
Subjective Assessment of Seniors on the Phenomenon of Discrimination: Analysis Against the Background of the Europe 2020 Strategy Implementation

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Abstract:

Purpose: Our study aimed to compare objective factors increasing discrimination and subjective feelings of seniors about discrimination. Additionally, we have attempted to indicate whether the elderly is discriminated against and to what extent they report such situations.

Design/Methodology/Approach: The linear ordering by Hellwig's method was used to construct Taxonomic Measure of Preventing Exclusion (TMPEi) and synthetic measures for finding the level of discrimination perception by seniors. Eurostat data was used to construct the TMPEi and Special Eurobarometer data to learn about senior subjective assessment of discrimination.

Findings: The construction of an additional taxonomic measure allowed for determining a negative relationship between the level of socio-economic development of a given country and the risk of discrimination. Comparing the EU countries' classification based on the obtained values with the results of the classification made based on the TMPEi allowed to check whether the lower risk of exclusion results in less discriminatory behavior and whether it influences seniors' better assessments in terms of the discrimination they observe.

Practical Implications: As a result, the possibility of applying for an institutional response of the European Union countries to the problems identified by seniors reflecting discrimination against citizens was assumed. Seniors constitute a growing social group. For this reason, they will have an increasing impact not only on social policy but also on product and service markets and, by participating in elections, they will decide who will run the countries.

Originality/Value: Because implementing strategic goals is usually controlled at the level of measurable indicators, the undertaken research constitutes an innovative approach to evaluating the implementation level of the Europe 2020 strategy. Our study is unique and fills the gap in researching the subjective assessment of seniors against discrimination.

Keywords: Discrimination, Europe 2020 strategy, Hellwig's linear ordering, seniors' assessment.

JEL codes: C38, J15, O52.

Paper type: Research article.

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1. Introduction

The three main Europe 2020 strategic priorities relate to intelligent, sustainable, and inclusive growth. The third priority is about activities for social inclusion, combating poverty, and promoting equal opportunities. In this context, an attempt was made to evaluate its implementation in the area relating to the elderly. The aging population is a phenomenon that affects all countries of the European Union. Therefore, a broad analysis of various aspects of seniors' lives is necessary. As they constitute an increasing social group, their needs become noticeable and the difficulties they face. Do seniors face any discrimination? Can they recognize it? How can we assess the achievement of the social inclusion goal from the point of view of the elderly? Our study aimed to create a taxonomic measure of preventing exclusion based on the Europe 2020 strategy guidelines and to recognize the perception of discrimination by people aged 60+. The taxonomic measure served as an indirect tool for measuring the phenomenon of discrimination in terms of realizing the inclusion goal. As a result of the implementation of the research goal, the possibility of applying for institutional responses of European Union countries to problems identified by seniors, reflecting discriminating them as citizens, was assumed.

2. Research Background and Literature Review

The conducted study was two-way in nature. The first part presents the basic assumptions of the Europe 2020 strategy, emphasizing the issue of social inclusion. The implementation of this part of the strategy is related to the subject of the undertaken research – the analysis of the phenomenon of discrimination. The analysis was carried out about a group of seniors who constitute an increasing part of every European society. The second stage of the research is a different view on discrimination, focused on the analysis of subjective feelings of seniors towards discrimination. This approach allows for a broader perspective, considering both objective and subjective factors.

When researching discrimination against the elderly, quoting definitions will make the wording used unambiguously.

It is not easy to find a clear definition of a senior. For example, The World Health Organisation believes that most developed world countries characterize old age at 60 years and above. However, this definition does not apply to Africa, where traditionally an elder or older adult is between 50 and 65. In Poland, the term senior is used for people of different ages. The Act of 11 September 2015, article 4 said: older adult – a person over 60 years of age. However, in the Central Statistical Office studies, one can find a reference to Eurostat and OECD, in which the elderly is referred to as people over 65. In turn, the Ministry of Health grants the right to free medicine to seniors over 75 years of age. Seniors aged 70+ are usually entitled to free public transport. In our study, we assume that a senior is a person over 60 years of age.

When using the term discrimination, we understand that: "Discrimination is an unequal, inferior, often also breaking the law, action, omission, criterion or regulation concerning persons or groups due to their actual or perceived identity characteristics, such as gender, gender identity, skin color ("race"), language, national and/or ethnic origin, religion, denomination or non-denomination, worldview, health and fitness level, age, psychosexual orientation, social and economic status, and others." The quoted definition was developed based on the terms used in the Polish legal system and in studies on counteracting discrimination and violence motivated by prejudice that does not have a legal nature, the materials of the Ombudsman, Anti-Discrimination Education Society, Anti-Discrimination Law Society, Crisis Intervention Society, Autonomia Foundation, Foundation for Social Diversity, Villa Decjusza Association, and information on rownosc.info and bezuprzedzen.org portals were used. Discrimination is based on prejudice. Prejudice is a negative assessment or judgment accompanied by a negative emotional attitude, e.g., aversion, disgust, fear, contempt, hatred towards some social group distinguished based on a selected identity feature or selected identity traits. This is based on the actual or alleged belonging of the person/persons to this group. Prejudice is an affective, emotional element of an attitude shaped over a long period of time and thus difficult to change. Based on various types of prejudices, several types of discrimination are observed:

- due to gender,
- due to sexual orientation,
- due to race and ethnicity,
- due to religion and belief,
- due to disability,
- due to age.

The most common studies on discrimination concern the labor market and the gender pay gap (Blinder, 1973; Oaxaca and Ransom, 1994). An interesting study was proposed by Petersen and Saporta (2004), found the fate of employees in their careers in terms of discrimination. Many authors deal with this topic about racial and ethnic issues (Pager and Shepherd, 2008; Bertrand, Chugh, and Mullainathan, 2005; Reimers, 2020). The existence of ethnic discrimination, but not about the labor market, was also proven by experiment (Fershtman and Gneezy, 2004). Racial discrimination has even been described as basketball referees (Price and Wolfers, 2010). The study of the impact of discrimination on mental and physical health seems very interesting (Krieger, 2014; Pascoe and Richman, 2009; Williams, Neighbors and Jackson, 2003). The study on the impact of religious discrimination on Muslims' level of stress (Ameline, Ndobu, and Roussiau, 2019) is also part of this research area. The issue of sexual discrimination is also described in the literature (Badgett, 1995; Grant, Motter, and Tanis, 2011). An important issue from equal opportunities is discrimination against obese people (Puhl, Andreyeva, and Brownell, 2008; Puhl and Brownell, 2012).

Ageism's concept has an essential meaning for analyzing discrimination against seniors (both whiles experiencing and inducing it). Definitions of ageism were introduced in 1969 by Butler to discuss the prejudice against the elderly. He pointed out that ageism is constructing stereotypes and discriminating against older people due to their age. Stuckelberger, Abrams, and Chastonay (2012) indicate that Schaie developed this definition in 1993. Ageism covers all age-related prejudices, regardless of the age group of the person being attacked. Vaculair *et al.* (2016) indicate that ageism is about negative stereotypes, prejudices, and discrimination against the elderly and people perceived as older (not necessarily included in a specific age group according to the birth date).

Considering the above definitions, fighting discrimination should be fighting stereotypes, especially those eagerly attributed to the elderly, as well as stigmatization, often considered soft discrimination. This issue is discussed in detail in Ayalon and Tesch-Römer (2018), Fisenko, Kheday, and Stepanyan (2018), Stuckelberger, Abrams, and Chastonay (2012), Stuckelberger and Vikat (2007), Stypinska and Turek (2017). Ayalon and Tesch-Römer (2018, p. 5) rightly note that the increasingly used term “active aging” is “the concepts of successful aging or active aging, which aim to differentiate between pathological processes that occur in old age, normal aspects of aging” and successful aging, without the burden of health.

Another element related to counteracting discrimination against the elderly is the genuineness of the occurrence of this phenomenon. Kaiser and Major (2006) indicate that the perception of discrimination results from a subjective assessment of the environment, and thus two errors may appear in the measurement of discrimination: a vigilance bias and a minimization bias. The former may result from the desire to excuse one's own failure. The latter is the result of premeditated action deliberately overlooking discrimination to reduce risk. In the presented results of our pilot survey (described below), we observed such a situation when the respondents reported that they themselves were not discriminated against because of age. On the other hand, they often served various examples of age discrimination observed in their environment.

Conducting a literature review, we concluded that the undertaken research concerns either exploring the definition of discrimination against older people (examples are given above) or the occurrence of a specific type of discrimination against older people, but rarely against professionally inactive people. There is a gap in research using seniors' subjective assessment towards feeling, observing, and even taking discriminatory actions. There are studies related to age discrimination: Barnes *et al.* (2004), Mucha and Krzyzowski (2010), Vauclair *et al.* (2016), but most of them concern situations observed in the labor market (often for people under 65), e.g., Arvanitis, Stamatopoulos, and Thalassinou (2011), Bendick, Brown, and Wall (1999), Bennington and Wein (2003), Botti, Corsi, and D'Ippoliti (2011), Breński (2013), Connolly (2008), Firbank (2001), Stock and Beegle (2004), Stuckelberger

and Vikat (2007), Stypińska (2014), Stypińska and Nikander (2018), Stypińska and Turek (2017).

About the elderly, studies related to gender discrimination were also conducted (Barnes *et al.*, 2004; Botti, Corsi and D'Ippoliti, 2011; Breński, 2013; Vauclair *et al.*, 2016), ethnic or origin (Barnes *et al.*, 2014), due to sexual orientation (Choi and Mayer, 2016) or due to disability (Corby, William, and Richard, 2019; Stock and Beegle, 2004). As presented above, our study is unique and fills the gap in researching the subjective assessment of seniors against discrimination and linking this assessment with objective factors.

As it has already been emphasized in the introduction, seniors constitute a growing social group. For this reason, they will have an increasing impact not only on social policy but also on product and service markets and, by participating in elections, they will decide who will run the countries. Therefore, there is a need to identify factors influencing their behavior, their needs, and problems. Only in this way will it be possible to implement the strategy's assumptions on social inclusion and to "tune" the market and political tools to this social group. This, in turn, will maintain social satisfaction, win the favor of the elders, and bring political and market benefits.

At the beginning of 2020, we started studying the most important problems faced by seniors. We chose face-to-face interviews in the snowball pattern as the data collection method. Unfortunately, the outbreak of the coronavirus pandemic prevented us from carrying out our study. However, the results of the pilot survey revealed problems that are not discussed in the literature. We managed to conduct a pilot survey in large, medium, and small towns and villages.

In total, we collected the opinions of 57 respondents aged 60+. In the survey, we asked respondents how they define the word senior. Most often, they would respond that seniors are the elderly in retirement or with a disability pension. Seniors are at least 60 years old and younger – 70-80 and older for older respondents. The respondents indicated that seniors have a stable financial situation, are independent, participate in social life, and develop their interests. There were also negative observations that seniors need care and a difficult financial situation – these assessments were rare.

In a further study, we assumed that a senior is over 60, either professionally active or inactive. Our pilot survey asked respondents about age discrimination: 67% of them stated that they did not experience any age discrimination, and only 12% of respondents were discriminated against. Seniors participating in the study indicated in what situations they observe age discrimination. It was surprising that the most frequent situations involved the health service, i.e., queues in which they have to wait for an appointment, the behavior of other patients in waiting rooms, and the behavior of medical staff. Seniors feel discriminated against when nurses

affectionately address them "granny" and "grampy," and doctors claim that the conditions they complain about are due to their age.

3. Data and Methods

The three main priorities of the Europe 2020 strategy relate to economic development, which should be pursued as smart, sustainable, and inclusive. As has already been mentioned, due to the subject of the undertaken research, our attention was focused on the implementation of the third of the priorities. The measurement of the degree of achievement of the strategic objectives is possible through the observed indicators' values.

However, at this point, it is worth emphasizing that while the observation of the level of the discussed indicators can accurately illustrate the progress in achieving the strategic goals to their relation to the situation of the elderly is problematic. Because of the indicators' general nature, it is impossible to present their values about age groups, apart from the poverty indicator. Hence the need to aggregate data so that it is possible to obtain as much information as possible. Due to the lack of data, the first stage of the research concerned the construction of a Taxonomic Measure of Preventing Exclusion, the values of which, in individual EU countries, could constitute indirect information on the risks associated with discrimination. Stuckelberger, Abrams, and Chastonay (2012, p. 134) proved in their research that "age discrimination is a key element of the exclusion of older people from the labor market." However, there seems to be a feedback loop between the two phenomena because excluded people have limited access to the labor market, and thus, as a result of the negative traits observed in society, they become or consider themselves discriminated against.

Considering the study of discrimination, we conclude that exclusion may be a reason for discrimination. Therefore, we assumed that the level of implementation of the third priority strategy related to social inclusion would be a good benchmark for our analyses. Based on the adopted assumption, we used Hellwig's ordering to construct the Taxonomic Measure of Preventing Exclusion (TMPEi) for each EU country. All variables that could indicate the risk of exclusion or its prevention, and thus exposure or its lack of the symptoms of discrimination, were considered, thus:

- At-risk-of-poverty rate,
- Median of the income ratio of people 65+ in relation to younger people,
- Material deprivation rate for people 65+,
- Projected number of healthy life years after the age of 65,
- Indicator of people aged 65+ who have never used a computer,
- Percentage of people who meet friends several times a month,
- Percentage of people who for financial reasons do not participate in cultural events,
- Percentage of people who are active in volunteering or are active in the community.

Data were sourced from the Eurostat databases and relate to the year 2018. Hellwig's method requires two postulates to be met. First, the nominates should be converted into stimulants, and then all, through normalization, lead to the comparability. Since, in our case, there were no nominates, normalization was performed by standardizing the values of variables according to the following formula:

$$z_{ij} = \frac{(x_{ij} - \bar{x}_j)}{S_j} \quad (1)$$

where: z_{ij} – standardized value of j -th variable in i -th object,
 x_{ij} – observed value of j -th variable in i -th object,
 \bar{x}_j – mean of j -th variable,
 S_j – standard deviation of j -th variable.

As a result of variable rescaling according to the standardization formula (eq. 1), we get each variable's average value equal to zero, with the standard deviation equal to 1. In the next step of Hellwig's method, an ideal object (pattern) must be established, the values of which are selected according to the following criteria. For each object (in our case, the country), the distance from the designated pattern is calculated. Euclidean distance is used in this method:

$$z_{0j} = \begin{cases} \max_i \{z_{ij}\} & \text{associated with stimulant} \\ \min_i \{z_{ij}\} & \text{associated with destimulant} \end{cases} \quad (2)$$

For each object (in our case the country), the distance from the designated pattern is calculated. Euclidean distance is used in this method:

$$d_{i0} = \sqrt{\sum_{j=1}^m (z_{ij} - z_{0j})^2}, i = 1, 2, \dots, n \quad (3)$$

The value of the distance of each object from the pattern allows ranking these objects in order from the best (closest to the pattern) to the worst (furthest from the pattern) or vice versa. To normalize the values of the d_{i0} distances obtained, as well as to obtain a measure which rising values would indicate the development of the studied phenomenon, a synthetic meter is constructed:

$$s_i = 1 - \frac{d_{i0}}{d_0}, i = 1, 2, \dots, n \quad (4)$$

where: $d_0 = \bar{d}_0 + 2S_{d_0}$,
 $\bar{d}_0 = \frac{1}{n} \sum_{i=1}^n d_{i0}$,
 $S_{d_0} = \sqrt{\frac{1}{n} \sum_{i=1}^n (d_{i0} - \bar{d}_0)^2}$.

The obtained value of s_i is the Taxonomic Measure of Preventing Exclusion (TMPEi) for each EU country. The applied formula the measure received refers to the maximum possible distance, which is d_0 between the ideal object and the non-ideal object. In Hellwig's method, the measure of s_i usually takes values in the range $\langle 0;1 \rangle$. The higher the value of the measure, the better place of a given country in the ranking (in our case, the lower the TMPEi value, the higher the risk of discrimination). When many objects are considered or when one of the variables more significantly differs from the ideal object, the measure may have negative values. The ordering synthetic measure stems from the relation between the distance of a given object to an ideal object and the interval of the variability of all the distances between objects and the ideal. It is possible to classify the considered objects due to differences in the values of measures. Based on formulas:

1. $s_i \geq \bar{s} + S_{s_i}$,
2. $\bar{s} + S_{s_i} > s_i \geq \bar{s}$,
3. $\bar{s} > s_i \geq \bar{s} - S_{s_i}$
4. $s_i < \bar{s} - S_{s_i}$,

where: $\bar{s} = \frac{1}{n} \sum_{i=1}^n s_i$,

$$S_{s_i} = \sqrt{\frac{1}{n} (s_i - \bar{s})^2}$$
(5)

We get four classes of as little varied as possible within one class and as diverse as possible between classes. In the first class are objects with the best (highest) results of the s_i (in our case, countries with the lowest level of the risk of discrimination) in the fourth class – with the worst results, most at risk of discrimination (Nowak, 1990).

In the study of seniors' subjective assessment on the phenomenon of discrimination, we used data collected in the Special Eurobarometer (European Commission, 2020) and the original questions contained in the questionnaire for this study (Eurobarometer 91.4, 2019). We examined the perception of discrimination about socio-demographic groups against which discriminatory behaviors are observed (a similar classification is presented by Olmińska (2017)). We have distinguished discrimination based on 1) gender; 2) age; 3) sexual minority as sexual orientation (being gay, lesbian, or bisexual) and being transgender or intersex (gender identity 1 and 2); 4) disability 5) religion; 6) ethnicity. From the Eurobarometer questionnaire, assessments of 6 questions were selected to determine the perception of discrimination in the six areas mentioned:

– SD1 – Do you have friends or acquaintances who are members of the following social groups?

- SD2 – Where you live, do you consider yourself to be part of any of the following social groups?
- QC1 – For each of the following types of discrimination, could you please tell me whether, in your opinion, it is very widespread, fairly widespread, fairly rare or very rare in your country?
- QC2 – In the past 12 months have you personally felt discriminated against or experienced harassment on one or more of the following grounds?
- QC6 – How you would feel about having a person from each of the following groups in the highest elected political position in your country?
- QC9 – Do you think that enough is being done to promote diversity in your workplace as far as each of the following is concerned?

We chose the SD1 question to check whether seniors recognize social groups that are at risk of discrimination. On the other hand, the SD2 question allowed us to check how many seniors are aware of belonging to one of the analyzed groups. The following questions allowed us to identify the similarities between respondents from different countries in the perception of discrimination of the six socio-demographic groups. For the analysis, we selected data for European Union residents aged 60+, broken down by gender, and three age groups 60-64, 65-74, 75+. Responses to the questions were measured differently. In questions SD1, SD2, QC2, the respondent could indicate each category that corresponded to their assessment, except for mutually exclusive. QC1, QC6, and QC9 were measured on 4- and 3-point ordinal scales, where the highest rating meant a terrible rating for the existence of discrimination. Because in the SD1, SD2, QC2 questions, the respondents could indicate any number of categories, each category could be selected n_i in the study, i.e., as many times as many respondents from the i -th country appeared in the age group for a given gender. If the share of the number of respondents' real choices tended to reach 100%, this meant confirmation of the existence of the problem of discrimination observed by a given group of respondents in each country.

Questions QC1, QC6, and QC9 were measured on ordinal scales of four and three points. The highest rating meant a terrible rating for the existence of discrimination. In the case of these questions, the maximum number of points to be obtained was kn_i , i.e., it was equal to the highest grade (k) product and the number of respondents in each country n_i . If the share of the number of respondents' actual choices for assessments confirming discrimination was up to 100%, this meant confirmation of the existence of the problem of discrimination observed by a given group of respondents in each country. As the number of appearances in the total number of respondents is measured on a metric scale, it was possible to use linear ordering. Since it is impossible to indicate the best reference value, we chose the non-pattern method (Panek and Zwierzchowski, 2013; Gatnar and Walesiak, 2004). The variables were measured in the same units, but the orders of magnitude were different, so we used the normalization according to formula (1). We calculated the synthetic variable allowing the assessment of the level of the studied phenomenon in the i -th country as follows:

$$p_i = \frac{1}{m} \alpha_j z_{ij}, i = 1, \dots, n; j = 1, \dots, m \tag{6}$$

where: α_j – weight of the factor identified for a specific type of discrimination,

$$\alpha_j \in (0; m), j = 1, \dots, m, \sum_{j=1}^m \alpha_j = m;$$

z_{ij} – normalized value of the share of the number of occurrences of the j -th factor identified for a specific type of discrimination in the i -th country.

Because for a specific type of discrimination, all factors identified on the basis of QC1, QC2, QC6, QC9 had the same importance for the study, the weights α_j were also equal, so the formula (6) was reduced to $p_i = \frac{1}{m} z_{ij}$. For the collected data and as a result of their transformation, we determined synthetic measures of seniors' subjective assessment of six types of discrimination in three age groups, broken down by gender of the respondents.

4. Taxonomic Measure of Preventing Exclusion in EU Countries

Table 1 presents the results obtained from the classification of countries according to TMPE_i due to gender. The countries with the lowest risk of exclusion and indirectly, discriminatory behavior are marked in green. In red – countries with the highest level of phenomena that may cause exclusion, and thus more frequent occurrence of discrimination. The results are also shown on the maps (Figure 1 and Figure 2).

Table 1. Classification of EU countries according to TMPE_i

Country	Women	Men
Belgium	2	2
Bulgaria	3	3
Czech Republic	2	2
Denmark	1	1
Germany	2	3
Estonia	4	4
Ireland	2	2
Greece	3	3
Spain	3	3
France	1	1
Croatia	3	2
Italy	4	4
Cyprus	4	3
Latvia	4	4
Lithuania	4	4
Luxembourg	2	1
Hungary	3	3
Malta	3	2
Netherlands	2	2
Austria	1	1
Poland	3	3
Portugal	4	4
Romania	3	3
Slovenia	2	2
Slovakia	2	2
Finland	2	2
Sweden	2	2
United Kingdom	2	2

Source: Own study.

Figure 1. Classification of EU countries according to $TMPE_i$ value for women



Source: Own study.

Figure 2. Classification of EU countries according to $TMPE_i$ value for men



Source: Own study.

It is commonly believed that older women are in a worse situation than men. For example, in their studies, Stypińska and Turek (2017) indicated that age discrimination more often affects women. The worsening situation of women may also be influenced by the persistent pay gap (this phenomenon is widely discussed in the literature, e.g., in Arvanitis, Stamatopoulos, and Thalassinos (2011)). Therefore, discrimination against women on the labor market results in their economic worsening in the future, which leads to social exclusion (with equal intensity in various areas), thus contributing to the aggravation of age and gender discrimination.

In the discussed research area, this thesis is not confirmed. Only four Member States (Malta, Cyprus, Croatia, and Luxembourg) were classified higher in the classification for men, which means that women in these countries are worse off, according to the $TMPE_i$. The example of Germany deserves special attention.

According to the value we have calculated, older women are better than men in this country. The observed situation may result from the fact that the analysis variables were not only of a monetary nature. However, we assumed that a country's socio-economic situation does influence the area discussed in our analysis. Therefore, to compare our TMPEi with the measure showing the level of socio-economic development, we have constructed a Taxonomic Measure of Economic Development. The same method was used, and the following variables were considered:

- GDP per capita in PPS,
- Employment rate,
- Gross domestic expenditure on research and development,
- Export of goods and services in % of GDP,
- Annual net earnings in EURO,
- Unemployment rate,
- Inability to make ends meet,
- In-work at-risk-of-poverty rate.

Table 2. Classification of EU countries according to TMED_i

Country	TMED	Country	TMED
Belgium	2	Lithuania	3
Bulgaria	4	Luxembourg	1
Czech Republic	2	Hungary	3
Denmark	1	Malta	2
Germany	2	Netherlands	1
Estonia	2	Austria	2
Ireland	1	Poland	3
Greece	4	Portugal	3
Spain	4	Romania	4
France	2	Slovenia	2
Croatia	3	Slovakia	3
Italy	4	Finland	2
Cyprus	3	Sweden	2
Latvia	3	United Kingdom	3

Source: Own study.

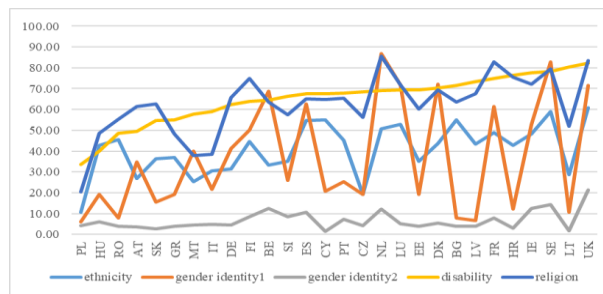
Comparison of the classification results based on TMPEi and TMDEi showed that they are very similar. The value of Rand measure about women amounted to 0.78 and about men 0.80. On this basis, we concluded that the socio-economic situation of a given country is reflected in the level of discrimination risk. The higher the class obtained based on TMDEi, the lower the level of risk of discrimination expressed by the measure of TMPEi.

5. Senior Recognition of the Phenomenon of Discrimination in the Environment

The Taxonomic Measure of Preventing Exclusion (TMPEi) we have constructed allowed for the European Union countries' classification. As a result, we observed

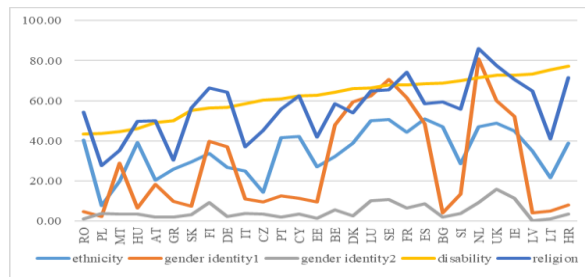
differences in the implementation of the third priority of the Europe 2020 strategy in individual countries, especially about seniors. However, the question is still open whether seniors observe any forms of discrimination, both in the environment and about themselves. Subsequent analyses aimed to determine the differences in perception and the experience of discrimination by seniors from different age groups among women and men. We pay special attention to Poland. First, we checked whether seniors recognize social groups exposed to discrimination in their environment (question SD1). The analysis results are presented in Figures 3-5 for the age groups 60-64, 65-74, and 75+, respectively.

Figure 3. Recognizing social groups exposed to discrimination by seniors aged 60-64



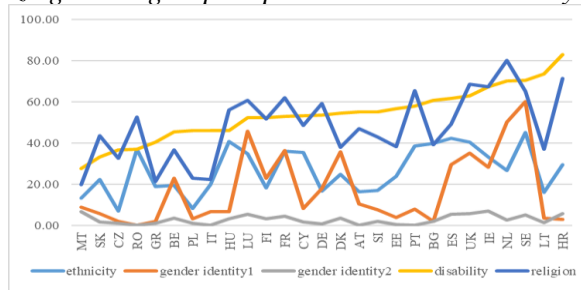
Source: Own study.

Figure 4. Recognizing social groups exposed to discrimination by seniors aged 65-74



Source: Own study.

Figure 5. Recognizing social groups exposed to discrimination by seniors aged 74+



Source: Own study.

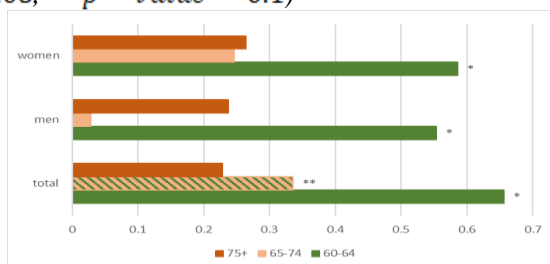
In Figures 3-5, the ordering was made based on respondents' share, indicating that there are disabled people in their social environment. As a risk of discrimination, this social group was indicated most often in most countries by respondents from all age groups. The second most frequently indicated social group observed in the respondents' immediate vicinity was people of other religions and views. Among the youngest and middle-aged Polish seniors, social groups associated with five types of discrimination are indicated the least frequently compared to other Europeans. The oldest Poles participating in the study also indicated people of a different religion, ethnic origin, gender identity, and sexual orientation in their environment few and far between. Compared to younger Polish seniors, the oldest people notice disabled people in their environment more often.

Among the youngest seniors, the Swedes and the English recognize all social groups at risk of discrimination in their environment (Figure 3). In the middle-aged senior's group, it can only be indicated that the Dutch notice in their environment people of different ethnic origin they belong either to sexual minorities or to communities with a different religion (Figure 3). In contrast, in Luxembourg, citizens indicate in their close surroundings people of different ethnic origins, being transgender or intersex and people with disabilities. Among the oldest people, the Swedes most often indicate people belonging to all social groups at risk of discrimination (Figure 5). When analyzing the indications given by seniors, it can be noticed that the perception of sexual minorities in one's environment decreases with age. However, one of the people with disabilities or other religion remains the most identified in the seniors' neighborhood. Seniors also recognize people of other ethnic origins in their environment, but the shares of this social group by the oldest seniors are significantly lower than by the younger ones (Figures 3-5).

Among people over 60, very few declared belongings to one of the social groups at risk of discrimination. In all age groups, both among men and women, 90% of respondents indicated that they do not belong to the distinguished social groups. In the group of people aged 60-74, when choosing to belong to any of the discriminated groups, the respondents indicated the most frequent, ethnic origin, religion, and disability. In the group of the oldest women, the order was reversed. As we have already indicated, the number of respondents belonging to one of the groups discriminated against is small in respective countries.

Therefore, we could not check the occurrence of this phenomenon in individual countries. We could also present discrimination against persons belonging to social groups only in terms of the entire EU. For this purpose, we calculated the correlation between the share of people who indicated that they belonged to a social group and the share of people who indicated they had been discriminated against. In Figure 6, we have presented the relationships between belonging to a group at risk of discrimination and being exposed to it.

Figure 6. Correlation coefficients between belonging to a social group at risk of discrimination and a personal feeling of being discriminated against (* $p - value = 0.05$, ** $p - value = 0.1$)



Source: Own study.

Considering all respondents (without a breakdown by gender), it should be stated that people belonging to at least one of the social groups at risk of discrimination have personally experienced discrimination. In the group of people aged 60-64, both women and men who indicated that they belonged to the studied social groups were those discriminated against. A higher correlation coefficient between belonging to a social group at risk of discrimination and experiencing discrimination was observed in all age groups for women. Therefore, although they belong to social groups at risk of discrimination, men are less likely to be discriminated against than women. This phenomenon may be because the senior generation is still burdened with the image of a (mentally) strong man, which results in public refusal to admit to weaknesses and signs of hostility in the environment.

6. Analysis of the Subjective Opinions of Seniors on the Phenomenon of Discrimination

Another question we decided to answer was whether there are any similarities or differences between Europeans in the perception and assessment of discrimination in each EU member country. We made this assessment based on seniors' answers to QC1, QC2, QC6, and QC9 from the Eurobarometer study. We conducted the analysis separately to perceive discrimination in each of the six distinguished socio-demographic groups (singled out by gender, age, sexual minority, disable, religion, origin). Table 3 shows the linear ordering of countries based on the synthetic measure of gender discrimination assessment.

The obtained synthetic measures in each age group, broken down by gender, were classified into one of the four classes in terms of the arithmetic mean and standard deviation (equation 5). In Table 3, we marked with dark green the classes with the optimistic assessment of the discrimination phenomenon. There are countries in which seniors assessed counteracting gender discrimination at a high level. Dark red indicates the opposite situation, i.e., countries where the respondents assessed the actions to counteract discrimination based on gender very badly.

When analyzing the ordering of countries presented in Table 3, we noticed large differences in assessing the studied phenomenon by men and women of the same age. Based on the presented rankings, we concluded that there is no country where the assessment of gender discrimination in all age groups, broken down by gender, was the same. The most critical assessment of the country situation related to gender discrimination is presented by women and men from three age groups in Hungary and Romania. Swedish women from three age groups assess this phenomenon worse in their country than men. The situation of gender discrimination in Poland is assessed very badly by the youngest seniors and significantly better by the older ones.

Table 4 presents the correlation coefficients of synthetic measures obtained for individual analyzed age groups, broken down by gender, and the rankings presented in Table 4. In Table 4, the correlations between women and men from the same age group are marked with red, blue, and green. By calculating these correlations, we wanted to check whether people from the same age group similarly assess the national problems related to gender discrimination. The biggest differences are between assessments made by the oldest men and women. The correlation coefficients between women's and men's assessments are higher and significant in the other two age groups, but it is not a strong relationship.

In Table 4, we marked the highest correlation coefficient in yellow to indicate respondents' unanimous group. It turned out that the assessments of the youngest men and the oldest women are the most similar: half of the analyzed countries were assigned to the same classes in both groups of respondents. In the first class, it is Malta, in the second class seven countries (Finland, Spain, Luxembourg, Austria, Greece, the Netherlands, Ireland), in the third class three countries (the United Kingdom, Belgium, and Portugal) and the fourth-class Hungary, Romania, and Italy. The second highest correlation coefficient indicating the most similar assessments concerns the youngest men and women aged 65 to 74. It is worth noting that in both respondents, four of the same countries, Malta, Slovenia, Slovakia, and Denmark, are included in the first (the best) class.

By assessing the order of countries presented in Table 5 and the values of correlation coefficients in Table 6 (indication as in Table 4), we found that women and men differ the least (regardless of age) in the assessment of the occurrence of discrimination against sexual minorities compared to ratings of other types of discrimination. In Luxembourg, both women and men aged 60+ assess the anti-discrimination of sexual minorities in their country as the best among all Europeans. All Italians present the opposite opinion. The most varied assessments are among the Irish, Finns, and Czechs. In Ireland, the phenomenon of discrimination against sexual minorities is assessed very poorly by people aged 65-74, while younger women and men and the oldest men assess this phenomenon's prevention significantly better.

Table 3. Seniors' assessment of gender discrimination – results of linear ordering

country	60-64		65-74		75+	
	men	women	men	women	men	women
MT	1	20	6	1	2	3
SI	3	1	16	7	19	17
SK	4	11	4	5	1	20
DK	5	6	9	3	10	5
FI	6	18	7	12	27	13
ES	7	15	14	16	5	6
LU	8	12	22	25	9	10
AT	9	26	25	15	6	8
GR	10	10	20	14	22	11
LT	11	2	1	23	20	2
NL	12	5	5	21	3	14
IE	13	3	26	18	25	9
EE	14	4	18	13	4	18
CY	15	22	3	6	26	16
BG	16	21	8	2	14	7
DE	17	17	2	10	7	4
FR	18	25	11	17	18	23
UK	19	9	17	8	21	22
BE	20	14	19	20	15	21
CZ	21	19	13	11	16	1
HR	22	7	21	22	11	12
PT	23	8	24	26	8	19
SE	24	24	15	24	12	25
PL	25	27	10	9	13	15
HU	26	28	23	27	17	24
RO	27	23	27	28	23	26
IT	28	16	28	19	24	27

Source: Own study.

Table 4. Correlation coefficients of gender discrimination synthetic measures

		60-64		65-74		75+	
		M	W	M	W	M	W
60-64	M	1					
	W	0.449	1				
65-74	M	0.555	0.185	1			
	W	0.592	0.307	0.517	1		
75+	M	0.231	0.076	0.146	0.101	1	
	W	0.666	0.432	0.466	0.466	0.155	1

Source: Own study.

Concerning the results of the analysis of the question SD1 (Figures 3-5), the position of Poland in the ranking (Table 5) indicates that counteracting discrimination against sexual minorities is a serious problem, even though the social group potentially exposed to this type of discrimination is small in the respondents' environment. Thus, sexual minority discrimination strongly influences Polish seniors' subjective perception of this phenomenon (mainly women).

In counteracting discrimination based on ethnic origin (Table 7), the assessments of respondents of the same age are consistent except for the oldest women and men (indication as in Table 4). The assessments made by women in all age groups are coincident (which is also observed in the group of men) – as in sexual minorities discrimination. The situation is assessed worst by all respondents from Cyprus, Hungary, Greece, Austria, Italy, and the Czech Republic. However, Spain's position

deserves attention, as respondents assessed the situation related to counteracting discrimination on the grounds of ethnic origin. Likewise, in Luxembourg, Estonia, Malta, Slovenia, and Croatia. Most respondents from the United Kingdom (except for men aged 65-74), Germany (except for the oldest women) are optimistic about their country's situation related to discrimination based on ethnic origin. In Poland, men assess the analyzed situation well and women poorly.

Table 5. Seniors' assessment of sexual minorities discrimination – results of linear ordering

country	60-64		65-74		75+	
	men	women	men	women	men	women
LU	1	3	3	2	1	1
MT	2	9	1	1	4	2
ES	3	17	7	15	16	11
EE	4	12	11	10	5	14
IE	5	7	25	25	18	3
BE	6	6	12	20	12	5
DK	7	4	9	4	7	4
SK	8	8	8	8	3	25
UK	9	1	5	3	8	6
FI	10	15	19	18	24	10
DE	12	2	2	7	11	13
SE	13	14	10	5	10	16
SI	14	5	15	6	9	19
NL	15	13	4	13	2	12
FR	16	10	6	14	13	17
HR	17	11	20	11	6	8
PL	18	26	18	28	19	20
PT	19	24	21	24	15	21
BG	20	25	22	17	28	24
CZ	21	16	14	9	22	9
LT	22	21	16	19	14	18
AT	23	23	23	27	25	7
RO	24	20	24	16	21	15
GR	25	19	28	23	26	23
HU	26	28	17	22	17	26
CY	27	22	26	21	23	22
IT	28	27	27	26	27	27

Source: Own study.

Table 6. Correlation coefficients of sexual minorities discrimination synthetic measures

		60-64		65-74		75+	
		M	W	M	W	M	W
60-64	M		1				
	W	0.77					
65-74	M	0.753	0.61		1		
	W	0.665	0.733	0.75		1	
75+	M	0.69	0.637	0.776	0.666		1
	W	0.785	0.694	0.502	0.514	0.441	

Source: Own study.

We observed a similar level of agreement in assessments in the case of discrimination based on ethnic origin (Table 7).

Table 7. Correlation coefficients of ethnic origin discrimination synthetic measures

		60-64		65-74		75+	
		M	W	M	W	M	W
60-64	M	1					
	W	0.618	1				
65-74	M	0.66	0.5	1			
	W	0.497	0.6	0.575	1		
75+	M	0.568	0.473	0.572	0.551	1	
	W	0.584	0.539	0.46	0.496	0.322	1

Source: Own study.

From the presented assessments of discrimination types, the least similar assessments among women and men from three age groups were given to issues related to religion. There are the most diverse opinions here (Table 8, an indication as in Table 4). The correlation coefficients between the assessments made by women and men from the same age groups indicate a lack of agreement.

Table 8. Correlation coefficients of religion discrimination synthetic measures

		60-64		65-74		75+	
		M	W	M	W	M	W
60-64	M	1					
	W	0.382	1				
65-74	M	0.414	0.236	1			
	W	0.564	0.171	0.505	1		
75+	M	0.444	0.415	0.671	0.436	1	
	W	0.538	0.253	0.229	0.302	0.267	1

Source: Own study.

In Slovakia, women aged 60-64 believe that the situation in their country regarding the occurrence of discrimination based on religion is very pessimistic. Simultaneously, the assessments of people belonging to the other five analyzed groups indicated a more optimistic assessment. In Austria, most of the seniors' groups indicated major problems related to this type of discrimination, while the oldest women assessed this problem completely differently. The worst situation is in Greece. All seniors assessed their situation, preferably in Luxembourg, Sweden, Spain, Estonia, Slovenia, and Malta.

When considering the situation in the European Union member states due to age discrimination and considering the opinions of seniors on this subject, we noticed some similarities in the assessments. The most similar values of the synthetic measures determined by us occurred in the youngest men's subjective assessments and the oldest women, women, and men aged 65-74 and the youngest women and men. However, the ranks of the oldest men differ from those of all other seniors. All respondents from Malta, Luxembourg, Estonia, and Austria most agreed and positively assessed age discrimination prevention in their country. All Lithuanians

assessed the situation the worst. In Hungary, except for the oldest men, in the Czech Republic except for the oldest women, in Italy except for the youngest women, and in Sweden except men aged 65-74, the observed age discrimination situation was assessed very poorly. In Poland, only women aged 60-74 assessed the situation regarding age discrimination as bad. Referring to our pilot survey, it is also worth pointing out that seniors did not indicate that they felt discriminated against because of their age.

The last type of discrimination that seniors recognized in their home country was discrimination based on disability. In this case, the least similar assessments are given by the oldest women and men, and the most similar are those of the youngest group of seniors. Considering seniors in different age groups, we noticed a very high similarity in the assessment given by the oldest and youngest women, while the correlation of the ratings of the youngest women and the oldest men is close to zero, so no similarity in their ratings can be indicated. The greatest discrepancies in assessments occur first in Sweden, Slovenia, and Portugal. Women assess this phenomenon's scale worse than men, and second in Ireland, the Czech Republic, Croatia, Finland, and Belgium, where men assess the phenomenon's scale significantly worse than women. The inhabitants of Bulgaria, Romania, and Lithuania were the most pessimistic about discrimination based on disability. On the other hand, seniors from Malta, Spain, Denmark, Luxembourg, and Germany assessed the prevention of discrimination on disability in their countries very positively.

7. Analysis of the Subjective Opinions of Seniors on the Phenomenon of Discrimination

In the next step of our analysis, we examined whether there is a positive relationship between the level of the TMPE_i set by us and subjective senior assessments of the phenomenon of discrimination. We wanted to know if a lower risk of exclusion resulting in less frequent discriminatory behavior encourages seniors to see less discrimination in their close surroundings. Table 9 compares the TMPE_i measure for women and men and the synthetic measure of perception of discrimination (SMPD_i) by seniors aged 65+ (considering all types of tested discrimination).

We have arranged the countries presented in Table 9 in terms of taxonomic measures obtained, considering all factors influencing the perception of discrimination according to its six types by women and men aged 65+. The correlation coefficients between the values of TMPE_i and SMDP_i measures reached shallow values for both women and men (0.43 and 0.33). The correlation showed no similarities in the ordering of countries. However, it was possible to identify countries where the ratings for men and women in both indicators belong to the same class (the classes are based on formula 5). In Bulgaria, Romania, and Greece, we received the same classification for both women and men into a group of countries where there is a bad situation in both measures. For all Italians, the TMPE_i and SMDP_i measures' values

were included in the last class, which indicates a terrible situation in terms of preventing exclusion and recognizing the scope of discrimination.

The same classification was observed for the Czech Republic, Ireland, Sweden, and Germany to the countries with a good level of both indicators designed for men. On the other hand, the level of both measures for women from Luxembourg, and good in Slovenia, Great Britain, Croatia, and Sweden, allow the classification of these countries to the group of an excellent level of TMPE_i and SMDP_i. In Austria and France, we have observed a very high exclusion prevention index, with the simultaneous pessimistic assessment of seniors (women and men) regarding discrimination in these countries.

Table 9. *Taxonomic Measure of Preventing Exclusion vs. Synthetic Measure Discrimination Perception*

Country	TMPE _i		SMDP _i	
	women	men	women	men
Luxembourg	2	1	1	1
Malta	3	2	1	1
Slovenia	2	2	1	2
United Kingdom	2	2	1	2
Spain	3	3	1	2
Denmark	1	1	2	3
Czech Republic	2	2	2	3
Croatia	3	2	2	2
Ireland	2	2	2	4
Slovakia	2	2	2	1
Germany	2	3	2	2
Estonia	4	4	2	1
Austria	1	1	3	3
France	1	1	3	3
Belgium	2	2	3	3
Finland	2	2	3	4
Netherlands	2	2	3	1
Sweden	2	2	3	2
Bulgaria	3	3	3	3
Cyprus	4	3	3	4
Greece	3	3	3	3
Romania	3	3	3	3
Lithuania	4	4	3	3
Portugal	4	4	3	2
Hungary	3	3	4	2
Poland	3	3	4	2
Italy	4	4	4	4

Source: Own study.

In Poland, women indicate significant problems related to the occurrence of discrimination in the analyzed types, and at the same time, the scope of the policy aimed at preventing social exclusion aimed at women is too low. Such a situation may also deepen the negative assessment by women of discrimination and social exclusion (and according to literature study also of women discrimination). Men perceive the situation differently because, in their opinion, the scope of discrimination in Poland is not as significant as women assess it. The fact that

Poland was classified in the second group in the area of perception of discrimination by men indicates that despite the insufficient scope of actions taken to prevent male exclusion (TMPEi), men do not perceive discrimination threats to the same extent as women.

8. Conclusions

By analyzing the review material of the available literature and constructing conclusions about the perception of discrimination, its experience, acceptance, and admitting to being discriminated against, or finally admitting to discriminatory behavior, we would like to highlight the social context. As Kaiser and Major (2006) indicate, it is the social context that influences how we think, feel, and behaves. The timeline of the individual is also essential. This shows that discriminatory behavior does not have to accompany the individual throughout their lives, but it may be only temporary. Considering the social climate and cultural factors, the pre-discrimination, which is particularly visible on the labor market as pre-market discrimination, can also be seen (Arvanitis, Stamatopoulos and Thalassinou, 2011).

This problem becomes more acute when we recall another cause, i.e., the social consensus (Vauclair *et al.*, 2016), enabling specific discriminatory actions. For older people, cultural and social factors play an important role in viewing discrimination and seeing themselves as discrimination targets. In a given social group, older people often believe that after reaching a certain age or retiring, they become lower status society members. They reinforce this stereotype themselves and, at the same time, allow discrimination. Vaculiar *et al.* (2016) also indicate that people who believe that they are discriminated against are more likely to perceive discrimination around them. Taylor *et al.* (1990) indicate possible scopes of perceiving discrimination as denying personal discrimination and exaggerating group discrimination. They also indicate the emergence of the phenomenon of discrimination because of incorrect assimilation of information.

The perception of discrimination varies not only among seniors from the EU member states. It was also indicated that discrimination is often assessed differently within one country by women and men belonging to the group of seniors but in different age groups. Moreover, women and men from the same age group assess the existence of the problem differently. Seniors assess the perception of discrimination against six social groups very differently (considering age and gender). They share the most similar assessments in their perception of discrimination against sexual minorities. The overwhelming majority of seniors do not define themselves as belonging to a social group exposed to discrimination. In contrast, those who indicate belonging to social groups towards which discriminatory actions are performed have a different ethnicity than the environment or are of a different religion. All seniors assess that the most vulnerable to discrimination are people with disabilities or of a different religion.

The combination of the Taxonomic Measure of Prevention of Exclusion and the measure of subjective perception of discrimination made it possible to identify countries where the policy of counteracting the exclusion of seniors is assessed very poorly and at the same time, the level of discrimination against social groups is assessed very negatively by seniors.

The conducted study allowed for an indirect assessment of the phenomenon of discrimination about implementing the third goal of the Europe 2020 strategy. It was noticed that the differentiation in the area of socio-economic development influences the level of threats related to discrimination.

In the European Union area, any discrimination is prohibited (Charter of Fundamental Rights (European Union, 2012), article No. 21). The EU legislation banned discrimination in employment, recruitment, and access to religious beliefs, disability, age, or sexual orientation. It also protects against discrimination based on skin color or ethnic origin, both in employment and other spheres of our lives, such as access to education, neighborly relations, and medical care access. Each of the European Union member states has been obliged to establish an institution responsible for the equality policy, assist discriminated persons, and promote equality principles. For this reason, research on discrimination is gaining importance. The one focused on seniors as they are becoming a large social group that plays an increasingly important role in European societies.

Regarding all discrimination, attention should be paid to negative mental reactions when noticing discrimination and being the target of discriminatory actions (Barnes *et al.*, 2004, Krieger, 2014; Pascoe and Richman, 2009; Williams, Neighbors and Jackson, 2003). Only by introducing legal regulations will penal consequences for discriminating persons and preventive measures be made possible. Despite the efforts to provide equal opportunities for all social groups, discrimination has lasting effects on both society and an individual (Hoff and Pandey, 2006). Therefore, it is important to educate about preventing discriminatory and excluding actions and changing prejudices into tolerance and acceptance.

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