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Rural–Urban Divide: Generation Z and Pro-Environmental Behaviour

Leszek S. Dąbrowski [1,*], Stefania Środa-Murawska [2], Paweł Smoliński [1] and Jadwiga Biegańska [2]

[1] Interdisciplinary Doctoral School of Social Sciences, Nicolaus Copernicus University, 87-100 Toruń, Poland
[2] Department of Urban and Regional Development Studies, Faculty of Earth Sciences and Spatial Management, Nicolaus Copernicus University, 87-100 Toruń, Poland
* Correspondence: l.dabrowski@doktorant.umk.pl

Abstract: Generation Z is the crucial cohort that will have to face the issues resulting from human impacts on the environment. The oldest members of this generation are now entering adulthood. Even though Generation Z is a global and homogeneous cohort, research indicates that the type of settlement unit where one lives may condition the emergence of intra-generational differences. The study focused on determining the pro-environmental behaviour (PEB) of Generation Z from the perspective of a former-socialist European country, Poland. We explored the motivational factors of Polish Generation Z towards their PEB and the actual PEB they undertake. We conducted focus-group interviews with 68 representatives of Generation Z, aged 16–19, living in villages, small towns, and medium-sized and large cities. The data obtained from the interviews were analysed in NVivo software by means of content analysis. Using the Theory of Planned Behaviour, we showed that the type of settlement unit determines pro-environmental attitudes and barriers to undertaking pro-environmental behaviour.

Keywords: pro-environmental behaviour; Generation Z; youth; rural–urban differences; theory of planned behaviour

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1. Introduction

The growing human impact on the environment is a global problem faced by governments and corporations. As a result, in addition to environmental pollution, we are observing a progressive loss of biodiversity and climate change [1–5]. The consequences of failing to take pro-environmental action are already evident and will be even more severe in the future [6]. In this view, the actions taken by individuals are very important [7]. Through their behaviour, they can call others to collective action with governments and industries [8]. Such actions are called pro-environmental behaviour (PEB), defined as conscious behaviour that seeks to minimise negative environmental impacts [9], e.g., energy conservation [8], recycling [10], sustainable transport use [11], and the purchase of green products [12].

The type and frequency of PEB are determined by a number of diverse variables, which the authors of [13] divide into external and individual, while the authors of [14] distinguish between personal factors (e.g., knowledge, education, childhood experience, age, and gender) and social factors (e.g., cultural and ethnic background, social class, religion, and rural vs. urban residence).

The study focused on determining the pro-environmental behaviour of Generation Z (Gen Z) from the perspective of a former socialist European country, Poland. Gen Z is the first generation born and raised in free Poland. Therefore, this is a very significant study, the first of its kind, examining the PEB of the youngest generation in Central and Eastern Europe.

Additionally, this study analysed PEB at a micro-scale, i.e., comparing rural and urban residence differences. Indeed, scholars point out that there is still a lack of research on

environmental attitudes and behaviour according to the place of residence [15–19], which is the primary determinant of PEB from a geographical perspective.

To date, rural–urban differences have been studied in the general population [15,16,20–22], using quantitative scales such as the NEP scale [15,16,20,21]. Apart from that, researchers have analysed environmental concern or knowledge [20], or environmental risk perceptions [22]. This paper suggests a qualitative approach to PEB. This qualitative framework helps show PEB's motivational factors without imposing top-down answers (as is the case with quantitative scales). Additionally, it was found that there is little research on the PEB of young people, and in particular Generation Z. Therefore, it seems that combining the analysis of rural–urban residence with the PEB of Generation Z will contribute to the knowledge of PEB and complement the existing body of research on youth with a geographical dimension.

Accordingly, the paper poses the following research questions:

RQ1: What are the attitudes of the members of Generation Z towards their pro-environmental behaviour?

RQ2: What social groups influence the pro-environmental behaviour of Generation Z?

RQ3: What are the constraints perceived by the members of Generation Z on their pro-environmental behaviour?

RQ4: What pro-environmental behaviour is displayed by Generation Z?

The above research questions allowed us to determine the degree of unification of the PEB of Polish Generation Z in relation to Western countries, including European ones. Moreover, all research questions were investigated through the prism of rural–urban residence, which allowed for the identification of potential variables differentiating PEB between rural and urban residence.

2. Literature Review

2.1. Pro-Environmental Behaviour of Generation Z

The interest in the PEB of young people stems directly from generational theory, which states that changes in young people's attitudes are a sign of impending social change [23]. These developments are also relevant to long-term environmental transformations [24]. Moreover, young people will experience greater effects of climate change in adulthood than adults do now [25]. Therefore, it can be assumed that youth should be willing to adopt pro-environmental attitudes, as they are also the ones who will have to face the consequences of poor environmental management. They also have better access to environmental information than other generations. Furthermore, the young have always, throughout the ages, disrupted the established social order [16]. As numerous studies have shown, adolescence is a special period in an individual's development in which values and world views are formed [23,26,27]. Nevertheless, other generations also play an essential role in PEB, both in its implementation and education. In particular, this refers to mentors of young people, such as parents, grandparents, or teachers [11,28].

Some of the previous studies on young people are in opposition to the image of the 'young environmentalist', as they show that young people have not always been an important link in the environmental struggle. The paper by [29] pointed to a lack of environmental awareness among young people, and [23] suggested that adolescents were devoid of environmental responsibility. However, as [30] explained, Gen Zers are 'greener' and more sustainability oriented. They are characterised as being environmentally conscious and, thus, showing a positive approach to pro-environmental initiatives [30]. Their attitudes indicate a desire to consume products that are environmentally friendly [11]. Similarly, Gen Zers are described as environmentally active individuals [31]. This characteristic distinguishes Gen Z from the Baby Boomers, who are defined as the 'have it all' generation, Gen X as materialists, and Gen Y as environmentally conscious hedonists [31]. Another feature that distinguishes Gen Z from older generations is their loyalty to clothing shops which is built mainly through the pro-environmental actions taken by retailers. For Generation X or Baby Boomers, the environmental orientation of retailers is less important [32].

However, Generation Z does not display pro-environmental attitudes and behaviour in all spheres. Research on Gen Zers' attitudes towards sustainable transport from Tirana (Albania) revealed that most teenagers considered car ownership as a social status symbol and wanted to buy a car in the future. Moreover, this also applied to young people who were not keen on cars [10]. In contrast, ref. [33] showed that it was the age group of 36–50 years that had a stronger PEB than representatives of the youngest generation. Similarly, the potential danger of low engagement with environmental problems was pointed out by [34], who argued that the increasing share of leisure time that young people spent virtually was resulting in less and less time spent in the natural environment, and this consequently reduced their environmental sensitivity.

An important factor determining the relationship with the environment is the contact with the natural world. It is particularly important during childhood and adolescence [28]. For example, research conducted in the 1980s by [35] revealed that, in the countryside, children and young people had more day-to-day contact with nature than in the city, resulting in more positive relationships with nature in rural children than in urban children. Therefore, it begs the question whether place of residence can nowadays be a factor differentiating PEB among rural and urban youth.

2.2. Rural vs. Urban in Pro-Environmental Behaviour

While evidence of the influence of gender, age, or education on pro-environmental attitudes and behaviour has been repeatedly confirmed [20,36], the debate on the impact of place of residence has remained unresolved for decades. However, as [37] argued, the circumstances in which an individual acts influence the adoption of pro-environmental attitudes. Hence, ref. [15] pointed to the need to clarify the influence of place on a variety of PEBs.

Researchers attempted to ground this discourse in a more theoretical framework to highlight the factors hidden behind 'rural' and 'urban'. Thus, according to the environmental deprivation theory, urban dwellers live in more transformed environments, with higher levels of degradation than rural dwellers, resulting in a higher level of concern for the environment at the local level and a greater spectrum of pro-environmental activities undertaken. Elsewhere, according to the nature exploitation theory, rural dwellers are more dependent on the natural resources found in these areas and sometimes take actions at the expense of the environment in order to 'grow the economy' of rural areas [38,39]. However, research results do not always reflect these two approaches.

The authors of [39] concluded that they noted no differences between rural and urban areas in environmental behaviour. The authors of [20] came to similar conclusions when they argued that urban and rural residents did not differ in terms of environmental concerns and actions. A slightly different light was shed on this issue by [15], who insisted that rural residents were more concerned about the environment than urban residents; however, in the context of behaviour, these differences were minor. At the opposite end are studies emphasising greater involvement in pro-environmental activities from urban residents [36].

It is also often suggested that, over the last few decades, the differences between rural and urban populations have been narrowing in terms of pro-environmental behaviour [20,39]. As [39] argued, this is due, among other things, to the availability of similar levels of education and the increased mobility of both groups, as these things also affect the mixing of their lifestyles. However, ref. [40] argued that social inequalities between rural and urban areas were still very high, which may contradict this argument. On the other hand, more recent studies showed that environmental services, such as recycling, were increasingly available also in rural environments, resulting in a narrowing of the gap in environmental attitudes and behaviour between rural and urban areas [15].

Meanwhile, another study [16] implied that rural residents were characterised as less concerned about the environment, and their attention was particularly directed towards problems related to agriculture, such as soil erosion and lack of water. More often than urban dwellers, they did not know how to answer open-ended questions about the environ-

ment, which probably indicated a lack of adequate environmental education in rural areas. Importantly, ref. [16] observed smaller differences in pro-environmental knowledge and attitudes among younger respondents, which again points to the need to verify whether the youngest generation shows differences in PEB depending on where they live.

The positions proposed, depending on the findings of the research, seem, on the one hand, to confirm and, on the other hand, to deny the impact of the urban–rural divide on PEB (Table 1). It seems crucial in this connection to pay attention to the motivation for the actions taken and to the broader context of the conclusions made.

Table 1. Position on influence of rural–urban divide on the PEB.

Author(s)	Positive Influence of Rural–Urban Divide on PEB
[38]	• Urban dwellers living in more transformed environments, with higher levels of degradation, which results in a higher level of concern for the environment at the local level and a greater spectrum of pro-environmental activities undertaken; • Rural dwellers more dependent on the natural resources found in these areas and sometimes take actions at the expense of the environment in order to 'grow the economy' of rural areas.
[36]	• Greater involvement in pro-environmental activities from urban residents.
[16]	• Rural residents were characterised as being less concerned about the environment, and their attention was particularly directed towards problems related to agriculture, such as soil erosion and lack of water.
	Narrowing Differences Between Urban–Rural Divide and PEB
[15]	• Rural residents more concerned about the environment than urban residents, but the availability of environmental services in both localities is in a narrowing of the gap in environmental attitudes and behaviour between rural and urban areas.
	No Impact of Rural–Urban Divide on PEB
[39]	• No differences between rural and urban areas in environmental behaviour due to the availability of similar levels of education and the increased mobility of both groups.
[20]	• Urban and rural residents did not differ in terms of environmental concerns and actions.

If only the positions confirming the positive impact of an urban–rural divide on PEB were collated, the key observation here seems to be that urban dwellers are very active in undertaking pro-environmental activities, as their living environment is much more transformed, and they value the quality of life highly. Rural dwellers, on the other hand, are motivated by economic factors, which, in a way, force them to take an interest in pro-environmental actions, as high environmental quality can translate into profits for them.

In the next group are positions arguing for a lower impact of an urban–rural divide on PEB due to similar availability of environmental services or no impact of an urban–rural divide on PEB due to the broader modernisation of society. However, while the similar availability of environmental services may be debatable, the factor related to the modernisation of society should be looked at in-depth, and the focus should be on the younger generation, who will be subjected to this process to a greater extent than older generations.

In addition, using the Theory of Planned Behaviour (explained broader in Section 2.3), which includes several factors influencing PEBs, it is possible to consider which of them may be susceptible to the urban–rural divide. Adopting such a broad perspective will not only allow the thesis of the impact of an urban–rural divide on PEB to be verified but also take a critical look at the theoretical approaches proposed earlier, as well as try to generalise the resulting premises.

2.3. Theoretical Framework

The Theory of Planned Behaviour (TPB) [41], which explains the variables that influence whether a particular behaviour appears, was used as the theoretical framework of the study (see Figure 1). Behaviour is preceded by behavioural intention, which arises from attitudes, subjective norms, and perceived behavioural control. Attitudes are explained by behavioural beliefs that can be both positive and negative. Subjective norms are explained through normative beliefs which refer to social pressures, i.e., important social groups that agree or disagree with the behaviour undertaken. Perceived behavioural control is interpreted by control beliefs, i.e., potential barriers that inhibit behaviour [41].

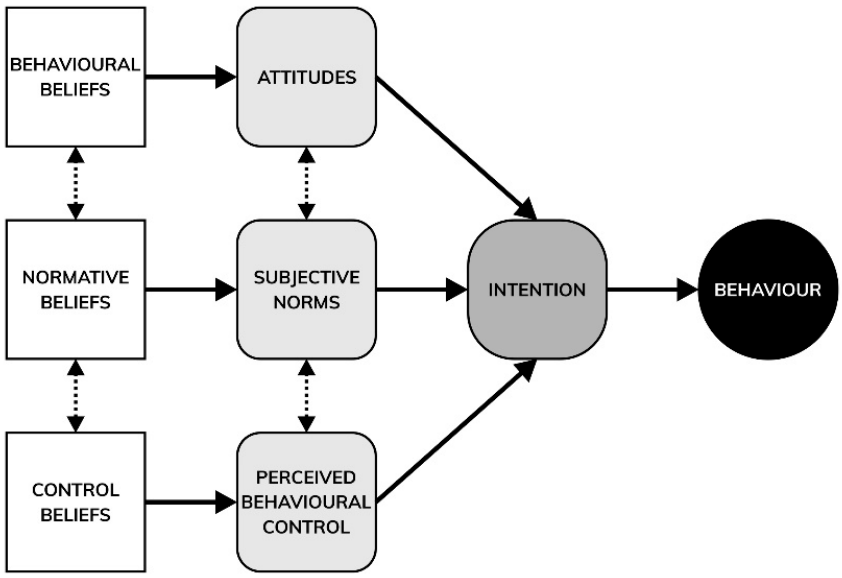


Figure 1. Theory of Planned Behaviour (based on [10,41]).

The authors of [35] showed that the TPB model works well in examining the beliefs underlying pro-environmental behaviour. They examined the individual components that make up the PEB of young people, and while this study, like many others [9,10], uses TPB in a quantitative strategy that allows for accurate estimates of the importance of individual model components, research into PEB does not preclude the use of a qualitative strategy. Despite the often pointed-out limitations of the qualitative approach in TPB, such as the inability to compute statistical models or the inability to generalise [42], as the authors of [43] emphasise, qualitative TPB allows for a better understanding of the underlying attitudes, beliefs, and barriers behind a behaviour. It also enables the development of a more detailed model related to the behaviour. Moreover, a qualitative approach in the TPB can be the first step to developing a quantitative study within the TPB framework [44].

An example of a qualitative approach within the TPB framework is Reference [45], which discussed food waste in the hospitality industry. It used individual interviews as the data collection method, followed by coding and categorisation to analyse these data. Moreover, the authors of [27] pointed out that there is a lack of research on adolescents' pro-environmental behaviour, and they proposed the use of TPB as a theoretical framework.

Therefore, the theoretical framework used, in the form of the Theory of Planned Behaviour, is adequate to determine the characteristics of the PEB of Generation Z from the former socialist country and to determine rural vs. urban residence as an explanatory variable of PEB.

3. Methodology

3.1. Research Design

A qualitative research design was used to identify the attitudes, subjective norms, and perceived behavioural control among Gen Zers, broken down into rural and urban

areas. The use of a qualitative framework allowed these factors to be identified without imposing hypotheses, as in a quantitative approach [45]. This provided a factual picture of the pro-environmental behaviour of Generation Z.

As the size of a settlement unit has an impact on many aspects of broader social life [46], the study divided cities into three size groups. The study used the most commonly adapted division of cities by population in Poland: small towns (under 20,000 inhabitants), medium-sized cities (between 20,000 and 100,000 inhabitants), and large cities (over 100,000 inhabitants) [47].

3.2. Data Collection and Participants

The study comprises a series of focus group interviews (FGI) with representatives of Generation Z (people born after 1994), aged 16–19. The selection of this generational cohort stems from the need to study young people who are or will be deciding on the shape and quality of the environment in the future [48]. FGIs place the problem in a broader perspective, and the results obtained are often deeper and richer than those obtained from individual interviews [49]. Furthermore, researchers believe that FGIs provide effective data collection through group dynamics and interaction between participants [50].

A non-probability purposive sample was used due to the selection of participants based on age (16–19 years) and unit of residence (see Table 1). Selection on the basis of rural or urban residence with a certain population was intended to show similarities and differences in approaches to PEB between residents of individual unit types. In addition, all participants were at the same educational stage (high school) because, as previous studies have shown, educational level is a variable that helps determine pro-environmental attitudes and behaviour [16,39]. The income variable was not controlled for, as evidence to date suggests that it does not determine pro-environmental action [16].

Twelve interviews were conducted (three for each settlement unit, i.e., village, small town, medium-sized city, and large city), lasting between 20 and 40 min. The length of the interview depended on the participants' involvement and the topic's exhaustion. Between five and seven people took part in each of them (the total number of participants in the interviews was sixty-eight). There is no consensus in the literature on the optimal number of FGI participants; however, it is recommended to have between four and ten participants per interview [50].

Data were collected by using a semi-structured interview guide, which allowed the interview to remain open and fluid, and to explore non-obvious threads related to the main topic of the conversation. Before the actual study began, the interview guide was tested to ensure that the issues it contained were comprehensible. It consisted of four main questions that aimed to explore the motivational factors of Polish Gen Zers towards their PEB. In terms of demographic information, participants provided only their age and place of residence.

Before the interview begins, participants were asked to present their points of view, regardless of other peer responses. In most of the interviews, the group managed to maintain a balance between agreement and disagreement on the issues raised. The interviews began with a general question asking about the types of PEB undertaken. Specific themes were then explored in relation to the TPB framework, namely attitudes towards the previously mentioned behaviours, the social groups influencing these behaviours, and the barriers inhibiting them.

The study group was reached through school principals, who allowed students to participate in the study. Similar permission to conduct the study was obtained from the Faculty of Earth Sciences and Spatial Management at the Nicolaus Copernicus University in Toruń (Poland). Upon receiving information about the study from the designated teacher, students gave their informed and free consent to participate in the interviews. The interviews were conducted in accordance with ethical guidelines—sensitive issues were not raised, participation was voluntary, and anonymity was assured. Young people were also asked for their honest and comprehensive opinions on the issues

discussed. At the very beginning of the interviews, permission to record the interviews was also obtained, which allowed the interviewers to focus on the interview process itself, while the content was transcribed later on. Each interview was transcribed verbatim. Participants' names were replaced by a code to ensure anonymity.

Due to the COVID-19 pandemic situation, conversations were held remotely, using video conferencing platforms such as Microsoft Teams, Zoom, Google Meet, and Discord, between September and November 2020. Whenever possible, conversations were held remotely by students from their schools. After the introduction of distance learning (school closures), students connected from their homes. An FGI conducted remotely by using online platforms is referred to by researchers as an Internet Focus Group [51].

3.3. Data Analysis

The data obtained from the interviews were analysed in NVivo software by means of content analysis according to generally accepted principles [52]. The PEBs identified at the beginning of the interviews were grouped into categories. Then three groups of codes were assigned to each category according to the TPB framework: attitudes towards individual PEBs (ATT codes), important social groups (SN codes), and perceived barriers (PBC codes). All results were analysed by place of residence: village (V), small town (ST), medium-sized city (MSC), and large city (LC). A corresponding matrix with categories and codes per settlement unit was then created (Table 2). The frequency of each category was analysed in order to obtain information on the frequency of PEB undertaken (Table 3). In total, seven categories were found (buying from second-hand shops, separating waste, reducing plastic, saving resources, using public transport, using green individual transport, and participating in climate protests), including fourteen attitudes, six social groups, and twenty barriers to PEB.

Table 2. Profile of respondents.

Characteristic	Number	Percentage
Gender		
Male	20	29
Female	48	71
Age (in years)		
16	8	12
17	26	38
18	28	41
19	6	9
Place of residence		
Village	14	21
Small town (less than 20,000 inhabitants)	21	31
Medium-sized city (from 20,000 to 100,000 inhabitants)	15	22
Large city (more than 100,000 inhabitants)	18	26

Table 3. Attitudes, reference groups, and perceived barriers towards individual PEBs by place of residence.

	ATT				SN				PBC			
CATEGORY	**V**	**ST**	**MSC**	**LC**	**V**	**ST**	**MSC**	**LC**	**V**	**ST**	**MSC**	**LC**
buying in second-hand shops	Cheap	greener, cheap	less water wastage, greener, cheap	-	friends	influencers, friends	friends	-	sometimes poor quality	sometimes poor quality	not being fashionable	-
waste separation	Cheap	Cheap	good for the environment, recyclability	good for the environment, recyclability	parents	parents	parents, teachers	parents, grandparent	-	no separate containers for different types of	-	-
reducing plastic	-	less littered environment	less littered environment	less littered environment, healthier nature and food	-	parents	friends, teachers	parents, grandparents	-	no money to buy products not packed in plastic	no substitutes for plastic packaging	no substitutes for plastic packaging
saving resources and energy	Cheap	Cheap	cheap, reduction in CO2 emissions	combating climate change	parents	parents	parents, grandparents	parents	no shower	forgetfulness	-	-
use of public transport	reduction of environmental pollution	reduction of environmental pollution	reduction of environmental pollution, cheap	prevention of climate change, reduction of environmental pollution, fast	parents, grandparents	parents, grandparents, friends	parents, grandparents, friends	parents	lack of connections	lack of connections	low comfort	congestion
use of green individual transport	reduction of environmental pollution, cheap, healthy	reduction of environmental pollution, cheap, healthy	environmental pollution, cheap, fast, pleasant	reduction of environmental pollution, cheap, fast, pleasant, healthy	friends, grandparents	friends	parents	parents	laziness, bad weather	laziness, bad weather	long distance to cover	no bikes in the system, long distance to cover
participation in climate protests	-	combating climate change	public awareness, combating climate change	public awareness, combating climate change	-	influencers, teachers, residents	friends, parents	friends, teachers, influencers	-	too small a city, adverse conditions, lack of belief in success	too small a city, no way to reach the protest	lack of time, no need to express views

Note. ATT—attitudes, SN—subjective norms, PBC—perceived behavioural control, V—village, ST—small town, MSC—medium-sized city, LC—large city.

4. Results

The results of the interviews were ranked according to predetermined thematic categories, namely (1) buying in second-hand shops, (2) separating waste, (3) reducing plastic, (4) saving resources, (5) using public transport, (6) using green individual transport, and (7) participating in climate protests. These are presented by previously adopted units of residence (village, small town, medium-sized city, and large city).

4.1. Shopping in Second-Hand Shops

Regarding the category of buying in second-hand shops, it should be pointed out that this type of PEB was not identified in large cities. In other settlement units, when respondents presented their attitudes, they answered that the advantage of buying second-hand clothes is their low price. In small towns and medium-sized cities, they also considered it green, and in addition, in medium-sized cities, the interview participants pointed out reduced water consumption (no water consumption for the production of new clothes). Friends were mainly identified as an important social group influencing behaviour in this respect. Furthermore, influencers appeared in small towns, as one respondent claimed:

> "influencers nowadays pay attention to ecological issues and also encourage people to buy from second-hand shops". (ST5)

As barriers to this behaviour, young people from rural areas and small towns emphasised the sometimes-poor quality of the clothes, and in medium-sized cities, the lack of opportunities to buy clothes that are trendy. In general, second-hand buying appeared most frequently in interviews with young people from small towns (14.3%), followed by those in medium-sized towns (13.3%) and in rural areas (7.1%) (Table 4).

Table 4. Number and share of respondents undertaking individual PEBs by place of residence.

	Residents' Locations							
	V		ST		MSC		LC	
PEB Research Themes	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Buying in second-hand shops	1	7.1	3	14.3	2	13.3	-	-
Waste separation	11	78.6	18	85.7	14	93.3	17	94.4
Reducing plastic	-	-	7	33.3	6	40	11	61.1
Saving resources	12	85.8	17	81	13	86.7	15	83.3
Use of public transport	2	14.3	9	42.9	10	66.7	16	88.9
Use of green individual transport	13	92.9	18	85.7	14	93.3	16	88.9
Participation in climate protests	-	-	1	4.8	13.3	3	3	16.7
Total number of respondents	**14**	**100**	**21**	**100**	**15**	**100**	**18**	**100**

Note: V—village, ST—small town, MSC—medium-sized city, LC—large city.

4.2. Waste Separation

The attitude of young people towards waste separation can be divided into two groups. In rural areas and small towns, they perceived it through the prism of cheapness (financial penalties can be received for not segregating waste):

> "I do not consider myself to be a very pro-environmental person, but I do separate waste, mainly because it is cheaper". (V3)

On the other hand, in the other two larger settlement units, the adolescents assessed waste separation from the perspective of recyclability and, more generally, environmental protection. The most important group influencing Gen Zers in this respect is parents. This group appeared in every settlement unit:

> "In my house, waste separation has been taking place for many years. Mum sees to it that we do it". (MSC13)

Apart from parents, young people in medium-sized cities pointed to teachers, and in large cities, they pointed to grandparents. The only perceived barrier was indicated by respondents from small towns—it was the lack of proper containers for waste separation in housing estates of multi-family blocks, which precluded them from fully separating waste. PEB related to waste separation was very often undertaken by representatives of all places of residence, increasing from 78.6% in rural areas to 94.4% in large cities.

4.3. Reducing Plastic

The category of reducing plastic was identified for all units except villages. A less littered environment was identified as the main attitude in cities. Additionally, in large cities, respondents highlighted the aspect of healthier nature and food when reducing plastic. The reference groups were more diverse, such that in small towns, it was only parents; in medium-sized cities, it was friends and teachers; and in large cities, it was parents and grandparents.

Gen Zers from small towns perceived the lack of money to buy products not packed in plastic as a barrier (because they are usually cheaper than products packaged in, for example, glass), and in other city sizes, it was the lack of available substitutes for products not packed in plastic:

> "If I have a choice, I try to choose products that are better for the environment. But if there is a product and there is no other option but to buy it in plastic packaging, I am forced to buy it". (LC9)

Reducing plastic as a PEB was most common in large cities (61.1%) and less common in medium-sized cities (40.0%) and small towns (33.3%). Representatives of Generation Z reduced plastic in various ways, including the following:

> "I don't use plastic bottles. I walk with a water filter bottle all the time" or (LC17)

> "I don't use plastic bags; I always have my shopping bag with me". (ST20)

4.4. Saving Resources and Energy

Youths' attitudes towards saving resources and energy were dominated by the belief that these actions reduce bills (except in large cities). Inhabitants of medium-sized and large cities also exhibited other attitudes: in the case of the former, it was the reduction of CO_2 emissions, and in the latter, the fight against climate change:

> "I try to save water and electricity because I think it has an impact on reducing climate change". (MSC4)

Gen Zers emphasised that it is mainly their parents or grandparents who draw their attention to the issue of saving water or electricity. Only the young people from the smallest units, i.e., villages and small towns, indicated any barriers. In the first case, it was the lack of a shower installed in the house, which made respondents use more water for bathing, and in the second case, forgetfulness related to switching off unused appliances from the power supply. Nevertheless, it is a very popular PEB in each of the settlement units and the proportion of indications between them is similar: villages and large cities—81.0%; medium-sized cities—86.7%; and small towns—83.3%.

4.5. Use of Public Transport

Another PEB identified is the use of public transport. Gen Zers from every type of unit considered using it as a good way to reduce pollution. Differences in other attitudes were also observed, namely that, in medium-sized cities, public transport is perceived as cheap, while in large cities, it is seen as fast and contributing to the prevention of climate change. This is how a respondent from a medium-sized city describes her attitudes and behaviour:

> "When I go alone or with friends on weekends or holidays, I try to choose public transport, e.g., train or bus. It is a greener mode of transport than the car because one bus carries many people. In big cities I travel by public transport. It is not complicated, and I think it can give something to our planet. I have no problem getting around by public transport". (MSC7)

In this category, the main reference groups are parents, who were indicated in all settlement units. In the countryside, grandparents are also pointed to, and in small towns and medium-sized cities, it is grandparents and friends. The perceived barriers in rural areas and small towns are the lack of bus or train connections; in medium-sized cities, the low comfort of public transport; and in large cities, congestion on public transport. By far,

the largest number of respondents use public transport in large cities (88.9%), followed by medium-sized cities (66.7%), small towns (42.9%), and rural areas (14.3%).

4.6. Use of Green Individual Transport

By using green individual transport, young people meant cycling, scootering, and walking. In all spatial units, respondents highlighted attitudes such as the reduction of environmental pollution and the perception of green individual transport as cheap. In addition, in rural areas, small towns, and large cities, it is seen as good for health. What is more, in medium-sized and large cities, Gen Zers find it fast and enjoyable:

> "I generally choose to cycle for closer distances—I love cycling and it gives me great pleasure. I try to take advantage of this as often as possible. Besides, I can get everywhere quickly by bike". (LC14)

In rural areas, important groups influencing the use of green individual transport are friends, but also grandparents:

> "My grandparents travel only by bicycle and often encourage me to cycle together". (V8)

In small towns, it is friends, and in medium-sized and large cities, it is parents who impact the respondents:

> "My dad rides a bike because he has changed his lifestyle and he will go everywhere he can by bike, so we often go places together". (MSC1)

In rural areas and small towns, barriers perceived by Generation Z to engaging in this PEB are laziness and bad weather. Different inhibiting factors were indicated by young people from medium-sized and large cities. In both cases, it was too great a distance to cover by bicycle, scooter, or on foot, and additionally in large cities, Gen Zers highlighted the lack of bicycles in the bicycle-sharing system. However, in general, the described PEB is readily undertaken by respondents from all types of settlement units—92.9% did so in rural areas, 85.7% in small towns, and 88.9% each in medium-sized and large cities.

4.7. Participation in Climate Protests

The final category is participation in climate protests, which is separate from the others due to its more formal environmental engagement. In rural areas, this form of PEB was not recorded among respondents. Attitudes in cities towards participation in climate protests were similar. In all types of cities, it was the fight against climate change, and in medium-sized and large cities, it was additionally the desire to make the public aware of the issue. Significant differences were identified in terms of those influencing participation in protests. Influencers were identified by Gen Zers in small towns and large cities due to the following fact:

> "For us youngsters, influencers are an important group that we often listen to. They actively encourage participation in climate protests". (LC11)

In small towns, residents are an important group, as a representative of Generation Z says:

> "Here the inhabitants are very conservative and there is no social and political consent to carry out such strikes". (ST15)

In medium-sized and large cities, friends often encourage each other to take part in such events, and additionally in large cities, teachers appear, too:

> "In our school I am an ambassador for the Youth Climate Strike. Teachers support me in my activities". (LC11)

There were also big differences in terms of barriers to participation in climate protests. As mentioned, when describing the reference groups, in small towns, Gen Zers point to unfavourable social conditions and display a lack of faith in the effectiveness of such measures. In small and medium-sized cities, respondents believe that their cities are too small to organise a climate strike effectively. Moreover, in medium-sized cities they emphasise

they are unable to get to a protest in a larger city, which prevents them from participating in such events. In large cities, the main inhibiting factors are lack of time to participate in protests or lack of need to express views in public spaces. Overall, participation in climate protests is low but increases with city size—in small towns this type of PEB was undertaken by 4.8% people, in medium-sized cities 13.3%, and in large cities 16.7%.

5. Discussion and Conclusions

The aim of the study was achieved by using the TPB model, which allowed the author to identify three main components that make up the PEB of Generation Z in Poland: attitudes, subjective norms, and perceived behavioural control. This is the first detailed study exploring the differences between rural and urban in the context of these motivational factors, which partly limits the opportunity to refer to other research findings.

In the qualitative strategy applied, the starting point was to identify the PEB types displayed by representatives of Generation Z in Poland. Gen Zers identified their PEB as (1) buying in second-hand shops, (2) segregating waste, (3) reducing plastic, (4) saving resources, (5) using public transport, (6) using green individual transport, and (7) participating in climate protests. The results obtained correspond to the findings of other studies. For example, ref. [48] portrayed the PEB of teenagers as related to recycling, water saving, environmentally friendly travel, and sustainable consumption. Similar conclusions were reached by [53], pointing to recycling or the use of pro-environmental technologies.

The best-studied component of PEB within Gen Z is sustainable consumption behaviour (SCB), which tends to be very high among the cohort in question [40]. An example of SCB is second-hand shopping, which was also highlighted by Polish Gen Zers. In the context of attitudes towards second-hand shopping, the results of this study are consistent with the findings of [9], which show young people's attitudes as positive and influencing their intention to purchase recycled clothing. Another category of consumer attitudes is SCCB (socially conscious consumer behaviour), which, according to [54], does not include second-hand shopping. This has implications for young people's perceptions of this type of consumer approach, as they claim that this type of behaviour is costly (e.g., buying higher-quality clothes) [54]. However, it seems that second-hand shopping fits both into SCB and SCCB assumptions and can be affordable even for teenagers. Apart from respondents from larger cities who did not engage in this PEB, the other groups saw it as a low-cost way to support environmental protection. In addition to this, Polish Gen Zers from smaller settlement units saw the relationship of this activity with the environment in terms of less water wastage. The very idea of reusing clothes is not new, but it is important that Generation Z engages in it. It is a strategy that offers great benefits from the perspective of sustainable consumption and environmental protection.

The use of sustainable transport is also an important element of PEB. As the authors of [55] explain, Generation Z is a key cohort in the context of developing sustainable transport and green travel. Gen Zers' attitudes towards sustainable transport were studied, for example, by [10] in Albania. They revealed that most Albanian teenagers show a desire to buy and own a car in their adult life. However, Polish Gen Zers, independently of the settlement unit, displayed positive attitudes towards sustainable transport, both in the use of public transport and environmentally friendly individual transport. Respondents from rural areas and all city types pointed out the advantages of these behaviours in the form of reduced environmental pollution. Differences were observed in medium-sized and large cities, where young people formulated a greater range of attitudes, such as preventing climate change or a good impact on health.

Compared to other studies, Gen Zers did not bring up the topic of food [45] or a range of activism activities (e.g., cleaning up green spaces) [56] during the PEB interview. This relates directly to the research design, as the interview did not dictate the PEB-related themes raised. Perhaps respondents did not perceive this as a pro-environmental activity, or it did not come to mind first during the ongoing interview.

Another component affecting PEB is the subjective norms shaped by different reference groups. The influence of social groups on the pro-environmental behaviour of Generation Z is undeniable and largely consistent with other research findings. No specific pattern of influence exerted by social groups according to place of residence was found. However, the social group that was indicated most, and is at the same time the most important, was parents, as confirmed by [11,57], among other scholars. For example, the study by [58] showed that parents who perceived walking and cycling as unsafe for their children had a strong influence on their children's future choice of these types of green and sustainable modes of transport. Ref. [34] argued along the same lines by considering parents as the most important group in shaping pro-environmental attitudes. In late adolescence, young people may also be influenced by their peers [34], which is also revealed by the results obtained in this study—friends were often indicated as an important social group influencing PEB. However, the two social groups mentioned above (parents and friends) can also have a disruptive effect from the perspective of engaging in PEB. Albanian adolescents felt significant social pressure from them towards car ownership and lacked role models and incentives to use public transport [10]. Other groups identified in the research are grandparents, teachers, and residents, who are all important social groups but do not usually play a prominent role [28]. In small towns and large cities, influencers who have so far not featured prominently in PEB research have emerged as a reference group. It is accepted in the literature that social media influencers are one of the most important groups with an impact on the attitudes of young people [59,60], so this may be a noteworthy indication for future research, particularly since, in many countries, Internet access is universal and usually unconstrained by unit of residence (rural–urban).

In addition to the components mentioned above, barriers are crucial in affecting PEBs. According to [61], three types of barriers can be distinguished: individuality, responsibility, and practicality. Individual barriers are related to the personality traits and attitudes of the individual [61]. These types of barriers were most common in rural areas and small towns, where Gen Zers indicated laziness or forgetfulness in the context of environmental issues. Responsibility barriers were the least represented by respondents, as only in the case of climate protests did respondents in small towns emphasise a lack of belief in success to combat climate change.

Practical barriers are social and institutional constraints that block people from taking pro-environmental action [61]. The obtained research results show that an example of such barriers may be the lack of time indicated by Gen Zers from large cities in relation to participation in climate protests. As [15] suggested, often these types of blocking factors resulted in a lack of commitment to PEB but did not imply a lack of concern for the environment. Another such example is barriers to the use of public transport. While these barriers were diagnosed in each settlement unit, they differ spatially. Youth from rural areas and smaller cities pointed to the lack of this type of transport. On the other hand, in medium-sized cities, the barrier was the low comfort of travel, and in large cities, it was the overcrowding of public transport. Similar differences were observed with respect to green individual transport—in villages and small towns, laziness or bad weather were barriers to its use; in medium-sized cities, a large distance to cover; and in large cities, a large distance to cover and the lack of bicycles in the bicycle-sharing system.

Apart from exploring the motivational factors of Polish Generation Z towards their PEB, the aim of the study was to explore the actual PEB undertaken by them. On the one hand, the results obtained are consistent with the work of [15], in which the authors showed that rural and urban residents did not differ in undertaking 'basic' PEBs, such as separating rubbish or saving electricity and water. The results, in this respect, indicate a similar trend, as young people from rural areas and cities of different sizes reported similar attitudes and barriers and reported adopting these behaviours with similar frequency. As explained by [15], this is due to the fact that environmental services (e.g., recycling) are becoming increasingly available in the countryside, resulting in a blurring of differences in pro-environmental attitudes and behaviour between rural and urban areas. On the

other hand, for the other PEB types, this is not true. For instance, in the case of public transport use, the larger the settlement unit, the more people in the interviews indicated engaging in this PEB. However, this situation is typical for Poland and other post-socialist countries, where access to public transport in rural areas is very low [62]. Moreover, young people from large cities did not buy from second-hand shops, and young people from the countryside did not reduce their plastic consumption or take part in climate protests. However, when it comes to protests, in relation to the situation of Polish Generation Z, one has to disagree with [15], who argued that place of residence had no effect on participation in protests. The results show that young urban dwellers are more involved and participate more frequently in protests. Generally, the bigger the city, the greater the scale of action and the more frequent this PEB is.

To date, many theories or concepts have been developed in an attempt to explain the residential gap. Its causes in relation to Polish Generation Z do not seem to stem from the environmental deprivation theory [38]. A report by [63] reveals that, in Poland, many environmental problems occur to the same extent in urban and rural areas. The gap is also unlikely to follow the theory of nature exploitation [39], as fewer and fewer young people are working in agriculture [64], so the members of the youngest generation are not exposed to the exploitation of nature for their own economic purposes. The cause of the residential gap tends to coincide with that proposed by [16]—it is due to educational disparities between rural and urban areas, resulting in a lack of full understanding of environmental problems and their consequences. Such a thesis is confirmed by numerous studies from Poland [65,66] and other post-socialist countries [67].

Until now, quantitative studies have mostly indicated that there are no rural–urban differences in environmental attitudes and behaviour due to narrowing differences between rural and urban populations [15,20,39]. One of the assumed reasons for this situation was the influx of better-educated urban dwellers into the countryside as a result of suburbanisation [15]. Other studies stood in opposition to these conclusions, arguing that urban and rural residents differed and pointing to urban dwellers as the more pro-environmental ones [16,36]. The qualitative study presented in this paper has shown that the topic of pro-environmental behaviour according to place of residence is not clear-cut. As shown in the discussion above, researchers have no consensus on the urban–rural divide. However, using a qualitative approach in TPB, we propose the model presented in Figure 2, which shows that, in at least two components, the urban–rural divide (the character of the settlement network) is crucial.

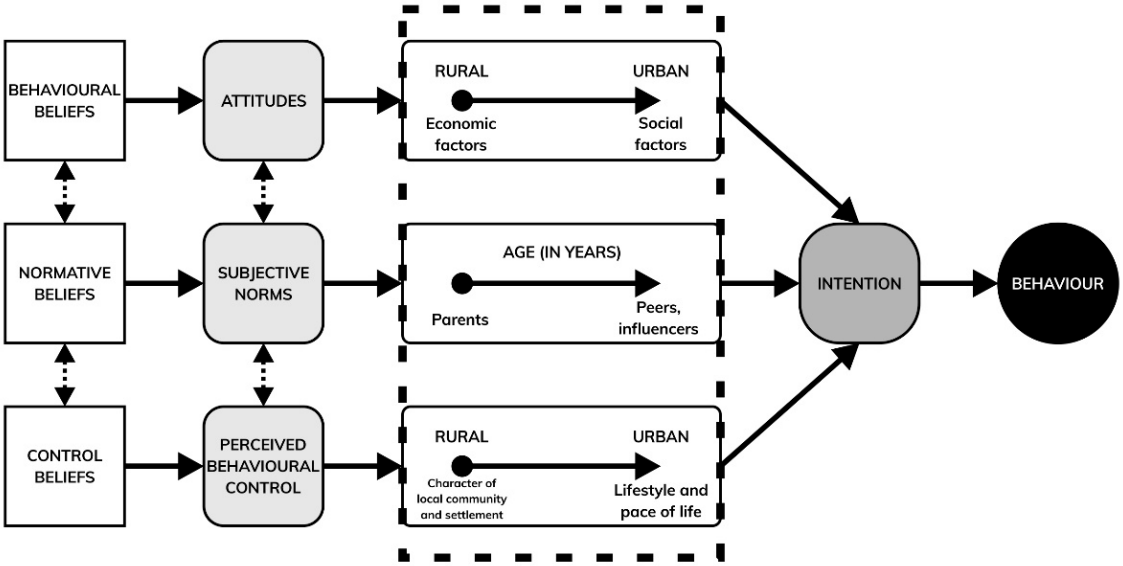


Figure 2. Theory of Planned Behaviour (based on [10,41]) completed on the basis of own study.

The first of these components is attitudes. According to the results, the smaller the settlement unit, the greater the importance of economic factors in adopting pro-environmental attitudes. On the other hand, the larger the settlement unit, the greater the importance of social factors (pro-environmental attitudes resulting from environmental awareness support environmental protection and, thus, increase the quality of life).

The second component determined by the size of the settlement unit is perceived behavioural control. The smaller the settlement unit, the more important the community characteristics are, and the larger the settlement unit, the more influential the pace of life and lifestyle. The proposal to explain the differences between the impact of the urban–rural divide and PEB focused, on the one hand, on economic factors with rural settlements and, on the other hand, on social factors with urban settlements:

- To a vast extent, corresponds to the observations made based on the literature studies (see Section 2.2). There it was noticed that the different positions concerning the impact of the urban–rural divide on PEBs could be made common if the factors analysed in other studies were divided into such categories;
- Is also a certain simplification of which we are aware. After all, in each case, when testing the impact of individual factors on a fundamental phenomenon, it is necessary to determine which factors are crucial and which are secondary. To make such a distinction in this study, we also emphasised the leading role of the economic factor (rural settlements) and the social factor (urban settlements). We know, however, that the list of these factors is much longer. Invariably, only two of them are of the most significant explanatory importance in determining the impact of the urban–rural divide on PEBs.

A component that is not dependent on the urban–rural divide is subjective norms. This component of the model is mainly determined by age. The lower the age, the more essential parents are for undertaking PEB, and the higher the age, the more important peers and social media influencers are.

In summary, the issue of Polish Generation Z's PEB according to place of residence is very complex and ambiguous. Using a qualitative strategy broken down into the countryside, small town, medium-sized city, and large city helped to bring this to light and better understand the problem. The presented study confirmed that dichotomising rural–urban is not in itself appropriate, because "urban" is not a homogeneous category and varies according to city size, as measured by population.

One can agree with [11] that Gen Zers generally exhibit positive pro-environmental attitudes, despite the fact that, in rural and urban areas, this is due to different reasons. One of the main reasons for non-involvement in PEB is that the traditional media do not cover many environmental problems [68–71] because the effects of environmental neglect are not immediately visible [8]. It seems that Generation Z, regardless of where they live, is the generation that looks to the future and sees the potential costs and consequences of not undertaking PEB, so their pro-environmental attitudes and behaviour should be explored, and action should be taken to engage them even more in environmental protection.

6. Limitations

The study conducted had several limitations. Firstly, the author was unable to generalise the findings to the whole population due to the qualitative strategy used, the purposive group selection, and the small number of respondents.

Secondly, the interviews were conducted only with members of Generation Z. Future research can be extended to other generations, including Generations Y and X, to see if intergenerational differences in PEB are increasing or decreasing.

Thirdly, the group considered comprised Gen Zers exclusively from Poland, a country in Central and Eastern Europe. In the future, it would be useful to broaden the geographical scope of the PEB study to include more European countries from different regions (e.g., Western Europe and Eastern Europe), making a comparative analysis. Another limitation was that the paper analysed only those PEB types that were indicated by the respondents

in the FGI. However, this was to capture PEB without imposing top-down answers, such as in quantitative research.

Fourth, we did not examine the respondents' environment, such as the type of house, infrastructure, and parents' education level and earnings. This is due to the research method used (FGI). These types of variables would have been more useful in the quantitative method. However, they are worth considering in future research.

A final limitation concerns the rural–urban distinction. In the study, villages were the units thus branded in the administrative division of Poland, while towns and cities were divided into classes according to the number of inhabitants. Subsequent studies should link individual villages and towns to variables such as the type of environment, the proportion of green spaces, or the degree of environmental degradation, which would allow for the creation of a multifaceted typology of settlement units and the identification of the PEB undertaken by their inhabitants.

7. Implications

We identified several implications. Our article provides practical cognitive value. Hence, the first implication is about creating appropriate policies. It helps point the way towards strengthening and building appropriate pro-environmental attitudes and behaviours. It is crucial to study PEB for all social groups, including Generation Z, because, as the authors of [72] point out, PEB analyses are key diagnoses that are a tool for creating appropriate policies.

Secondly, our results extend the knowledge of PEB within a different society than modern Western societies. There is a wealth of research on PEB in Western societies, and the significance of understanding PEB in these societies is generally accepted [73]. Our results provide a better understanding of the situation of countries that were relatively recently classified as Western societies, as they were socialist states until 1989. We have shown that PEB in Poland is a confirmation of the findings of, among others, ref. [74]. They point out that, in post-socialist countries, even though the government does not agree with EU policy, the inhabitants undertake PEB in their daily lives along the lines of behaviour from Western EU countries.

Thirdly, from a theoretical perspective, we have shown that the current theories on urban–rural heterogeneity are insufficient to capture the relationships between these units. More research is needed to create new theories or modify old ones.

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