

## “RETHINK AND USE PRODUCT SMARTER” – SUSTAINABLE, CIRCULAR BEHAVIOR OF SILVER CONSUMERS IN POLAND

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**Purpose:** The aim of the article is to assess the attitudes of individuals aged 55+ in Poland towards responsible consumption and to identify circular, sustainable behaviors among this demographic, focusing on smart product use through Rethink strategies. These actions are undertaken in response to environmental challenges and the problem of excessive waste production.

**Design/methodology/approach:** The study employed the CATI (Computer-Assisted Telephone Interviewing) method among residents of Poland aged 55+. The sample was selected considering respondents' gender, age, and place of residence (city or rural area). The research was conducted in 2022.

**Findings:** The results of the study allow for the formulation of general conclusions regarding the pro-environmental attitudes of individuals aged 55+ and provide answers to the research questions posed.

**Social implications:** Identification and development of pro-environmental awareness among older adults, as well as strengthening behaviors within the framework of conscious consumption.

**Originality/value:** Filling the knowledge gap regarding circular behaviors of the Rethink type among older adults aged 55+. The considerations contribute to the discussion on circular behaviors of older individuals.

**Keywords:** silver economy, sustainable consumption, silver consumers, circular behaviour, strategy Rethink.

**Category of the paper:** research article.

## 1. Introduction

The challenge of demographic transition is currently affecting many countries in the EU, including Poland. Demographic transition is a result of persistently low fertility rates and increasing life expectancy, which results in an aging population (Li et al., 2019; Podgórnjak-Krzykacz, Przywojska, Warwas, 2020; Podgórnjak-Krzykacz, Przywojska, Wiktorowicz, 2020a; Zhang et al., 2021). The share of people aged over 65 in the total EU population will grow by 2050 from 17% to 30% (Podgórnjak-Krzykacz, Przywojska, Wiktorowicz, 2020b). The population of Poland will also become increasingly older; by 2060, the number of individuals over 60 in Poland is expected to rise by 21.0% compared to 2022, reaching 11.9 million seniors, which will account for 38.3% of the total population (Główny Urząd Statystyczny, 2023). This trend necessitates an urgent reorganization of living conditions, the local environment, social services, and the adaptation of product and service offerings to make them more friendly for the elderly (Fulmer et al., 2020; Hoof, Marston, 2021; Kowalczyk-Anioł et al., 2021).

At the same time, scientists and international organizations emphasize the importance of taking action for social inclusion and environmental protection in line with the concept of sustainable development. The pursuit of sustainable development has also become a goal of the age-friendly cities movement. The WHO, as the originator of the age-friendly cities concept, emphasizes the importance of sustainable development within the local environment. An environment better adapted to the needs of older adults should also provide broader benefits for the entire community, including the advantages of sustainable development (Hoof, 2023; van Hoof et al., 2024; WHO, 2018).

At the same time, individual consumer attitudes and behaviors are crucial in the pursuit of sustainable development (Oosterveer, Spaargaren, 2013). Sustainable consumption is significant for ensuring both social and environmental sustainability (Vargas-Merino et al., 2023). Among sustainable consumer behaviors aimed at minimizing their negative environmental impact, three main groups can be distinguished: choosing sustainable options (organic and eco-friendly products, as well as local goods and environmentally friendly packaging), avoiding the purchase of new products (circular practices and recommerce, purchasing second-hand items, or participating in the second-hand market), and supporting collective actions (group purchasing, social initiatives within the sharing economy, and borrowing) (Bi et al., 2024).

The first group of behaviors, which involves choosing sustainable products and packaging, is widely discussed in the literature. However, significantly less attention has been paid to consumer attitudes and behaviors aimed at avoiding the purchase of new products and reducing waste generation through circular practices. Researchers emphasize that the circular behaviors of individuals contribute to increasing resource efficiency and reducing waste. These behaviors

align with the circular economy, which promotes sustainable development and has a strong potential to transform society towards a more sustainable future by extending the life cycle of products and encouraging responsible consumption (Ma et al., 2021). Responsible consumption involves conscious and rational resource consumption that seeks to mitigate the negative environmental impact by preventing environmental degradation (Jain et al., 2023; Jiang et al., 2024). Responsible consumption has many dimensions. It can be considered as sustainable, ethical, rational, local consumption, as well as a lifestyle defined as minimalism.

Circular behaviors help reduce the use of new products by extending the usefulness of those already in use. Ali and Choe(2022) categorized the following circular behaviors: Care – maintaining and repairing products, Upgrade – improving the functionality and aesthetics of products to extend their lifespan and reduce the need for purchasing new ones; Repurpose – reusing unused products (through selling, giving away, or applying them in new ways); Appreciate – using the product one already owns and resisting the urge to discard it due to psychological obsolescence.

Currently, we also have several Frameworks R that comprehensively classify circular behaviors. These are sets of strategies that indicate how to achieve a circular economy. These frameworks are useful for both researchers and businesses to understand the pathways to a circular economy. One of the more developed frameworks, the Framework 9R, lists ten circular economy strategies, starting from the "Refuse" (R0) strategy to "Recover" (R9), showing different levels of priority in waste management and the associated circular behaviors (Kirchherr et al., 2017; Potting et al., 2017). At the top of the hierarchy, and thus the most prioritized, are Refuse (R0), Reduce (R2), and Rethink (R3), which focus on smarter and more sustainable practices in the production and use of products. The strategies Reuse (R4), Repair (R5), Refurbish (R6), Remanufacture (R7), and Repurpose (R8) aim to extend the lifespan of products and their parts. For the useful application of materials, the strategies Recycle (R8) and Recover (R9) are highlighted.

In our article, we focus on the circular behaviors of seniors related to smarter product use through the Rethink strategy. This strategy is one of the priority strategies in the Framework 9R and pertains to consumers. It encourages them to share products with each other to maximize their usage and suggests reconsidering how products are used and disposed of. Consumer behaviors associated with the "Rethink" strategy include, among others, borrowing, renting, and sharing products.

The main aim of this article is to assess the attitudes of individuals aged 55+ in Poland towards responsible consumption and to identify circular, sustainable behaviors among this demographic, focusing on smarter product use through the Rethink strategy, undertaken in response to environmental issues and excessive waste production. We focused on older consumers for several reasons. Firstly, the dynamic aging of the Polish population means that seniors represent a significant consumer segment. Secondly, studies on consumer behavior throughout the lifespan are becoming increasingly popular as the number of consumers aged

55+ steadily increases (Carpenter, Yoon, 2015; Venn et al., 2017). Thus, we contribute to the ongoing discussion on consumer behaviors among older adults. Thirdly, we fill the gap in knowledge regarding Rethink-type circular behaviors. Existing research has not addressed this issue. Few studies to date have focused on responsible and sustainable consumption among mature adults (Grasso et al., 2019; Zbucnea et al., 2021) or responsible consumption in a broader - generational – context (Bulut et al., 2017; Diprose et al., 2019; Gordon-Wilson, Modi, 2015; Morrison, Beer, 2017; Pinto et al., 2011). On the other hand, studies concerning older adults in Poland have focused on assessing the environmental awareness of seniors (Ministerstwo Klimatu i Środowiska, 2020; Włodarczyk, 2019) and identifying sustainable shopping behaviors (Zalega, 2018, 2024). Fourthly, understanding consumer behaviors in relation to R-strategies is, according to researchers (Zimmermann et al., 2024), essential for businesses to adjust their marketing strategies to meet the needs and preferences of consumers, and ultimately to ensure the successful adoption of a circular economy.

In the article, we present the results of representative research among Polish consumers aged 55 and older. The study allowed us to answer the following research questions:

1. What environmental problems are considered the most burdensome by individuals aged 55+?
2. What is the attitude of individuals aged 55+ towards responsible consumption?
3. To what extent do individuals aged 55+ use products in a smarter way, applying the Rethink strategy?

## 2. Methods

In order to answer the research questions, we conducted a study using the CATI technique among 401 individuals aged 55+ in Poland. The research sample was selected proportionally from the population living in Poland aged 55+, taking into consideration gender, age, as well as the voivodeship where they live and the respondents' place of residence (i.e. the city or the village). The study was conducted in 2022. The study included control variables such as gender, place of residence (city, village), and income per person in the household.

**Table 1.**  
*Sample structure*

	Variable	N	%
Gender	Men	171	42.6
	Women	230	57.4
Place of residence	Village	138	34,4
	City	263	65,6
Income	2000 PLN or lower	246	61.3
	2001-3000 PLN	115	28.7
	3001-4000 PLN	32	8.0
	over 4000 PLN	8	2.0

In the study, we defined three variables:

1. The perception of environmental problems by individuals aged 55+
2. The attitude of individuals aged 55+ toward responsible consumption
3. Smarter product use – Rethink behaviors among individuals aged 55+

The measurement of variable (1) Perception of environmental problems by individuals aged 55+ involved respondents identifying the most burdensome environmental issue from five options: air pollution; overcrowded landfills, waste management problems; water pollution; climate change; and depletion of natural resources.

Variable (2) Attitude of individuals aged 55+ toward responsible consumption was measured using 3 items that assess the frequency with which respondents follow the following principles:

**Table 2.**  
*Measurement of the variable Attitude toward responsible consumption*

Variable	Items	Scale
Attitude toward responsible consumption	I follow the principle of making products myself rather than purchasing them	Always Often Sometimes Never
	I adhere to the principle of renting or exchanging (e.g., books, equipment/ tools) instead of buying	
	I apply the principle of minimalism, purchasing only necessary items and avoiding unnecessary ones	

Source: own elaboration.

The variable (3) Smarter product use - Rethink behaviors among individuals aged 55+ was measured using four items assessing the frequency of the following practices:

**Table 3.**  
*The measurement of the variable Smarter product use – Rethink behaviors*

Variable	Items	Scale
Smarter product use – Rethink behaviors	I give away unused products to other people	Always Often Sometimes Never
	I sell my clothes and equipment online on platforms such as OLX.pl, Vinted.pl, and Allegro.pl	
	I willingly borrow items from others that I only need occasionally	
	I purchase products jointly with friends or family to share their use afterward	

Source: own elaboration.

In the Research results section, we present the distribution of responses from the respondents and their average ratings, taking into account respondent characteristics such as gender, place of residence, and income per person in the household. The average ratings were calculated for the components of variable (2) Attitude toward responsible consumption and (3) Smarter product use – Rethink behaviors. The scale was coded as follows: 1 – always, 2 – frequently, 3 – sometimes, 4 – never. Therefore, the lower the average rating, the more frequently respondents engage in the behavior.

### 3. Research results

#### 3.1. Perception of environmental issues among individuals aged 55+ in Poland

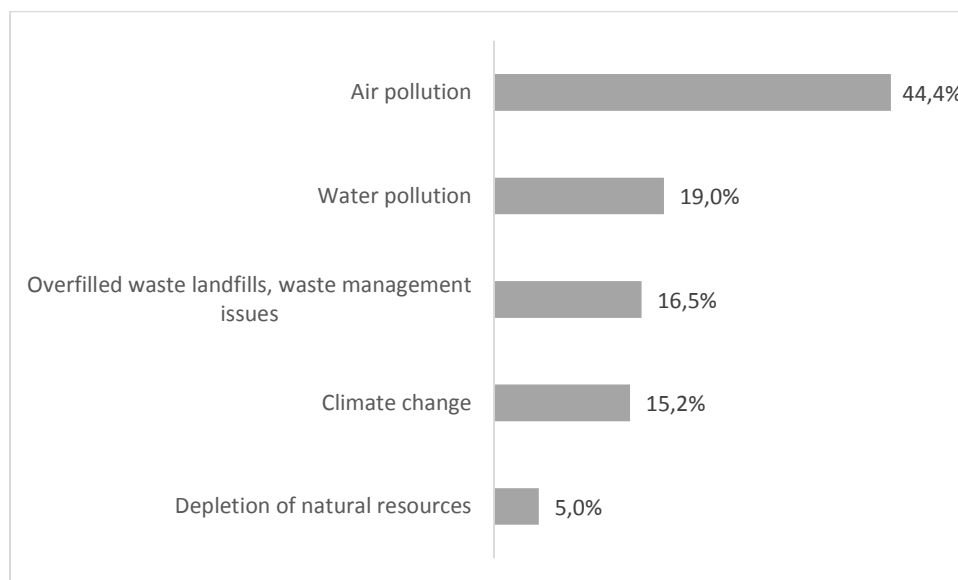
The majority of respondents (44.4%) identified air pollution as the most critical environmental problem (Table 4, Figure 1). The second most frequently indicated issue was water pollution, with 19% of responses, representing less than half the number of mentions for air pollution. Approximately one-sixth of respondents highlighted overfilled waste landfills and climate change as key concerns. The prioritization of air pollution may be influenced by its frequent coverage in the media. Additionally, air pollution constitutes a significant health hazard for older adults, who are disproportionately affected by its adverse effects (D'Oliveira et al., 2023).

**Table 4.**

*The most pressing environmental issues according to respondents*

Problems	n	%
Air pollution	178	44,4
Overfilled waste landfills, waste management issues	66	16,5
Water pollution	76	19,0
Climate change	61	15,2
Depletion of natural resources	20	5,0
<b>Total</b>	<b>401</b>	<b>100,0</b>

Source: own elaboration.



**Figure 1.** Ranking of the most pressing environmental issues according to respondents.

Source: own elaboration.

Comparing the responses of women and men (Table 5), it can be observed that women more frequently than men identified air pollution, water pollution, and climate change as the most burdensome problems. In contrast, men more often than women emphasized issues related to waste generation and management.

**Table 5.***The most pressing environmental issues by gender of respondents*

Environmental issues	Gender					
	Women			Men		
	n	%	rank	n	%	rank
Air pollution	105	45,7	1	73	42,7	1
Overfilled waste landfills, waste management issues	35	15,2	4	31	18,1	2
Water pollution	46	20,0	2	30	17,5	3
Climate change	37	16,1	3	24	14,0	4
Depletion of natural resources	7	3,0	5	13	7,6	5
Total	230	100,0	-	171	100,0	-

Source: own elaboration.

Respondents living in rural areas more frequently than those residing in urban areas identified water pollution as the most burdensome environmental issue (Table 6). Conversely, city dwellers were more likely to point to air pollution and climate change as the most pressing problems.

**Table 6.***The most pressing environmental issues by respondents' place of residence*

Environmental issues	Place of residence					
	Village			City		
	n	%	rank	n	%	rank
Air pollution	58	42,0	1	120	45,6	1
Overfilled waste landfills, waste management issues	23	16,7	3	43	16,3	3
Water pollution	32	23,2	2	44	16,7	2
Climate change	19	13,8	4	42	16,0	4
Depletion of natural resources	6	4,3	5	14	5,3	5
Total	138	100,0	-	263	100,0	-

Source: own elaboration.

Considering the respondents' income levels (Table 7), it can be observed that individuals with incomes of up to 2000 PLN per capita in the household more frequently than wealthier respondents identified air pollution as a pressing issue. Respondents with incomes in the range of 2001-3000 PLN stood out with regard to concerns about overcrowded landfills and waste management, with this issue ranking as the second most significant in this group. Meanwhile, respondents with incomes between 3001-4000 PLN more frequently than other income groups highlighted the depletion of natural resources as a key environmental concern. Respondents earning over 4000 PLN, although constituting a small proportion of the sample (8 individuals), were more likely to emphasize the severity of water pollution and climate change issues compared to less affluent respondents.

**Table 7.***The most pressing environmental issues by respondents' income*

Environmental issues	Income per capita in the household (PLN)											
	2000,00 or lower			2001,00–3000,00			3001,00–4000,00			over 4000,00		
	n	%	rank	n	%	rank	n	%	rank	n	%	rank
Air pollution	114	46,3	1	48	41,7	1	13	40,6	1	3	37,5	1
Overfilled waste landfills, waste management issues	32	13,0	4	27	23,5	2	6	18,8	2	1	12,5	4
Water pollution	47	19,1	2	21	18,3	3	6	18,8	2	2	25,0	2
Climate change	40	16,3	3	16	13,9	4	3	9,4	5	2	25,0	2
Depletion of natural resources	13	5,30	5	3	2,6	5	4	12,5	4	0	0,0	5
Total	246	100,0	-	115	100,0	-	32	100,0	-	8	100,0	-

Source: own elaboration.

### 3.2. Attitudes of individuals aged 55+ toward responsible consumption

The attitudes of individuals aged 55+ toward responsible consumption, as reflected in the results of our study, appear to be quite positive. Nearly 60% of respondents always or frequently adhere to the principle of producing goods themselves rather than purchasing them (Table 8). The remaining 40% follow this principle occasionally. The principle of renting and exchanging products instead of purchasing them is somewhat less prevalent, with just over half of respondents always or frequently adopting this principle. The principle of minimalism is always or frequently practiced by 49.10% of respondents, although the highest proportion, 11%, reported never adhering to it.

**Table 8.***Respondents' attitudes toward responsible consumption*

Attitudes	Frequency	n	%
I follow the principle of making products myself rather than purchasing them	Always	57	14,2
	Often	180	44,9
	Sometimes	158	39,4
	Never	6	1,5
I adhere to the principle of renting or exchanging (e.g., books, equipment/tools) instead of buying	Always	35	8,7
	Often	180	44,9
	Sometimes	173	43,1
	Never	13	3,2
I apply the principle of minimalism, purchasing only necessary items and avoiding unnecessary ones	Always	28	7,0
	Often	169	42,1
	Sometimes	160	39,9
	Never	44	11,0

Source: own elaboration.

An analysis of the respondents' average ratings indicates that women adhere to the above principles slightly more often than men, and individuals living in cities more frequently than those in rural areas (Table 9). Considering respondents' income levels, those with the highest incomes, above 4000 PLN, were less likely than others to follow all the principles, particularly the principle of minimalism.



**Table 9.**

*Average ratings of attitudes toward responsible consumption among individuals aged 55+ by gender, place of residence, and income levels*

Attitudes	Gender		Place of residence		Income per capita in the household (PLN)			
	Women	Men	Village	City	2000,00 or lower	2001,00-3000,00	3001,00-4000,00	over 4000,00
I follow the principle of making products myself rather than purchasing them	2,20	2,39	2,30	2,27	2,33	2,17	2,28	2,38
I adhere to the principle of renting or exchanging (e.g., books, equipment/tools) instead of buying	2,33	2,51	2,50	2,36	2,45	2,30	2,41	2,75
I apply the principle of minimalism, purchasing only necessary items and avoiding unnecessary ones	2,45	2,68	2,60	2,52	2,63	2,35	2,47	3,13

Source: own elaboration.

### 3.3. “Rethink” behaviors among individuals aged 55+

The “Rethink” behaviors analyzed in the study most often involve respondents giving away unused products to others (Table 10). This is always practiced by 6% of respondents, with an additional 43.4% doing so frequently. The second most common Rethink behavior, in terms of frequency, is purchasing products jointly with friends or family to share their use. Only 2.7% of respondents reported always engaging in this practice, while 35.4% do so frequently. Borrowing items from other people is most commonly done occasionally, with 52.6% of respondents indicating this frequency. Conversely, the behavior of selling their clothes and equipment online through platforms such as OLX, Vinted, or Allegro recorded the highest percentage of "never" responses (76.8%).

**Table 10.**

*Frequency of “Rethink” behaviors among respondents*

“Rethink” behaviors	Frequency	n	%
I give away unused products to other people	Always	24	6,0
	Often	174	43,4
	Sometimes	154	38,4
	Never	49	12,2
I sell my clothes and equipment online on platforms such as OLX.pl, Vinted.pl, and Allegro.pl	Always	0	0,0
	Often	28	7,0
	Sometimes	65	16,2
	Never	308	76,8
I willingly borrow items from others that I only need occasionally	Always	8	2,0
	Often	112	27,9
	Sometimes	211	52,6
	Never	70	17,5

Cont. table 10.

I purchase products jointly with friends or family to share their use afterward	Always	11	2,7
	Often	142	35,4
	Sometimes	186	46,4
	Never	62	15,5

Source: own elaboration.

Women slightly more frequently than men declare engaging in all of the discussed Rethink behaviors (Table 11). There are no significant differences in the frequency of these behaviors between urban and rural residents. Meanwhile, individuals with the highest incomes engage in all the discussed behaviors less frequently than respondents with lower incomes.

**Table 11.**

*Average frequency of “Rethink” behaviors among respondents by gender, place of residence, and income level*

“Rethink” behaviors	Gender		Place of residence		Income per capita in the household (PLN)			
	Women	Men	Village	City	2000,00 or lower	2001,00-3000,00	3001,00-4000,00	over 4000,00
I give away unused products to other people	2,55	2,6	2,5	2,60	2,58	2,51	2,63	2,75
I sell my clothes and equipment online on platforms such as OLX.pl, Vinted.pl, and Allegro.pl	3,67	3,73	3,69	3,70	3,72	3,66	3,66	3,88
I willingly borrow items from others that I only need occasionally	2,81	2,92	2,85	2,86	2,91	2,77	2,72	3,00
I purchase products jointly with friends or family to share their use afterward	2,70	2,81	2,76	2,74	2,76	2,74	2,63	2,88

Source: own elaboration.

#### 4. Discussion and conclusion

The Rethink behaviors analyzed in our study among Poles aged 55+ are undertaken by respondents with moderate frequency. Particularly rarely practiced is the sale of their own clothes and equipment on online platforms such as olx.pl, vinted.pl, and allegro.pl. This may be hindered by lower digital competencies of older adults in Poland, as pointed out by other researchers (Garwol, 2019; Susło et al., 2019). On the other hand, respondents in our study recognize the burden of environmental problems. The most pressing issues they highlight are air pollution, water pollution, and overcrowded landfills. These problems significantly determine the quality of life for older adults, who are one of the groups particularly vulnerable to the negative consequences of such threats (e.g., the increased mortality of older adults due to diseases resulting from poor air quality) (Michalak et al., 2022).

Existing studies indicate that women tend to have stronger pro-environmental attitudes than men. They are significantly more likely to engage in various environmental activities (Tindall et al., 2003; Zelezny et al., 2000). Our research findings also confirm that women aged 55+ are more sensitive to the issue of climate change. They are more concerned than men about the ongoing degradation of the natural environment (air pollution, water pollution). Women are slightly more likely than men to adhere to the principles of responsible consumption. They are more inclined to produce goods (such as food or clothing) themselves rather than purchasing them. These attitudes are not solely a result of disposable income, but also influenced by trends, the desire to stand out, or social sensitivity (e.g., donating clothing to those in need). For women, emotional and sentimental values attached to goods are also important. However, women engage in Rethink circular behaviors with the same, equally low frequency as men.

Men, as respondents in our study, similarly to women, recognize the importance of environmental issues, although they attach more significance to the problem of waste. Like women, they also follow the principles of responsible consumption. They see the rationale in producing goods themselves or sharing products. However, it is difficult to clearly observe a connection between circular behaviors and gender, as indicated by other researchers (Bassi, 2023; Patel et al., 2017).

An important variable influencing pro-environmental behaviors is income, as it is a key factor determining purchasing power. For most older adults, the primary source of income is pensions, which are typically allocated to meet basic needs. As highlighted in the Green Generation report (Mobile Institute, 2020), there is a common belief among individuals aged 55+ that living according to ecological principles involves additional costs.

Interestingly, the results of our study indicate that respondents with relatively high incomes (above 4,000 PLN) are less likely to follow the principles of responsible consumption in their consumer choices. They apply the principle of minimalism to the least extent. On the other hand, individuals with lower incomes are more inclined to produce goods themselves or share items (such as tools, devices, books, etc.) with others. For Polish seniors, such behaviors may stem from habits acquired in the past, personal experiences, or values passed down from their families. Thus, some circular behaviors seem to be "inherited" from generation to generation rather than the result of ecological awareness development. On the other hand, these behaviors could also have an economic basis. As indicated by the report on the economic security of households in Poland (Derkacz et al., 2024), seniors, compared to other age groups, assess their ability to engage in current consumption less favorably. Their incomes often do not allow them to achieve financial stability. The lack of sufficient financial resources to meet basic needs limits the tendency to waste resources and forces a more rational approach to their use. Younger generations entering retirement carry with them consumption behaviors and habits shaped in market economy conditions. These behaviors are often revised due to a decrease in disposable income.

Considering the criterion of place of residence, our study shows that the ranking of environmental issues is the same for respondents living in rural and urban areas. However, those living in rural areas were more likely to point out water pollution as a major problem. On the other hand, city dwellers are more sensitive to climate change. In cities, especially large ones, a range of phenomena related to air pollution accumulates, such as the urban heat island effect and the lack of biologically active surfaces. These issues have a significant impact on the health of older adults.

Our study focused on the attitudes and pro-environmental behaviors of individuals aged 55+ in Poland, with particular emphasis on the implementation of the "Rethink" strategy within responsible consumption. The research reveals a positive attitude among seniors towards responsible consumption, though it also highlights limitations related to the adoption of more sustainable and digital solutions, such as online sales or shared purchasing. The findings provide valuable insight into the consumer behavior of older adults and indicate the need for educational and systemic support to increase their involvement in circular consumption. Campaigns should emphasize the importance of environmental issues, such as climate change, which, according to our research, are less recognized by individuals aged 55+. Education should also promote "Rethink" behaviors as simple and accessible ways to protect the environment. An important direction for action should also involve promoting local circular economy initiatives, particularly by facilitating access to product exchange and rental platforms. For individuals aged 55+, education regarding sharing, selling, or exchanging goods online is crucial. Future research is also recommended to explore in greater depth the underlying factors influencing the consumer behaviors of older adults.

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