

"ELECTRONICS REUSE INDUSTRY: HOW TO OVERCOME CONSUMER HESITANCY?"

Research Paper

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"Abstract"

Refurbishment and remanufacturing of electronic devices are reuse options that benefit the customers and the environment. Reuse of electronics has the negative connotation of inferior quality and risk of failure causing customer purchase hesitancy. This research presents insights on how the electronic reuse businesses are fighting buyer's hesitancies. First, companies offer products and services that attract and satisfy the buyer's expectations, like a wide range of good quality products and brand options at a lower price point. Then, they also avoid factors that dissatisfy the customers like poor warranty, rigid payment and product return policies, and mediocre customer service. They want a positive buying experience for repeat business and word-of-mouth marketing..

Keywords: Circular Economy, Refurbish, Remanufacturing, Electronics Reuse, ICT

1 Introduction

Reusing electronics benefits, not just the customers but also our planet; but why the slow consumer uptake in industrialized nations like the United States (U.S.)? Extending the life of devices before they become electronic waste (e-waste) is economical and helps prevent the rapid mounting of e-waste in our landfills. However, in a recent survey by Statista (2022) of 10,057 Americans, 66% of respondents were unwilling to buy a refurbished smartphone. How should the electronic reuse industry persuade the public to give used devices another chance?

While there is increasing academic research in the Circular Economy Reduce, Reuse, and Recycle, the secondary market in electronics research is still in its infancy. The notable pieces of literature available at the moment contain studies of consumer perspectives. Limited research explores the business angle from the viewpoint of industry players: refurbishers, remanufacturers, and retailers. Therefore, the research question for the paper is:

How do the electronics secondary market players utilize their competencies to address buyer's hesitancy and grow the market?

This study aims to understand how the reuse electronics industry companies plan to grow the market. The research explores the business marketing strategies and solutions to overcome buyer's hesitancy toward electronic used goods in industrialized nations like the United Kingdom (U.K.) and the U.S. This research can provide a snapshot of the industry's marketing strategies, which companies can benchmark and improve their game plan.

2 Theoretical Background

2.1 Two-Factor Theory

Leading the consumers to depart from the traditional "throw-away" consumption and forget about buying brand-new electronics would require solid motivating factors. The motivation-hygiene (two-factor) theory of job satisfaction indicated that "the factors involved in producing job satisfaction (and motivation) are separate and distinct from the factors that lead to job dissatisfaction" (Herzberg, 2008, HYGIENE VS. MOTIVATORS section). While the two-factor theory is generally used in employee satisfaction and retention, it can be expanded to motivating and inspiring consumers towards purchases and advocacies. Herzberg's theory implies that it is not enough to avoid dissatisfiers to encourage buyers; it also requires satisfiers (Kotler & Keller, 2016). The researcher will use this theoretical framework to examine the business strategies and promotions used in the electronics reuse industry.

2.2 Satisfiers

Motivators or satisfiers are the factors that are associated with positive outcomes derived from performing an action (Robbins & Judge, 2017). Motivators are intrinsic factors that fulfill the individual needs or ultimate goal (Herzberg et al., 1959). In secondary market resale, these factors satisfy a customer's need to buy a reliable product with specific features at an established price. These factors would lead to customer satisfaction and possibly repeat business.

2.3 Dissatisfiers

Hygiene or dissatisfiers are extrinsic factors that cause unhappiness when not adequate (Herzberg, 2008); the adequate presence of these factors will not motivate a purchase. An example provided by Kotler & Keller (2016) relates to the product warranty. They pointed out that providing a product warranty does not necessarily mean customers will purchase the product. However, an absence of one will dissatisfy a buyer (and may complain or refrain from buying).

3 Literature Review

3.1 Product Life-Extension: re-marketing, reselling, refurbishing, and remanufacturing

The short innovation cycles on Information and Communication Technology (ICT) devices like mobile phones, laptops, printers, etc., and "throw-away" consumption have driven the increase of electronic waste (e-waste) in our landfill. While recycling does help, only 20% of the 50 million tons of e-waste generated per year globally was known to be recycled (PACE and U.N. E-Waste Coalition, 2019). The rest of the e-waste disposal process and destinations are uncertain. E-waste requires complicated handling and processing due to some toxic contents of electrical and electronics equipment (EEEs) that are hazardous to our biodiversity (Parajuly et al., 2019). Limiting e-waste would require a paradigm shift for both businesses and consumers. Extending the productive life of ICTs would mean slowing down the build-up of e-waste in the rubbish heap. Product life-extension is a business model that aims to keep products that still hold value in circulation as prolonged use, instead of throwing them, recaptures valuable materials, energy, and product components (Lacy & Rutqvist, 2015). Refurbishment and remanufacturing of older ICTs are forms of product recovery and restoration targeted for resale at a lower price compared to brand-new asset.

3.2 Reselling Electronics in Secondary Market

Several works of literature acknowledge the complexity of consumer buying behaviour (Esmailian et al., 2021; Kotler & Keller, 2016; Sharifi & Shokouhyar, 2021). It is a necessity for businesses to understand this complexity to offer the right products and services. Marketers must understand how the consumers process the marketing and environmental stimuli and make a purchase decision (Kotler & Keller, 2016). Applying Kotler & Keller's (2016) stimuli and response concept in marketing refurbished and remanufactured goods, the key stimuli are product features and options availability, fast shipping, economic, ecological responsibility, technological innovations, and online connectivity. The human brain processes the information from these stimuli and decides (purchase, save for later, or disregard). Motivation is a psychological process that primarily influences purchase decisions (Kotler & Keller, 2016). Motivation is a driving force for a person to act towards satisfying a need or achieving a goal (Karakiewicz et al., 2015; Kotler & Keller, 2016). This definition explains why, given the proper stimuli, customers will generally look for and acquire the products and services that match their needs and budget (Ellen MacArthur Foundation, 2018).

Studies show that 50% of users are willing to purchase used electronics "under the right condition" (Ellen MacArthur Foundation, 2018, p.8). Furthermore, the foundation suggested that businesses should target the "leading edge" users as they will lead the market as early adopters. In another study, Mugge et al. (2017) identified six consumer groups based on their response to the refurbished smartphone questionnaire: (1) casual supporters, (2) sustainability enthusiasts, (3) conservative critics, (4) susceptible followers, (5) proud power-users, and (6) expert techies. Casual supporters and sustainability enthusiasts have favorable views of electronic reuse. Furthermore, susceptible followers are potential buyers of refurbished and remanufactured electronics if provided with relevant information about the benefits of electronic reuse. Conservative users, proud power users, and expert techies have negative views of refurbished electronics. These findings about the users with negative opinions of electronic reuse resonate with Esmailian et al. (2021) findings that there will be a segment of the market that will not be bothered in buying refurbished products regardless of product pricing and condition ("like-new" or "as-new"). The weighty argument with the Ellen MacArthur Foundation's (2018) suggestion of changing "leading users" practices to purchase used products is that it will be challenging and require more effort and resources for businesses to reverse the negative perception of customers belonging to the resistant groups. A more efficient path would therefore be targeting customer communication and providing the proper incentives to the more accepting consumer groups, which can be as high as 50% of the users, as aforementioned.

3.3 Refurbishment

Refurbishment keeps the product in circulation longer, reducing the need to manufacture new products that use energy and natural resources and emit greenhouse gases (GHG; i.e., from burning fossil fuel). Buying refurbished product is a sustainable action. However, the connotation of "refurbished" units as inferior quality (Gåvertsson et al., 2018) can discourage the interested buyer. A refurbished product, primarily associated as used or pre-owned with device malfunction risk. It can come from different origins, such as store displays or demo units, customer returns, excess inventory, customer returns, and canceled orders (Esmailian et al., 2021). It is impartial to say that not all refurbished units have been excessively used, as some can be as good as new, and some are highly functional with possible cosmetic flaws (scratches or regular wear and tear). Many, including Esmailian et al.(2021,p.2) and Gåvertsson et al. (2018), emphasized the importance of educating consumers about the "true value" of refurbished goods from a cost-benefit standpoint. The "true value" recognition will help motivate customers. However, the product's "true value" must be greater than the risk to drive a purchase.

Ellen MacArthur Foundation (2013) defined product refurbishment as a process of reverting goods to functional condition through repair of faulty or close to failing parts replacement and updating the product's appearance for a "like-new" look. In ICTs, the practice would involve one or more of these processes: cleaning, replacing the battery or screen, fixing cosmetic defects, some degree of testing,

and repacking (Sharifi & Shokouhyar, 2021). The definition from both Ellen MacArthur Foundation (2013) and Sharifi & Shokouhyar (2021) do not ascertain the software-related processes, such as previous data erasure, factory setting reset, and software and firmware update. Since the tech-savvy users are the least likely to reuse ICTs (Mugge et al., 2017), it is crucial to highlight to the less tech-savvy users the software upgrade process, which includes the data erase and software updates. Doing this can increase their confidence that they are buying up-to-date products.

Since most "used" consumer goods, like ICTs and entertainment devices, are functional and not at the end of life after they are replaced, they are likely to end up as refurbished than remanufactured because remanufacturing costs more. Generally, products costing less than \$300 are refurbished (U.S. International Trade Commission, 2012).

3.4 Remanufacturing

A few works of literature associate remanufacturing with the process of restoring used assets to "as-new" conditions following the same quality standards as brand-new products (Chen et al., 2020; Ellen MacArthur Foundation, 2013; Kağnıcıoğlu & Kutlu, 2016). The process usually involves disassembly, replacement of worn or faulty components, reassembly, testing, repackaging, and distribution (U.S. International Trade Commission, 2012). Wahjudi et al. (2018) indicated that remanufacturing is more eco-friendly than producing new products due to fewer materials and energy consumption. However, in terms of cost, resource, and energy use, remanufacturing is less efficient than refurbishment. The complexity and scaled-up processes involving remanufacturing plus the requirements of capital funding to establish the infrastructures and facilities make remanufacturing more expensive. Therefore, remanufacturing is more appropriate for higher-value electronics like laptops, desktops, data center equipment, and industrial and medical apparatus, where more value can be recovered from a larger volume of electronics throw-aways.

3.5 Enablers and Barriers in Normalizing Electronics Reuse

Sustainability advocates like (Ellen MacArthur Foundation, 2018; Lacy et al., 2020) believe that technological advancements are the amplifiers for advancing the reuse of ICTs. Lacy et al. (2020) compiled a comprehensive list of technological amplifiers in their book. They refer to digital platforms for buying and selling used electronics, robotics, automation for disassembly and reassembly, digital sorting systems, and design for disassembly and repairability. However, these cutting-edge technologies were beneficial in scaling up the collection, refurbishment, and remanufacturing process. What is missing from the list is the power of social media. From promoting the benefits of buying used devices, discounts, and bundle deals, social media platforms help know consumer sentiments, product and service reviews (Sharifi & Shokouhyar, 2021), suggestions, and trends. Another enabler of the electronic reuse industry is warranty. Warranties can be a tool businesses can use to promote product reliability and quality (Alqahtani & Gupta, 2017). Warranties can mitigate customers' perception of the risk of failure and inferior quality.

Despite the economic and environmental benefits of electronics reuse, consumer hesitancy is one of the most significant barriers to normalizing buying used ITCs. User perception of inferior performance, financial risk if the unit fails to function, and early obsolescence (Ellen MacArthur Foundation, 2018) deter customers from engaging in the secondary market.

However, in reality, it is not just a perception; many customers are dissatisfied with refurbished products due to lower quality (scratches, lower battery health) and lack of accessories (Nasiri & Shokouhyar, 2021). Customer dissatisfaction, nowadays, is not only limited to a person's displeasure and dislike for repeat business but can easily be shared on social media and influence far greater audience reach. Second-hand shops must establish a good reputation by selling only vetted products and providing guarantees and warranties to their customers to mitigate these dissatisfactions. Ellen

MacArthur Foundation (2018) suggested that aside from guarantees, full transparency will provide added assurance and eventually confidence for the consumers.

Another barrier in this industry is the lack of standardization and certification (Ellen MacArthur Foundation, 2013). There is a need for the reuse industry to standardize its product quality and condition criteria, labeling, and certification so broader consumers can have transparency of information.

Lastly, the limited funding for infrastructure for device take-back collection, sorting, and remanufacturing will impede the growth of EEE restoration. While this study is focused on mitigating customer hesitancy towards used electronics, it is crucial to highlight the importance of infrastructure. Failing to access financial capital would mean limiting the advancement in refurbishment and remanufacturing technology, which hinders the scaling up in volume and the lowering of the cost of device restoration (Ellen MacArthur Foundation, 2018).

3.6 Method of Analysis

The researcher applied the theoretical framework from Herzberg's two-factor theory of motivation and satisfaction in examining the strategy, customer service, and promotions of businesses in refurbishment, re-marketing and resale, and remanufacturing of ICTs. The research is an exploratory study and employs a qualitative approach. It involved a documentary search of online sources to understand the content, look, and feel of the company websites, video logs (vlogs), and social media presence. The researcher also held a semi-structured interview with refurbishing, remanufacturing, or retailing companies in the U.S. and the U.K. Their strategies were presented as satisfier or avoidance of dissatisfier.

3.7 Observations and Discussions

This section contains the results and discussions of the documentary searches and interviews of key employees of companies operating in the secondary market for ICTs. Results are categorized as satisfiers or dissatisfiers avoidance. Promotions that would attract and fulfill the customer's need to acquire a product based on their quality and budget criteria are considered satisfiers. On the other hand, expected offerings that could disappoint and dissuade buyers if not available are considered dissatisfier avoidance.

3.8 Company A: RefurbMe (<https://www.refurb.me/>)

According to the CEO and founder, Mr. Simo Elalj, RefurbMe is an online site that helps customers compare and monitor Apple refurbished products sold by professional refurbishers. The company does not refurbish the product but provides a platform where buyers can quickly see the prices, warranty, and refund policies for every merchant selling a specific model. The comparator tool provides product information allowing buyers to make an informed buying decision. The company strategies include 1) providing full information transparency to increase consumer confidence in buying and selling refurbished products, 2) educating consumers with frequent blog posts regarding industry trends, news, and benefits of circular consumption, and 3) appealing to the customer's sense of environmental responsibility. Table 1 contains the website review findings. RefurbMe's main satisfier is the wealth of information (comparator tool, product specification and information, and the well-defined, standardized product state criteria). However, due to the nature of business as e-commerce or marketplace, the avoidance of satisfier offerings are limited to what their refurbisher offers. This situation is why RefurbMe has to choose and vet only those professional refurbishers to protect their integrity as an e-commerce business.

RefurbMe	Satisfier	Dissatisfier Avoidance	Findings
Product			

Product Variety	X		Offers a great array of new and refurbished Apple products from laptops, desktops, phones, tablets, headphones, watches, and other accessories.
Quality	X		Only list products from certified refurbishers which guarantee their products as good quality.
Brand Names	X		Offers Apple products
Packaging	-		Covered by refurbisher/supplier.
Performance	-		Covered by refurbisher/supplier.
Post-sales services		-	Covered by refurbisher/supplier.
Warranty		-	Covered by refurbisher/supplier. Only featured products with a minimum warranty of 30 days
Return Process/ Policy		-	Covered by refurbisher/supplier.
Product information: Specification and Condition	X		Full spec and product conditions are available on the website. It has standard criteria for the cosmetic state: grade A, B, and C posted on the website, regardless of how the refurbishers define their product condition (e.g., excellent, pristine good, fair, or acceptable.)
Price			
List Price	X		Prices listed are shown so customers can compare models and refurbishers. Up to 75% less than brand new. Comparison tool and filter available.
Discount	X		Discounts are offered by some refurbishers: student discounts, education discounts, wholesale discount
Payment Process		X	Through refurbisher's terms
Promotion			
Advertising	X		Through the website and social media
Public Relations	X		Through the website and social media
Information drive	X		Blogs, buying guides, posted on the website and social media.
Customer Review		X	Via Trustpilot 4.4 stars (As of 07 Aug 2022)
Freebies	-		
Place			
Distribution Channels		X	E-commerce
Locations		X	Online presence only, no physical store
Transport/Shipping		-	Covered by refurbisher/supplier, the website has a shipping details comparison tool (free shipping, availability, leadtime)
Website Ease of Use		X	Comparator tool that is easy to use and are in 5 languages

Table 1. RefurbMe Website Review Summary

3.9 Company B and C: Buybackboss and Again (<https://buybackboss.com/> and <https://goagain.com/>)

From competitive cash offers fast and easy device return process, free mail-in shipment to instant online offer, Buybackboss provides a platform for hassle-free exchange for people to cash in their older, even broken devices. Its CEO and owner, Mr. Jack Wright, indicated that the firm's goal is to encourage people to dispose of their older electronics by offering them a convenient way to make money from their e-wastes. The company provides numerous satisfiers to motivate sellers to turn in

their outdated devices for financial gain. It also ensures dissatisfiers like the difficulty of transaction and shipping are addressed.

Again, a sister company of Buybackboss is a global reseller and distributor of broken, used, and new high-end electronics. Their main objective is to make buying refurbished electronics a no-brainer choice for consumers. It offers as long as a 12-month warranty and a 60-day return policy with no restocking fees and competitive prices with an average of 20-30% less than brand-new products. Savings vary depending on the model and product condition. It is essential for Again to gain customers' trust by offering tested, renewed (like-new) devices with a warranty similar to new items. Its warranty is similar to new products and resonates with Alqahtani & Gupta's (2017) assessment that a warranty (as well as worry-free return policies) backs the quality claim of the refurbisher and addresses the buyer's worry about the risk of failure. The fundamental strategy for Again is gaining customer confidence, so dissatisfiers like poor warranty and return services or policies are avoided. Table 2 contains the website review findings.

Company	BuyBackBoss (buying used electronics)			Again (Reseller)		
	Satisfier	Dissatisfier Avoidance	Findings	Satisfier	Dissatisfier Avoidance	Findings
Product Variety	X		Buys a variety of (mobile phones and tablet) models and brands	X		Offers a variety of refurbished ICTs (phones, Macbooks, tablets, smartwatches, and consoles)
Quality	X		Accepts any quality, even broken ones.	X		Units are tested, only sells devices with 80% battery health
Brand Names	X		Buys top tech brands (Apple, Samsung, Google, L.G., Motorola, Huawei, HTC, Xiaomi)	X		Sells in top tech brands (Apple, Samsung, Google, L.G., Huawei, Sony, GoPro)
Packaging	-		Customer packs their gadget.	X		Provides safe packaging for shipment.
Performance	-			X		Products are tested with a 30-point inspection to guarantee functionality and performance.
Post-sales services		-			-	
Warranty		-			X	All products with a 1-year warranty
Return Process/ Policy		-			X	30-day returns with no restocking fees
Product information: Specification and		-		X		Provides the general product information, including cosmetic state

Condition				
Price				
List Price	X	The seller gets an instant quote from the company	X	Up to 70% less than brand new. A simple filter is available for a better search experience.
Discount	-		X	5% discount available for email subscriber
Payment Process	X	Via check or Paypal after receiving and testing the used electronics.	X	Accepts online payment: credit cards, PayPal, ApplePay, GooglePay
Promotion				
Advertising	X	via social media	X	via the website, YouTube, newsletter, email
Public Relations	X	via social media	X	via website, YouTube
Information drive	X	via social media	X	via website, YouTube
Customer Review	X	Via Trustpilot 4.7 stars	-	
Freebies	-		-	
Place				
Distribution Channels	X	online	X	online
Locations	-		-	
Transport/ Shipping	X	Free shipping to BuyBackBoss	X	FedEx 2-day shipping
Website Ease of Use	X	Comprehensive and easy to use	X	Comprehensive and easy to use

Table 2. BuyBackBoss and sister company Again Website Review Summary

3.10 Company D: The Big Phone Store (<https://www.thebigphonestore.co.uk/>)

The researcher talked to the managing director of The Big Phone Store in the U.K., Mr. Steve Athwal. The company has an online presence and multiple physical stores, capturing both the internet savvy and those who prefer to check their intended merchandise for purchase in a physical store. The company offers competitive pricing when buying, trading, and selling pre-owned electronics. It provides clients with a price-match promise, flexible financing (interest-free) option, a 12-month warranty on most pristine (like-new) electronics, bundled deals, and a smooth return process (including mail-in shipping). Its main goal is for the customer to have a positive buying or selling experience with the company so they will be repeat customers and spread the word about how better it is to buy or sell pre-owned electronic goods.

Bar-Isaac & Tadelis (2008) emphasized the importance of the seller’s reputation, especially for products where the quality of goods is in question, and previous transactions matter greatly to both parties. The company separates itself from others with substandard products and services by providing excellent customer service, including extending delivery cut-offs, having on-site repair services, and engaging and educating customers. Table 3 contains the website review findings for the big Phone Store.

The Big Phone Store	Satisfier	Dissatisfiers Avoidance	Findings
Product			
Product Variety	X		Offers a wide variety of techs from phones, computers, tablets, headphones, watches, speakers, Television, gaming consoles, cameras, and other accessories.
Quality	X		The company has infrastructure for electronics refurbishment and repairs. It has a machine capable of precisely heating up/cooling down the circuit boards with BGA components in a controlled manner. The store has 70+ quality checks on refurbished products.
Brand Names	X		Offers a variety of top market brands. The store itself is maintaining its brand as a professional refurbisher and a high-quality retailer of both new and refurbished techs.
Packaging	X		Provides safe environmentally friendly packaging for shipment, and original packaging for a new shipment.
Performance	X		Products are tested with 70+ tests to guarantee functionality and 80% or higher minimum battery level.
Post-sales services		X	Repair service is available within the warranty period.
Warranty		X	1-yr warranty for new and refurbished products, except for products with "fair" condition (have a 3-month warranty).
Return Process/ Policy		X	14-day return guarantee available
Product information: Specification and Condition	X		General spec and conditions are available on the website. The company has standard criteria for the cosmetic state: new, like-new, pristine, very good, good, and fair.
Price			
List Price	X		The prices listed are shown for model and refurbisher comparison. Quick search filters are available. Price promise match guarantee.
Discount	X		Different discounts are available; some are offered to followers on social media or free accessories for buying certain products.
Payment Process		X	Online payment (PayPal, Apple Pay, credit cards, and flexible payment options available.
Promotion			
Advertising	X		Online promotion on different social media platforms
Public Relations	X		Online, social media platforms
Information drive	X		Blogs, buying guides, and Vlogs posted on social media
Customer Review		X	Via Trustpilot 4.8 stars (As of 08 Aug 2022)
Freebies	X		Free accessories for buying specific items
Place			
Distribution Channels		X	E-commerce and physical store

Locations	X	U.K and E.U.; Wolverhampton, U.K. (Physical store)
Transport/Shipping	X	Free standard delivery for orders over £30, next-day delivery available for a fee.
Website Ease of Use	X	Very intuitive, a multitude of information available

Table 3. The Big Phone Store Website Review Summary

3.11 Company E: Circular Computing (<https://circularcomputing.com/>)

Circular Computing evolved from a refurbishing company to now a remanufacturing company, according to Mr. Steve Haskew, the director of Sustainability and Client Engagement. The company pivoted as the electronics industry shifted from changing hardware to changing software (hardware remains relatively longer). Circular Computing caters to the laptop needs of larger organizations and businesses like governments and resellers. The company's main competitive advantage is being the first to be awarded British Standards Institution (BSI) certification Kitemark, a leading product and service quality mark in the U.K. The BSI kitemark represents quality, competency, and commitment to product durability and sustainability, allowing the company to offer an alternative source of I.T. equipment. The company addressed the main satisfiers for an organization, high quality at a lower cost by delivering an average of 30-35% (up to 40%) cost savings compared to brand-new. The company also eases the worry of an organization about the risk of device malfunction and complicated return process by offering a 3-year warranty, free part replacement, and trial period as proof of concept. The I.T. customer can use the remanufactured laptops for ten weeks without commitment to purchase. This strategy covers Herzberg's concept that it is not enough to provide only satisfiers to motivate a person; dissatisfiers, like poor warranty and complicated product return, must also be avoided (Kotler & Keller, 2016). Circular Computing is thriving in the secondary market by providing products and services that satisfy its customer's needs and addressing worry and possible dissatisfaction.

Circular Computing	Satisfier	Dissatisfier Avoidance	Findings
Product			
Product Variety	X		Offers a wide variety of laptops
Quality	X		Excellent quality through 5+ hr Circular Remanufacturing Process & 360-point quality check. ISO9001, and BSI Kitemark certified. Uses British Standards BS887 in remanufacturing process.
Brand Names	X		Offers Dell, HP, and Lenovo brands
Packaging	X		Equal or better than new
Performance	X		Equal or better than new
Post-sales services		X	The website has an online help center for troubleshooting help/topics.
Warranty		X	Offers standard 1-year warranty on laptop and battery, extended warranty for up to 3 years
Return Process/ Policy		X	Through RMA process
Product information: Specification and Condition	X		Full specification available
Price			
List Price	X		Prices can be up to 40% savings, but a quote has to be requested for the actual price per unit.
Discount	X		via B2B negotiation

Payment Process	X	B2B payment
Promotion		
Advertising	X	Via website, social media
Public Relations	X	Via website, social media
Information drive	X	Via website, social media
Customer Review	X	Trustpilot 3.5 stars (As of 08 Aug 2022)
Freebies	-	Via B2B negotiation
Place		
Distribution Channels	X	B2B
Locations	X	Online- Distributors: U.K, Europe, North America
Transport/Shipping	X	B2B
Website Ease of Use	X	The website is helpful and easy to use

Table 4. *Circular Computing Website Review Summary*

4 Summary

From the interview of the participating companies, the key strategies are:

- Dissatisfier Avoidance: Making selling and buying pre-owned electronics easy by covering shipping fees, extending shipping cut-offs, mail-in device collection, instant quotation when selling old devices, financing options, and fast and easy transactions. Customer hesitancy is expected to lessen by increasing consumer confidence through information transparency on product status and performance, offering a warranty, and up to 60 days of product return without a restocking fee.
- Main Satisfiers: Incentivizing consumers economically through cash or store credits towards device upgrade or next electronic purchase, lower purchase cost, price matching, discounts, proof of good quality products, a wide variety of product and brand options, and consistent online presence for information drive, marketing communications, and promotions.
- Additional Satisfiers: Educating consumers regarding the benefit of reuse, refurbishing, and remanufacturing in electronics. The information drive is done through social media, emails, and blogs.

5 Conclusion and Limitations

Electronics reuse, such as refurbishment and remanufacturing, are sustainable options for acquiring ICTs. By purchasing used products, one is reducing the use of virgin raw materials, energy, and GHG emission.

Some secondary market players in the electronics industry acknowledge customer hesitancy and are working towards gaining buyer's confidence by ensuring that the purchase goal is fulfilled satisfactorily with quality products at a lower cost. Companies are also removing the negative image of the used electronic goods market by providing a competitive warranty, streamlined shipping and return processes, and excellent customer service. These companies aimed to elevate the overall secondary market by educating customers about the goodness of electronics reuse and the best way of choosing professional refurbishers, remanufacturers, and retailers with good reputations.

The objective of the research is to identify the business strategies of companies in the reuse market in electronics. Using the two-factor theory in categorizing strategies helps evaluate the company's

approach to motivating customers to purchase "renewed" products. While the framework can be applied to any secondary market company, the data obtained from this study is qualitative and cannot be used to generalize for the whole industry due to the limited five companies represented. More quantitative and empirical studies are suggested to solidify the validity of the results of this study. Moreso, the representatives interviewed in this study are from businesses with online presence but operate mainly in the U.S., Europe, or the U.K. The strategies of refurbishers and remanufacturers in Asia, Africa, or other regions may be different and merit future studies.

The electronics reuse market is growing and expected to expand rapidly as environmentalism grows among consumers. If the advocates of the reuse industry are correct that 50% of consumers are willing to buy pre-owned goods "under the right conditions," then this market has great potential to grow, while providing eco-friendly alternatives. Future research must help expand the secondary market, and the focus must be on understanding the "right conditions." Factors like product features, brands, retail channels (online or physical stores), customer ratings and feedback, and marketing channels (prints, emails, social media) must be examined to understand how they can be used to broaden the information campaign market reach and attract more sales.

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