

Management of Rise in E-waste due to Demonetisation

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E-Waste or Electronic Waste refers to the discarded electronic equipment's like mobile phones, office computers, television sets, credit cards, refrigerators etc. We present to you a few ideas to manage the increase in the E-waste generated due to demonetisation

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INTRODUCTION

The electronics that are supposed to be reused, recycled or disposed off are the commodities which form the scrap material until they are treated as they are supposed to, so still remain a part of E-Waste. Cathode Ray Tubes (CRTs), that form a major part of television sets and monitors are very difficult to recycle and are hazardous for our environment. This E-Waste has to be treated or else causes toxicity in many of the countries throughout the world by seeping down into the water table and also corroding the soil and polluting the environment.

E-Waste presents a potential security threat also like unerasable hard drives, credit card numbers linked with financial data or account information along with the records of online transactions which can be accessed by organized criminals can lead to security breaches. These will be prominent in India in the upcoming years mainly due to the recent announcement of demonetisation on November 8, 2016 by our honorable Prime Minister Mr. Narendra Modi. Due to this demonetisation and demoting plastic money, the use of digital payment modes are on a rise. This has its positive as well as negative

effects just like other political decisions. The positive effects will be seen in the long run as predicted by our rule makers, but one of the major negative effects will be a sudden surge rise in use of more and more electronic devices and equipments. These include mobile wallets, credit cards, debit cards, rupee cards, cash cards, cashback promotion cards, petrol point cards, and in order to access these electronic wallets or netbanking we need mobile phones, tablets and laptops. Government has launched Unified Payment Access with the means of BHIM application, but still it will require a mobile phone and also to add to all the above cards, another card of our citizenship called the Aadhar Card. So these will be the new replacement of cash in the upcoming years. These are in addition to the existing cards that we need to have like the driving license, voter id card, pan card, passport, aadhar card, plus a few passport sized photographs to be carried along all the time is what is generally recommended. Keeping all these along was already a hassle but now even more cards and mobile devices are to be carried. This will lead to an increased ownership of these electronics and when they will be discarded in future, it will add up piles and piles of E-Waste into the country.

Literature review

The present scenario

We live in an era these days where everybody is becoming more and more technologically advanced. People are running behind gadgets and learning to use all the latest launches. It's not just the learning part where it ends, it's also the aspiration to own and use these gadgets and their gimmicks. The big conglomerates that are making these are also on

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a high gear. These big companies are making huge profits out of the people by selling them the latest technology and all the while increasing the need and demand of these electronic gadgets. In a vast country like India, the digital penetration is not very high. With the launch of services by the likes of Reliance Jio and inexpensive android smartphones by Indian and Chinese companies, the Indian market has seen a surge rise in the sale of mobile phones and electronic devices. People already owning a mobile device too are going for a second phone to enjoy the benefits of these services offered by these companies like free calling or internet, even if these are not highly required. But the problem neither rises there nor ends. All the companies are focused upon how to sell their phones, how to catch the consumer, how to make people buy the gadgets and make huge profits out of them. Companies are focused on creating demands for multiple sim cards per user, multiple mobile phones, multiple gadgets like tablets, smartwatches, laptops, fitness bands, personal computers etc. These machines were created to make our lives simpler, but at some level sometimes it seems to be doing the opposite.

Management of E-waste

The management and understanding of this E-Waste can be done in different ways at 3 different levels. These 3 levels are from each point of our society,

1. At the personal level (as a citizen of India)
2. At the corporate level (major companies Corporate Social Responsibility or CSR)
3. At the government level (at the centre as well as the state)

At a personal level:

What is E-waste at a person level?

The E-Waste can be understood as the electronic items that we use on the daily basis. This includes the use of the various cards and electronic wallets adjoined with identity and finances and for managing the non-plastic money.

Solution

Now one of the ideas that can be implemented for the reduction of all these cards and entities is making one card for all cards. Such an infrastructure already exists in our country in the form of Aadhar Card. The Aadhar Card is one card which holds the identity of every citizen individually. It has biometric signature in the form of fingerprints. It can

be used as a single identity with all the details thus eliminating all other identity related and signature related cards. Now as per the case of digital money, the Aadhar Card can be linked to it as well. It has a digital inbuilt access as well as a unique identification number, which is also known as the Unique Aadhar Number (or UAN). These digital access and the UAN can be used to link your bank account with the Aadhar and the payments can be made and received directly through the bank accounts. This will eliminate any kind of need for debit/cash/credit cards etc. Also the mobile wallets has the disadvantage that it cannot transfer cross-platform, i.e, a person using Paytm wallet can only transfer funds to another person using Paytm wallet and not to the person using MobiKwik, PhonePe, Freecharge, SBI Buddy or any other wallet. Also, all these e-wallets charge a nominal fee for transferring money from the wallet to bank account, whereas if the Aadhar payment system is launched, then all these problems will be automatically removed. The security of Aadhar is through fingerprints, and added security features like retina scans and manual signatory or facial point recognition system can be introduced at an on-demand basis for the citizens who require them. So, all we need to carry will be one card for all - the Aadhar Card.

Another management idea at the citizen level can be the introduction of RFID chips per individual with latest security scanners and features. RFID or Radio Frequency Identification chips uses electromagnetic fields to identify and track the tags automatically. They have special readers that catch the frequency wirelessly. These can carry data of upto around 2000 bytes, and that too is being researched upon to be made reader specific and higher data capabilities with password protected and user authenticated data sharing. These RFIDs can be allocated to the user with only the important specified data and personal information that can replace all the electronics and cards that add to E-Waste.

At the corporate level:

What is E-waste at a corporate level?

All the companies focus on making more and more consumers buy more and more products by them each day. Instead of reducing their consumption of electronics, companies focus on increasing them, so that they can sell their products and earn profits through sales. This generates an enormous amount of E-Waste.

Solution

We can see the example of one of the biggest tech giant in the world, made what it is by Mr. Steve Jobs, the rank one smartphone maker Apple Inc. In the United States, Apple follows this policy of offering its customers big discounts on exchange offers, i.e, as soon as they launch their new model, they ask their customers to bring back the old model and get discount on the new model. By doing this Apple hits two birds with a stone, they enhance their new model sales, and they also do their societal marketing and participate in the Corporate Social Responsibility actively. The old phones that they gather, they recycle and reuse its usable components and treat the waste properly before dumping. Indian companies should also start such schemes and take part in reducing E-Waste in this manner pro-actively.

Another idea for managing the increase in corporate level E-Waste is by introducing just a simple chip, which contain all the useful or necessary data required in the daily life. The simple chip can be mounted anywhere, at the back of your wallet, on your existing mobile phone, or even at the back of your hand. This chip can contain your basic profile as well as your daily routine requirements. It can be personalised as per the requirement of the user. It can add in itself a feature to act as a Metro Card for a user in Delhi, where the protocol for Delhi Metro reader can be added. Also the provision for the daily basic wallet info or money can be added into it for basic expenditure per day based on the personal discretion of the individual. Basic identification information of the individual can be added into it along with security features of password protection or fingerprint scanning etc.

At the government level:

What is E-waste at a government level?

This E-Waste problem has to be seen and managed as an atrocity to the environment. The government has to make sure it is treated properly and not just dumped into earth or water, as it may get poisonous for the environment and people.

Solution

To manage this due to demonetisation they should introduce features or innovations to handle non-plastic money. Other than this they should introduce schemes to motivate people for participation in non-disposal of waste items in a harmful manner. Instead they can offer remunerations and rewards systems for active participation in managing E-Waste.

Government can put up small plants for recycling these wastes and auction them at low prices to raise funds for keeping the operations running. They can organize drives and events like "Best out of Waste" for promoting innovative minds in handling the problems like these and make something productive out of it. People can be offered cashbacks or discounts on government offerings and sellings if they give them the old unused electronics, thus ensuring proper and safe disposal of them.

We can observe how the electronic waste is on a rise now already, and due to the demonetisation effect, it is only going to rise. So few of these steps should be implemented at each and every level now itself, only then we can ensure a low rise in E-Waste, which might even be manageable by our future nation.

" We do not inherit the Earth from our ancestors, We borrow it from our children."

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