

AN ANALYSIS OF INFLUENCES THAT ATTRACT YOUNG CONSUMERS IN THE NETHERLANDS' INTEREST ON BUYING REFURBISHED ELECTRONIC DEVICES

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ABSTRACT

Refurbished electronic devices are a relatively new and emerging topic in the IT world. Its newness causes people, young consumers included, to not know and be aware of it. Which means that the young consumers in the Netherlands do not always have interest in buying refurbished electronic devices (REDs). This is an issue for companies whose business revolves around REDs. This research paper aims to analyse the influences that can attract young consumers' interest in buying REDs. The analysis of this study was conducted using both literature and interviews. The finding discusses the young consumers' level of knowledge and awareness of this topic. Furthermore, there is also discussion of the solution that can help the company attract young consumers' interest in buying REDs.

Keywords: Refurbished Electronic Devices, Knowledge, Awareness, Interest

BACKGROUND

Electronic devices have long been invented to ease people's daily life. Since the advancement of technology, the invention and production of electronic devices has increased massively. These increases however make consumers discard their electronic devices faster than before, resulting in the huge increase in electronic waste or so called e-waste. To avoid this, the solution is to do refurbishing and remanufacturing of electronic devices since it will keep products to stay in circulation longer (Suaverdez, 2022). Companies that are interested in doing business related to refurbished electronic devices need to do thorough research to make sure their product sells in the market.

Seeing that companies are interested in the refurbishment electronic devices business, they will need to know their market in order to make sure their products will sell. One of the prominent consumers of their market is from the young consumer segment. Hence, the objective of this research is to find out the influences that can attract young consumers in the Netherlands' interest in buying refurbished electronic devices. This research aims to provide insight to said business people to make their refurbishment of electronic devices more visible to every segment of consumer especially the young consumer segment.

The main data collection method is in the form of literature review to collect main needed data. In addition to that, the author will also do interviews and focus group discussions with people that match the characteristics of this research's criteria, which are young consumers that live in the Netherlands. Afterwards, the data collected will be examined to develop answers.

THEORETICAL FRAMEWORK

Refurbished Electronic Devices

According to Suaverdez (2022), refurbishing and remanufacturing of electronic devices are reuse options that can give benefit to the customers and the environment. Refurbishment keeps the product to stay in the circulation longer, thus reducing the need to manufacture new products that

use natural resources and energy that will emit greenhouse gases (Suaverdez, 2022). Product refurbishment is also defined as a process that revert goods to functional condition through repair of defective or close to failing parts replacement and also giving updates to the product's appearance so they look like new (Ellen MacArthur Foundation, 2013).

Young Consumer

The international definition of the youth age group has not been agreed globally. According to the United Nations, 'youth' is defined as people of ages between 15 and 24 years old. People from the category 'youth' that become consumers will lately be called young consumers in this research.

This research focuses more on the young consumer segment rather than the general consumer segment for several reasons. The main reason is that the author's company coaches request for the data to be collected from this segment. Yadav and Pathak (2016) claims that young consumers are the representative of the society and also the long-term electronic users. This means that they are also the group of people who have strong electronic products consumption ability since they are exposed to technology.

People from the young consumer segment are the ones that usually have conversations about the recent environmental condition and also sustainability of the products they use on a daily basis. These conversations are the other reasons why this research revolves around them, because the topic of refurbishment of electronic devices is closely related to the product sustainability which then can collectively affect the environmental condition in the long run.

This research only focuses on the young consumers in the Netherlands because of two reasons. The first reason is that the authors' company coaches request the data to be collected from the Netherlands area only. The second reason is that it is easier for the author to collect and analyse the data if the data is sourced from a small and closed area in this case, The Netherlands, instead of the whole world.

Knowledge Level

According to Merriam-Webster, knowledge is the fact or condition of having information or of being learned. Segijn and Ooijen (2020) claims that insights in knowledge of personalisation could give information to advertising literacy programs so that they can adjust their programs to make people more informed consumers. Persuasion knowledge is also claimed to make consumers less susceptible to advertising by giving them power to resist persuasive attempts (Segijn and Ooijen, 2020). According to Park and Lessig (1981), consumers' subjective knowledge is related to their behaviour and according to Alba and Wesley Hutchinson (2000) that relationship between objective and subjective knowledge does not seem to be strong.

Awareness Level

According to Merriam-Webster, awareness is the quality or state of being aware. This means that the consumers have a certain quality or state of being aware. Huynh et al., (2022) claims that consumer awareness is an important feature that allows consumers' uncertainty about an individual seller's acceptance decisions.

RESEARCH METHODOLOGY

This research is performed to understand the aspects that can influence young consumers on their decision of buying refurbished e-waste. The researcher of this research report will need to do the research using qualitative strategy. Furthermore, the data acquired cannot be utilised raw. It needs to be interpreted, so the researcher can get the result.

For the sampling aspect, the researcher will need to use non-probability sampling instead of probability sampling. This is because this sampling is intended to assess a real life phenomenon, and not to make inferences of statistical nature related to the wider population (Yin, 2003). The sampling

will be convenience sampling since the researcher will be using university colleagues that match the criteria as part of the sample instead of unknown individuals.

The main objective of this research is to find out what influences young consumers to buy or not buy refurbished e-waste. Therefore, the main research method is to perform interviews that ask people that match the criteria to answer tailor-made questions related to the topic. In addition to that, the researcher will be performing literature review that can help summarise and evaluate a text related to the topic discussed (Knopf, 2006) and interview in the form of Focus Group Discussion (FGD) is chosen as the secondary research method by the author.

RESULTS AND DISCUSSION

The interview question “How willing are you to consider buying refurbished electronic devices if they fulfil most of your selection criteria (such as product feature, product price, etc.)?” can answer the main question because it will urge the interviewees to not only divulge their willingness to buy the refurbished electronic devices but also show some of the criteria they are looking for in the products itself which in this case become the criteria that will influence the young consumer to buy refurbished electronic devices. However, since this is going to be focusing on the factors, the interviewees’ willingness will not be discussed in depth.

Question Number	Factors	Interviewee Answers
8	Price	... price is an important factor for me... (G2)
		... I can save budget . (G3A)
		... it would most depend on the price ... (G4A)
		If they are cheaper very likely... (G6A)
		Price is the most important criterion for me... (G9B)
	Quality	... look for quality ... (G3B)
		... and quality . (G11)
	System Compatibility	... the new one always have improvement with the system ... (G4D)
		...cannot update to newer software ... (G5A)
	Sellers' Trustworthiness	...make sure the store that sell the refurbish products are trusted ... (G4C)

Table 1. Factors that can influence young consumers to buy refurbished electronic devices

Table 1 shows the factors that can influence young consumers to buy refurbished electronic devices. This table is made from the collection of several interview answers that correspond to the main question (which is about the factors or criteria). From the table, it is known that there is one main factor and three factors that can influence the young consumers. The main factor is the price of the refurbished electronic devices. This is shown in G2’s and G9B’s answers where they mention that it is an important factor if not the most important factor for them. G3A also mentioned their willingness to buy the product so they can save budget.

Other factors that can influence young consumers are quality and system compatibility. Both G3B and G11 stated that they look for quality in the products. Whereas for system compatibility, it refers to the devices’ software compatibility to the latest version. As stated by G4D that the new electronic devices always have the latest software version (unlike the refurbished electronic devices) and as referred by G5A that some refurbished electronic devices’ software cannot be updated to the latest one.

An interviewee (G4C) also raised the sellers’ trustworthiness as one of the concerns when buying refurbished electronic devices. They expressed that they will have to fully trust the seller of the refurbished electronic devices. They believed that a non-trusted seller might have planted malware or viruses on bought devices.

Question Number	Knowledge Level (Amount of Interviewees/Total Interviewees)	Interviewee Answers
3	Good Understanding (10 out of 21)	Only a very small percentage of electronic devices that are currently used are refurbished... (G1)
		... (REDs) are electronic devices that have been repaired or restored to a usable condition . Examples of REDs include refurbished mobile phones,... (G2)
		... many companies like Coolblue, Mediamarkt, and Amazon are offering refurbished electronic devices like phones... (G10A)
	Basic Understanding (5 out of 21)	... electronic devices that has been returned to the manufacturers and then they repair it and make it better ... (G3A)
		... its like you recycle your electronic waste... (G3B) ... it's like a used phone or tv and the store restored it again so it can work for the next person (G5B)
No Understanding (5 out of 21)	... it's the first time I've heard about it . (G4A) ... havent really heard that much about it so i have no idea what it mean . (G4B) I know nothing about REDs. (G7A)	
Indecipherable Answer (1 out of 21)	-(G5C)	

Table 2. Interviewees' Knowledge Level related to Refurbished Electronic Devices

The interview question “What do you know about refurbishment electronic devices (REDs)? (Provide examples of REDs such as mobile phone, laptop, game console, tablet, LCD TV, Bluetooth speaker, etc)” can answer the first subquestion because it will urge the interviewees to reveal to what extent they know about refurbished electronic devices. The answers to this interview question will then be compiled into Table 2.

Table 2 shows the knowledge level of the young consumers related to refurbished electronic devices. The author creates four specific interview answer categories that correspond to this subquestion, which is good understanding, basic understanding, no understanding, and lastly indecipherable answer.

The first category, good understanding category, refers to the interviewees' understanding of the refurbished electronic devices with which they can mention a definition of the REDs and also either their facts or their examples. There are 10 interviewees out of 21 that can be put in this category. Interviewees such as G1 was able to mention a fact about refurbished electronic devices, that is that only a very small percentage of the current electronic devices are refurbished. Another interviewee, G2, was able to mention both the definition (electronic devices that have been restored to a usable condition) and examples of refurbished electronic devices (such as phones amongst others). G10A, on the other hand, was also able to mention definition and also fact such as the companies that offer refurbished electronic devices, such as Coolblue and Mediamarkt.

The second category, basic understanding category, refers to the interviewees' understanding on the REDs topic with which they can only mention either a definition or examples of the REDs. There are five interviewees out of 21 that can be put in this category. G3A, one of the interviewees that is put in this category, stated that what they know about refurbished electronic devices are the electronic devices that have been returned to the manufacturer and then get repaired to make them better. This is similar to what G5B had to say about the topic, which is that the used phone or tv is restored by the store so it can work for the next person. On the other hand, G3B analogised the refurbishment process as the recycle process of people's electronic waste.

The third category, no understanding, refers to the interviewees' lack of understanding on the REDs topic with which they cannot mention either a definition, facts, or examples related to the topic. There are also five interviewees out of 21 that can be put in this category. Both G4A and G4B mentioned that they have not heard much about the refurbishment of electronic devices, hence they have practically no idea about it. G7A has the same knowledge level and straightforwardly say that they know nothing about the topic.

The last category, the indecipherable answer category, means that the answer provided by the interviewee is unable to be deciphered. There is only one interviewee that is put in this category. Only G5C has provided the author indecipherable answer.

Question Number	Experience Level (Amount of Interviewees/Total Interviewees)	Interviewee Answers
6	Good Experience (6 out of 21)	... swappie which is a company that refurbishes iPhones... (G1)
		... an ad online for a refurbished laptop from a well-known electronics company. (G2)
		Primarily from Telecom providers (G10A)
	Bad Experience (1 out of 21)	Probably, I cannot remember where or when (G6B)
	No Experience (11 out of 21)	No. (G5A, G7B, G9A)
Indecipherable Answer (3 out of 21)	- (G4B, G4D, G5C)	

Table 3. Interviewees’ Experience Level of Encountering Refurbished Electronic Devices Advertisement

The interview question “Have you ever seen an advertisement promoting refurbished electronic devices? Probe: If your answer is yes to the above question, where and when have you seen the ad? Can you please tell me more about the advertisement?” can answer the second subquestion because it will urge the interviewees to share their experience of encountering refurbished electronic devices advertisement. The answers to this interview question will then be compiled into Table 3.

Table 3 shows the experience level of the young consumers when encountering refurbished electronic devices advertisements. The author creates four specific interview answer categories that correspond to this subquestion, which is good experience, bad experience, no experience, and lastly indecipherable answer.

The first category, good experience, refers to the interviewees’ good experience when encountering refurbished electronic devices advertisement with which they are able to mention the media, the products, and or the company sources of said advertisements. There are 6 interviewees out of 21 that can be put in this category. Interviewees such as G1 have good experience encountering the advertisements because they can mention the company that refurbishes electronic devices, which is Swappie. G2 also had a good experience since they are able to mention that they saw refurbished laptop advertisements from a well-known electronics company. On the other hand, refurbished electronic devices advertisements encountered by G10A were from Telecom providers primarily.

The second category, bad experience, refers to the interviewees’ category refers to the interviewees’ bad experience encountering REDs advertisement with which they are unable to remember the details of the advertisements. There is only one interviewee out of 21 that can be put in this category. G6B have a bad experience because they cannot remember where and when they have encountered the refurbished electronic devices advertisements.

The third category, no experience, refers to the interviewees’ lack of experience encountering REDs advertisements with which they are unable to mention an advertisement. There are 11 interviewees out of 21 that can be put in this category. Interviewees such as G5A, G7B, and G9A straightforwardly answered no when asked whether or not they have encountered any refurbished electronic devices.

The last category, the indecipherable answer category, means that the answer provided by the interviewee is unable to be deciphered. There are three interviewees that are put in this category. Those three interviewees are G4B, G4D, and G5C. Their answer did not provide the author facts about whichever experience they have when encountering refurbished electronic devices.

Question Number	Approach	Interviewee Answers
11	Social Media	... through online ads or social media campaigns... (G2)
		... the best is to use online advertisement and social media . (G3A)
		YouTube ads. (G6A)
		... short interesting video on TikTok ... (G8)
		Blogs or short social media posts... (G9A)
	Others	... incorporated in school program . (G5C)
		Convince people ... (G6B)
		... a need for institutional change through politics ... (G7B)
		... stick with marketing ... (G9B)
		TV advertisement ... (G11)
13	Social Media	... a review video in youtube ... (G3A)
		social media ... (G5B)
	Others	... make it easier and more approachable for consumers to buy refurbished electronic device... (G1)
		Discounts or incentives ... (G2)
		... given trial ... (G4A)
		... software support for the device... (G6A)
		... the price-quality ratio would be crucial. (G9A)
		... attached gifts , or increased warranties ... (G10A)
		Emphasise the environmental benefits ... (G11)

Table 4. Approaches that can gain young consumers’ attention towards refurbished electronic devices

The interview question “From your viewpoint, what is the best approach (for e.g., tv advertisement, online ads, etc.) to make you learn about refurbished electronic devices? Probe: Why do you believe that is the best approach?” and “From your viewpoint, what are the best approaches to encourage the young consumers to consider buying refurbished electronic devices? Probe: Please explain why these are the best approaches?” can answer the third subquestion because it will urge the interviewees to share their opinion on what are the best approaches to attract young consumers’ attention towards refurbished electronic devices and their opinion on what are the best approaches to encourage young consumers to consider buying refurbished electronic devices.

Table 4 shows the approaches that can gain young consumers’ attention towards refurbished electronic devices. This table is made from the collection of several interview answers that correspond to the subquestion (which is about the approaches). From the table, it is known that there are two approaches that are considered the best approaches by the interviewees.

The first approach is social media. Interviewees have social media as the main answers for both questions. G2 stated that social media can make them learn about refurbished electronic devices, which means their attention is attracted to refurbished electronic devices. G3A and G5B also agree with this, since they also mentioned social media as the best approach. G6A gave an example of social media that can attract young consumers’ attention, which is Youtube advertisements. Another examples given are TikTok short videos according to G8. Blogs can also attract young consumers’ attention as stated by G9A. If it is about encouraging young consumers to consider buying refurbished electronic devices, G3A mentioned that making a review video on Youtube can also be one of the best approaches.

The second approach is other approaches other than social media. According to them, there are several ways that can attract young consumers' attention towards refurbished electronic devices. Interviewee such as G5C mentioned that making information about refurbished electronic devices incorporated in school programs can help attract attention. Another interviewee, G6B, believes that convincing people directly is a good approach for this case. G9B stated that they should stick with

marketing to attract attention. On the other hand, G11 believes that conventional way such as TV advertisements are able to attract young consumers' attention towards refurbished electronic devices.

Interviewees also have several answers when asked the approaches that can attract young consumers' attention towards refurbished electronic devices in a more encouraging way of making young consumers consider buying refurbished electronic devices. G1 stated that making it easier and more approachable for consumers to buy refurbished electronic devices can encourage the young consumer, which means that they believe the best way is to make them more accessible. G2 believes that if given discounts or incentives, young consumers will be more encouraged to consider buying refurbished electronic devices.

Some other answers are by G4A who mentioned that giving trials of the product can encourage the young consumers. G9A believes that the price-quality ratio is crucial in this case, which means that the refurbished electronic devices should have attractive prices with good quality to make young consumers. In addition to that, attached gifts and increased warranties on refurbished electronic devices are also attractive to potential consumers according to G10A. Lastly, G11 stated that if the producer emphasised the environmental benefits of refurbished electronic devices, it would encourage the young consumers to consider buying the refurbished electronic devices.

CONCLUSION

From the data collected, there are several factors that can affect young consumers. The main factor is price as there are more interviewee answers that mention price as the factor that can influence young consumers. The other factor is quality, system compatibility, and sellers' trustworthiness which are mentioned in at least one of the interviewees' answers. From the data collected, there are several levels of young consumers' knowledge on refurbished electronic devices. The levels are good understanding with the most interviewees, basic understanding and no understanding with the same amount of interviewees, and lastly the indecipherable answer category which gives the author no information on their knowledge level. From the data collected, there are experience levels, good experience with the second most interviewee, bad experience with the least amount of interviewee, no experience with the most interviewee, and the indecipherable answer category which gives the author no information on their experience level. From the data collected, there are two main approaches that can attract young consumers's attention. The two main approaches are social media and other approaches. Social media is considered the best approach by most interviewees and other approaches mentioned ranged from discounts to warranties.

This research is highlighting the solutions for companies that plan to delve into REDs business to make their business more visible to the young consumers. This research starts from studying the influences, knowledge level, and the advertisement experiences of the young consumer to then be able to develop solutions to make the company more visible. The findings suggest that the company should first be able to promote their products mainly through social media such as TikTok and Youtube as that social media has great reach. Second solution would be that the company should be able to give several things that are considered attractive by young consumers when buying the products., such as product trials, discounts, increased warranties.

This study has some limitations. First limitation would be the sample size since a bigger sample size would give better findings and reliability. Second limitation would be interviewee background. If it is possible, it would be better to have a more diverse interviewee background, so the findings would be gathered from both students and non-students. Last limitation would be language mannerism used in this interview and FGD sessions. These sessions were conducted in a semi-formal to non-formal way, so most answer given is non-formal answer which needs to be converted into a more formal answer.

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