

## Comparison of Japan and OECD Countries in Terms of Well-Being Resources

### Porównanie Japonii i krajów OECD pod względem zasobów związanych z dobrostanem

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#### Abstract

While evaluating the concept of well-being for sustainability, which is defined as the feeling of having the physical and psychological resources necessary for a good life, it is essential to benefit from different perspectives referring to socio-psychological factors or their possible effects as well as financial and economic data. The aim of this study, which deals with the well-being level in terms of sustainability resources, is to evaluate the OECD countries and examine the differences and similarities in Japan, one of the G8 countries. According to the results of the multidimensional scaling analysis conducted for this purpose, Japan is in the same cluster as Luxembourg, which has the highest positive value, while Germany is one of the countries with the highest rate of divergence from other G8 countries in the difference matrix.

**Key words:** well-being, social protection, natural capital, sustainability, OECD, G8, MDS, Japan

**JEL Classification:** I31, H55, J24, Q56

#### Streszczenie

Oceniając koncepcję dobrostanu pod kątem zrównoważoności, którą definiuje się jako poczucie posiadania zasobów fizycznych i psychicznych niezbędnych do dobrego życia, istotne jest skorzystanie z różnych perspektyw odnoszących się do czynników społeczno-psychologicznych lub ich możliwych skutków a także danych finansowych i gospodarczych. Przeprowadzona analiza umożliwiła na wskazanie poziomu dobrobytu pod względem zrównoważonych zasobów w krajach OECD, a także określenie różnic i podobieństw pomiędzy tymi państwami a Japonią, jednym z krajów grupy G8. Zgodnie z wynikami analizy skalowania wielowymiarowego Japonia znajduje się w tym samym klastrze co mający najwyższą wartość dodatnią Luksemburg, podczas gdy Niemcy należą do jednego z krajów o najwyższym wskaźniku rozbieżności w stosunku do innych państwo G8 w macierzy różnic.

**Słowa kluczowe:** dobrostan, ochrona socjalna, kapitał naturalny, zrównoważony rozwój, OECD, G8, MDS, Japonia

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#### 1. Introduction

Although economic and financial data provide detailed information about the structural conditions and functioning of countries, they may be insufficient to reveal all values in terms of humans and society. For this reason, researches made using fields such as psychology and sociology are at least as important as quantitative data (González-Carrasco et al., 2019). While the concept of psychological well-being, which is considered an individual situation, is evaluated as social well-being, a similar but macro perspective is mentioned. In the concept of well-being, social tendencies are also included in the analysis as well as applied to individual perceptions to understand the main reasons underlying the results obtained (Bérenger & Verdier-Chouchane, 2017). However, multi-

dimensional multidisciplinary studies carried out in this way can provide comprehensive data on all the details of the subject studied.

When it comes to social well-being, it is important what opportunities the current resources will offer in the future. The concept of well-being, which has the potential to affect an individual's quality of life, happiness, satisfaction, or other emotional states, should be considered in terms of psychological effects, as well as the resources needed for a good life (Hansen and Slagsvold, 2012). Deciding on the level of well-being by looking at the level of development or per capita income of countries in a contract will mean ignoring people's expectations, perceptions, and psychological states (Ince, 2023). Therefore, an individual's psychological well-being is measured by at least six factors that affect whether they feel comfortable, healthy, or happy. Although these variables sometimes increase or decrease due to the sub-dimensions which are generally considered in the scope of physical, intellectual, occupational, spiritual, financial, environmental, social, and emotional dimensions (Nishaat, 2022; Neto, 2023).

When the concept, which includes psychological or mental health as well as physical health, is considered from a social perspective, the effects of being in various economic and social groups as workers, employers, or people, are also included in the results. For this reason, comprehensive research on this subject and the comparisons to be obtained as a result of these researches have the potential to guide many decision-makers and implementing institutions and organizations as well as politicians (Patel et al., 2008; Srivastava et al., 2021; Nowak-Olejnik et al., 2022). From this point of view, social well-being evaluation in terms of OECD countries is included in the study, and Japan and G8 countries are compared in terms of well-being resources, which are seen as one of the strong sustainability indicators. Because, from the perspective that guides the UN Sustainable Development Goals, one of the biggest challenges facing society today is meeting the basic needs of the population while protecting the environment and resources (Henderson & Loreau, 2023). In addition, considering the concept of social well-being in terms of resources helps to bring the subject to the agenda from a different perspective. For this purpose, the literature containing the concept of social well-being is included firstly, and then the method part of the research is examined. After the part including the results of the analysis, the study is completed with the conclusions and recommendations.

## 2. Social protection and well-being in OECD countries

The issue of social protection and well-being is one of the socially relevant dimensions of a large-scale study by the OECD. While 11 dimensions are used for current well-being in measurements made with more than 80 indicators, 4 different dimensions are used in 2020 and before in terms of resources required for future well-being. There are also sub-contents of the data shared in three dimensions, namely natural capital, social capital and economic capital in 2021. However, since the institution constantly updates its data, it can renew the data towards the end of the year and may increase it to 4 dimensions with the human capital dimension. Natural capital, which is the first of the sub-dimensions of the source of well-being, includes subjects such as the percentages of places determined as protected areas in the sea and on land, greenhouse gas emissions originating from domestic production and renewable energy sources. The social capital dimension, which includes common issues, includes information such as obesity rates, gender perception, trust in the state and voluntary organizations. Lastly, in the economic dimension, financial data such as research and development expenditures, the financial value created in the economy, borrowing and growth are shown. While these data could be obtained in more detail before 2018, the amount of information presented in terms of sub-dimensions is decreasing as the study is renewed today.

Some countries such as Turkey, Costa Rica, Iceland, Mexico and Switzerland are among the countries that do not have complete data in terms of scale and sub-dimensions in the study conducted since 2013. The OECD database does not include annual proportional data on environmental resources, future conservation plans and rates. For some countries, the up-to-dateness of the period covered in the research may be one of the determining factors in this regard. After the end of the year, OECD data can be updated easily and efficiently. Conversely, Russia, Brazil and South Africa are included in the study, although they are not among the OECD countries in scope. However, data from Brazil and South Africa are also lacking. For all these reasons, the study is considered as 34 countries within the scope of the countries in Table 1. Although it is not an OECD country, another reason for including Russia in the study is that it is among the G8 countries and offers the opportunity to make comparisons with Japan in this field.

Table 1. Countries participating in social protection and well-being research, source: <https://stats.oecd.org/>

Australia	Denmark	Ireland	Luxembourg	Slovenia
Austria	Estonia	Israel	Netherlands	Spain
Belgium	Finland	Italy	New Zealand	Sweden
Canada	France	Japan	Norway	UK
Chile	Germany	Korea	Poland	USA
Colombia	Greece	Latvia	Portugal	Russia
Czechia	Hungary	Lithuania	Slovakia	

The resource dependence of countries such as Costa Rica, which hosts 5% of animal species despite its small area, and Turkey, which allows four seasons with its intercontinental location, is a critical issue not only for these countries but also for global sustainability (Salom-Pérez et al., 2022). For this reason, being involved in comprehensive research is also crucial in terms of raising awareness. The inclusion of Turkey in the studies conducted within the scope of the European Union, although it is not a member, may be due to such reasons (Heck and Hess, 2017). However, since the focus of this study is Japan, it would be useful to focus on the G8 countries without deepening the subject.

The G8, also known as the group of eight, consists of eight developed countries, primarily Japan, but also France, Germany, Italy, the United Kingdom, the USA, Canada, and Russia. While there were 6 countries at the beginning, it was completed into 8 countries with the participation of Canada in 1976 and Russia in 1997. In the group where activities such as conferences, meetings, political research, and economic summits are organized, the task of setting the agenda and hosting the meetings is given to the country holding the term presidency (Haq, 2003).

On the other hand, while all countries reach their current level of development, they create various pressures on the natural resources and sustainability. Although it is one of the economically debated issues how developing countries will catch up with the leading countries, it is also a serious problem in terms of natural resources. A close examination of the 17 UN Sustainable Development Goals makes it clear what the country should prioritize at all levels in terms of protecting the environment and natural resources. It is clear that the interaction between human and nature must go beyond people's exploitation of nature to meet their needs. The third goal is *good health and well-being* but there is no question of protecting human health without a self-sustaining nature (UN, 2022). Therefore, global organizations such as the OECD, G8 and the UN can play an active role in removing national borders to take pioneering steps in sustainability.

In this study, the relevant part of the classification of G8 countries is that it provides the opportunity to compare Japan with other developed countries. Thus, the development factor, which is one of the factors affecting social well-being, is taken under control. In this context, the purpose and method of the research are given in the next title.

### 3. Objective and methodology

This study aims to comparatively examine Japan and other OECD countries in terms of well-being. In this context, first of all, the well-being dimensions according to the countries and the total levels obtained due to these criteria were determined. Then, with the multidimensional scaling analysis, the similarities and differences of the natural, social and economic capital dimensions constituting the well-being are resources with the levels of OECD countries were determined. For analysis, mMDS PROXSCAL algorithm was used in the IBM SPSS Statistics 25.0 program. In addition, to analyze the difference matrix results in detail, distance cluster combinations were calculated using hierarchical clustering analysis.

The data of the study belong to the *Social Protection and Well-being* research conducted by the OECD and the *Social Well-being* research conducted by the Japanese Red Cross Society. While using the 2021 data, which contains the most current information as of the study date, countries with at least one missing dimension in the data set were not included in the study. As a result, in the study, which included 34 countries, comparisons were made with the G8 countries in addition to the OECD to deepen the Japan comparison. For this comparison, Russia, one of the G8 countries, is also included in the analysis.

While multidimensional scaling (MDS) helps to identify the differences and similarities between the units examined, it is considered an alternative to factor analysis with its function of revealing structural meanings (Saeed et al., 2018). Going beyond the determination of the relationship between units, graphical outputs can be obtained based on similar and different characteristics (Lawrence et al., 2010). The main purpose of the method is to determine the position of the examined units in terms of various dimensions by the original figure by using the distance values. According to the distances determined according to the  $n$  number of unit  $p$  variables, the stress value showing the differences is calculated by providing a representation in the  $k$ -dimensional space (Sun et al., 2011). This value, which shows the harmony between the viewing distances and the original, makes the complex relationships between the units in the multidimensional data matrix explainable, understandable and interpretable (Buja et al., 2008). The strain value is obtained from the distances in space obtained as a result of a certain iteration between the features and the proximity and monotony differences obtained based on these distances. The purpose of the iteration calculation is to determine the stress and minimize it as much as possible (Williams and Munzner, 2004). The values of stress statistics and the degree of compatibility are measured with certain classifications (Hout et al., 2013). This is a five-point scale between the exact fit vs incompatibility probabilities.

### 4. The results

The research aims to evaluate the well-being level according to OECD countries by considering the resources, to identify the differences and similarities by determining the situation in terms of Japan, one of the G8 countries. In

the comparisons between countries, it is desired to obtain more detailed analysis results by evaluating the situation in terms of the sub-dimensions that make up well-being. For this purpose, the estimated distances according to the stress value measurement used to determine the suitability of the metric multidimensional scaling method (mMDS), show a structure consistent with the real values in terms of OECD data of 34 countries.

According to the stress and fit measurement, the S-stress value of the data was 0.07, and the DAF and Tucker's fit coefficient values were 0,99. While the stress value close to zero indicates the suitability of the data, the closeness of the fit coefficients confirms this fit (Hout et al., 2013; Saeed et al., 2018). According to the stress values, if the fitness level is below 0,05, there is a *perfect fit*, while below 0,10 there is a *good fit*. According to this classification, values up to 0,20 are defined as *low fit*, while if it is greater than this value, *incompatibility* occurs (Sun et al., 2011; Zand et al., 2015). From this point of view, it has been determined that the data used within the scope of the study are suitable to use the multidimensional scaling method, and meet the conditions for *good fit* value and Proxscal algorithm analysis. Therefore, data are annotated with a confidence ratio greater than 0,95 at the matched stress value for the k:2 dimension.

Table 2. Coordinates of countries, source: own elaboration

Countries	Dimensions	
	1	2
Australia	-0,757	-0,140
Austria	0,578	0,338
Belgium	0,707	-0,592
Canada	-0,561	-0,545
Chile	0,482	0,079
Colombia	0,882	-0,323
Czech Republic	0,263	-0,004
Denmark	0,190	-0,255
Estonia	-0,248	-0,173
Finland	-0,275	-0,464
France	-0,075	0,153
Germany	-0,031	0,641
Greece	0,163	0,530
Hungary	0,664	0,103
Ireland	1,120	-0,268
Israel	-0,559	-0,010
Italy	0,090	-0,426
Japan	0,438	0,077
Korea	-0,539	-0,424
Latvia	-0,394	-0,283
Lithuania	0,774	-0,823
Luxembourg	0,400	1,220
Holland	-0,533	-0,073
New Zealand	-0,381	0,396
Norway	-0,499	-0,233
Poland	0,097	0,954
Portugal	0,218	0,118
Slovakia	-0,511	0,713
Slovenia	-0,175	0,786
Spain	-0,151	0,175
Sweden	0,061	-0,329
UK	-0,627	0,172
USA	-0,685	-0,568
Russia	-0,126	-0,522

According to the coordinates in Table 2, Ireland is the only country with a positive value above one in terms of the first dimension, while the countries with the closest values are Hungary, Belgium, Lithuania and Colombia. Japan took its place as the eighth country with a positive value in this ranking with 0,438. Developed countries such as Australia, the USA, the United Kingdom, and Canada are among the countries with the lowest value in this dimension. In the second dimension, Lithuania, Belgium, the USA, and Canada have the lowest values, while Luxembourg has the only positive value above 1, followed by Poland, Slovenia, and Slovakia. Japan is the 15th country in this ranking. According to the coordinate values (Table 2), it can be said that Ireland and Luxembourg, the two countries with the highest positive value above one, have values close to each other in terms of resources that will provide prosperity in the future.

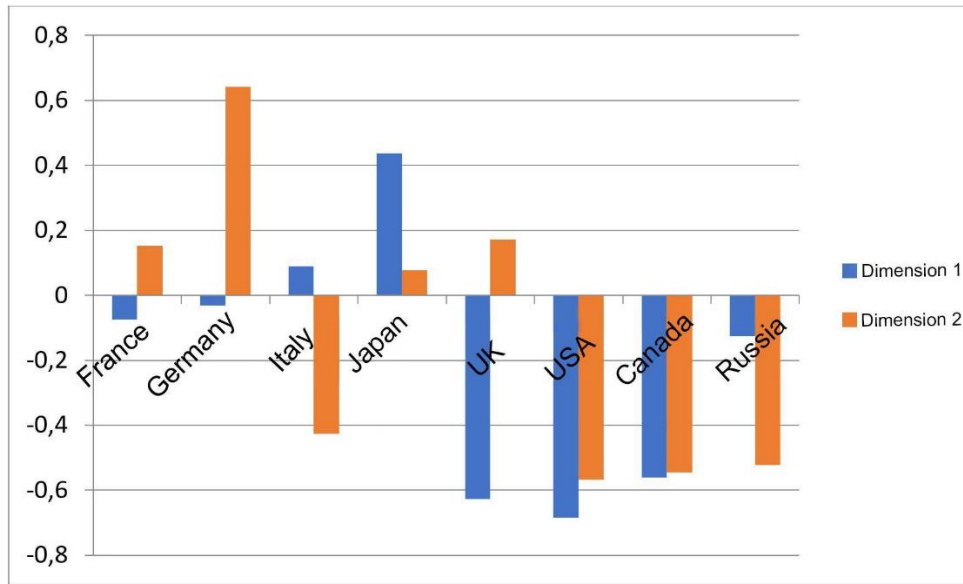


Figure 1. Coordinates for G8 countries, source: own elaboration

When these dimensions are considered in terms of G8 countries, it is seen that Japan exhibits a consistent image as the only country with positive values in both dimensions, while other countries have negative values. While France, Germany, Italy, and England have two dimensions, one negative and the other positive, USA, Canada, and Russia have negative values in both dimensions.

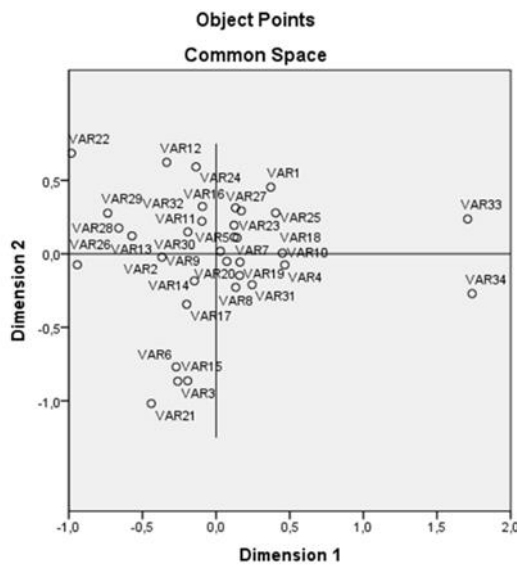


Figure 2. OECD countries distance model, source: own elaboration

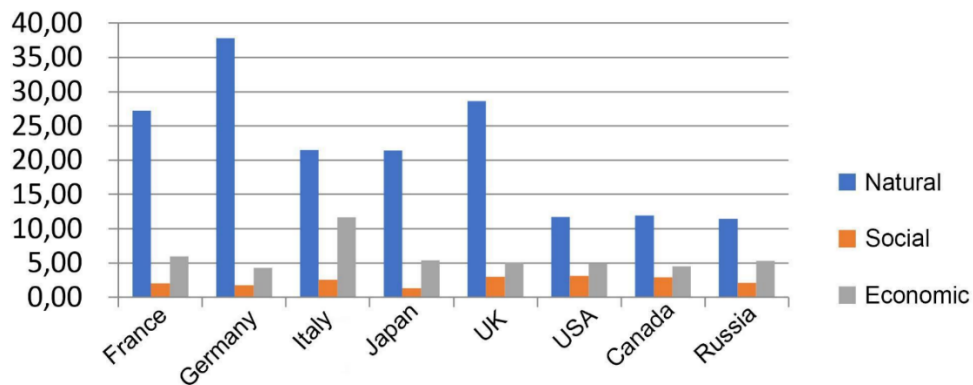


Figure 3. G8 countries in terms of capital dimensions of well-being resources, source: own elaboration

While Germany is the country with the highest value in the dimension of natural capital, which contains information about the sustainability of the environment and the future position of natural resources, it is seen that the USA, Canada, and Russia have values close to each other. Japan has the lowest value in terms of social capital. In this measurement, which includes expressions such as the priority given to the state and stakeholder participation when making laws or legal regulations, 0 means no participation, and the highest value of 4 means maximum participation. In this dimension, the USA, which has a value above 3, is followed by the United Kingdom, Canada, Italy, and France with a value above 2. Finally, Italy ranks first, followed by France and Japan, in terms of economic growth including growth rates, while Germany ranks last among the G8 countries. The results of the proximity and difference analysis, which are carried out to more clearly examine the similarities and differences of countries with each other, are shown in Table 3.

Table 3. Diversity matrix for G8 countries, source: own elaboration

G8 Countries	Canada	France	Germany	Italy	Japan	UK	USA	Russia
Canada	0,000							
France	238,529	0,000						
Germany	671,047	113,861	0,000					
Italy	143,917	65,898	320,733	0,000				
Japan	93,019	35,543	270,729	41,292	0,000			
UK	279,591	3,452	86,145	94,423	55,297	0,000		
USA	0,240	242,563	679,743	141,433	96,143	284,325	0,000	
Russia	1,405	250,134	694,399	141,938	99,122	295,195	1,230	0,000

According to the difference matrix, the countries that are most different and far from each other are gathered on the axis of Germany. Germany shows the highest difference primarily with Russia, followed by the USA, Canada and Italy. According to the matrix, the countries with the closest values are the USA and Canada. While Japan's difference matrix values are among the countries that are close to each other in the fifth rank, the country they are similar to is France.

In order to determine the relations between the countries in more detail, the hierarchical clustering analysis of the G8 countries is performed and the distance cluster combinations are calculated. Looking at the results of the clustering analysis, it is determined that the two countries, Japan and Chile, formed the first cluster as the countries closest to each other in terms of similarity with a coefficient value of 0,225. Then, Canada and the USA (0,240) form the second cluster with close values, while the coefficient value is above one in other clusters.

According to the data of the Japanese Red Cross Society (2022), studies in the field of social protection and well-being are taken into account in the classification of social assistance services. According to research conducted in this area, Japan is included in the *super-aging* classification, which means the highest elderly population, while the number of people who can live independently is gradually decreasing after the decline in the number of people over 65 years old. The country, which attaches importance to daily care services for increasing social well-being, has started to focus on this area by adding 28 different care centers within the scope of the association in 2020. In the days when natural disasters such as earthquakes, floods and landslides increase the demand for social services, Japan is one of the countries that make great efforts to cope with serious problems. For example, in the Hokkaido earthquake in 2018, 53 emergency aid teams, 39 psychological support teams, 12 medical treatment teams and 10 temporary hospitals were established within the scope of the association. Therefore, it is necessary to consider micro and macro environmental factors such as pandemics, natural disasters and global crises when comparing the well-being results of Japan and other countries. Because, according to the annual report of the association, solution methods that have not been tried before, such as opening online courses, have been applied to compensate for the sudden drop in the number of healthy life training and application programs after the closure processes experienced in 2020. The participation, which reached 800,000 before the pandemic, could be achieved online at the level of 160,000 during the pandemic process, and it was observed that these effects continued after the pandemic. Due to such effects, which can be expanded with the data of other aid organizations, it is necessary to evaluate the period of the countries in a social positioning. Nonetheless it can be said that all these developments have different results in terms of sustainability. In addition to the expected short-term results, unpredictable long-term effects make it difficult to evaluate the country's conditions with only limited variables in the evaluation of sustainability of resources.

## 5. Conclusion and future research directions

In addition to the resources that affect the quality of life, there are many studies in the literature about the current situation of the concept of spaciousness, which includes a psychological dimension such as the individual's feeling that he has the necessary resources for a good life. The issue of well-being in OECD countries has been discussed in various studies in terms of the *better life index*. Liberati and Resce (2022) present a model proposal that draws attention to the issue of social injustice, using OECD 2020 data on well-being, which they consider from a regional

perspective. Similarly, Koronakos et al. (2022) discussed the issue of economic diplomacy based on well-being with the results of better life index measurement. Although there are studies examining data from Turkey (Aydan et al., 2022; Brzezińska, 2022), studies based on current data in this field are more limited (Nakajima et al., 2022; Takahashi et al., 2022). Moreover, available studies usually include data for the period 2013-2017 or 2018 results. In addition to the current well-being, the number of studies in terms of resources that will affect the future well-being level and the perception of these resources is also insufficient (Aldabbs et al., 2022; Fink and Ducoing, 2022). For this reason, the fact that the study fills this gap in the literature and provides detailed and up-to-date information about the G8 countries as well as the OECD is among the points where it differs from other studies. The study, in which the subject of social protection and well-being is discussed in terms of resources, is aimed to evaluate the well-being level of OECD countries in terms of resources with a multidimensional scaling analysis. Cluster analysis and comparison of G8 countries are also included in order to detail the measurement of future well-being expectations, which consists of three sources, natural capital, human capital and economic capital, in terms of Japan. Japan, which has positive values in terms of the dimensions examined according to the data of 2021, ranks fourth among the G8 countries in terms of natural capital, which includes the importance given to natural resources, and ranks second in terms of social capital, which also includes private sector and government cooperation. The country, which ranks third among the G8 countries in terms of economic growth, is in the same cluster with Ireland, which has the highest positive value in the first dimension, and Luxembourg, which has the highest positive value in the second dimension, according to the difference matrix. In this classification, Australia and Lithuania are among the countries with the most negative divergence. According to the results of the hierarchical clustering analysis, while Japan and Chile are in the same cluster with close values, this close clustering has also been detected in Canada and the USA. Conversely, Germany is one of the countries with the highest rate of divergence from other G8 countries in the difference matrix. This differentiation is also clearly seen in the natural capital dimension of Germany.

The study is carried out using the 2021 data, which is the most recent data completed. Comparison studies can be made when the data for 2022, which has not yet been completed, are published. Another suggestion for researchers is to examine the data of countries by comparing them with other data in national databases. In this area, temporal measurements can be made as well as cross-comparisons. The use of 2021 data, which coincides with the pandemic process, can be considered as one of the shortcomings of the study. The pandemic, which causes extraordinary economic and social situations on a global scale, has the potential to directly or indirectly affect all indicators, including the growth rates of countries (Ince, 2020). For this reason, it is recommended to re-do the study in the post-pandemic period and evaluate it according to the conditions it is in. The level of development and social services, which have the power to directly determine the quality of life of the individual, affect the living standards of societies and can be determinative in resource access. For this reason, it is important to examine individual and social well-being according to environmental conditions. Developing countries such as Turkey need to share databases that allow such research. The psychological well-being of the individual is one of the important factors that can have an impact on macro indicators such as the well-being of the society and the level of development of the country. To realize more clearly the steps to be taken today to reach the desired level in the future, the current situation should be evaluated well and the resource needs of future generations should be taken into consideration. Therefore, it can be said that the issue of sustainability will increasingly come to the fore in the future. The UN Sustainable Development Goals also support this view as one of the crucial steps taken in this direction.

## References

1. ALDABBAS M., TEUFEL S., TEUFEL B., SPYCHER J., 2022, Forecasting the Quality of Life in a Future Smart Society, the Case of Switzerland, *International Journal of Social Science and Humanity* 12(2): 107-112. DOI: 10.18178/ijssh.2022.12.2.1075.
2. AYDAN S., BAYIN-DONAR G., ARIKAN C., 2022, Impacts of Economic Freedom, Health, and Social Expenditures on Well-Being Measured by the Better Life Index in OECD Countries, *Social Work in Public Health* 37(5): 435-447, DOI: 10.1080/19371918.2021.2018083.
3. BÉRENGER V., VERDIER-CHOUCANE A., 2007, Multidimensional Measures of Well-Being: Standard of Living and Quality of Life Across Countries, *World Development* 35(7): 1259-1276, DOI: 10.1016/j.worlddev.2006.10.011.
4. BRZEZIŃSKA J., 2022, A Study on the OECD Better Life Index Using Multivariate Statistical Analysis, *Argumenta Oeconomica* 1(48): 235-245, DOI: 10.15611/aoe.2022.1.10.
5. BUJA A., SWAYNE D. F., LITTMAN M. L., DEAN N., HOFMANN H., CHEN L., 2008, Data Visualization with Multidimensional Scaling, *Journal of Computational and Graphical Statistics* 17(2): 444-472, DOI: 10.1198/106186008X318440.
6. FINK J., DUCOING C., 2022, Does Natural Resource Extraction Compromise Future Well-Being? Norwegian Genuine Savings, 1865-2018, *The Extractive Industries and Society* 10112: 1-15 DOI: 10.1016/j.exis.2022.101127.
7. GONZÁLEZ-CARRASCO M., VAQUÉ C., MALO S., CROUS G., CASAS F., FIGUER C., 2019, A Qualitative Longitudinal Study on the Well-Being of Children and Adolescents, *Child Indicators Research* 12(2): 479-499, DOI: 10.1007/s12187-018-9534-7.
8. HANSEN T., SLAGSVOLD B., 2012, The Age and Subjective Well-Being Paradox Revisited: A Multidimensional Perspective, *Norsk Epidemiologi* 22(2), DOI: 10.5324/nje.v22i2.1565.

9. HAQ S., 2003, Future of the G-8, *Strategic Studies* 23(3): 168-186, <http://www.jstor.org/stable/45242486>.
10. HECK G., HESS S., 2017, Tracing the Effects of the EU-Turkey Deal Movements, *Journal for Critical Migration and Border Regime Studies* 3(2): 35-56.
11. HENDERSON K., LOREAU M., 2023, A Model of Sustainable Development Goals: Challenges and Opportunities in Promoting Human Well-Being and Environmental Sustainability, *Ecological Modelling* 475: 110164, DOI: 10.1016/j.ecolmodel.2022.110164.
12. HOUT M. C., PAPESH M. H., GOLDINGER S. D., 2013, Multidimensional Scaling, *Wiley Interdisciplinary Reviews: Cognitive Science* 4(1): 93-103, DOI: 10.1002/wcs.1203.
13. INCE F., 2020, The Effects of COVID-19 Pandemic on the Workforce in Turkey, *Smart Journal* 6(32): 1125-1134, DOI: 10.31576/smryj.546.
14. INCE F., 2023, Digital Transformation and Well-Being, *Digital Psychology's Impact on Business and Society*, eds. Anshari M., Razaq A., Fithriyah M., Kamal A.N., IGI Global, <https://doi.org/10.4018/978-1-6684-6108-2>.
15. JAPANESE RED CROSS SOCIETY, 2022, *Social Well-being Services: Annual Report of 2020-2021*, <https://www.jrc.or.jp/english/activity/well-being/> (09.08.2022).
16. KORONAKOS G., SMIRLIS Y., SOTIROS D., DESPOTIS D.K., 2022, The OECD Better Life Index: A Guide for Well-Being Based Economic Diplomacy, *Modern Indices for International Economic Diplomacy*, eds. Charles V., Emrouznejad A., Palgrave Macmillan, Cham, DOI: 10.1007/978-3-030-84535-3\_2.
17. LAWRENCE J., ARIETTA S., KAZHDAN M., LEPAGE D., O'HAGAN C., 2010, A User-Assisted Approach to Visualizing Multidimensional Images, *IEEE transactions on Visualization and Computer Graphics* 17(10): 1487-1498, DOI: 10.1109/TVCG.2010.229.
18. LIBERATI P., RESCE G., 2022, Regional Well-Being and Its Inequality in the OECD Member Countries, *The Journal of Economic Inequality* 20: 671-700, DOI: 10.1007/s10888-021-09521-7.
19. NAKAJIMA H., MORITA A., KANAMORI S., AIDA J., FUJIWARA T., 2022, The frequency of job participation and well-being of older people in Japan: Results from JAGES study, *Archives of Gerontology and Geriatrics* 104720: 1-10, DOI: 10.1016/j.archger.2022.104720.
20. NETO F., 2023, Brazilian International Students' Satisfaction with Migration Life in Portugal, *Journal of International Students* 13(2), DOI: 10.32674/jis.v13i2.4782.
21. NISHAAT A., 2022, Understanding the Concepts of Subjective Well-being and Psychological Well-being, *The Bulletin of the Graduate School, Soka University* 43: 99-108, <http://hdl.handle.net/10911/00040868>.
22. NOWAK-OLEJNIK A., SCHIRPKE U., TAPPEINER U., 2022, A Systematic Review on Subjective Well-Being Benefits associated with Cultural Ecosystem Services, *Ecosystem Services*, 57: 101467, DOI: 10.1016/j.ecoser.2022.101467.
23. OECD, 2022, *Resources for Future Well-being*, <https://stats.oecd.org/> (09.08.2022).
24. PATEL S. R., BAKKEN S., RULAND C., 2008, Recent Advances in Shared Decision Making for Mental Health, *Current Opinion in Psychiatry* 21(6): 606-612, DOI: 10.1097/YCO.0b013e32830eb6b4.
25. SAEEDN., NAM H., HAQ M. I. U., MUHAMMAD-SAQIB D. B., 2018, A Survey on Multidimensional Scaling, *ACM Computing Surveys (CSUR)* 51(3): 1-25, DOI: 10.1145/3178155.
26. SALOM-PÉREZ R., WULTSCH C., ADAMS J. R., SOTO-FOURNIER S., GUTIÉRREZ-ESPELETA G. A., WAITS L. P., 2022, Genetic Diversity and Population Structure for Ocelots (*Leopardus Pardalis*) in Costa Rica, *Journal of Mammalogy* 103(1): 68-81, DOI: 10.1093/jmammal/gyab146.
27. SRIVASTAVA S., CHAUHAN S., MUHAMMAD T., SIMON D. J., KUMAR P., PATEL R., SINGH S. K., 2021, Older Adults' Psychological and Subjective Well-Being as a Function of Household Decision Making Role: Evidence from Cross-Sectional Survey in India, *Clinical Epidemiology and Global Health* 10: 100676, DOI: 10.1016/j.cegh.2020.100676.
28. SUN J., CROWE M., FYFE C., 2011, Extending Metric Multidimensional Scaling with Bregman Divergences, *Pattern Recognition* 44(5): 1137-1154, DOI: 10.1016/j.patcog.2010.11.013.
29. TAKAHASHI T., ASANO S., UCHIDA Y., TAKEMURA K., FUKUSHIMA S., MATSUSHITA K., OKUDA N., 2022, Effects of Forests and Forest-related Activities on the Subjective Well-Being of Residents in a Japanese Watershed: An Econometric Analysis Through the Capability Approach, *Forest Policy and Economics* 139: 102723, DOI: 10.1016/j.forpol.2022.102723.
30. UN, 2022, *The 17 UN Sustainable Development Goals*, New York, <https://sdgs.un.org/goals>.
31. WILLIAMS M., MUNZNER T., 2004, Steerable, Progressive Multidimensional Scaling, *IEEE Symposium on Information Visualization: 57-64*, Texas, USA, DOI: 10.1109/INFVIS.2004.60.
32. ZAND M. S., WANG J., HILCHEY S., 2015, Graphical Representation of Proximity Measures for Multidimensional Data: Classical and Metric Multidimensional Scaling, *The Mathematica Journal* 17(7): 1-61, DOI: 10.3888/tmj.