THE BEST COUNTRY TO RETIRE IN: COMPARISON OF THE EUROPEAN UNION COUNTRIES

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Abstract

The paper presents the preliminary results of research conducted to identify the countries that offer the most convenient conditions for senior living within the EU countries. The specific indicators that affect life satisfaction in retirement and their development in the period 2007–2018 were analysed.

The purpose of this article is to create the ERI index that rates every country individually and to evaluate the country's performance on the given indicators at the same time. The indicators are divided into three main domains: health, finance, and the opportunities at the labour market. Data were primarily obtained from EU-SILC and ECHP surveys. To set the indices a data normalization and proximity-to-target methodology were used.

The main results of the study show that the Scandinavian countries, Benelux except for Belgium, along with Germany and Austria seem to be the most attractive countries to retire in. The biggest change within the reference period was observed in Hungary while a negative change occurred in Greece and Portugal. There is a wide room for improvement for Baltic states and Slovakia as well. Also, Bulgaria, Croatia, and Romania, which want to join the Schengen Zone in 2020, should focus on the general improvement.

Key words: retirement, health, finance, labour

JEL Code: J14, J26

Introduction

Demographic changes and population ageing represent a challenge that each country needs to face around the globe. The number of studies on this topic led to a rapidly growing number. There is a strong need to adapt to continuously changing conditions and environments in different areas, for example, healthcare system, the financial security of elderly, or pension systems. Individuals and institutions are exposed to many risks concerning low-interest rates, rapidly ageing population, longevity, and climate change which presents an immediate financial

risk today (Natixis, 2019). It is necessary to meet the basic care needs of the elderly and the well-being of this segment of the population needs to be promoted. In accordance to the demographic shift and increasing proportion of older people, it is essential to adjust the environment so older people can be more active and socially confident. Moreover, we need to understand the beliefs, values, needs, and goals of this specific group of people in order to provide a suitable environment that meets their needs and requirements (Amorim and Franca, 2019; Randriambelonoro et al., 2020).

1 Literature review

Retirement refers to the time of life when one chooses to permanently leave the workforce behind. It can also be expressed as a life-course transition when old age and inactivity starts. The traditional retirement age is usually ranging from 60 to 65 in developed countries (Fasang, 2012). From another perspective, this condition is considered to be a transition from the career job to retirement. Sometimes, older adults are involved in post-career employment so it is a gradual process till they fully retire. However, changes in the mental well-being and decline in life satisfaction of individuals related to reaching retirement age have been explored (Dingemans and Henkens, 2015). Therefore, it is crucial to recognize which determinants affect the satisfaction of the elderly both positively and negatively.

Planning in the long period before one leaves the work is essential to achieve a successful retirement experience. It should also consider both micro and macro levels of intervention (Ball and Bullock, 2014). Retirees have been connected their positive feelings with higher income, health status and, family support for their decisions for decades (Kimmel et al., 1978). The retirement satisfaction can vary according to gender, age, education level, marital status, income, and region of the country. The situation of leisure services, quality of the environment, financial circumstances, and respect for the dignity of the citizen are also important determinants that influence the well-being of retired people (Amorim and Franca, 2019). Concerning the sources of the satisfaction and enjoyment, physical health and financial situation seem to have a stronger effect on retirees than others. Recent studies showed that daily physical activity can improve the healthy ageing of older adults. However, the motivation in old age is quite low (Evelyne et al., 2001; Ehrari et al., 2020). They also confirmed the importance of demographic factors, good health, social factors and participation, financial factors, or leisure engagement in terms of improving subjective perceived satisfaction. All of them have become increasingly important in the last decade (Kridahl, 2014; Scharn et al., 2018).

2 Data and methodology

Every year The Global Retirement Index (GRI) is created by Natixis Investment Managers and CoreData Research to examine the factors that drive retirement security and to provide a comparison tool for best practices in retirement policy. It is a multi-dimensional and the most comprehensive in-depth survey of its kind. In 2020, it includes International Monetary Fund (IMF) advanced economies, members of the Organization for Economic Cooperation and Development (OECD), and the BRIC countries (Brazil, Russia, India, and China). A mean score was calculated for each category–housing, benefits & discounts, visas & residence, cost of living, fitting in & entertainment, healthcare, development, climate, governance, and opportunity (Natixis, 2019). This served as an inspiration to create a modification of the GRI focused on the countries of the European Union.

The European Retirement Index (ERI) consists of the 15 target-oriented indicators, grouped into three thematic sub-indices, which are health, finance, and labour market.

The first step to construct the index is to obtain the raw data from reliable sources, which are mostly EU-SILC and ECHP surveys, and then to transform them into normalized indices. In order to create normalized indices, minima and maxima need to be established and maxima are considered to be ideal outcomes. Minima are defined as lower performance benchmarks and determined as the worst possible scenario. Indicators were normalized following Emerson et al. (2012) and Hsu et al. (2016) and proximity-to-target methodology which uses the general formula (1):

$$non - logartihmic\ indicator = \frac{observed\ value - lower\ performance\ benchmark}{target - lower\ performance\ benchmark} \quad (1)$$

Sometimes, indicators need to be transformed into logarithms (2) because of the high level of skewness. It allows not only to identify the differences between the best and the worst performers, but also to differentiate between top-performing countries and to better distinguish variations among them. It also enables to better identify the differences across the whole scale and these functions are a better representation of variables which have decreasing marginal welfare benefit, such as income (Emerson et al., 2012):

$$indicator\ in\ logarithmic\ form = \frac{\ln(x) - \ln(m)}{\ln(t) - \ln(m)} \quad (2)$$

where:

t: target or sample maximum;

m: lower performance benchmark or sample minimum;

x: value of the variable.

Another approach to measure a country´s performance on any given indicator and its position and to transform data into a consistent normalized scale (0,1) is used by Huba et al. (2003):

$$I_{xi} = (max\ x_i - x_i) / (max\ x_i - min\ x_i), \quad (3)$$

if indicator growth represents an undesirable trend or

$$I_{xi} = (x_i - min\ x_i) / (max\ x_i - min\ x_i), \quad (4)$$

if indicator growth represents a desirable trend and where:

x_i: the value of the given indicator;

I_{xi}: the normalized value of that indicator for the *i-th* country.

The final score for each country and every time period was calculated as the arithmetic mean of obtained normalized data, assuming that all variables have the same weight:

$$Final\ Score = \frac{Ix1 + Ix2 + \cdots + Ix15}{15} \quad (5)$$

To create the European Retirement Index, the following indicators were normalized:

Tab. 1: Variables included in the European Retirement Index

Category	*Variable*
Health	- life expectancy at age 65;
	- healthy life years at 65;
	- share of people with good or very good perceived health at age 65 or over;
	- total health care expenditure (€ per inhabitant);
	- medical technology (magnetic resonance imaging units per 100.000 inhabitants).
Finance	- people at risk of poverty or social exclusion in age class 55 years or over;
	- mean equivalised net income in Euro (age class 65 years or over);
	- median equivalised net income in Euro (age class 65 years or over);
	- inability to face unexpected financial expenses (type of household: one adult 65 years or over);
	- inability to face unexpected financial expenses (type of household: two adults, at least one aged 65 years or over).
Labour	- gender pay gap in unadjusted form (from 55 to 64 years);
	- employment rate (age group 55-64 years);
	- part-time employment as percentage of the total employment (from 55 to 64 years);
	- participation rate in education and training (from 55 to 64 years);
	- health workforce migration (number of medical doctors).

Source: own processing

The whole analysis was executed in Microsoft Excel 2016 and SmartDraw Software, LLC 2020.

3 Results and discussion

The individual performance and position of each country were obtained using formulas (3) and (4). Tab. 2 shows the final score for each country that was calculated as the arithmetic mean of normalized data assuming all indicators have the same weight. The results present the development of index from 2007 to 2018.

Tab. 2: The European Retirement Index development in the EU countries (2007–2018)

Geo/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Belgium	0,55	0,57	0,56	0,55	0,54	0,56	0,57	0,57	0,57	0,56	0,57	0,59
Bulgaria	0,22	0,21	0,20	0,21	0,24	0,23	0,24	0,23	0,23	0,23	0,24	0,28
Czechia	0,39	0,37	0,37	0,38	0,37	0,38	0,39	0,40	0,40	0,41	0,42	0,45
Denmark	0,66	0,62	0,65	0,68	0,68	0,68	0,69	0,69	0,69	0,68	0,68	0,68
Germany	0,59	0,62	0,61	0,56	0,60	0,60	0,60	0,54	0,65	0,64	0,64	0,65
Estonia	0,39	0,42	0,41	0,41	0,43	0,43	0,43	0,40	0,41	0,44	0,42	0,43
Ireland	0,57	0,55	0,55	0,55	0,59	0,58	0,59	0,57	0,57	0,56	0,58	0,67
Greece	0,47	0,47	0,50	0,47	0,48	0,47	0,44	0,37	0,41	0,40	0,40	0,40
Spain	0,46	0,51	0,48	0,50	0,47	0,50	0,51	0,49	0,49	0,49	0,50	0,50
France	0,58	0,61	0,57	0,55	0,54	0,56	0,60	0,60	0,60	0,59	0,59	0,58
Croatia	0,28	0,31	0,27	0,26	0,25	0,28	0,27	0,26	0,27	0,25	0,24	0,25
Italy	0,41	0,43	0,43	0,39	0,42	0,46	0,48	0,48	0,48	0,48	0,49	0,48
Cyprus	0,42	0,40	0,39	0,45	0,41	0,43	0,44	0,41	0,40	0,42	0,42	0,44
Latvia	0,23	0,25	0,22	0,21	0,26	0,28	0,27	0,24	0,24	0,24	0,23	0,23
Lithuania	0,28	0,29	0,28	0,27	0,28	0,29	0,29	0,28	0,28	0,28	0,27	0,29
Luxembourg	0,59	0,64	0,65	0,65	0,76	0,77	0,76	0,72	0,73	0,72	0,70	0,70
Hungary	0,24	0,28	0,25	0,25	0,25	0,24	0,24	0,25	0,27	0,33	0,35	0,42
Malta	0,46	0,45	0,45	0,46	0,48	0,50	0,51	0,52	0,54	0,53	0,55	0,57
Netherlands	0,67	0,70	0,71	0,68	0,67	0,68	0,67	0,68	0,67	0,65	0,67	0,66
Austria	0,65	0,65	0,65	0,58	0,64	0,67	0,66	0,58	0,67	0,67	0,67	0,65
Poland	0,28	0,30	0,28	0,29	0,30	0,30	0,32	0,32	0,34	0,35	0,33	0,40
Portugal	0,45	0,45	0,41	0,40	0,40	0,41	0,39	0,35	0,34	0,34	0,34	0,39
Romania	0,30	0,33	0,31	0,27	0,27	0,27	0,27	0,27	0,28	0,26	0,25	0,30
Slovenia	0,42	0,42	0,44	0,41	0,41	0,41	0,41	0,43	0,42	0,42	0,43	0,44
Slovakia	0,29	0,29	0,30	0,31	0,31	0,33	0,33	0,33	0,34	0,34	0,34	0,36
Finland	0,67	0,64	0,63	0,63	0,62	0,63	0,58	0,64	0,65	0,64	0,65	0,63
Sweden	0,75	0,71	0,70	0,69	0,70	0,63	0,74	0,75	0,73	0,72	0,73	0,76

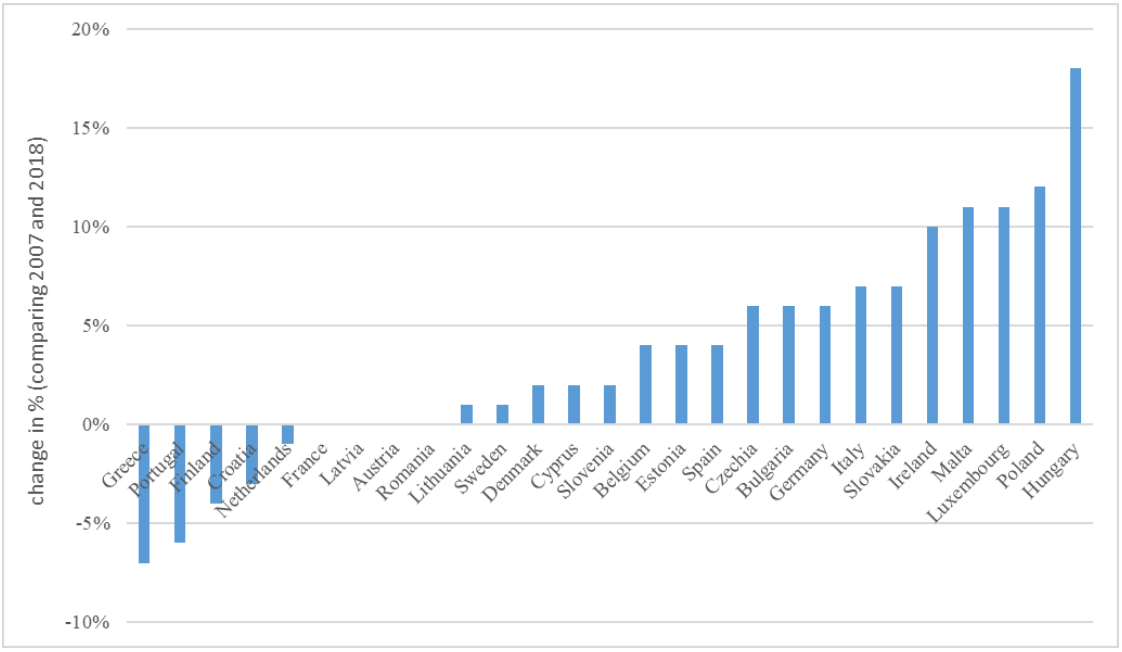
Source: own processing and calculations

In some countries, the situation improved when comparing with the beginning of the period, while in others, the value of ERI decreased rapidly. The highest positive change within the reference period 2007–2018 was observed in Hungary (18%), Poland (12%), Luxemburg (11%) or Malta (11%), while a negative change occurred in Greece (-7%), Portugal (-6%), Finland (-4%), Croatia (-3%) and Netherlands (-1%). There is a wide room for improvement for Baltic states and for Slovakia as well (0,29 in 2007 and 0,36 in 2018). Also, Bulgaria, Croatia and Romania should focus on the general improvement. The ERI change during the reference period in percentage is presented in Fig. 1.

Fig. 2 shows how EU countries can be divided into different groups according to the results achieved in 2018. Countries with the highest score (ranged from 0,61 to 0,80) are

coloured on blue, with medium score (from 0,41 to 0,60) on green and countries with the lowest score (from 0,21 to 0,40) on yellow. Other countries were not involved in the analysis.

Fig. 1: Comparison of the European Retirement Index in % (2007 and 2018)



Source: own processing (Eurostat, 2020)

Fig. 2: Clustering of EU countries based on the ERI (2018)

Source: own processing in SmartDraw 2020
Legend: yellow (0,21 – 0,40); green (0,41 – 0,60); dark blue (0,61 – 0,80); light blue (not involved in the analysis)

The study by Amorin and Franca (2019) shows that elderly prefer to live in those countries where their retirement income is sufficient and which allow them to relax more or to take better care of themselves. When comparing with other studies based on similar determinants, the results differ more or less. According to Borden (2020) only 3 countries were placed in the top ten–Portugal took the first place and Spain and France took eight and ninth. The ranking took several factors into consideration, including the cost of health care, the cost of living or the access to entertainment. More European countries were involved in top ten in survey by U.S. News & World Report, where Spain took fourth place, Portugal fifth place, Luxembourg seventh place, followed by Ireland, Sweden and Italy.

As life satisfaction in retirement is determined by many factors, the further research must be based on the diversity of indicators related to this topic, for example overall perceived social support, share of housing cost in disposable income of elderly, pollution or other environmental problems, crime, violence or vandalism in the area, etc. Other variables which also seem to be relevant in terms of elderly's quality of life may be energy and vitality index, prevalence of chronic diseases, need for personal care, consumption of fruits and vegetables, tobacco or alcohol consumption, social environment, frequency of going to theatre, cinema, live performances or cultural sites and many others.

Conclusion

The paper was primarily focused on living conditions in the EU countries, especially for seniors. We tried to discover which one of the EU countries offers the most convenient conditions for senior life. The specific indicators that affect life satisfaction in retirement and their development were analysed and the ERI index was created for each country individually. It evaluates the country's performance within the three fields–health, finance and labour market. To set the indices data normalization and proximity-to-target methodology were used.

The results show that the Scandinavian countries, Benelux except for Belgium, along with Germany and Austria seem to be the most attractive countries to retire in. The biggest change within the reference period 2007–2018 was observed in Hungary, while a negative change occurred in Greece and Portugal. There is a wide room for improvement for Baltic states and Slovakia as well. Also, Bulgaria, Croatia and Romania should focus on the general improvement.

The most suitable country for retirement is ultimately subjective matter. We have to consider a several limitations in the analysis. A lot of crucial determinants are not measurable, such as the comfort of a climate, the friendliness of the local people, etc. Preferences vary from person to person and the choice depends on the gender as well–what is essential for one, may be totally irrelevant for other. We also should think about the weights of variables, since assigning particular weights could definitely bring different results.

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