Time to formalise informal e-waste management in Bangladesh

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WITH 4-5 percent annual growth, the global electrical and electronic waste (e-waste) reached up to 44.7 million tonnes in 2016, of which 20 percent, or 8.9 million tonnes, is documented to be collected and recycled properly. According to the UN University, 50 million tonnes of e-waste is discarded by the world inhabitants which is greater than the weight of all commercial airlines the world has seen so far.

E-waste is hazardous, complex and mostly discarded in the general waste stream, especially in developing countries. The unprecedented growth of e-waste is not only contributed by developed countries but also by developing countries like Bangladesh.

In case of Bangladesh a wide range of factors, including rapid globalisation, urbanisation, increased access to modern technology and purchasing power, substantial reduction in new product development cycle, increased frequency of offering new products, and higher use of planned obsolescence strategy by electronic products manufacturers are contributing towards the generation of a huge amount of electronic waste stream.

The growth of such amount of waste in recent years is exponential when compared to even four to five years back. The prediction that in the coming years we would consume even more types and varieties of electronic goods propelled by the increased prosperity of the country. This consumption will eventually lead to even higher growth of electronic waste. Unfortunately, we are yet to know how much we have generated recently and in the recent past, let alone the future e-waste generation data.

A 2009 estimation predicted that Bangladesh generates roughly 2.81 million tonnes of e-waste every year and the lion's share of that waste stream is recycled by an unskilled, deregulated, unstructured and informal recycling sector. This is 2019 and naturally the e-waste volume is 4-5 folds of the amount of 2009 and still the informal sector is primarily handling the recycling process of this huge amount of e-waste. This is posing significant human and environmental health risks and leads the country to lose a significant amount of recoverable precious materials.

China, India, Ghana, the Philippines, Pakistan and Nigeria are the major countries that recycle or reuse more than 80 percent of e-waste generated by developed countries. Of them, China receives and recycles 70 percent alone.

Researches showed that e-waste is not only traded between developed and developing countries but also between developing countries. Upon treatment or recycling of the imported e-waste, China uses the recycled materials in manufacturing various types of electronic and electrical equipment. One of the major destinations of the Chinese refurbished outputs is Southeast Asian countries.

Bangladesh is also becoming an important secondary recipient of e-waste global export due to its substantial trade relationships with China, its exponential growth in internal and regional trade, illegal import by brokers and traders, use of 'waste tourists' and lack of e-waste specific regulations.

According to the MRC report 2017, $2.2 billion worth of consumer electronic products (HS code 84 and 85) were imported to Bangladesh in 2016, where China (69 percent) was the largest exporter. Ceiling fan and other types of fan, air conditioner, refrigerator, washing machine, battery, UPS, microwave woven, television and spare parts are included in the same code. Besides, in 2018, 40 million mobile phones were imported where 30 million imported legally and the rest through grey channels, according to an estimate of the Bangladesh Mobile Phone Importers Association.

With an annual growth rate of 15-20 percent, the laptop market of Bangladesh was worth about $175 million in 2018 and 60 percent of the demand is largely meet by the import of laptops from China, Singapore, the USA, Thailand and Malaysia.

The consumer electronics market is also growing in Bangladesh. With 15 percent yearly growth rate, the market of manufactured and imported consumer electronics was estimated at $4 billion in 2017. Many Bangladeshi companies have also started manufacturing a range of consumer electronics products in recent times to meet the demand of the lower income people. This clearly represents a potential growth trend in the consumer electronics industry. However, this also increases the worry of the exponential growth of e-waste. Bangladesh does not have any preparation whatsoever to treat or manage this huge amount of e-waste in a sustainable way.

Bangladesh currently has no specific environmental policy or act or guidelines to directly manage the e-waste problem. Though a draft regulation on 'E-waste management rules' was developed and amended in 2011 and 2017 respectively under the Environment Conservation Act, 1995, no progress in rules acceptance and implementation has been visible till today.

It is commonly said that the future of e-waste management in developing countries depends not only on the effectiveness of local government and the informal operators of recycling services but also on community participation and private manufacturers together with national and regional initiatives. Integrating the informal sector into the formal could result in reduced pollution and health hazards. In addition, efficient and effective resource management practice may offer the country a lot of reusable resources from the e-waste recycling process. Now-a-days, extended producer responsibility (EPR) is considered as one of the most widely-used formal waste management-related policies that help integrate the informal waste management sector.

REUTERS/FILE

Old cellular phone components are discarded inside a workshop in the township of Guiyu in China's southern Guangdong province.

EPR requires the producers of electronics goods to take all or partial responsibility for the disposal of their commercialised products. EPR policy requirements can be implemented in many forms.

One of them is 'Product take-back requirements' where at the post-consumption stage the manufacturers take the responsibility of taking back their products in whole or part. The extent to which producers are required to recycle their post-consumption products can be defined in the performance standard requirements.

The raw materials categorised as high environmental risk are often subject to material taxes. The purpose of such taxes is to encourage manufacturers to shift towards more environment-friendly parts or components. In some cases, consumers assume the responsibility of e-waste management by paying a deposit while purchasing a product and then receiving a refund -- known as deposit or refund schemes -- when returning the post-consumption product. Customer responsibility can also be extended by charging consumers advance disposal fees at the point of purchase for the cost of treating and recycling without any refund afterwards.

Landfill taxes, illegal dumping fees, tax benefits and subsidies for eco-friendly design, labeling, products and promotions are other forms of EPR implementation. Taking the various forms of EPR into account, it would be interesting to see the level of urgency from the electrical and electronic products manufacturers and/or resellers of Bangladesh regarding the adoption of EPR.

According to the proposed E-waste Management Rules, 2017, the government is planning to introduce the deposit or refund schemes. Moreover, the proposed rules also set the goal to increase the extent of producer responsibility gradually from 15 percent to 55 percent from the first year to the four year of rules implementation. Although many consumer electronics manufacturers selling home appliances, batteries and bulbs are already taking back their old, close to end of life electronic products through different types of consumer promotions, the intention is not clear – whether it is a strategic initiative motivated by EPR or something else.

There is no doubt that integrating EPR into the informal e-waste recycling sector would be highly challenging for Bangladesh. A research conducted by the authors on the informal sector of e-waste management revealed that there is a lack of coordination among collection units, insufficient data on regular supply and demand of e-waste, no quality control or check on supply, inadequate infrastructure, and dearth of education and skill on separation, dismantling and even recycling.

Factors such as manufacturing of non-branded and counterfeit products, usages of refurbished and repaired second-hand products, the likeliness of original parts being replaced by other brands or generic components are compounding the existing challenges faced by the e-waste management sector.

To mitigate these challenges and integrate with the EPR system, there is a strong need to coordinate the input and output sector of the informal e-waste system with proper institutionalisation and regulation. With adequate public awareness campaign, a basic waste separation and collection infrastructure needs to be developed and the recyclers and recycling centres must be developed with right training and education.

The monitoring process can be streamlined through recycling licensing and certificates. Interface organisations such as third-party private recyclers can be nurtured to mediate between the informal sector and the manufacturer group. The integration is likely to be possible if the informal sector serves as organised collection points for the formal waste sector and after basic sorting is able to divert as much of the e-waste as possible to treatment facilities for recycling and treatment primarily performed by manufacturers or third-party recyclers.

Paying particular attention to the role played by the informal sector of e-waste management and specifying manufacturers responsibilities for such management with the integration of right environmental policy and capacity-based regulatory enforcement can pave the pathway to develop a formalised end-of life products waste management system. This is a dying need for Bangladesh if we are to enjoy the technology-mediated development with its full potential.

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REUTERS/FILE

An employee works near a Boeing 737 Max aircraft at Boeing's production facility in Renton, Washington.

Boeing says to halt 737 MAX production next month

AFP, *Washington*

BOEING said Monday it would temporarily suspend production of its globally grounded 737 MAX jets next month as safety regulators delay the aircraft's return to the skies after two crashes.

The decision confirmed investor fears that the company's recovery from the crisis is dragging on longer and creating more uncertainty for Boeing than executives anticipated.

Boeing's travails since March have weighed on the US economy, holding down American manufacturing output, trade and sales of durable goods while damaging the company's performance on Wall Street's benchmark Dow Jones Industrial Average.

In a statement, the company said it would continue to pay its workers despite the temporary production stoppage, but the decision immediately raised questions for the future of parts suppliers that contribute to the jets' manufacture.

"We have previously stated that we would continually evaluate our production plans should the MAX grounding continue longer than we expected," the company said in a statement.

"As a result of this ongoing evaluation, we have decided to prioritize the delivery of stored aircraft and temporarily suspend production on the 737 program beginning next month." The company said it would focus on delivering 400 jets it has kept in storage.

Though the jets have been grounded worldwide since March following deadly crashes in Indonesia and Ethiopia, which left 346 people dead, Boeing had continued to produce 40 of the planes per month at a Renton, Washington facility.

Last week, US aviation regulators issued the company an unusually sharp rebuke, accusing it of pursuing an "unrealistic" timeline for the MAX's return to service and of making public statements intended to put pressure on federal authorities.

The Federal Aviation Administration said Wednesday it could not approve the jets' return to service before 2020, even though Boeing had long said it planned to get officials' green light before the end of this year.

Boeing and the FAA have been under intense scrutiny for their responses to issues with the aircraft, including the flight-handling system involved in both accidents, the Maneuvering Characteristics Augmentation System, or MCAS.

Japan to tighten screws on tech giants to ensure transparency

REUTERS, *Tokyo*

JAPAN will tighten regulations to prevent technology giants including Facebook Inc and Google from abusing their market power and having unfair advantage over small businesses, officials said on Tuesday.

The new law would oblige tech giants, including Google LLC, Apple Inc , Facebook Inc and Amazon.com Inc to disclose the terms of contracts with customers and to report to the government about their operations, they said.

Japan's move followed the global trend - from the United States to Europe and Australia - of tightening the regulatory screws on the online platforms, which have policy makers scrambling to address concerns ranging from anti-trust issues to the spread of "fake news" and hate speech.

Google and Facebook have opposed tighter regulation, while traditional media owners, including Rupert Murdoch's News Corp, have backed reform.

"We want to put the new law into effect in the way that would make business transactions become transparent without imposing excessive burdens or hampering innovation," Economy Minister Yasutoshi Nishimura told reporters.

"The new law constitutes a framework for 'platformers' to make autonomous efforts to maintain transparency and fairness."

For protection of personal data, the government will revise the personal information protection law to allow individuals to request digital firms to suspend the use of their data. The law currently regulates the handling of data collected by illicit means.

With regard to the anti-monopoly law, the Fair Trade Commission will revise guidelines to respond to the digital market by evaluating the value of data when inspecting a tie-up of corporations.

How rare earth shocks lifted an upstart Australian mining company

REUTERS, *Mount Weld, Australia*

SPRAWLED across a spent volcano on the remote edge of the Great Victoria Desert in Western Australia, the Mount Weld mine seems a world away from the US-China trade war.

But the dispute has been a lucrative one for Lynas Corp , Mount Weld's Australian owner. The mine boasts one of the world's richest deposits of rare earths, crucial components of everything from iPhones to weapons systems.

Hints this year by China that it could cut off rare earths exports to the United States as a trade war raged between the two countries sparked a US scramble for new supplies and sent Lynas shares soaring.

As the only non-Chinese company thriving in the rare earths sector, Lynas shares have gained 53 percent this year. The shares jumped 19 percent last week on news that the company may submit a tender for a US plan to build rare earths processing facilities in the United States.

Rare earths are crucial for producing electric vehicles, and are found in the magnets that run motors for wind turbines, as well as in computers and other consumer products. Some are essential in military equipment such as jet engines, missile guidance systems, satellites and lasers.

Lynas' rare earths bonanza this year has been driven by US fears over Chinese control over the sector. But the foundations for that boom were established almost a decade ago, when another country - Japan - experienced its own rare-earths shock.

REUTERS/FILE

A worker picks up a handful of rare earth concentrate that has been left to dry in the sun before it is packed and shipped to Malaysia for further processing, at Mount Weld, Australia.

In 2010, China restricted export quotas of rare earths to Japan following a territorial dispute between the two countries, although Beijing said the curbs were based on environmental concerns.

Fearing that its high-tech industries were vulnerable, Japan decided to invest in Mount Weld - which Lynas acquired from Rio Tinto in 2001 - in order to secure supplies.

Backed by funding from Japan's government, a Japanese trading company, Sojitz, signed a $250 million supply deal for rare earths mined at the site.

"The Chinese government did us a favour," said Nick Curtis, who was executive chairman at Lynas at the time.

The deal also helped fund the building of a processing plant that Lynas was planning in Kuantan, Malaysia.

Those investments helped Japan cut its rare earths reliance on China by a third, according to Michio Daito, who oversees rare earths and other mineral resources at Japan's Ministry of Economy, Trade and Industry.

The deals also set the foundations for Lynas' business. The investments allowed Lynas to develop its mine and get a processing facility in Malaysia with water and power supplies that were in short supply at Mount Weld. The arrangement has been lucrative for Lynas.