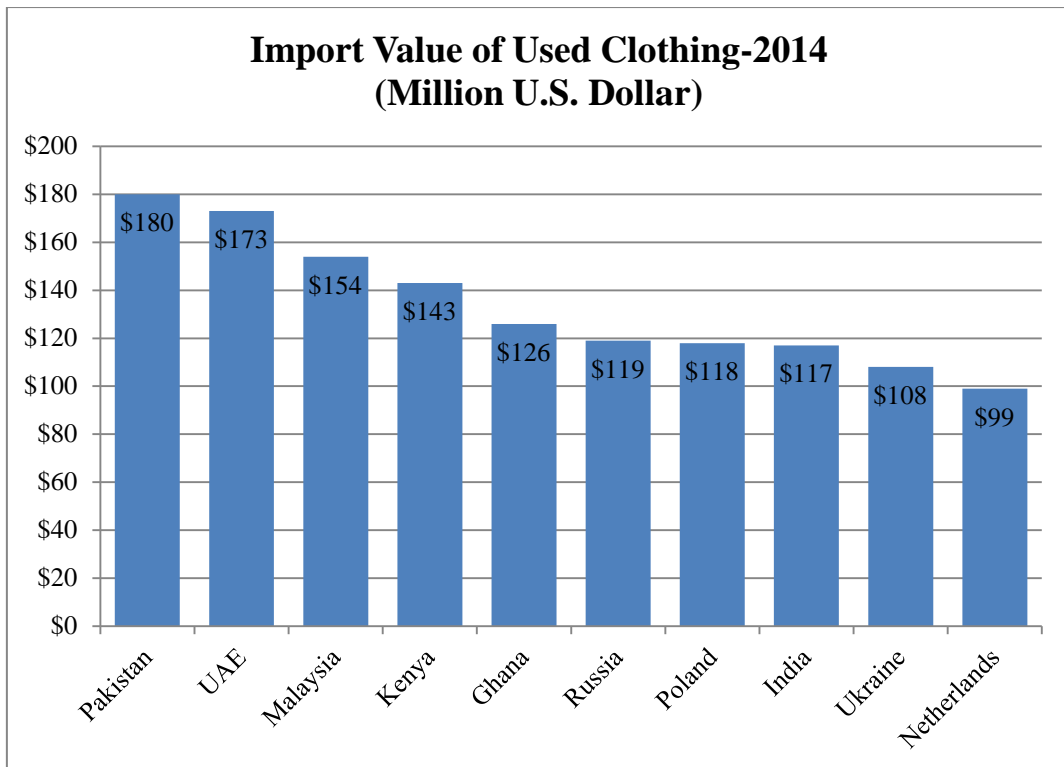


Figure 8: Export Value of Used Clothing-2014

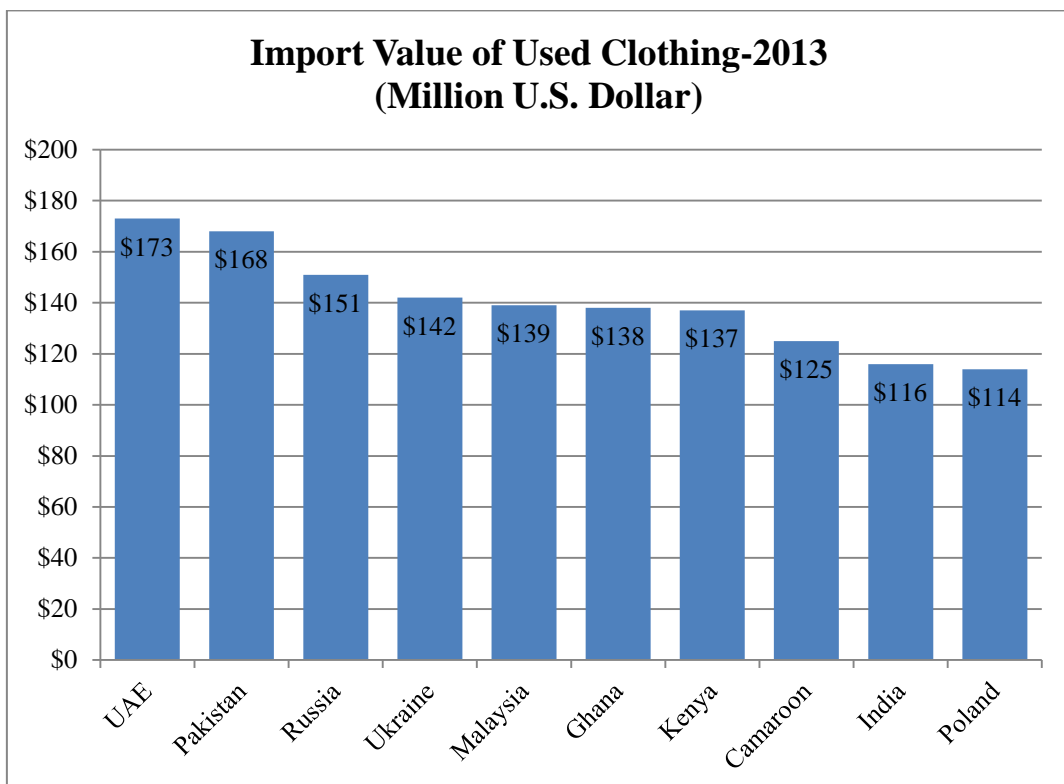


Figure 9: Export Value of Used Clothing-2013

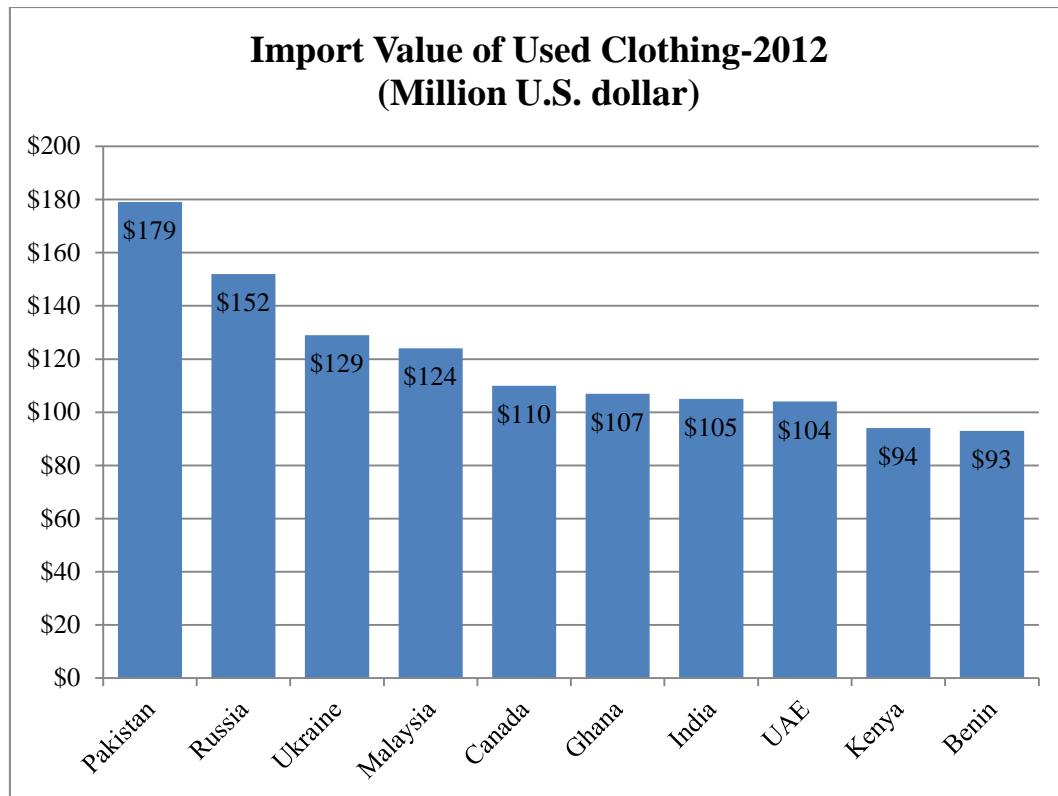


Figure 10: Export Value of Used Clothing-2012

10. Recommendation

Public awareness must be developed so that they don't throw away their used clothing to landfills as there is a huge market developing for used clothing around the world. Recycling process must be cheaper so that it gets cost effective.

11. Conclusion

When the consumers throw things away, they tend to forget about them. However, all of the trash has to go somewhere and that somewhere is usually to the landfill. Landfills are not infinite and when they get full and there is no more room for trash. But recycling and reuse keeps things out of the landfills, which is better for the environment. Many resources go into the manufacturing of clothing. As clothing breaks down, as anything will, it can contribute to pollution that seeps into our soil and our water. We all live on this planet, and we are all responsible for doing our part. Helping to keep trash out of the landfills by recycling and reuse is something that we can do and that includes recycling your used clothing. If recycling and reuse will be more, it will help to reduce the need for the manufacturing of new good. Manufacturing requires raw materials and the process usually contributes to pollution of both the air and in the soil. Manufacturing also requires huge energy resources. Recycling and reusing second hand clothes means that fewer raw materials are needed, less energy is used and less pollution is generated. And of course, donating second hand clothes helps the planet and other people; it is a win-win situation all around. Exporting these goods keeps them out of the landfill and gets them into the hands of people who can use them. Buying secondhand is good for the environment. Buying used

clothing and goods decreases demand for new clothing and goods and keeps virgin resources from being used.

References

- [1]. <https://en.oxforddictionaries.com/definition/recycle>
- [2]. <https://en.oxforddictionaries.com/definition/reuse>
- [3]. Karin M. Ekstrom and Nicklas Salomonson (2014), Reuse and Recycling of Garments and Textiles—A Network Approach, *Journal of Macro marketing*, Vol. 34(3) 383-399
- [4]. <https://www.thebalance.com/textile-recycling-facts-and-figures-2878122>
- [5]. Domina, T. & Koch, K. (2002) Convenience and frequency of recycling – implications for including textiles in curbside recycling programs, *Environment and Behavior*, 34, 216–238.
- [6]. Laura Farrant & Stig Irving Olsen & Arne Wangel (2010), Environmental benefits from reusing clothes, *International Journal of Life Cycle Assess*, 15:726–736,
- [7]. Koch, K. & Domina, T. (1999) Consumer textile recycling as a means of solid waste reduction. *Family and Consumer Sciences Research, Journal*, 28, 3–17.
- [8]. Solomon, M.R. & Rabolt, N.J. (2009) *Consumer Behavior in Fashion*. Prentice Hall, Upper Saddle River, NJ.
- [9]. Jacoby, Jacob, Carol K. Berning, and Thomas F. Dietvorst (1977), ‘‘What About Disposition—What Do Consumers Do with Products Once They Have Outlived Their Usefulness, and How does this Relate to the Purchase of Replacement Products?,’’ *Journal of Marketing*, 44 (2), 22-28.
- [10]. S. CUC, M. Vidovic (2011). Environmental Sustainability through Clothing Recycling. *Operation and Supply Chain Management*, 4(2/3), 108-115.
- [11]. Britten, F. (2008) Is recycling your old clothes worth it? *The Sunday Times*. [Www document]. URL <http://www.timesonline.co.uk/tol/news/environment.html> (accessed on 18 February 2010).
- [12]. Morley, N., Slater, S., Russell, S., Tipper, M. & Ward, G.D. (2006), Recycling of low grade garments waste. Oakdene Hollins, Salvation Army Trading Company, Nonwovens Innovation & Research Institute. [<http://www.oakdenehollins.co.uk.html>], (accessed on 21 March 2008).
- [13]. Hyun-Mee Joung and Haesun Park-Poaps (2014), Factors motivating and influencing garments disposal behaviours *International Journal of Consumer Studies* ISSN 1470-6423