

Chapter 6

E–Waste Management for Sustainable Development: A Case of Private Commercial Banks in Bangladesh

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ABSTRACT

Continuous e-waste generation causes harms to the environment and the economy. This study aims to explore e-waste management systems in the private commercial banks in Bangladesh and ways to reduce e-waste generation and sustainable solutions of e-waste management. The rapid economic growth and establishment of commercial private banks has created a market for computers, consumer electronics, and household appliances in Bangladesh. This study looks into the generation of e-waste growth rate and remedial measures. The e-waste is harmful to human health and for the environment. Barium and lithium are examples that affect brain, heart, liver, kidneys, and skeletal system. It's critical to raise awareness about the dangers of inappropriate e-waste disposal. E-waste must be recycled properly to have a low environmental impact. It was found that banking generated 2176.30 tons of e-waste. Results showed statistically significant growth rate. Buy back guarantee and bring your own device may be options for e-waste reduction.

1. INTRODUCTION

E-waste is a growing concern as well as a significant commercial potential, considering the volume of e-waste created and the harmful and valuable components included inside. Iron, copper, aluminum, gold, and other metals account for more than 60 percent of e-waste, while contaminants account for 2.70 percent. These pollutants' produces high toxicity, particularly when burnt or recycled in uncontrolled

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circumstances. The Basel Convention designated e-waste as hazardous and established a framework for regulating the Trans boundary movement of such trash (Widmer *et al.*, 2005). Electronic garbage or e-waste is one of the world's fastest increasing concerns. E-waste is composed of a variety of components, some of which include dangerous compounds that, if not properly disposed of, can have a negative influence on human health and the environment. Electronic garbage, or e-waste, is a growing environmental concern in a number of developing nations, including Bangladesh. It is one of the most recent categories of garbage to be classified as a waste material. Bangladesh, in line with worldwide trends and in response to its continued rapid expansion, is expanding its reliance on electronics-based appliances, equipment, and tools in people's homes, offices, industrial units, cars, and communication systems. This has resulted in an increase in the rate of e-waste creation (BUET, 2018). Many developing countries and countries in transition have an informal or less-organized small-scale sector that acquires discarded or obsolete computing equipment for repair and resale. Numerous informal and unskilled groups collect and recover elements such as copper, gold, and plastics from electronic and electrical garbage (e-waste), unaware of the harmful health and environmental consequences (Quinn *et al.*, 2021). E-waste defined as all types of electrical and electronic devices and their parts that have been thrown away as garbage by the owner with no intention of reuse. According to a European Union study, e-waste is growing at a rate of 5.0 percent per year, roughly three times faster than other waste streams in the solid waste sector (Schwarzer *et al.*, 2015). The use of electronic components and microchips in domestic appliances, office equipment, transportation systems, and industrial instruments and gadgets has increased exponentially during the last few decades. As these products reach the end of their useful lives, they are accumulating in ever-increasing quantities at various waste sites in practically every country on Earth. Commercial banks are no exception, and the digitalisation of the industry, as well as the emergence of e-commerce, internet banking, and cloud computing, have accelerated the trend. As a result, the amount of electronic garbage generated by commercial banks in Bangladesh has increased many folds. Electronic waste (e-waste) or waste from Electrical and Electronic Equipment (WEEE) contains a number of hazardous compounds, including lead, chromium, and plastic additives. Often containing valuable metals and other reusable materials such as plastics, e-waste has been viewed as a source of additional revenue by an increasing number of Bangladesh's low-income and unemployed residents. Recycling scrap and used electrical equipment is a lucrative business in Bangladesh, where there is little or no environmental regulation or occupational health legislation to protect workers who are directly exposed to health risks associated with waste recycling activities. In our country, the informal sector recycles a relatively tiny percentage of used electrical equipment; the remainder is dumped in landfills, rivers, ponds, sewers, lakes, channels, and open places. Improper recycling and recovery practices can have a significant negative influence on the environment. Crude methods of deconstruction frequently result in toxic emissions, which contaminate the environment and expose workers and the general public to hazardous elements. Assessment of e-waste generation is critical for addressing the difficulties of e-waste, setting targets, and identifying optimum management strategies. In this research, an attempt has been made to quantify the electronic waste generated by commercial banks in Bangladesh. Electronic trash (e-waste) management is undergoing tremendous change. Apart from a fast-growing global population, globalisation is pushing product demand, resulting in increased costs for a variety of resources. The planet is becoming more crisscrossed with used electrical items and recyclable resources. It means both opportunities and challenges of e-waste management (William *et al.*, 2008). E-waste policies and laws are emerging to address the worldwide challenge of rising e-waste. Even assessing the creation of e-waste is proving difficult in a number of nations. The primary impediments to implementing current

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