

About EuPI

The European Policy Initiative (EuPI) of Open Society Institute – Sofia Foundation aims to contribute to improving the ability of new member states to effectively impact common European policies through good quality research, policy recommendations, networking and advocacy. The initiative operates in the eleven new member states from CEE through a network of experts and policy institutes.

Web-site <http://www.osis.bg>

Web-site: <http://www.TheCatchUpIndex.eu>

About the report

The report "Where are They Now? Findings of the European Catch-Up Index 2021" presents the findings of the European Catch-Up Index project of the European Policies Initiative (EuPI) of Open Society Institute - Sofia Foundation (OSI-Sofia) supported by a grant from Open Society Foundations (OSFs). This product is for non-commercial use only. The views expressed in the report are those of the author and do not necessarily reflect the views of OSI-Sofia or OSFs.

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About Index 2021¹

The Catch Up Index measures the performance of 35 countries – the EU member states, the candidate and potential candidate countries across four categories - Economy, Quality of Life, Democracy and Governance, using 47 basic indicators. There are scores for each category and an Overall Score, composed of the scores for the four categories, based on a scale from 100 to 0, highest to lowest. The standardized scores allow for rankings the countries from 1 to 35, highest to lowest position.

The primary goal of the Catch-Up Index is to measure how the newer EU member states (dubbed EU11) from Central and Eastern Europe are catching-up with their counterparts to the West, i.e. the older member states (dubbed EU14+2 as Malta and Cyprus are included). The candidate countries – CC – and the Potential Candidate Countries – PCC – are also included in the Index. It is easier to track catching-up in the economy, but the Index methodology allows for comparing the convergence in additional, important areas of development. In short, the Index attempts to measure the “average European levels” that the countries and citizens in the newer member states aspire to reach. The Index results can serve the broader purpose of assessing the processes of convergence and divergence in Europe across the four categories and the multiple indicators, compare countries and groups of countries and look for relationships between different factors.

This is the tenth edition of the Catch-Up Index, with the first report released in 2011 and published every year. This allows for multi-year comparisons and registering longer term trends. As the current Index is based mostly on data released in 2021 with the latest available, but not later than 30 November 2021, it is referred to as “Index 2021”.

The data used in the Index 2021 encompass the period coinciding with the Covid-19 pandemic, which started in early 2020. Therefore, the Index 2021 data and findings in this report describe the situation on the European continent at the time of the Covid-19 health, economic and social crisis but this is more of a snapshot as the extent of these changes will be felt and examined long after this. Furthermore, the index has been released after the start of Russia’s war against Ukraine on February 24, 2022 but the data and analysis precede and have been finalized before it and therefore do not cover the dramatic implications of the conflict. In practice, the index reflects the situation in Europe immediately before the start of the war.

There are several changes in Index 2021 compared to previous editions. As the UK left the EU at the end of 2020, it is no longer included among the EU member states. The Index uses the term “new member states” to designate the countries of CEE that joined the EU with the fifth wave of enlargement in 2004 and 2007 and Croatia, which joined in 2013. Despite that there is considerable amount of time passed and many countries object being called “new”, there are still common characteristics and trends of

¹ Disclaimer: The latest used data in the Catch-Up Index 2021 is as of 30 November 2021. Missing data was replaced using imputation procedures as explained in the supplements of this report.

these countries as a group that make studying their experience valuable. After all, the Pont Neuf in Paris still retains its name - “new bridge” - despite being completed in 1606.

It should also be noted that the Catch-Up Index registers performance on per capita basis, thus eliminating the size of a country (or the overall country GDP) as a factor. In case the countries have substantial intra-regional differences, they are not taken into account as it is the country average and per capita that matter in this case. The Index does not register internal country regional differences due to methodological and technical complexity, although that was considered when initially designing the Index.

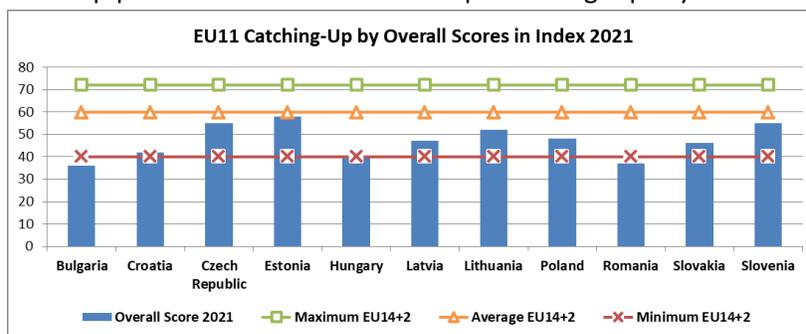
In addition to the regular Catch-Up Index, this year the Global Catch-Up Index came into existence expanding the comparison to 57 countries. The Global Index includes several groups of countries – the EU member states – “old” and “new”, the candidate and potential candidate countries, those closely associated with the EU – such as the European Economic Area and Switzerland, EU’s neighbors that are former socialist countries too and in different ways engaged with the EU, including those in Central Asia. The rest are a number of countries around the world – Canada, the US, China, Russia, Australia, Japan, South Korea and Israel. The methodology followed largely the model of the Catch-Up Index with the indicators divided into Economy, Quality of Life, Democracy and Governance categories.

Catch-Up Index 2021							
Group	Country	Economy Score (100-0)	Quality of Life Score (100-0)	Democracy Score (100-0)	Governance Score (100-0)	Overall Score (100-0)	Overall Ranking (1-35)
EU14+2	Denmark	71	68	76	72	72	1
EU14+2	Netherlands	69	69	74	71	71	2
EU14+2	Sweden	68	68	74	72	70	3
EU14+2	Finland	61	71	75	72	70	4
EU14+2	Luxembourg	73	67	66	71	69	5
EU14+2	Ireland	73	66	69	63	68	6
Iceland	Iceland	59	70	69	70	67	7
EU14+2	Germany	65	62	64	67	64	8
EU14+2	Austria	61	63	60	68	63	9
UK	UK	60	61	57	65	61	10
EU14+2	Belgium	54	67	61	58	60	11
EU11	Estonia	57	55	62	59	58	12
EU14+2	France	55	61	57	60	58	13
EU11	Slovenia	51	60	53	57	55	14
EU11	Czech Republic	55	57	53	56	55	15
EU14+2	Portugal	43	51	58	60	53	16
EU11	Lithuania	54	49	54	50	52	17
EU14+2	Spain	47	52	53	54	51	18
EU14+2	Cyprus	48	56	52	49	51	19
EU14+2	Malta	54	50	51	50	51	20
EU11	Poland	47	52	44	48	48	21
EU11	Latvia	51	42	51	46	47	22
EU14+2	Italy	40	50	52	44	46	23
EU11	Slovakia	46	46	45	48	46	24
EU11	Croatia	41	43	40	44	42	25
EU11	Hungary	45	39	34	41	40	26
EU14+2	Greece	32	46	41	39	40	27
EU11	Romania	43	30	42	34	37	28
EU11	Bulgaria	41	27	37	38	36	29
CC	Serbia	34	30	28	26	30	30
CC	Montenegro	29	31	26	28	29	31
CC	North Macedonia	34	21	26	26	27	32
CC	Albania	26	21	27	22	24	33
CC	Turkey	36	30	10	15	23	34
PCC	BiH	24	21	18	12	19	35
*Legend							
EU14+2	<i>The fourteen old EU member states, after the UK left in 2020, and Cyprus and Malta, which joined in 2004</i>						
EU11	<i>The new EU member states from CEE, which joined in 2004, 2007 and 2013</i>						
CC	<i>EU Candidate Countries</i>						
PCC	<i>EU Potential Candidate Countries</i>						
<i>**The ranking is based on the Index 2021 Overall Scores. The scores are from 100 to 0, highest to lowest. The ranking is from 1 to 35, highest to lowest position. The groups of countries are: the EU14+2 are the fifteen old EU member states and Cyprus and Malta; the EU11 are the EU member states from CEE, which joined in 2004, 2007 and 2013. The candidate countries are designated as CC and the PCC are the potential candidate countries. Iceland was a candidate country and the UK was EU member state until 2020.</i>							

Index 2021 Highlights

Have you ever wondered what happened to your favorite stars? There are TV programs or magazine articles devoted to updating the public on the professional and personal lives of beloved celebrities under the heading “Where Are They Now?”. In a similar way, the Catch-Up Index, in addition to the most current ranking of 35 European countries on selected indicator, offers a look back at the performance of the countries in the index in comparative perspective. As the index has been published since 2011, the performance is registered in a decade old period. These are the most important findings in Index 2021:

- The top performers in index 2021 in the ranking of 35 countries by overall score are Denmark (1st with 72 points out of 100), the Netherlands (2nd with 71 points) with Sweden (3rd) and Finland (4th) with 70 points each with just minimal difference in the score, Luxembourg (5th with 69 points), Ireland (6th with 68) points and Iceland (7th with 67 points) on a scale from 100 to 0, highest to lowest score.
- The last three countries in the 2021 ranking are Bosnia and Herzegovina (35th with 19 points), Turkey (34th with 23 points) and Albania (33rd with 24 points).
- Index 2021 shows a gap between the best performers in the Northern and Western Europe and those lagging behind in the Southeast of the continent and this difference has remained since the first edition of the index in 2011.
- The East-West and North-South divides still persist, but the index shows that there is a catching-up process with EU11 countries performing equally or sometimes outperforming older member states.

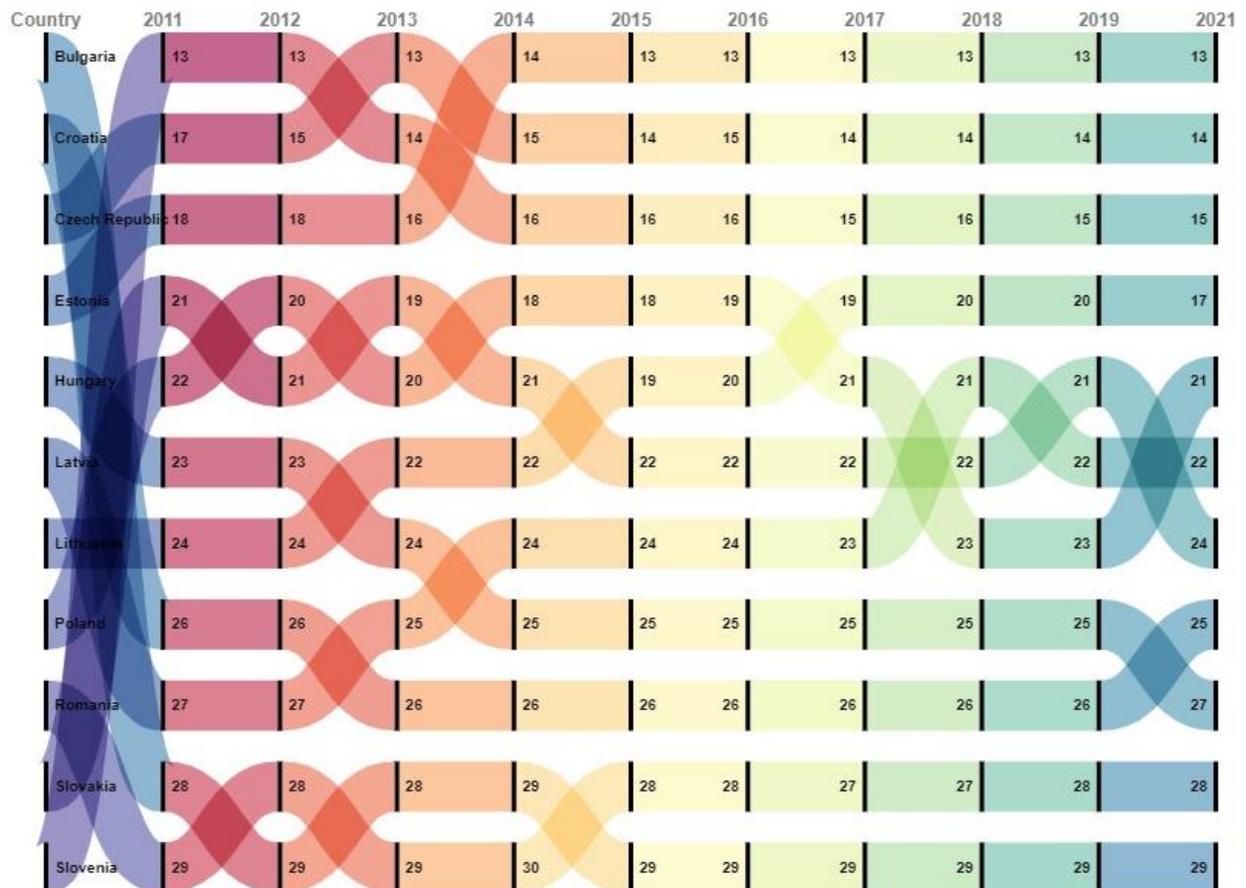


states.

- The comparison of data shows the catching-up of the EU11 was most dynamic in the 2011-2014 period after which the process slowed down or was reversed for some countries.

- The results of the index 2021 show that three EU11 countries - Estonia, the Czech Republic and Slovenia – are close to but do not outperform the average benchmark of 60 points of the EU14+2 group with respectively 58, 55 and 55 points.
- In the overall ranking, Estonia is 13th, the Czech Republic 14th and Slovenia 15th in the overall ranking out of 35 countries, while none of the EU11 countries is near the best performers of the EU14+2 group with the maximum score of 72 points.
- But along with the top three performers in the EU11 group, there is the dynamic trio of Estonia, Lithuania and Latvia, which have improved continuously both their scores and rankings between 2011 and 2021 with a regional pattern in the improvement as these are all Baltic countries.

Changes in the Ranking of the EU11 countries between 2011 and 2021



- Estonia excels among the other EU11 states as it climbed from 18th in the overall ranking in 2011 to 13th position in 2021 and is now 9th out of 35 countries in Democracy, 11th in Economy and 13th in Governance, while Slovenia performs better in Quality of Life on 13th position.
- The year on year country developments in the index are as a rule incremental, but the long-term comparisons between the first edition and the latest 2021 edition show the levels of change, with Estonia’s climbing up the ranking from 18th to 13th place and retaining it over the years.
- Index 2021 shows the trajectory of the new EU member states convergence with the rest, but there are cases of divergence of some countries indicated in the categories of Democracy and Governance.
- In Democracy, Hungary witnessed a significant drop of 7 positions and 17 score points and 4 positions and 6 points drop in Governance too from 2011 to 2021, while Poland dropped by 3 positions and 7 points in Governance in the same period from 2011 to 2021.

- The divergence trends may indicate changing views of the catching-up paradigm by some political leaders in CEE, who are rejecting the emulation of the “Western” counterparts, at least in democracy and governance and cherry-picking their participation in the European project.

There are several findings in index 2021, which confirm also the results of previous editions of the index, as follows:

- The EU11 as a group are still far from the top performers of the EU14+2 and their average scores are closest to the average benchmarks in the Economy and further away, but equally distant to the average scores in Quality of Life, Democracy and Governance, where the catching-up is slower.
- The new EU member states still differ in many respects from their counterparts in EU14+2, but at the same time make up a diverse group themselves.
- There are some findings that defy common preconceptions, e.g. several of the CEE countries have the lowest inequality levels in the EU - Slovakia (1st among 35 countries), Slovenia (2nd) and the Czech Republic (3rd) are the least unequal countries among the 35 countries according to the Gini indicator. But Bulgaria (34th), Lithuania (33rd) and Latvia (32nd) are the countries with the highest inequality and among the last in the ranking.

Similar to previous editions of the index, the cluster analysis divides the countries into groups with similar characteristics and provides another perspective of the Index 2021. Estonia is the only country from the EU11 group, which entered the second cluster by overall score. However, there is no EU11 country in the first cluster of best performers. The EU11 countries are not represented in the best performing clusters in the Economy category, there is only one new EU member state represented in best scoring Democracy clusters and fare slightly better in Quality of Life and Governance top clusters with three CEE countries in each of them.

- There are clear geographic patterns as shown in the cluster map by overall scores: all countries in the clusters four to six are exclusively concentrated on the Balkans or around it, while no country from this region is in the better performing clusters one to three. This creates a picture of the dividing lines in Europe between the Balkans and the rest.

- The comparison between clusters in the Index 2011 and Index 2021 by overall score shows that the new member states as a whole have moved up to the better performing clusters, catching-up with a number of EU14+2 countries and leaving the last two clusters to the EU candidate countries in Southeastern Europe.

**OVERALL SCORE: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
Cluster	2
Cluster	3
Cluster	4
Cluster	5
Cluster	6



- The analyses show that there seems to be geographic and time patterns in the Catch-Up Index dynamics. For example, the top clusters consist of best performing countries in Western core and Northern Europe while the last two clusters consist of the candidate countries located in Southeastern Europe, which are falling behind.
- Furthermore, the trends in the ranking and scores shows that the catching-up and the changes were most dynamic from 2011 to the 2014-2016 period, after which there is a slowdown of the process. The changes in the period 2011-2021 happen mostly within the EU11 group, compared to the EU14+2 of old member states and the EU candidate countries.

The Global Catch-Up Index 2021 Findings

Global Catch-Up Index 2021			
Overall Score: Ranking and Clusters			
Country	Overall Score	Rank	Cluster
Norway	74	1	1
Ireland	74	2	
Luxembourg	72	3	
Switzerland	72	4	
Netherlands	70	5	
Denmark	70	6	
Sweden	70	7	
Iceland	70	8	
Finland	69	9	
Australia	67	10	2
Canada	67	11	
Austria	66	12	
Belgium	65	13	
Germany	65	14	
Japan	63	15	
UK	63	16	
France	63	17	
South Korea	62	18	
USA	61	19	
Estonia	60	20	3
Slovenia	59	21	
Spain	59	22	
Malta	58	23	
Portugal	58	24	
Czech Republic	58	25	
Italy	57	26	
Cyprus	56	27	
Israel	55	28	
Lithuania	53	29	4
Greece	52	30	
Poland	52	31	
Latvia	51	32	
Slovakia	51	33	
Croatia	49	34	
Hungary	47	35	
Romania	44	36	
Bulgaria	41	37	
Montenegro	39	38	5
Albania	38	39	
Serbia	37	40	
Georgia	37	41	
North Macedonia	36	42	
Turkey	35	43	
Armenia	35	44	
Ukraine	34	45	
Moldova	33	46	
BiH	33	47	
China	33	48	6
Kazakhstan	32	49	
Belarus	31	50	
Kosovo	30	51	
Russia	30	52	
Kyrgyzstan	23	53	
Azerbaijan	23	54	
Uzbekistan	16	55	
Tajikistan	14	56	
Turkmenistan	11	57	

In addition to the regular Catch-Up Index, this year the Global Catch-Up Index came into existence expanding the comparison to 57 countries. The Global Index includes several groups of countries – the EU member states – “old” and “new”, the candidate and potential candidate countries, those closely associated with the EU – such as the European Economic Area and Switzerland, EU’s neighbors that are former socialist countries too and in different ways engaged with the EU, including those in Central Asia. The rest are a number of countries around the world – Canada, the US, China, Russia, Australia, Japan, South Korea and Israel. The methodology followed largely the model of the Catch-Up Index with the indicators divided into Economy, Quality of Life, Democracy and Governance categories.

There is an important disclaimer: though the Catch-Up Index and the Global Index are very similar, the Global Index uses a smaller number of indicators, which has impact on the results, including differences in the ranking of countries.

- In the global ranking, the winner is Norway (1st out of 74 countries with 74 points), followed by Ireland with an identical score (2nd with 74 points) with a minimal difference after the decimal separator.

- The best performing EU11 country in the global ranking is Estonia (20th out of 57 countries with 60 points), followed closely by Slovenia (21st with 59 points), which are part of the third cluster of good performers.

- The EU countries dominate the best performing clusters, along with those most closely associated with them such as the EEA and Switzerland or recent member UK.

- The other developed Western-style

democracies around the world perform generally remarkably well in each of the four categories and in the overall global ranking.

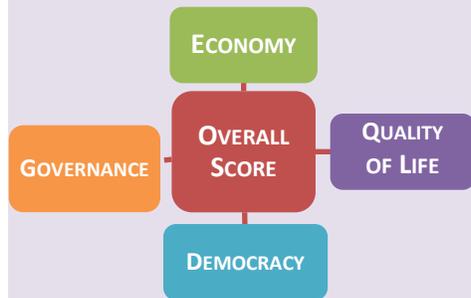
- In Quality of Life, which is measured by education, life expectancy and inequality indicators, the European countries give up the first two spots to two Asian democracies – South Korea and Japan – but continue to perform excellently.
- As a whole, the EU11 countries outperform their counterparts outside of the EU (i.e. the former socialist block members) across the board.
- Several of the EU11 countries hold their own against a number of developed countries, including in Quality of Life, Democracy and Governance, with Slovenia, the Czech Republic and the three Baltic countries generally outshining the others.
- It is indicative that none of the EU member states is part of the last two clusters of underperforming countries.

“You don’t know how lucky you are”: The Economist Sums It Up

A recent Economist article on the transition of the former Communist bloc countries (12 February 2022 edition) came up with a telling subtitle - “The promise of former eastern-bloc economies is mostly unfulfilled: But those that joined the EU have done much better than the rest”. The article sums up the developments in the region in the last 30 years nicely and it is supported by the findings of the Global Catch-up Index.

Better still, the Economist article addresses the EU member states in Central and Eastern Europe “You don’t know how lucky you are”, summing up that “Among the economies which joined the EU, in contrast, growth remained strong. In 2016, GDP per person in Romania overtook that in Russia. While much of the former Soviet Union remained dependent on exports of grain, gas and gold, central Europe and the Baltics became deeply integrated with European labor and financial markets, and tied into European supply chains.” There is a warning though “Sailing has not been entirely smooth; over the past decade, populist governments in Poland and Hungary have weakened democratic institutions. But such systems remain miles away from the authoritarian regimes common across most of the post-Soviet world.”

Categories, scores and ranks: About the methodology approach



The Catch-Up Index model is simple and is designed to assess the performance of the selected countries across the four categories. Each country is ascribed a score in each category, and the Overall Score is the average of those in the four categories combined. The countries are then ranked according to that score. Performance in the broad categories is assessed on the basis of indicators and sub-indicators, each having a different weight assigned to it, depending on its importance in the Catch-Up Index model. The raw data from different sources is standardized on a scale of 0 to 100 points, so that comparisons or other processing of scores can be made between countries, categories and indicators. The countries' performance is measured relative to each another and not to external targets,

because the standardization method assigns the highest score to the best performing country and vice versa. As mentioned above, the scores run on a scale from 0 (lowest) to 100 (highest), while the ranks range from 1 (highest) to 35 (lowest) – the number of countries included in the Index.

The EU member states are divided into four main groups – the EU11 and the EU14+2, the CC – candidate countries and PCC – the potential candidate countries. The EU11 group includes the ten post-communist countries from Central and Eastern Europe (CEE), which joined in 2004, 2007 and Croatia in 2013. The other, the control group is the EU14+2 – the older member states plus Cyprus and Malta, which also joined in 2004 but come from a different context and path of development, and thus are closer in characteristics to the older EU members. The UK, which used to be a member state until 2020 and Iceland, which used to be a candidate state are shown separately.

The model uses a set of several yardsticks - or benchmarks – against which to assess the progress or lagging of the EU11 in meeting the standards of the rest of the EU. The benchmarks can be considered to be targets for the EU11.

The Index takes as its main benchmark the “EU14+2 Average”, which is the mean of the scores of these countries in a given category or indicator as a component of the overall score. The average (or mean of the scores) was preferred to the median (the “middle number” in a range of scores in this case) for a number of practical reasons. The “EU14+2 Average” is a group score and does not correspond to a specific country. Sometimes, the median is also used and the corresponding score can be associated with a particular country.

The other two important benchmarks are the “EU14+2 Maximum”, which is the highest score in the group and the “EU14+2 Minimum”, which is the lowest score in the EU14+2 group. Both the maximum and the minimum score can be associated with a respective country.

Once the “maximum”, “average” and “minimum” are established and the countries are ranked according to their score, it can be easily observed if a particular country is above, below or near any of these benchmarks and how near or far it is to the target.

Other group scores – “average” for the EU11, the candidates or potential candidates – can be drawn depending on the task of the comparison.

The “EU14+2 Average” is the main benchmark, because the maximum may be an unrealistically high target, while setting the minimum – the lowest score – as a goal would have no motivational value.

Clusters and Ranking by Overall Score in Index 2021

Overall Score: Ranking and Clusters 2021				
Group	Country	Overall Score 2021	Overall Rank 2021	Cluster
EU14+2	Denmark	72	1	1
EU14+2	Netherlands	71	2	
EU14+2	Sweden	70	3	
EU14+2	Finland	70	4	
EU14+2	Luxembourg	69	5	
EU14+2	Ireland	68	6	
Iceland	Iceland	67	7	
EU14+2	Germany	64	8	2
EU14+2	Austria	63	9	
UK	UK	61	10	
EU14+2	Belgium	60	11	
EU11	Estonia	58	12	
EU14+2	France	58	13	
EU11	Slovenia	55	14	
EU11	Czech Republic	55	15	3
EU14+2	Portugal	53	16	
EU11	Lithuania	52	17	
EU14+2	Spain	51	18	
EU14+2	Cyprus	51	19	
EU14+2	Malta	51	20	
EU11	Poland	48	21	
EU11	Latvia	47	22	
EU14+2	Italy	46	23	
EU11	Slovakia	46	24	
EU11	Croatia	42	25	4
EU11	Hungary	40	26	
EU14+2	Greece	40	27	
EU11	Romania	37	28	5
EU11	Bulgaria	36	29	
CC	Serbia	30	30	
CC	Montenegro	29	31	
CC	North Macedonia	27	32	
CC	Albania	24	33	6
CC	Turkey	23	34	
PCC	BiH	19	35	

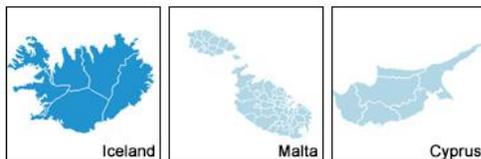
The top performers in index 2021 by overall score are Denmark (1st with 72 points out of 100), the Netherlands (2nd with 71 points) with Sweden (3rd) and Finland (4th) with 70 points each with just minimal difference in the score. The last three countries are Bosnia and Herzegovina (35th with 19 points), Turkey (34th with 23 points) and Albania (33rd with 24 points).

The first and second clusters are composed of old member states and two other Western countries (Iceland and UK) with Estonia the only EU11 country in the second cluster. The third cluster is composed mostly of Central and South European countries. The fourth cluster, which sits between the more successful performers and those lagging behind, is composed of EU member states in the Balkans and their neighbor Hungary. The last two clusters at the bottom of the ranking are composed exclusively of the rest of the Balkan countries, which are candidate or potential candidate EU members.

There are clear geographic patterns in the cluster map by overall scores. All countries in the clusters four to six are exclusively concentrated on the Balkans or around it, while no country from this region is in the better performing clusters one to three. This creates a picture of the dividing lines in Europe between the “wider” Balkans region and the rest.

**OVERALL SCORE: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
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Cluster	5
Cluster	6



The comparison of clusters between the first edition of the index in 2011 and the current one, i.e. Index 2021, provides additional perspective with a number of interesting findings. The first two clusters by overall score consisted of only 19 states in Index 2011, in Index 2019 they were 24 and in Index 2021 there were only 13 countries. This shows that over the years more countries moved to the better performing groups, but yet again it is becoming a more exclusive club as fewer countries manage to maintain excellent performance across the four categories.

With regard to the catching-up of the new EU members, in Index 2011 the EU11 champions – Slovenia (13th position in 2011), the Czech Republic (17th position in 2011) and Estonia (18th position in 2011) were part of just the third cluster and were the only new member states there. But in Index 2021 Estonia has moved to the second cluster (it was there in Index 2019 too). Six new member states became part of the third cluster already in Index 2019 and have stayed there in the current Index 2021 too. These are the Czech Republic, Slovenia, Lithuania, Slovakia, Latvia and Poland, moving up the hierarchy of clusters.

In 2011, six of the current new member states were in the “transitional” fourth cluster, situated between the better and worse performing countries, and two others - Romania and Bulgaria - were in



the fifth cluster. In Index 2021, this fourth transitional cluster has shrunk from 8 to 5 countries. Bulgaria and Romania have become part of the fourth cluster already in Index 2017 together with Hungary, Croatia and Greece and the rest of the CEE countries have moved up. Furthermore, in Index 2021 there are no new member states in the fifth and sixth cluster, as they all have moved up to other groups, and there are only EU candidate countries from the Balkans in the last two clusters.

The trends show that between the Index 2011 and Index 2021, the new member states have “graduated” to the better performing clusters, catching-up with a number of EU14+2 countries and leaving the last two clusters to the EU candidate countries in Southeastern Europe.

About the cluster analysis

The cluster analysis divides countries in the Catch-Up Index into groups based on shared characteristics. In addition, it also shows the proximity of the clusters to one another, i.e. some clusters are closer to each other and more distant from the rest. The clusters are also hierarchical, with better performing countries in clusters of higher order.

The findings of the cluster analysis reveal divisions in Europe along the lines of shared characteristics as identified by the indicators of the Catch-Up Index. This “Europe” is different from the one that is usually perceived to be divided along political lines and by legal arrangements.

The findings of the cluster analysis provide an alternative narrative about the divergence and convergence processes in Europe. It can be argued that countries within one cluster or those clusters in closer proximity are more likely to forge common approaches or policies even if they have disagreements in the short term. Thus the cluster analysis shows a more “organic Europe” - a snapshot of similarity and dissimilarity, based on characteristics of countries, not political agreements or legally bindings. This allows to better track the processes of convergence and divergence on the continent.

Clusters and Ranking in Economy in Index 2021

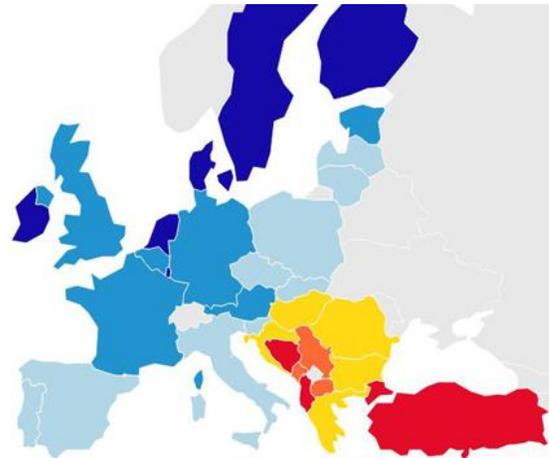
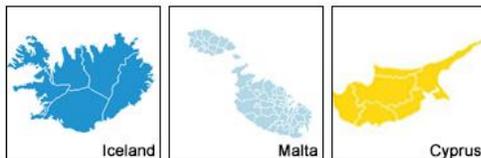
Economy Scores: Ranking and Clusters 2021				
Group	Country	Score 2021	Rank 2021	Cluster
EU14+2	Luxembourg	73	1	1
EU14+2	Ireland	73	2	
EU14+2	Denmark	71	3	
EU14+2	Netherlands	69	4	
EU14+2	Sweden	68	5	
EU14+2	Germany	65	6	
EU14+2	Austria	61	7	
EU14+2	Finland	61	8	
UK	UK	60	9	2
Iceland	Iceland	59	10	
EU11	Estonia	57	11	
EU11	Czech Republic	55	12	
EU14+2	France	55	13	
EU14+2	Belgium	54	14	
EU14+2	Malta	54	15	
EU11	Lithuania	54	16	
EU11	Slovenia	51	17	3
EU11	Latvia	51	18	
EU14+2	Cyprus	48	19	
EU11	Poland	47	20	
EU14+2	Spain	47	21	
EU11	Slovakia	46	22	
EU11	Hungary	45	23	
EU11	Romania	43	24	
EU14+2	Portugal	43	25	4
EU11	Bulgaria	41	26	
EU11	Croatia	41	27	5
EU14+2	Italy	40	28	
CC	Turkey	36	29	
CC	North Macedonia	34	30	
CC	Serbia	34	31	
EU14+2	Greece	32	32	
CC	Montenegro	29	33	6
CC	Albania	26	34	
PCC	BiH	24	35	

The top three performers in Economy in Index 2021 are Luxembourg (1st with 73 points), followed with a just slight difference in score by Ireland (2nd with 73 points) and Denmark (3rd with 71 points). The last three countries in the ranking are Montenegro (33rd with 29 points), Albania (34th with 26 points) and BiH (35th with 24 points).

The first cluster is composed of only Western EU member states. But the second cluster of also strong performers, includes the EU11 countries of Estonia (11th with 57 points) and the Czech Republic (12th with 55 points), in the same group as the UK and France. The third cluster is composed of CEE and South European states, and the fourth cluster has a similar composition. The last fifth and six clusters are composed of countries in the Balkans, including the EU member state Greece and the candidate and potential candidate countries.

**ECONOMY SCORES: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
Cluster	2
Cluster	3
Cluster	4
Cluster	5
Cluster	6



The comparison between the distribution and composition of clusters between the 2011 and 2021 editions of the index in the Economy category shows several changes, having in mind that in 2011 there were five clusters altogether and six in 2021.

The number of countries in the first and second clusters remained unchanged when 2011 and 2021 are compared.

With regard to catching-up, Slovenia used to be in the second cluster in 2011, but moved down to the third cluster in 2021. Estonia, the Czech Republic and Lithuania joined the second cluster in Economy in 2021 – and improvement over 2019, when there were no new EU member states in the first two clusters in the current index. This third cluster in both 2011 and 2021 contains a number of new EU member states – four in 2011 and five in 2021.

The fourth cluster in 2011 contained six current EU new member states (having in mind Croatia was still an EU candidate in 2011), but only 3 in 2021. In 2021, the fourth “transitional” cluster have enlarged and contains more old EU member states - Portugal and Italy compared to 2011, when there was only Greece which downgraded to the fifth cluster in 2021. A year on year comparison shows that Cyprus and Spain moved from the fourth cluster in 2019 to the third one in 2021.

In regard to the last clusters, there is no substantial change in their composition. In 2011 the last cluster (fifth at the time) consisted of only candidate and potential candidate countries and in 2021 it was split into fifth and sixth cluster and BiH and Albania moving to the sixth. It was only Greece that was downgraded from the forth cluster in 2011 to the fifth one in 2021.

Clusters and Ranking in Quality of Life in Index 2021

Quality of Life Scores: Ranking and Clusters 2021				
Group	Country	Score 2021	Rank 2021	Cluster
EU14+2	Finland	71	1	1
Iceland	Iceland	70	2	
EU14+2	Netherlands	69	3	
EU14+2	Sweden	68	4	
EU14+2	Denmark	68	5	
EU14+2	Belgium	67	6	
EU14+2	Luxembourg	67	7	
EU14+2	Ireland	66	8	
EU14+2	Austria	63	9	
EU14+2	Germany	62	10	
UK	UK	61	11	2
EU14+2	France	61	12	
EU11	Slovenia	60	13	
EU11	Czech Republic	57	14	
EU14+2	Cyprus	56	15	
EU11	Estonia	55	16	
EU14+2	Spain	52	17	3
EU11	Poland	52	18	
EU14+2	Portugal	51	19	
EU14+2	Italy	50	20	
EU14+2	Malta	50	21	
EU11	Lithuania	49	22	
EU11	Slovakia	46	23	
EU14+2	Greece	46	24	
EU11	Croatia	43	25	4
EU11	Latvia	42	26	
EU11	Hungary	39	27	5
CC	Montenegro	31	28	
EU11	Romania	30	29	
CC	Turkey	30	30	
CC	Serbia	30	31	
EU11	Bulgaria	27	32	6
CC	Albania	21	33	
PCC	BiH	21	34	
CC	North Macedonia	21	35	

The top three performers in the Quality of Life category are Finland (1st with 71 points), Iceland (2nd with 70 points) and the Netherlands (3rd with 69 points). The last three countries in the ranking are with identical results with just a slight difference in scores - Albania (33rd with 21 points), BiH (34th with 21 points) and North Macedonia (35th with 21 points).

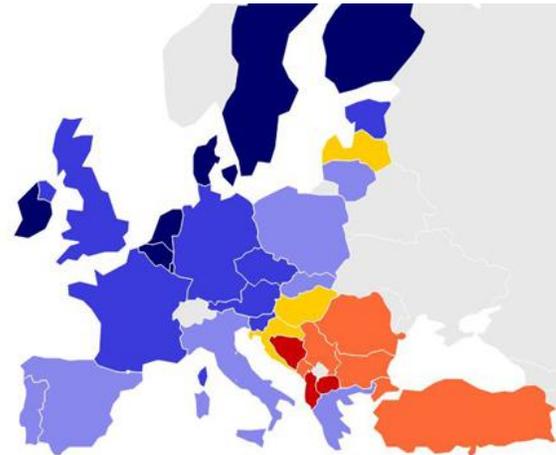
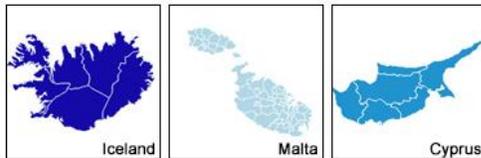
The first two clusters contain a relatively small number of countries – mostly from the EU14+2, but the three EU11 countries – Slovenia (13th), the Czech Republic (14th) and Estonia (16th) are also included in the second cluster.

The fourth cluster is composed of just three EU11 countries. The countries last two clusters are all Balkan countries – a mix of EU members and candidate states.

There are a number of differences and similarities in the Quality of Life clusters when the Index 2011 and Index 2021 are compared. In 2011, the first and second cluster consisted of a large number of countries - 12 in the first cluster and 5 in the second one. This was the situation in Index 2019 too. But in 2021 only 8 countries remained in in the first cluster of the best performers.

**QUALITY OF LIFE SCORES: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
Cluster	2
Cluster	3
Cluster	4
Cluster	5
Cluster	6



In 2011 only one new EU member state – Slovenia - made it to the second cluster and there is no EU11 country in the first cluster. But in 2021, there were already three EU11 countries – Slovenia, the Czech Republic and Estonia – in the second cluster among the best performers.

Within the fourth “transitional” cluster, Slovakia, Lithuania and Poland graduated from the 2011 positions in the fourth cluster to the third one in Index 2021. They were replaced by Hungary, which was downgraded from the third cluster in 2011 respectively to the fourth one in 2019. Greece started in the second cluster in 2011, dropped to the fourth cluster in 2019, but in 2021 it moved up again in the third cluster.

There are changes in the fifth and six clusters too. Four candidate countries and Romania used to be in the last sixth cluster in 2011. But in 2021 the sixth cluster has shrunk leaving Albania, BiH and North Macedonia. Romania and Turkey moved up to the fifth cluster to join Bulgaria, Montenegro and Serbia. Latvia managed to leave the fifth cluster of 2011 to join the fourth cluster in 2021.

Clusters and Ranking in Democracy in Index 2021

Democracy Scores: Ranking and Clusters 2021				
Group	Country	Score 2021	Rank 2021	Cluster
EU14+2	Denmark	76	1	1
EU14+2	Finland	75	2	
EU14+2	Sweden	74	3	
EU14+2	Netherlands	74	4	
Iceland	Iceland	69	5	2
EU14+2	Ireland	69	6	
EU14+2	Luxembourg	66	7	
EU14+2	Germany	64	8	
EU11	Estonia	62	9	3
EU14+2	Belgium	61	10	
EU14+2	Austria	60	11	
EU14+2	Portugal	58	12	
UK	UK	57	13	
EU14+2	France	57	14	
EU11	Lithuania	54	15	
EU11	Slovenia	53	16	
EU14+2	Spain	53	17	
EU11	Czech Republic	53	18	
EU14+2	Cyprus	52	19	
EU14+2	Italy	52	20	
EU11	Latvia	51	21	
EU14+2	Malta	51	22	
EU11	Slovakia	45	23	4
EU11	Poland	44	24	
EU11	Romania	42	25	
EU14+2	Greece	41	26	
EU11	Croatia	40	27	5
EU11	Bulgaria	37	28	
EU11	Hungary	34	29	
CC	Serbia	28	30	
CC	Albania	27	31	
CC	Montenegro	26	32	6
CC	North Macedonia	26	33	
PCC	BiH	18	34	
CC	Turkey	10	35	

In Democracy, the top three performers are Denmark (1st with 76 points), Finland (2nd with 75 points) and Sweden (3rd with 74 points). The last three countries in the ranking are North Macedonia (33rd with 26 points), BiH (34th with 18 points) and Turkey (35th with 10 points).

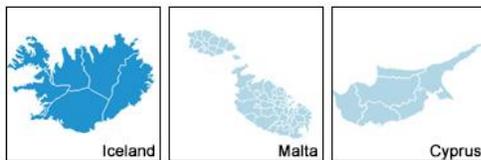
The first two clusters with the best performers are composed of small number of countries – just eight and they are all North and Western European. The third cluster is the biggest one with a mix of countries across the EU from CEE, Central and Southern Europe.

The fourth cluster is the transitional one where countries can go either way. The last two clusters include countries from Southeastern Europe with the exception of Hungary, which is their immediate neighbor anyway.

The changes in the Democracy clusters between 2011 and 2021 show the following. The number of countries in the first and second cluster, which consists of the best performers, has decreased from ten in 2011 and fourteen in 2019 to eight in 2021. Estonia, the best performer of the EU11 group, used to be in the second cluster in the last index 2019 but moved to the third cluster in 2021.

**DEMOCRACY SCORES: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
Cluster	2
Cluster	3
Cluster	4
Cluster	5
Cluster	6



The composition of the third cluster is indicative. In 2011, it consisted of twelve countries out of which seven were new EU member states with Poland and Hungary among them. In the previous Index 2019, the third cluster has shrunk to nine countries with five new EU countries, but both Poland and Hungary are downgraded to the fourth cluster. In Index 2021, Poland remained in the fourth cluster, but Hungary dropped further to the fifth cluster. The fourth “transitional” cluster is quite telling too. It consisted of a mix of old and new member states in 2011, but in 2019 there were mostly EU11 countries and Greece. In 2019, this fourth cluster was joined by the downgraded Hungary and Poland and the upgraded Bulgaria and Romania, which moved up from the fifth cluster.

The fifth and sixth clusters experienced change too. In 2011, there were a number of candidate and potential candidate countries and two new EU member states in the fifth cluster – Bulgaria and Romania. Bulgaria and Romania managed to move up to the fourth cluster in 2019, joining countries such as Hungary, Greece and Croatia. However, in the current Index 2021 the EU member states of Hungary and Bulgaria, backslid to the fifth cluster joining several of the candidate countries from the Balkans. The last, sixth cluster consists of BiH and Turkey.

Clusters and Ranking in Governance in Index 2021

Governance Scores: Ranking and Clusters 2021				
Group	Country	Score 2021	Rank 2021	Cluster
EU14+2	Denmark	72	1	1
EU14+2	Finland	72	2	
EU14+2	Sweden	72	3	
EU14+2	Luxembourg	71	4	
EU14+2	Netherlands	71	5	
Iceland	Iceland	70	6	
EU14+2	Austria	68	7	
EU14+2	Germany	67	8	
UK	UK	65	9	
EU14+2	Ireland	63	10	2
EU14+2	France	60	11	
EU14+2	Portugal	60	12	
EU11	Estonia	59	13	
EU14+2	Belgium	58	14	
EU11	Slovenia	57	15	
EU11	Czech Republic	56	16	3
EU14+2	Spain	54	17	
EU11	Lithuania	50	18	
EU14+2	Malta	50	19	
EU14+2	Cyprus	49	20	
EU11	Poland	48	21	
EU11	Slovakia	48	22	
EU11	Latvia	46	23	
EU11	Croatia	44	24	
EU14+2	Italy	44	25	
EU11	Hungary	41	26	4
EU14+2	Greece	39	27	
EU11	Bulgaria	38	28	
EU11	Romania	34	29	5
CC	Montenegro	28	30	
CC	Serbia	26	31	
CC	North Macedonia	26	32	
CC	Albania	22	33	6
CC	Turkey	15	34	
PCC	BiH	12	35	

In governance, there are three countries on top with identical results with just a slight difference in the scores - Denmark (1st with 72 points), Finland (2nd with 72 points). The countries at the bottom of the ranking are Albania (33rd with 22 points), Turkey (34th with 15 points) and Bosnia and Herzegovina (35th with 12 points).

The first and second cluster of the best governed countries include North and West European countries as well as three EU11 ones – Estonia (13th), Slovenia (15th) and the Czech Republic (16th).

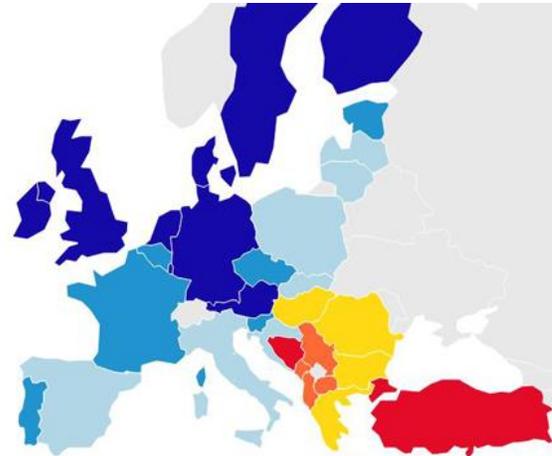
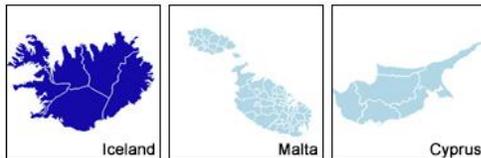
The third cluster is composed of countries from CEE and Southern Europe. The fourth cluster includes the EU member states of Hungary, Greece, Bulgaria and Romania.

The last two clusters – fifth and sixth – are composed of the rest of the Southeast European countries, which are EU candidates.

The comparisons between clusters in the Index 2011 and Index 2021 show the following results, having in mind there were five clusters in total in 2011 and six clusters in 2021 in the Governance category.

**GOVERNANCE SCORES: RANKING AND CLUSTERS
CATCH-UP INDEX 2021 EDITION**

Cluster	1
Cluster	2
Cluster	3
Cluster	4
Cluster	5
Cluster	6



In 2011, two new EU member states were in the second cluster – Slovenia and the Czech Republic. In 2021, Estonia joined them too, thus there are three EU11 countries in the second cluster. The third cluster expanded between 2011 and 2021. In 2011, there were five countries in it, four out of which were new EU member states and one old one. In 2021, there are already nine countries in the third cluster with five EU11 and four EU14+2 countries.

The fourth “transitional” cluster in 2011 had seven countries, but shrunk to just four in 2021. I.e. in 2011, there were Italy and Greece among several new EU member states, while in 2021 there are only Hungary, Greece, Bulgaria and Romania remaining in the fourth cluster as the others have moved up to other clusters. The fifth and last cluster of 2011, which consisted only of EU candidate countries have split into two in 2021. Turkey and BiH are in the last sixth cluster and the other candidate countries remaining in the fifth.

Trends: Changes in Scores and Ranks between 2011-2021

Trends by Overall Performance between 2011 and 2021

The table below represents the changes in the Catch-Up Index in the period 2011-2021 by ranking and scores with the countries shown according to their group – EU14+2, EU11, candidates and potential candidate as well as Iceland and the UK.

The trends show that the changes happened mostly in the group of the EU11 countries. The most convergence processes are registered by the three Baltic countries from the EU11 group- Estonia, Latvia and Lithuania – which scores and ranks have been improving over the years. However, the divergence is also associated with EU11 countries – Hungary, Poland and Slovakia – which have been gradually sliding down the rankings and losing points over the years.

In the group of the candidate countries, the changes by overall score show little change over the years, with Albania showing a positive trend and Montenegro, Turkey and BiH losing positions.

Among the EU14+2 countries, a number of countries have worsened their performance in the index 2021 compared to previous years, including Spain, Sweden, Austria, Cyprus, Germany, Malta and Luxemburg. Others, such as Denmark, Finland, Ireland, the Netherlands and Portugal has performed well and improved their results. The UK, which just recently left the EU at the end of 2020, performs inconclusively losing points and positions in the ranking.

Trends in Economy between 2011 and 2021

The Catch-Up Index: Changes by Overall Scores 2011 - 2021																					
Group	Country	Overall Score 2021	Overall Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank change vs 2019	Rank change vs 2018	Rank change vs 2017	Rank change vs 2016	Rank change vs 2015	Rank change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
EU14+2	Austria	63	9	-1	-2	-1	-2	-3	-3	-3	-2	-2	0	0	0	-1	-2	-2	-2	-2	-2
EU14+2	Belgium	60	11	0	-1	-1	-1	-2	-3	-2	-2	-1	0	0	0	0	0	-1	0	-1	0
EU14+2	Cyprus	51	18	0	0	2	2	2	2	-1	-4	-4	1	1	2	3	2	1	0	-4	-4
EU14+2	Denmark	72	1	1	1	1	1	1	1	1	0	1	0	0	0	0	2	2	1	2	1
EU14+2	Finland	70	3	1	1	1	1	0	0	0	-1	0	2	2	2	2	2	1	2	1	2
EU14+2	France	58	12	0	0	0	0	-2	-2	-3	-2	-2	0	0	0	0	0	0	0	0	0
EU14+2	Germany	64	8	-1	-2	-2	-2	-3	-2	-2	-1	0	0	0	-1	-1	-2	-2	-2	-2	1
EU14+2	Greece	40	26	1	3	3	4	2	3	2	-1	-4	1	2	2	1	1	1	1	-1	-1
EU14+2	Ireland	68	6	1	1	2	3	4	5	6	6	4	1	1	2	3	3	5	4	5	2
EU14+2	Italy	46	23	0	0	-1	-1	-1	-1	0	-2	-2	1	1	1	0	0	0	0	-1	-3
EU14+2	Luxembourg	69	5	-1	-1	-1	-2	-2	-3	-2	-3	-2	-2	-2	-2	-4	-3	-2	-4	-4	-4
EU14+2	Malta	51	19	-3	-4	-3	-4	-3	-4	-3	-3	-3	-3	-4	-3	-5	-4	-6	-4	-3	-3
EU14+2	Netherlands	71	2	1	1	1	0	1	1	1	1	1	2	2	2	2	2	3	2	3	2
EU14+2	Portugal	53	16	-1	0	0	2	4	5	5	3	2	1	1	2	2	5	4	5	3	3
EU14+2	Spain	51	20	-1	-1	-2	-1	-1	0	-2	-3	-4	-2	-2	-3	-3	-3	-3	-3	-3	-5
EU14+2	Sweden	70	4	0	0	-1	-1	-1	-2	-2	-2	-1	-2	-2	-2	-2	-2	-3	-3	-2	-1
EU11	Bulgaria	36	29	0	0	1	2	2	2	2	1	2	0	0	0	0	0	0	-1	0	-1
EU11	Croatia	42	25	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
EU11	Czech Republic	55	14	0	0	0	0	0	1	0	0	2	0	0	0	1	0	1	-1	1	3
EU11	Estonia	58	13	1	1	2	2	3	3	5	6	6	0	0	0	0	0	1	3	5	5
EU11	Hungary	40	27	-1	-1	-2	-2	-2	-4	-5	-6	-7	-2	-2	-2	-2	-2	-2	-3	-4	-4
EU11	Latvia	47	22	0	-1	-1	0	0	3	5	7	6	0	-1	1	2	2	2	3	5	5
EU11	Lithuania	52	17	2	3	2	2	3	4	5	8	7	3	3	2	3	2	5	5	7	7
EU11	Poland	48	21	1	2	0	-2	-3	-2	-1	-1	1	2	2	0	-2	-3	-3	-1	-1	1
EU11	Romania	37	28	1	0	0	1	1	3	3	2	5	0	-1	-1	0	0	2	1	0	1
EU11	Slovakia	46	24	-2	-1	-2	-3	-2	-2	-3	-2	-1	-3	-2	-2	-2	-2	-3	-5	-3	-3
EU11	Slovenia	55	15	0	1	0	1	3	2	1	0	-1	0	1	0	1	1	1	-1	-2	-2
CC	Albania	24	33	-1	-1	-1	1	3	3	1	4	3	-1	-1	-1	0	1	2	1	2	2
CC	Montenegro	29	31	-1	-1	-1	-1	-3	-5	-4	-1	-1	-1	-1	-1	-1	-1	-3	-1	-1	-1
CC	North Macedonia	27	32	2	3	3	1	0	2	1	0	0	1	1	1	0	0	1	0	0	0
CC	Serbia	30	30	1	1	1	0	3	3	2	2	2	1	1	1	1	1	1	1	1	1
CC	Turkey	23	34	1	1	1	0	-2	-3	-2	-2	-1	0	0	0	0	-1	-2	-1	-1	-1
PCC	BiH	19	35	1	0	0	2	-1	-4	-3	-3	-2	0	0	0	0	0	-1	0	-1	-1
Iceland	Iceland	67	7	-1	-1	1	1	2	2	4	3	2	-1	-1	-1	-1	1	1	2	1	-1
UK	UK	61	10	-1	-1	-2	-3	-2	-2	-2	-1	-1	0	0	0	0	0	-1	-2	-1	0

The trends in the Economy category in the period 2011-2021 show that the “catching-up” has been generally successful within the EU11 group of countries. Only Croatia, Slovenia and Slovakia show deterioration when the results of the index 2021 to the rest are compared, but on the other hand these three countries have good positions in the ranking in this category.

This is not the case with the other groups in the index, with both EU14+2 countries and the EU candidates countries on the whole are backtracking on their achievements. This includes the former EU member the United Kingdom. The big exception is Ireland, which rebounded from the previous crisis, with Malta and Cyprus also showing some improvement, as well as Iceland. Among the EU candidate countries, Serbia has shown dynamism.

In addition to these group patterns, it seems that there is another pattern as the catching-up is most dynamic roughly until 2014 after which it slows down or reverses.

Economy: Changes in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
EU14+2	Austria	61	7	-1	-1	0	-1	-2	-3	-2	-2	-1	1	1	1	1	-1	-1	0	0	1
EU14+2	Belgium	54	14	-1	-1	-1	-2	-4	-4	-3	-4	-2	1	0	-1	-1	-3	-4	-4	-4	-2
EU14+2	Cyprus	48	19	0	1	5	5	5	4	-1	-6	-8	0	2	4	4	6	4	-1	-7	-6
EU14+2	Denmark	71	3	1	0	1	1	1	1	3	2	3	-1	-1	-1	-1	-1	-1	0	-1	0
EU14+2	Finland	61	8	1	1	0	0	-1	-3	-2	-4	-4	2	2	2	1	-1	-3	-2	-3	-3
EU14+2	France	55	12	0	-1	-1	-2	-3	-3	-5	-3	-2	1	0	0	-1	-2	-3	-3	-3	-1
EU14+2	Germany	65	6	0	-1	-1	-1	-1	1	0	2	3	0	0	0	-1	-1	1	-1	0	1
EU14+2	Greece	32	32	0	0	1	1	1	0	0	-3	-7	-1	-1	0	0	0	0	2	-1	-5
EU14+2	Ireland	73	2	3	4	5	10	12	16	17	17	12	1	1	2	4	7	9	10	9	7
EU14+2	Italy	40	28	-1	-1	-3	-3	-5	-3	-4	-5	-6	-2	-2	-4	-4	-6	-4	-5	-7	-6
EU14+2	Luxembourg	73	1	0	0	-1	-1	-1	-2	-2	-3	-2	0	0	0	0	0	0	0	0	0
EU14+2	Malta	54	15	-4	-2	0	0	2	3	7	3	4	-4	-2	0	-1	0	0	6	2	2
EU14+2	Netherlands	69	4	1	1	1	0	1	2	3	1	0	0	1	1	-1	0	0	0	0	-2
EU14+2	Portugal	43	24	1	1	2	1	-1	2	1	-1	-5	0	1	2	2	0	2	2	-1	-5
EU14+2	Spain	47	20	-1	-1	-1	-1	-3	-1	-2	-5	-7	0	-1	0	0	-1	0	-3	-5	-5
EU14+2	Sweden	68	5	0	0	-1	-1	-1	-2	-1	-1	1	0	-1	-2	-1	-2	-2	-3	-2	-1
EU11	Bulgaria	41	26	1	1	1	1	2	2	2	2	3	2	2	1	1	2	3	2	2	2
EU11	Croatia	41	27	1	1	2	2	1	2	-2	-3	-1	0	0	1	1	0	1	-2	-2	-2
EU11	Czech Republic	55	13	0	1	1	1	3	4	5	5	6	1	2	1	2	4	1	3	5	5
EU11	Estonia	57	11	0	0	0	0	0	2	3	5	5	1	0	0	1	2	2	2	5	5
EU11	Hungary	45	23	1	1	1	1	1	1	1	2	4	0	0	-1	-1	0	-1	1	3	3
EU11	Latvia	51	17	0	1	0	0	-1	2	4	7	7	0	0	0	0	-1	0	2	5	6
EU11	Lithuania	54	16	1	2	2	2	1	3	3	7	8	0	0	0	0	-2	0	-1	3	5
EU11	Poland	47	21	1	1	1	0	1	1	2	3	5	1	1	0	0	0	0	1	3	3
EU11	Romania	43	25	1	1	1	0	1	3	3	4	5	0	-1	0	0	1	2	2	2	4
EU11	Slovakia	46	22	-1	-1	-2	-3	-2	-1	-1	-1	0	-1	-2	-3	-4	-2	-2	-2	-2	-2
EU11	Slovenia	51	18	0	1	2	3	1	2	-1	-3	-4	0	0	0	1	0	-1	-4	-5	-4
CC	Albania	26	34	-1	-1	-3	-3	-3	-6	-6	-5	-1	0	0	0	-1	-1	-1	-1	0	1
CC	Montenegro	29	33	-2	-3	-3	-4	-3	-13	-10	-5	-4	-1	-1	-2	-2	-2	-8	-4	-1	-1
CC	North Macedonia	34	30	0	-1	-2	-2	-2	-1	-1	-1	1	0	0	0	0	0	1	1	0	3
CC	Serbia	34	31	3	5	4	5	7	3	2	0	0	2	2	2	3	3	3	1	2	0
CC	Turkey	36	29	-1	-3	-3	0	-2	0	0	-1	0	0	0	0	0	0	1	1	0	1
PCC	BiH	24	35	2	2	0	1	-2	-5	-7	-1	-3	0	0	0	0	0	0	0	0	-1
Iceland	Iceland	59	10	-4	-4	-3	-1	2	3	2	5	1	-3	-3	-3	0	2	2	1	4	0
UK	UK	60	9	-1	-1	-1	-2	-1	-2	-3	-2	-2	0	0	0	-2	-1	-1	-1	-1	-3

Trends in Quality of Life between 2011 and 2021

The Quality of Life trends in index 2021 show two broad trends. There is visible deteriorations among half the EU14+2 countries (this trend includes the UK too), visible improvement among most of the EU11 countries. The exceptions with a downward trend among the EU11 countries are Bulgaria, Slovakia to some extent with especially Hungary losing both considerable points and positions in the ranking.

Among the EU candidates, the situation is mixed – Serbia and North Macedonia’s performance deteriorates, while the performance of Montenegro and Turkey improves.

Quality of Life: Change in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
EU14+2	Austria	63	9	-2	-2	-3	-3	-3	-2	-2	-2	-2	1	0	0	1	-1	2	0	0	0
EU14+2	Belgium	67	6	1	0	1	1	1	1	1	1	2	0	1	2	2	1	1	1	1	4
EU14+2	Cyprus	56	15	1	0	3	3	1	1	0	-2	-2	0	0	2	1	0	0	0	-2	-1
EU14+2	Denmark	68	4	1	1	0	0	2	2	2	2	2	1	4	2	1	5	4	4	2	2
EU14+2	Finland	71	1	1	1	1	2	1	2	0	1	1	0	0	1	2	2	2	1	1	2
EU14+2	France	61	11	-2	-3	-4	-4	-3	-4	-4	-3	-4	1	1	0	0	0	-2	-1	-1	-3
EU14+2	Germany	62	10	-4	-5	-6	-5	-6	-7	-5	-4	-2	-1	-5	-5	-4	-6	-6	-4	-2	1
EU14+2	Greece	46	23	2	2	0	-1	0	0	-3	-8	-10	1	1	-1	-1	-1	-2	-3	-6	-6
EU14+2	Ireland	66	8	0	1	1	2	3	2	2	2	0	0	2	4	4	4	4	3	3	-1
EU14+2	Italy	50	20	-1	-3	-5	-5	-5	-4	-5	-7	-8	-2	-3	-5	-5	-4	-4	-4	-5	-7
EU14+2	Luxembourg	67	7	1	0	-3	-4	-4	-4	-3	-3	-4	0	-1	-6	-6	-6	-6	-3	-4	-6
EU14+2	Malta	50	21	-1	-1	-1	-1	-1	-1	-4	-1	0	-1	-2	-2	-2	-2	-3	-4	-2	-2
EU14+2	Netherlands	69	3	0	0	-1	-1	-2	-1	-2	-2	-1	0	0	0	-1	-1	-1	-2	-2	-1
EU14+2	Portugal	51	19	1	2	1	2	3	5	5	4	3	2	1	1	1	2	3	4	4	2
EU14+2	Spain	52	17	-2	-1	-1	-1	0	0	0	-2	-5	0	-1	-1	1	0	0	1	1	-1
EU14+2	Sweden	68	5	0	1	1	0	1	0	-2	-1	0	-1	-1	2	-1	1	0	-2	-1	0
EU11	Bulgaria	27	32	-2	-3	-1	-2	-3	-3	-2	-3	-3	-2	-2	-2	-3	-2	-2	-2	-1	-2
EU11	Croatia	43	25	1	1	-1	0	-1	0	2	2	-1	0	2	1	1	1	1	1	0	0
EU11	Czech Republic	57	14	0	1	2	1	1	1	-1	2	4	0	0	0	0	-1	0	-1	2	4
EU11	Estonia	55	16	1	2	2	2	3	5	7	7	6	0	2	2	1	2	3	5	4	4
EU11	Hungary	39	27	-2	-4	-5	-5	-5	-5	-5	-9	-8	0	-1	-2	-2	-2	-2	-2	-6	-5
EU11	Latvia	42	26	0	-2	0	1	0	2	4	6	6	0	-1	1	1	1	1	1	1	1
EU11	Lithuania	49	22	2	3	3	3	3	3	4	11	8	1	1	2	2	1	2	2	4	4
EU11	Poland	52	18	1	4	2	3	4	2	4	5	7	1	3	3	3	2	2	4	6	5
EU11	Romania	30	29	0	-3	1	2	0	0	2	-2	3	0	0	0	1	0	0	2	1	2
EU11	Slovakia	46	24	-2	-1	0	0	2	0	-3	-1	1	-2	-2	-1	-1	0	-1	-5	-2	0
EU11	Slovenia	60	13	1	2	0	1	4	2	3	2	3	0	0	0	0	1	0	1	1	2
CC	Albania	21	33	-2	-2	-1	0	2	4	1	0	-1	0	0	0	1	2	2	2	1	0
CC	Montenegro	31	28	0	-2	-2	-2	-6	-6	-2	-2	0	0	0	0	0	0	0	0	1	1
CC	North Macedonia	21	34	4	3	2	0	-2	-2	-2	-3	-4	1	1	0	-1	-1	-1	-1	-2	-2
CC	Serbia	30	30	2	4	4	3	7	5	0	-3	-2	2	1	1	1	2	2	-1	-2	-2
CC	Turkey	30	31	1	4	5	5	3	3	6	8	8	0	1	1	1	0	0	1	2	3
PCC	BiH	21	35	0	-1	3	4	0	-1	0	2	3	-1	-1	0	0	-1	-1	-1	0	0
Iceland	Iceland	70	2	1	1	1	3	2	2	3	3	1	0	0	2	5	3	4	3	3	2
UK	UK	61	12	-2	-3	-4	-5	-4	-4	-1	-1	-3	-1	-1	-2	-3	-2	-2	0	0	0

Trends in Democracy between 2011 and 2021

The trends in the Democracy category in the period 2011-2021 show improvement in several countries in both the EU14+2 and EU11 groups. Estonia, Latvia, Lithuania and Romania are those within the EU11 who are converging fast towards the designed goals. Portugal, Italy, Ireland, Cyprus, France are those among EU14+2 who register improvement. Within the candidate countries, Albania achieves better results over the years and to a lesser extent some improvement by Serbia when the 2021 results are compared to previous years.

Democracy: Change in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
EU14+2	Austria	60	11	-2	-3	-2	-4	-4	-4	-6	1	-2	-2	-2	-2	-3	-2	-2	-5	-1	-2
EU14+2	Belgium	61	10	-1	-1	-1	-1	-3	-3	-2	1	-1	0	0	0	0	0	0	0	0	0
EU14+2	Cyprus	52	19	3	1	3	5	6	8	4	2	0	3	2	3	5	5	4	3	3	0
EU14+2	Denmark	76	1	2	2	1	1	3	2	0	5	2	1	1	0	0	1	1	0	2	1
EU14+2	Finland	75	2	0	1	1	3	2	2	1	-1	4	-1	-1	1	1	1	1	1	-1	2
EU14+2	France	57	13	0	3	5	4	-2	0	-1	1	0	1	3	6	7	-1	1	0	1	0
EU14+2	Germany	64	8	0	0	1	1	-1	0	-1	2	0	0	0	0	1	0	0	-1	0	0
EU14+2	Greece	41	26	-1	3	4	7	1	5	6	3	-3	-1	1	1	2	0	1	1	1	0
EU14+2	Ireland	69	5	1	1	3	3	4	4	5	6	3	2	2	2	2	2	2	4	2	2
EU14+2	Italy	52	20	1	3	2	3	4	2	8	5	5	1	2	1	2	2	2	3	3	4
EU14+2	Luxembourg	66	7	-3	-3	-1	-1	-2	-4	-5	-2	-3	-1	-1	-1	-1	-2	-2	-2	-2	-2
EU14+2	Malta	51	21	-3	-4	-5	-9	-8	-8	-5	-2	-5	-5	-7	-7	-9	-7	-8	-6	-4	-6
EU14+2	Netherlands	74	3	2	3	3	3	3	3	2	4	2	1	1	1	1	1	1	1	1	0
EU14+2	Portugal	58	12	-3	-1	-2	4	7	6	6	7	5	-1	1	0	4	9	8	7	8	6
EU14+2	Spain	53	16	-1	0	-3	-1	-2	0	-1	-1	-2	-1	1	-1	1	1	1	0	-1	0
EU14+2	Sweden	74	4	1	0	0	1	0	0	-1	2	-1	-1	-1	-2	-2	-3	-3	-2	-2	-3
EU11	Bulgaria	37	28	2	1	2	5	3	1	3	1	3	1	1	1	2	1	0	0	1	0
EU11	Croatia	40	27	2	0	-1	-2	-2	-1	-2	-2	0	0	-2	-2	-2	-2	-1	-2	-2	0
EU11	Czech Republic	53	17	0	-1	-3	-4	-3	-3	-4	-4	-4	1	-2	-1	-3	-2	-2	-3	-4	-3
EU11	Estonia	62	9	1	2	2	3	3	2	3	3	5	3	2	4	4	4	3	3	2	3
EU11	Hungary	34	29	-2	-2	-2	-4	-3	-8	-9	-11	-17	-1	-1	-1	-2	-2	-4	-5	-5	-7
EU11	Latvia	51	22	0	0	0	2	4	8	11	10	7	-2	-2	-2	1	1	2	4	4	3
EU11	Lithuania	54	15	2	3	2	2	2	3	5	4	3	4	4	3	6	3	6	6	6	5
EU11	Poland	44	24	-1	-2	-4	-11	-12	-8	-8	-9	-7	0	0	-1	-9	-8	-6	-6	-6	-3
EU11	Romania	42	25	4	3	2	4	6	7	8	6	10	1	1	1	1	3	4	4	3	4
EU11	Slovakia	45	23	-4	-3	-3	-9	-7	-7	-6	-8	-4	0	0	1	-5	-4	-4	-3	-4	0
EU11	Slovenia	53	18	0	1	-1	-1	1	0	-1	-1	-1	-1	0	-1	1	2	-2	-1	-2	-1
CC	Albania	27	31	0	1	1	4	7	4	8	7	12	1	1	1	1	2	1	3	3	3
CC	Montenegro	26	32	-2	-5	-1	0	-4	-4	-7	-6	-3	-1	-1	-1	-1	-1	-2	-2	-2	-2
CC	North Macedonia	26	33	4	6	7	7	6	7	3	-1	0	0	0	1	0	-1	1	-1	-1	-1
CC	Serbia	28	30	-2	-6	-4	-6	-6	-1	0	-2	2	0	0	0	-1	0	1	1	1	1
CC	Turkey	10	35	-1	-1	1	-1	-1	-3	-4	-9	-4	0	0	0	0	0	0	0	0	0
PCC	BiH	18	34	0	0	-2	3	1	-2	-3	-4	-2	0	0	-1	0	0	-1	-1	-1	-1
Iceland	Iceland	69	6	-1	-2	2	-1	4	1	5	4	2	-1	-1	-1	-1	0	0	2	0	0
UK	UK	57	14	-2	-2	-4	-4	-5	-5	-6	-1	-2	-1	-2	-3	-3	-3	-3	-3	-2	-3

At the same time, there is considerable deterioration in the performance of number of countries. These are first of all Poland and Hungary, which have been steadily diverging in the Democracy category. This is the case, though on smaller scale, with fellow EU11 countries of Slovakia, Slovenia and Croatia.

The UK, which left the EU in the end of 2020, has also witnessed its scores and ranking in the Democracy category declining. Relatively few of EU14+2 experience deterioration with the worst case being Malta, Austria, Luxembourg as well as Sweden, which however remains at the top 4th place in the ranking nevertheless.

Trends in Governance between 2011 and 2021

The trends in the Governance category in the period 2011 – 2021 show that only a handful of countries improve upon their performance. These are mainly EU11 countries, among them Estonia, Latvia and Lithuania have improved their scores and ranking considerably. For example Estonia’s ranking increased by six positions and seven to nine points when the 2021 results are compared to those in 2011, 2012 and 2013. In the EU14+2 group, the positive example is Portugal, which increased its positions up to 6 position

Governance: Change in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
EU14+2	Austria	68	7	0	-1	0	-1	-2	-2	-1	-2	-2	0	0	0	-1	-1	-1	-2	-2	-1
EU14+2	Belgium	58	14	-1	-1	-3	-3	-4	-6	-5	-5	-5	-1	-2	-3	-3	-3	-3	-4	-3	-3
EU14+2	Cyprus	49	20	-2	-3	-1	-3	-4	-3	-6	-8	-7	-1	-1	-1	-2	-3	-1	-3	-6	-4
EU14+2	Denmark	72	1	0	1	0	-1	-2	-1	-3	-5	-5	2	3	2	1	1	2	0	0	0
EU14+2	Finland	72	2	-1	-1	1	0	-3	-3	-1	-2	-1	-1	-1	2	1	-1	0	1	1	1
EU14+2	France	60	11	1	1	3	2	2	-1	0	-1	0	1	2	2	1	1	1	1	1	2
EU14+2	Germany	67	8	0	-1	-2	0	-2	0	0	0	0	0	0	-2	1	0	0	-1	-1	-1
EU14+2	Greece	39	27	1	4	6	5	5	4	2	2	0	0	2	2	1	1	0	0	0	-1
EU14+2	Ireland	63	10	-3	-2	-2	-4	-4	-2	-3	0	-2	-1	-1	0	0	-1	-1	-2	0	-1
EU14+2	Italy	44	24	1	2	2	3	4	2	2	1	2	1	1	1	1	1	1	1	-1	-1
EU14+2	Luxembourg	71	4	-1	0	0	-1	0	1	3	0	0	-2	1	1	0	1	1	2	0	0
EU14+2	Malta	50	18	-5	-6	-4	-5	-5	-9	-10	-10	-11	-1	-3	0	-4	-5	-5	-5	-5	-6
EU14+2	Netherlands	71	5	0	-1	-1	-1	-1	-1	-1	1	0	0	-2	-3	0	-1	-1	-1	1	0
EU14+2	Portugal	60	12	-1	-1	1	2	6	6	7	5	4	-1	-1	0	1	3	2	6	5	3
EU14+2	Spain	54	17	2	1	-1	3	2	1	-1	1	1	1	1	0	2	2	1	-2	1	1
EU14+2	Sweden	72	3	0	0	-1	-2	-1	-4	-3	-3	-3	1	-1	-2	-2	0	-2	-1	-1	-1
EU11	Bulgaria	38	28	0	1	3	5	6	5	3	3	3	0	-1	0	1	1	1	0	0	0
EU11	Croatia	44	25	3	2	3	4	4	5	5	5	5	1	1	1	1	1	1	1	1	2
EU11	Czech Republic	56	16	-1	-1	1	1	2	3	1	-1	0	-2	-2	0	0	0	0	-2	-1	1
EU11	Estonia	59	13	2	3	3	4	4	6	7	9	9	2	3	1	2	1	2	6	6	6
EU11	Hungary	41	26	-2	-2	-3	-3	-2	-5	-8	-5	-6	-2	-2	-2	-2	-2	-4	-4	-4	-4
EU11	Latvia	46	23	1	-1	-1	1	0	2	2	6	6	0	-2	0	0	0	1	0	2	2
EU11	Lithuania	50	19	3	2	1	0	3	5	7	8	9	1	1	1	1	3	4	5	5	5
EU11	Poland	48	21	2	2	1	-1	-4	-3	-3	-2	0	1	2	1	0	-1	-1	-1	-1	-1
EU11	Romania	34	29	0	-1	-2	-1	-1	1	0	0	1	0	-1	-2	-2	-2	-1	0	0	0
EU11	Slovakia	48	22	1	1	0	2	0	0	-2	1	1	-1	0	-1	0	-1	-1	-1	-1	-1
EU11	Slovenia	57	15	1	1	1	4	5	4	2	2	0	1	2	0	2	3	2	1	1	-1
CC	Albania	22	33	-3	-2	-1	2	5	9	7	2	2	0	0	0	0	1	2	2	0	0
CC	Montenegro	28	30	-1	4	1	-1	-2	-1	-1	4	3	0	1	1	1	0	0	0	2	0
CC	North Macedonia	26	31	1	2	2	1	-3	0	2	1	1	1	1	1	1	0	1	1	-1	1
CC	Serbia	26	32	-1	-1	-2	-3	1	4	4	7	8	-1	-2	-2	-2	0	1	1	2	2
CC	Turkey	15	34	2	1	-1	-5	-7	-12	-11	-10	-10	0	0	0	0	-1	-3	-3	-3	-3
PCC	BiH	12	35	0	-1	-1	-2	-4	-7	-7	-4	-4	0	0	0	0	0	-1	-1	0	0
Iceland	Iceland	70	6	0	0	2	2	1	2	8	4	4	0	0	2	1	1	1	5	2	2
UK	UK	65	9	2	0	-1	-3	-1	0	1	0	0	1	1	0	-1	1	1	0	0	1

The Economy category explained: methodology notes

The Economy category measures the economic performance and potential of the countries in the Index. Each of the four categories in the Catch Up Index is ascribed equal importance in terms of calculating a country's overall score.

The Economy category is measured through a set of nine indicators, each of which captures a different aspect of economic performance. Some indicators gauge more than one aspect of economic performance. The metrics of the indicators are based on 14 sub-indicators, of varying weightings. The specific indicators and the weightings assigned to the sub-indicators reflect the unique model of the Catch Up Index.

The raw data used for the indicators (e.g. GDP per capita or other composite indicator scores or coefficients) are converted into a Catch-Up Index score on a scale of 0 to 100 (lowest to highest) to allow for a standardized score that can be compared across countries or categories and indicators. Each of the indicators has different weight assigned to it, according to its importance in the Catch Up Index model.

Economy Indicators	Sub-indicators	Weight
GDP per capita	GDP per capita in PPS, EU28=100	25% (0,25)
Government debt	General government debt (% of GDP)	13% (0,125)
Credit ratings	Sovereign credit ratings	13% (0,125)
Employment	Employment rate %	8% (0,083)
Energy Intensity	Energy intensity of the economy	8% (0,083)
Information Society	Information and Communication Technology	8% (0,083)
Research and Development	Patents granted by USPTO per capita	4% (0,042)
	High-tech exports as % of manufactured exports	4% (0,042)
Market development	Doing Business rank	4% (0,042)
	Economic Freedom score	4% (0,042)
Transport infrastructure	Motorways per area 1000 km ²	2% (0,021)
	Motorways per 100,000 inhabitants	2% (0,021)
	Other roads per 1000 km ²	2% (0,021)
	Other roads per 100,000 inhabitants	2% (0,021)

GDP per Capita (PPS with EU28=100 basis, Eurostat) remains the most important indicator of economic activity and is assigned 25% weight in the total Economy category.

Government Debt, measured as a % of GDP, is second in importance with 12.5%. The global economic calamities of recent years, and especially the ongoing debt crisis in Europe, have clearly demonstrated the critical importance of government debt as a factor for the economic vitality of a country.

The **Sovereign Credit Ratings** – or creditworthiness and level of investment risk - of a country are also attributed high importance in the Index, with a 12.5% weight. The Index uses a composite, rescaled score of the ratings of the three major agencies (Fitch, Moody's and Standard & Poor's).

Employment, with a weight of 8%, is a measure of an economy's potential to generate jobs and integrate as much as possible of the labor force in the labor market; this is measured through the share of working-age people in employment.

Energy Intensity, also ascribed an 8% weighting, is a measure of an economy's energy efficiency, calculating energy consumption divided by GDP as kilogram of oil equivalent per €1000. Energy intensity is also an important measure of an economy's competitiveness, because high energy inefficiency incurs more costs in production and services.

Research and Development, again with a weight of 8%, is a measure of the level of development and the "quality" of contemporary economies, including their competitiveness. The Index uses two sub-indicators. The first is the number of patents registered from a country with the United States Patent and Trademark Office (USPTO) annually on a per capita basis. The second indicator is the share of high-tech exports in a country's manufactured exports.

The **Market Development** indicator (also 8%) is the composite score of two sub-indicators – the World Bank's Ease of Doing Business ranking and the Heritage Foundation/Wall Street Journal Index of Economic Freedom. The latter defines the highest form of economic freedom as "an absolute right of property ownership, fully realized freedoms of movement for labor, capital, and goods, and an absolute absence of coercion or constraint of economic liberty beyond the extent necessary for citizens to protect and maintain liberty itself."

The **Transport Infrastructure Indicator** (8%) is a measure of a country's economic development and its potential for economic activity. The Index uses four sub-indicators, based on calculating coefficients of motorways and other roads on a per capita and country area basis.

The ingredients of democracy: Methodology notes

Catching up in Democracy is essential for the post-communist member states of the EU, particularly given that the Copenhagen accession criteria for EU membership primarily focused on democracy. But although EU membership has often been perceived as a watershed in the political transition of the EU11 group, or even the end of that transition, it now appears that the newer members may not have achieved parity with more developed European nations in their progress in building democratic institutions and societies.

The Catch-Up Index was designed to analyse several aspects of democracy that are of particular significance for the newer member states, and those that are aspiring to be.

The Democracy category has equal weighting with the other three categories in the Catch-Up Index (Economy, Quality of Life and Governance). This category is measured through a set of seven indicators, which use nine sub-indicators. The raw data drawn from opinion polls and other composite indicator scores are converted into the Catch-Up Index score on a scale of 0 to 100 (lowest to highest) to give a standardized score that allows for comparison across countries, categories and indicators. Each of the indicators has a different weight assigned to it according to its importance in the Index model.

Democracy Indicators	Sub-indicators	Weight
Democracy Indices	Freedom House score Freedom in the World	20% (0,195)
	Economist Intelligence Unit Democracy Index	20% (0,195)
Media Freedom	Freedom House Freedom of the Press score	10% (0,98)
	Reporters without Borders Press Freedom Index	10% (0,98)
Satisfaction with democracy	Satisfaction with democracy %	10% (0,98)
Trust in People	Trust in people	10% (0,98)
Voice and Accountability	Voice and Accountability - WGI	10% (0,98)
Human Rights	Political terror indicator by Global Peace Index	10% (0,98)
E-participation	E-participation index	2% (0,024)

The first indicator used to measure democracy is composed of two established **composite democracy indexes** – those of **Freedom House** and the **Economist Intelligence Unit (EIU)**. Each was attributed very high importance in the Democracy category with 20% weight (or 40% for both) because they assess the overall democracy in a country. The Freedom of the World index was used from Freedom House, rather than the specialized post-communist states’ Nations in Transit index, because it does not encompass the Western European states. The EIU Democracy Index was used because its scores are more nuanced than the Freedom of the World scores, which allows for better distinction between the quality of democracy in the European states.

Media Freedom was attributed special attention in the Catch-Up Index because the media is essential to the democratic process – especially in the post-communist states. The Catch-Up Index relies again on two established media freedom indexes – of Freedom House and of Reporters without Borders. Each is assigned 10% weight, giving the Media Freedom indicator a 20% overall weight.

Satisfaction with Democracy measures the attitude of citizens towards the democratic systems of governance

in their countries. This is one of the only two indicators (along with Trust in People) that relies on public opinion surveys (in this case the main source is Eurobarometer), and the scores are based on the proportion of citizens who approve their countries' democratic systems.

Trust in People measures the level of people's trust of those who are outside of their immediate family or close friends. Literature abounds on the importance of trust for democracy - above all Francis Fukuyama's "Trust", - or economy and the successful organization of society. In this case, the Catch-Up Index employs the measure of Trust in People as a proxy for civil society development, given the limitations of available data on similar indicators for all the countries in the Index.

Voice and Accountability, with a weight of 10%, is a composite indicator of the World Bank's World Governance Indicators (WGI). This includes perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. The WGI scores also use World Bank assessments and reports that are not publicly available.

Absence of **Political terror** is also deemed essential for a functioning democracy and carries a weight of 10%. The scores are based on Global Peace Index "Political terror" indicator, e.g. identifying state terror, or violations of physical and personal integrity rights carried out by the state.

E-participation (2%) measures the level of participation in decision-making, governance or similar activities that is enabled by Information and Communication Technologies. For example, the facilitation of citizens' political participation through internet or cellular technologies within the broader "e-democracy" concept. Facebook advocacy or the "twitter revolutions" offer specific examples of similar phenomena.

Quality of Life: Methodology notes

Quality of Life is the category most influenced by the “bottom-up” approach in constructing the index. The metrics of the category have been designed to establish how wealthy people are and to what degree social issues affect them, such as income inequality, risk of poverty and long-term unemployment. The indicators also aim to assess levels of access to higher education and the quality of education available, as well as whether people are living longer, healthier lives with access to good quality healthcare services.

These criteria are prerequisites for individuals to have good quality of life and for the “health” and successful development of society at large. It does not come as a surprise that the majority of the citizens of the newer member states (and the candidates) associate EU membership above all with improved quality of life, at least closer to that of their more established EU counterparts.

The raw data used for the indicators (e.g. life expectancy in years, and other composite indicator scores or coefficients) are converted into the standardized Catch-Up Index score, on a scale from 0 to 100 (lowest to highest), to allow for comparison across countries, categories and indicators. As was the case in the other categories, each of the indicators has a different weight assigned to it, reflecting its importance in the Catch-Up Index model.

Quality of Life Indicators	Sub-indicators	Weight
Welfare of consumers	Actual individual consumption with EU28=100	20% (0,2)
Social issues	Inequality - Gini coefficient	7% (0,067)
	Relative median at-risk-of-poverty gap (%)	7% (0,067)
	Long-term unemployment rate (%)	7% (0,067)
Education	Share (%) of early school leavers	5% (0,05)
	Share of population (%) with university degree	5%(0,05)
	PISA* score in reading literacy	3% (0,033)
	PISA score mathematical literacy	3% (0,033)
	PISA score in scientific literacy	3% (0,033)
Health	Healthy life expectancy at birth in years	5% (0,05)
	Life expectancy in years	5% (0,05)
	Infant mortality by age of 5	5% (0,05)
	EuroHealth Consumer Index	5% (0,05)
Human Development	Human Development Index (UN)	20% (0,2)
* Programme for International Student Assessment (OECD).		

Welfare of Consumers is attributed 20% weight in the category. It is based on data from Eurostat’s Actual Individual Consumption dataset, which is calculated on EU28=100 basis (rescaling each country’s data as a

fraction of the EU mean).

The Social Issues indicator, with a total weight of 21%, comprises three sub-indicators that measure different aspects of social problems in a society. The first assesses social inequality using the Gini coefficient – the greater the inequality, the lower a country's score in the Index. The second sub-indicator is based on Eurostat's relative median at-risk-of-poverty gap indicator. The third sub-indicator measures long-term unemployment in society, which signals the existence of more deep-seated social problems than the basic unemployment rate.

The **Education** indicator has been designed to reflect primarily the quality of education, rather than the quantity, given that the GDP share of education or the number of teachers or students do not always correspond to good outcomes. This is especially valid with regard to the new member states, where often inefficient and unreformed systems produce poor results, notwithstanding the funds or manpower channeled into them.

As is the case with many of the index indicators, their data can also be useful in assessing other aspects of the same category or, in this case, other categories. For example, as well as being a key indicator for Quality of life, education is relevant in assessing economic potential, democracy and good governance. The sub-indicator on early school-leavers assesses the share of young people giving up education and training prematurely; this may also help to gauge broader social problems. The second sub-indicator is the share of the population that hold university degrees. The next three education-related sub-indicators are based on the results of the Organisation for Economic Co-operation and Development's *Programme for International Student Assessment (PISA)*. The PISA scores go beyond the performance of high-school students and survey the broader state of a country's education sector, for example qualification levels of teachers and the quality of universities.

The **Health** indicator is likewise designed to focus more on the outcomes than on less indicative criteria such as share of GDP or the number of medical workers. One sub-indicator is life expectancy, measuring how many years a person is expected to live, while another is healthy life expectancy, specifically taking into account life without major illness. The indicator for infant mortality is also indicative of the broader state of health services or social services in a country (or even the state of society more broadly) because it assesses the likelihood of children surviving to the age to 5. The fourth sub-indicator is a composite of the EuroHealth Consumer Index by the Health Consumer Powerhouse, which measures the quality of healthcare systems in a country (including by outcome).

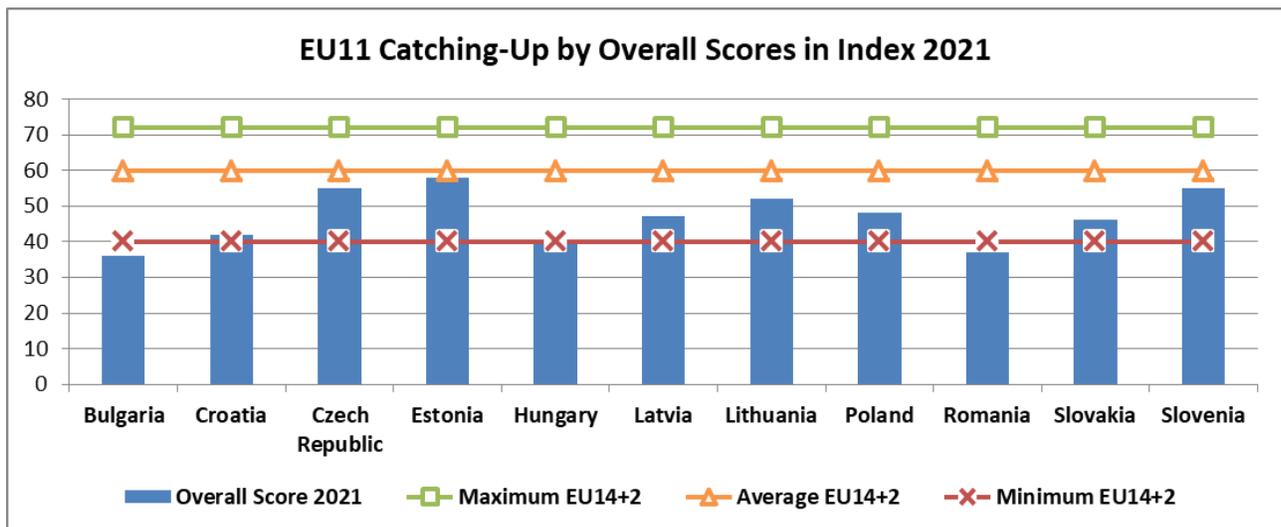
The United Nations' **Human Development Index** is a composite index measuring life expectancy, literacy, education and standards of living for countries worldwide. It has similar dimensions to the Catch-Up Index, but includes additional data and methodology, which complements the other indicators but does not overlap with them.

The Catching-up of the EU11 Countries in Index 2021

EU11 Catching-Up in Index 2021 by Overall Score

The catching-up by Overall Scores of Index 2021 compares the performance of the EU11 countries by their overall scores with three benchmarks – the maximum, average and minimum scores - of their counterparts of the EU14+2 group. The EU11 is comprised of the countries in Central and Eastern Europe, which joined the EU in 2004, 2007 and 2013. The EU14+2 are the countries which established and joined the EU before 2004 as well as Cyprus and Malta, which became EU member states in 2004.

The results of the index 2021 show that three EU11 countries - Estonia, the Czech Republic and Slovenia – are close to but do not outperform the average benchmark of 60 points with respectively 58, 55 and 55 points. Estonia is 13th, the Czech Republic 14th and Slovenia 15th in the overall ranking out of 35 countries. None of the EU11 countries is near the best performers of the EU14+2 group with the maximum score of 72 points. Eight of the EU11 countries outperform the minimum benchmark of the EU14+2 group of 40 points and the rest three of them – Hungary, Romania and Bulgaria – are on or below this minimum benchmark.



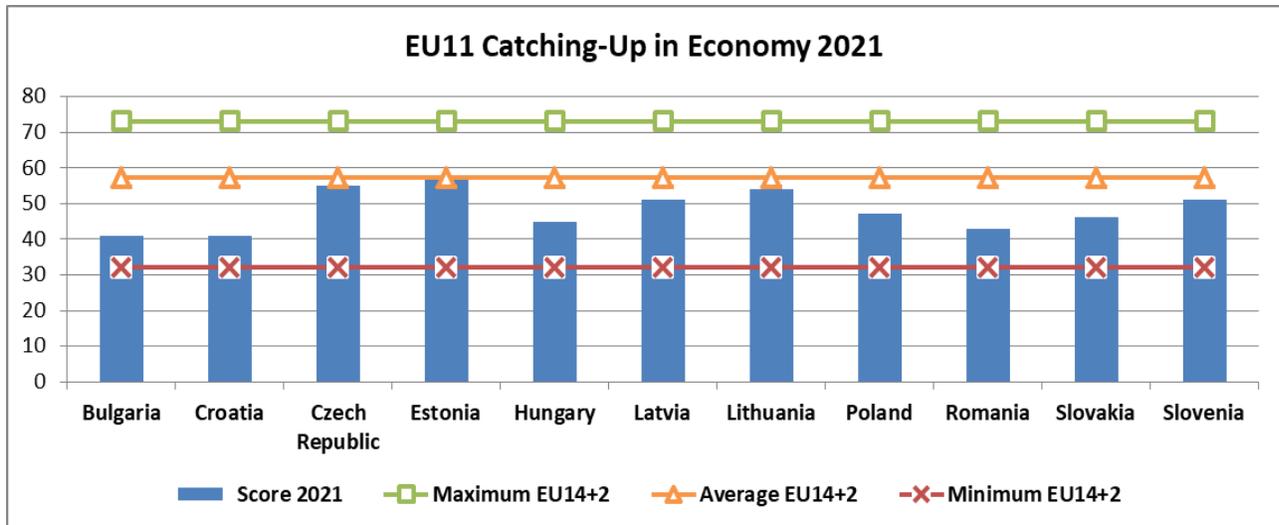
The trends in the catching-up process show that between 2011 and 2021 three countries –Estonia, Lithuania and Latvia – have improved continuously both their scores and rankings. Estonia jumped 5 positions up the ranking, Lithuania – 7 positions and Latvia – 5 too in 2021 compared to the starting position in 2011. There seems to be a regional pattern in the improvement as these are all Baltic counties. The table also shows that after 2012-2014 the improvement by overall score slows down or disappears.

Hungary and Slovakia register the biggest continuous downgrade in performance in the period 2011 - 2021. Hungary falls by 4 positions and Slovakia by 3 positions in 2021 compared to 2011 with deterioration in scores too. Among the other countries, Poland’s performance worsens too with 3 positions lower in 2021 compared to 2015 and 2016. With the Czech Republic results oscillating in this period, the V4 (Visegrad 4) group performance in the index is not very good.

Group	Country	Overall Score 2021	Overall Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank change vs 2019	Rank change vs 2018	Rank change vs 2017	Rank change vs 2016	Rank change vs 2015	Rank change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
Maximum EU14+2		72	1																		
Average EU14+2		60																			
EU11	Estonia	58	13	1	1	2	2	3	3	5	6	6	0	0	0	0	0	1	3	5	5
EU11	Czech Republic	55	14	0	0	0	0	0	1	0	0	2	0	0	0	1	0	1	-1	1	3
EU11	Slovenia	55	15	0	1	0	1	3	2	1	0	-1	0	1	0	1	1	1	-1	-2	-2
EU11	Lithuania	52	17	2	3	2	2	3	4	5	8	7	3	3	2	3	2	5	5	7	7
EU11	Poland	48	21	1	2	0	-2	-3	-2	-1	-1	1	2	2	0	-2	-3	-3	-1	-1	1
EU11	Latvia	47	22	0	-1	-1	0	0	3	5	7	6	0	-1	1	2	2	2	3	5	5
EU11	Slovakia	46	24	-2	-1	-2	-3	-2	-2	-3	-2	-1	-3	-2	-2	-2	-2	-3	-5	-3	-3
EU11	Croatia	42	25	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
EU11	Hungary	40	27	-1	-1	-2	-2	-2	-4	-5	-6	-7	-2	-2	-2	-2	-2	-2	-3	-4	-4
Minimum EU14+2		40	26																		
EU11	Romania	37	28	1	0	0	1	1	3	3	2	5	0	-1	-1	0	0	2	1	0	1
EU11	Bulgaria	36	29	0	0	1	2	2	2	2	1	2	0	0	0	0	0	0	-1	0	-1

EU11 Catching-Up in the Economy in Index 2021

In the Economy category, Estonia (11th out of 35 countries) performs on par with the average benchmark of 57 points of the EU14+2 countries, followed by the Czech Republic (13th position) and Lithuania (16th position) with 55 and 54 points respectively. None of the EU11 countries is close to the best result of the EU14+2 group of 73 points. All EU11 countries outperform the minimum benchmark in the Economy category.



The trends in the Economy catching-up show that most of the EU11 countries improved their performance compared to the starting year 2011, including Estonia, the Czech Republic, Lithuania, Latvia, , Poland, Hungary and Bulgaria. Three countries register deterioration in both rankings and scores –Slovenia, Slovakia and Croatia.

However, the table also shows that after 2012-2014 the improvement in the Economy category slows down or disappears.

Economy: Changes in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
Maximum EU14+2		73	1																		
Average EU14+2		57																			
EU11	Estonia	57	11	0	0	0	0	0	2	3	5	5	1	0	0	1	2	2	2	5	5
EU11	Czech Republic	55	13	0	1	1	1	3	4	5	5	6	1	2	1	2	4	1	3	5	5
EU11	Lithuania	54	16	1	2	2	2	1	3	3	7	8	0	0	0	0	-2	0	-1	3	5
EU11	Latvia	51	17	0	1	0	0	-1	2	4	7	7	0	0	0	0	-1	0	2	5	6
EU11	Slovenia	51	18	0	1	2	3	1	2	-1	-3	-4	0	0	0	1	0	-1	-4	-5	-4
EU11	Poland	47	21	1	1	1	0	1	1	2	3	5	1	1	0	0	0	0	1	3	3
EU11	Slovakia	46	22	-1	-1	-2	-3	-2	-1	-1	-1	0	-1	-2	-3	-4	-2	-2	-2	-2	-2
EU11	Hungary	45	23	1	1	1	1	1	1	1	2	4	0	0	-1	-1	0	-1	1	3	3
EU11	Romania	43	25	1	1	1	0	1	3	3	4	5	0	-1	0	0	1	2	2	2	4
EU11	Bulgaria	41	26	1	1	1	1	2	2	2	2	3	2	2	1	1	2	3	2	2	2
EU11	Croatia	41	27	1	1	2	2	1	2	-2	-3	-1	0	0	1	1	0	1	-2	-2	-2
Minimum EU14+2		32	32																		

Indicators in the Economy Category in Index 2021

The following tables present the ranking and scores of the EU11 countries by the basic indicators, which are used to measure the Economy category.

GDP per Capita		
Country	Score 2021	Rank 2021
Maximum EU14+2	100	1
Average EU14+2	61	
Czech Republic	50	15
Slovenia	48	16
Lithuania	47	18
Estonia	47	20
Poland	42	22
Hungary	42	23
Latvia	41	24
Romania	41	25
Slovakia	40	26
Croatia	37	28
Minimum EU14+2	37	27
Bulgaria	33	30

In GDP per capita indicator, no new member state of the EU10+1 group is close to the EU15+2 average result of 61 score points. The closest ones are the Czech Republic with 15th position out of 35 and 50 points in the index on the scale 0 to 100 (lowest to highest), followed by Slovenia (16th position and 48 points and Lithuania and Estonia with nearly identical scores (18th and 20th place with 47 points). Bulgaria (30th position and 33 points), Croatia (28th position and 37 points) and Slovakia (28th position and 40 points) are last among the EU11.

Employment		
Country	Score 2021	Rank 2021
Maximum EU14+2	76	2
Czech Republic	68	7
Estonia	66	9
Latvia	61	12
Lithuania	61	13
Slovenia	59	14
Hungary	57	16
Average EU14+2	55	
Poland	54	18
Bulgaria	52	20
Slovakia	51	21
Romania	47	24
Croatia	38	26
Minimum EU14+2	25	31

The Employment indicator ranking shows that six of the EU11 countries are above the EU14+2 average with the Czech Republic and Estonia closest to the maximum score of the old member states with identical scores of 68 and 66 points and 7th and 9th position respectively. Romania (24th place and 47 points) and Croatia (38st place and 26 points) are last in the group.

The research and development indicator uses data of two sub-indicators - patents granted by United States Patent and Trademark Office (USPTO) per capita and high-tech exports as a percentage of manufactured exports (World Bank data). The Czech Republic is close to the desired average of the EU14+2 with 13th place and 54 point, followed by Hungary (15th place and 52 points) and Latvia (16th place and 50 points). Estonia somewhat surprisingly came last in 2021, after being second among the EU11 in the previous index. The drop is due to over threefold decrease in the volume high-technology exports (% of manufactured exports), according to UN statistics, e.g. from nearly 17.9 % in 2017 to 5.8% in 2019 but further explanation is not provided.

Research and Development		
Country	Score 2021	Rank 2021
Maximum EU14+2	77	2
Average EU14+2	59	
Czech Republic	54	13
Hungary	49	16
Latvia	48	17
Lithuania	42	20
Bulgaria	40	21
Romania	40	22
Poland	40	23
Slovenia	40	24
Slovakia	40	25
Croatia	37	27
Minimum EU14+2	37	28
Estonia	36	29

Energy Efficiency		
Country	Score 2021	Rank 2021
Maximum EU14+2	76	1
Average EU14+2	63	
Slovenia	56	17
Croatia	54	19
Romania	51	20
Slovakia	50	21
Lithuania	48	22
Hungary	48	23
Latvia	48	24
Poland	48	25
Czech Republic	46	26
Estonia	42	27
Minimum EU14+2	33	29
Bulgaria	13	32

Energy efficiency reflects the energy intensity of the economy. The new member states have generally poor performance in this indicator. Slovenia is the closest to the desired average score with 18th place and 54 points, followed by Croatia (20th place and 52 points) and Latvia (21st place and 49 points).

The transport infrastructure indicator uses data from four sub-indicators – length of roads and highways both per population and per the country size. Three new member states perform above the average benchmark with Slovenia very close to the EU14+2 maximum too with 65 points and 4nd place among 35 countries. It is followed by Hungary (6th place and 59 points) and Estonia (8th place and 57 points). Romania (33rd place with 34 points) and Bulgaria (30th with 37 points) are last among the new member states.

Transport Infrastructure		
Country	Score 2021	Rank 2021
Maximum EU14+2	72	1
Slovenia	65	4
Hungary	59	6
Estonia	57	8
Average EU14+2	56	
Lithuania	55	10
Croatia	55	13
Czech Republic	49	18
Latvia	45	23
Minimum EU14+2	44	25
Slovakia	41	28
Poland	41	29
Bulgaria	37	30
Romania	34	33

Government Debt		
Country	Score 2021	Rank 2021
Estonia	78	1
Maximum EU14+2	74	2
Bulgaria	74	3
Czech Republic	68	5
Latvia	65	9
Lithuania	63	10
Romania	63	11
Poland	58	15
Slovakia	57	17
Hungary	47	23
Slovenia	47	24
Croatia	43	27
Average EU14+2	42	
Minimum EU14+2	0	35

The new member states excel in the government debt indicator with very low levels of debt. Estonia is 1st among 35 countries and 80 points, above the old member states maximum score. Bulgaria is 3rd among 35 countries with 72 points and the Czech Republic is 6th with 67 points. Even the last among the new member states in this indicator are performing above the EU15+2 average – Croatia (27th place and 43 points), Slovenia (24th place and 46 points) and Hungary (23rd and 46 points).

The Market Development indicator consists of two sub-indicators – of Doing Business and Index of Economic Freedom. Four new member states score above the average benchmark with Lithuania (4th place with 75 points), Estonia (5th place and 74 points) outperforming the rest by a large margin. The last in the new member states ranking are Croatia (31th place and 31 points) and Hungary (29th place and 37 points).

Market Development		
Country	Score 2021	Rank 2021
Maximum EU14+2	80	1
Lithuania	75	4
Estonia	74	5
Latvia	62	9
Czech Republic	55	14
Average EU14+2	52	
Poland	48	17
Slovenia	47	18
Romania	40	25
Bulgaria	39	27
Slovakia	39	28
Hungary	37	29
Croatia	31	31
Minimum EU14+2	13	34

Information&Communication Technology		
Country	Score 2021	Rank 2021
Maximum EU14+2	78	2
Estonia	66	9
Average EU14+2	62	
Slovenia	49	17
Latvia	47	18
Croatia	46	19
Lithuania	45	21
Czech Republic	45	22
Slovakia	43	24
Minimum EU14+2	42	25
Hungary	40	26
Poland	39	27
Bulgaria	38	28
Romania	30	30

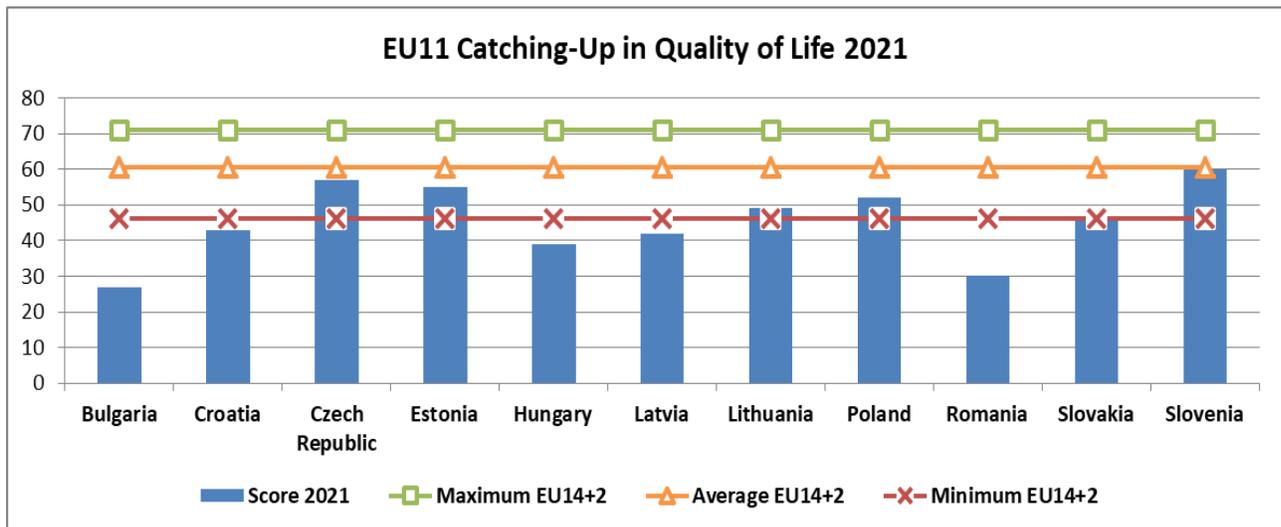
The Information and Communication Technology index of the United Nations measures the level of development of the information society in a country. Estonia is above the average benchmark and is closest among its peers to the old member states minimum – with 9th place and 66 points. It is followed by a large margin by Slovenia (17th place with 49 points) and Latvia (18th place and 47 points). Romania (30th with 30 points), Bulgaria (28th with 38 points) and Poland (27th with 39 points) are last among the new member states.

The Credit Rating is the average score of the sovereign rating risks of the three big credit agencies - Moody's, S&P and Fitch. The Czech Republic and Estonia with 61 points each and 12th and 13th place respectively outperform the average benchmark of the old member states. The worst performing countries in this indicator among the new member states are Croatia (28th place and 32 points), Romania (27th place and 36 points) and Hungary (24th place and 39 points).

Credit Rating		
Country	Score 2021	Rank 2021
Maximum EU14+2	79	1
Czech Republic	61	12
Estonia	61	13
Average EU14+2	61	
Lithuania	55	14
Slovakia	55	15
Slovenia	55	16
Latvia	52	19
Poland	51	20
Bulgaria	43	22
Hungary	39	24
Romania	36	27
Croatia	32	28
Minimum EU14+2	25	31

EU11 Catching-Up in Quality of Life in Index 2021

In the Quality of Life category, Slovenia (13th out of 35 countries) reaches the average benchmark of 60 points, followed by the Czech Republic (14th) and Estonia (16th) with 57 and 55 points respectively. No country of the EU11 group is close to the best result of 71 points of the EU14+1 group. Romania and Bulgaria are farthest from the desired benchmark with 30 and 27 points respectively. In fact, 5 out of the 11 CEE countries score below the minimum score of their counterparts in the EU14+1 group, leaving Quality of Life the category of poorest performance in the index.



The trends in the period 2011-2021 show that the Czech Republic, Estonia, Poland, Lithuania and to a lesser extent Latvia and Romania register improvements in the Quality of Life category, but the process slowed down or stopped after 2014. Hungary registered the most serious downgrade in this category losing respectively 5 and 6 positions compared to 2011 and 2012. Slovakia and Bulgaria's performance deteriorated too.

Quality of Life: Change in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
Maximum EU14+2		71	1																		
Average EU14+2		60																			
EU11	Slovenia	60	13	1	2	0	1	4	2	3	2	3	0	0	0	0	1	0	1	1	2
EU11	Czech Republic	57	14	0	1	2	1	1	1	-1	2	4	0	0	0	0	-1	0	-1	2	4
EU11	Estonia	55	16	1	2	2	2	3	5	7	7	6	0	2	2	1	2	3	5	4	4
EU11	Poland	52	18	1	4	2	3	4	2	4	5	7	1	3	3	3	2	2	4	6	5
EU11	Lithuania	49	22	2	3	3	3	3	3	4	11	8	1	1	2	2	1	2	2	4	4
EU11	Slovakia	46	24	-2	-1	0	0	2	0	-3	-1	1	-2	-2	-1	-1	0	-1	-5	-2	0
Minimum EU14+2		46	23																		
EU11	Croatia	43	25	1	1	-1	0	-1	0	2	2	-1	0	2	1	1	1	1	1	0	0
EU11	Latvia	42	26	0	-2	0	1	0	2	4	6	6	0	-1	1	1	1	1	1	1	1
EU11	Hungary	39	27	-2	-4	-5	-5	-5	-5	-5	-9	-8	0	-1	-2	-2	-2	-2	-2	-6	-5
EU11	Romania	30	29	0	-3	1	2	0	0	2	-2	3	0	0	0	1	0	0	2	1	2
EU11	Bulgaria	27	32	-2	-3	-1	-2	-3	-3	-2	-3	-3	-2	-2	-2	-3	-2	-2	-2	-1	-2

Indicators in the Quality of Life Category in Index 2021

Consumption per capita		
Country	Score 2021	Rank 2021
Maximum EU14+2	85	1
Average EU14+2	64	
Lithuania	57	14
Czech Republic	49	17
Poland	46	20
Slovenia	44	21
Estonia	43	22
Romania	43	23
Minimum EU14+2	42	24
Slovakia	38	25
Latvia	37	26
Hungary	35	28
Croatia	33	29
Bulgaria	29	30

The consumption indicator is used for comparing the relative welfare of consumers between countries. The countries of the EU11 are still far from the desired average benchmark and even farther from the best performers in the old member states group. The difference between the best performer Lithuania with 57 points (14th place out of 35) and the maximum score of 85 points (1st place) is evident. The Czech Republic (17th with 49 points) and Poland with 46 points and 20th place also performs well. The last in the ranking of new member states are Bulgaria (30th place with 29 points), Croatia (29th place with 33 points) and Hungary (28th place with 35 points).

Social Issues is a composite indicator that includes three sub-indicators on inequality, risk of poverty and long-term unemployment. One of the EU11 member states outperforms all the rest of the 35 countries in the index. The Czech Republic is 1st in the ranking with 74 points, Slovenia is 4nd with 70 points and Poland with 11th place and 62 points perform above the average benchmark. The last in the ranking of the EU11 are Latvia and Romania with 23rd and 25th place with nearly identical scores of 40 points and Bulgaria is last with 30th place with 33 points.

Social Issues		
Country	Score 2021	Rank 2021
Czech Republic	74	1
Maximum EU14+2	70	3
Slovenia	70	4
Slovakia	65	8
Poland	62	11
Average EU14+2	56	
Estonia	56	16
Croatia	51	18
Lithuania	45	21
Hungary	44	22
Latvia	40	23
Romania	40	25
Minimum EU14+2	33	29
Bulgaria	33	30

Gini index (social issues sub-indicator)		
Country	Score 2021	Rank 2021
Slovakia	92	1
Slovenia	81	2
Czech Republic	78	3
Maximum EU14+2	72	5
Poland	64	9
Hungary	59	13
Croatia	59	14
Average EU14+2	54	
Estonia	49	18
Romania	35	28
Minimum EU14+2	32	31
Lithuania	29	32
Latvia	28	33
Bulgaria	7	34

The data for one of the sub-indicators – inequality - measured by the Gini index, shows that EU11 societies either very equal or among the most unequal. Three of the new EU member states are at the top of the overall ranking – Slovakia, Slovenia and the Czech Republic. Slovakia is the best performing country with the lowest Gini coefficient and lowest inequality among the 35 countries in the index. Slovenia is 2nd with 81 points and the Czech Republic is 3rd with 78 points. They are above the maximum score of the EU14+2 countries with 5th place and 72 points. Three other countries – Poland, Hungary and Croatia - are performing above the average benchmark.

But they are also countries lagging behind – Bulgaria is just 34th out of 35 countries with 7 points, Latvia is 33th with 28 points and Lithuania is 32nd with 29 points.

The Education indicator is a composite of several sub-indicators – share of people with university education and the PISA results. Estonia is the best performing country among all 35 included in the index with 1st place and 73 points. Poland (4th, 66 points), Slovenia (5th, 66 points), Lithuania (12th, 59 points), Latvia (15th, 57 points) perform well too as they score above the average benchmark with respectively. Romania with 34th place and 22 points and Bulgaria with 31st place and 28 points are last among the new member states.

Education		
Country	Score 2021	Rank 2021
Estonia	73	1
Maximum EU14+2	71	2
Poland	66	4
Slovenia	66	5
Lithuania	59	12
Latvia	57	15
Average EU14+2	56	
Czech Republic	55	17
Croatia	51	21
Slovakia	47	22
Hungary	47	23
Minimum EU14+2	38	27
Bulgaria	28	31
Romania	22	34

PISA (education sub-indicator)		
Country	Score 2021	Rank 2021
Estonia	80	1
Maximum EU15+2	75	2
Poland	73	3
Slovenia	67	5
Czech Republic	62	12
Average EU15+2	58	
Latvia	56	17
Lithuania	53	19
Hungary	53	20
Croatia	48	23
Slovakia	47	24
Minimum EU15+2	28	29
Romania	23	30
Bulgaria	22	31

In regard to the PISA scores, which is a sub-indicator for education and which remains unchanged since the last edition of the index, Estonia is 1st among all 35 countries with a score of 80 points. Poland, Slovenia and the Czech Republic are also performing well with Poland on 3rd place of 35 in total and 73 points, Slovenia (5th with 67 points) and the Czech Republic (12th with 62 points). Bulgaria (31st with 22 points) and Romania (30th with 23 points) are last among the new member states.

The Health indicator uses several sub-indicators: life expectancy, healthy life expectancy, quality of the healthcare system and the infant mortality. No country is above the average benchmark, but Slovenia (16th with 59 points), Estonia (18th with 54 points) and the Czech Republic (20th with 50 points) perform better than their peers. Bulgaria (34th place with 20 points) and Romania (35th with 19 points) are last in the group.

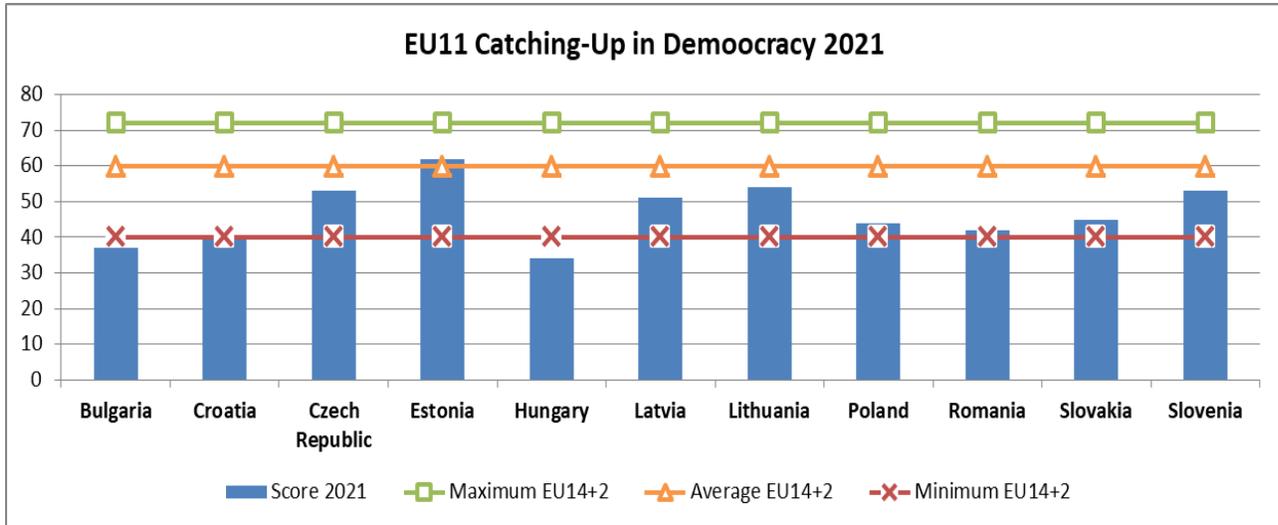
Health		
Country	Score 2021	Rank 2021
Maximum EU14+2	70	2
Average EU14+2	63	
Slovenia	59	16
Estonia	54	18
Czech Republic	50	20
Minimum EU14+2	49	21
Croatia	40	23
Slovakia	40	24
Poland	36	25
Lithuania	33	28
Hungary	32	29
Latvia	32	30
Bulgaria	20	34
Romania	19	35

Human Development Index		
Country	Score 2021	Rank 2021
Maximum EU14+2	78	1
Slovenia	63	11
Average EU14+2	63	
Czech Republic	57	15
Estonia	54	18
Lithuania	50	21
Poland	49	22
Latvia	43	23
Minimum EU14+2	43	24
Slovakia	41	25
Hungary	39	26
Croatia	38	27
Romania	29	29
Bulgaria	24	31

The Human Development Index of the United Nations is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. No new EU member state is above the average benchmark of the EU14+2, but Slovenia is very close with 11th place out of 35 and 63 score points. The Czech Republic (15th with 57 points) and Estonia (18th with 54 points) follow closely. The last in line are Romania and Bulgaria with respectively score of 29th and 31st place and 29 and 24 points.

EU11 Catching-up in the Democracy Category in Index 2021

In the Democracy category, Estonia with 62 points outperforms the average benchmark of 60 points, followed by Lithuania and the Czech Republic, which are the top 3 countries in the EU11 group. Estonia, with its 9th position out of 35 countries, is the best performing EU11 country in any category. Croatia, Bulgaria and Hungary are at the bottom of the EU11 ranking with scores equal (Croatia) or lower than the minimum score of 40 points of the EU14+2 group.



The long-term trends in Democracy in the period 2011-2021 present a mixed picture. A number of countries register significant deterioration in – most of all Hungary, followed by Poland, the Czech Republic and to a lesser extent Slovenia, Slovakia and Croatia. Estonia, Lithuania, Latvia and Romania register improvement in their scores and ranking.

Democracy: Change in Ranks and Scores 2011-2021																					
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2019	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
Maximum EU14+2		72	1																		
EU11	Estonia	62	9	1	2	2	3	3	2	3	3	5	3	2	4	4	4	3	3	2	3
Average EU14+2		60																			
EU11	Lithuania	54	15	2	3	2	2	2	3	5	4	3	4	4	3	6	3	6	6	6	5
EU11	Czech Republic	53	17	0	-1	-3	-4	-3	-3	-4	-4	-4	1	-2	-1	-3	-2	-2	-3	-4	-3
EU11	Slovenia	53	18	0	1	-1	-1	1	0	-1	-1	-1	-1	0	-1	1	2	-2	-1	-2	-1
EU11	Latvia	51	22	0	0	0	2	4	8	11	10	7	-2	-2	-2	1	1	2	4	4	3
EU11	Slovakia	45	23	-4	-3	-3	-9	-7	-7	-6	-8	-4	0	0	1	-5	-4	-4	-3	-4	0
EU11	Poland	44	24	-1	-2	-4	-11	-12	-8	-8	-9	-7	0	0	-1	-9	-8	-6	-6	-6	-3
EU11	Romania	42	25	4	3	2	4	6	7	8	6	10	1	1	1	1	3	4	4	3	4
EU11	Croatia	40	27	2	0	-1	-2	-2	-1	-2	-2	0	0	-2	-2	-2	-2	-1	-2	-2	0
Minimum EU14+2		40	26																		
EU11	Bulgaria	37	28	2	1	2	5	3	1	3	1	3	1	1	1	2	1	0	0	1	0
EU11	Hungary	34	29	-2	-2	-2	-4	-3	-8	-9	-11	-17	-1	-1	-1	-2	-2	-4	-5	-5	-7

Indicators in the Democracy Category in Index 2021

Satisfaction with Democracy		
Country	Score 2021	Rank 2021
Maximum EU14+2	89	1
Average EU14+2	62	
Estonia	60	10
Hungary	51	13
Lithuania	49	17
Czech Republic	44	20
Latvia	44	21
Poland	44	22
Bulgaria	37	24
Slovakia	37	25
Romania	36	27
Croatia	34	29
Minimum EU14+2	31	30
Slovenia	22	32

The Satisfaction with Democracy indicator is based on the results of public opinion surveys (Eurobarometer). No new EU member state scores above the average benchmark, but Estonia with 60 points and respectively 13th place is closest. The most disappointed with the state of democracy in their countries are Croatia (34nd place and 29 points) and Slovenia with (32nd place and 22 points).

Trust in People is a proxy indicator for civil society development. It measures to what extent people trust others that are not their immediate friends and relatives. This is a fundamental measure for a democratic society. No new EU member state is above the maximum benchmark, but Estonia is above the average benchmark with 8th place and 62 points, followed by Slovenia and Lithuania with identical scores of 57 points and 11th and 12th place respectively. The last among their peers are Poland (26th with 38 points), Slovakia (28th with 36 points) and Bulgaria with identical result (30th with 31 points).

Trust in People		
Country	Score 2021	Rank 2021
Maximum EU14+2	99	1
Estonia	62	8
Average EU14+2	60	
Slovenia	57	11
Lithuania	57	12
Romania	53	15
Latvia	52	17
Czech Republic	42	21
Hungary	40	22
Croatia	38	24
Poland	38	26
Slovakia	36	28
Bulgaria	31	30
Minimum EU14+2	30	32

Democracy Indices		
Country	Score 2021	Rank 2021
Maximum EU14+2	74	2
Average EU14+2	63	
Estonia	59	12
Slovenia	57	16
Czech Republic	55	18
Latvia	51	21
Minimum EU14+2	50	22
Lithuania	50	23
Slovakia	49	24
Poland	43	25
Croatia	42	26
Romania	40	27
Bulgaria	39	28
Hungary	32	29

The Democracy Index is a composite score of Freedom House and Economist Intelligence Unit reports. According to these results, all new member states are below the average benchmark and far from the best performer among the old member states. Estonia is the closest with 12th place and 59 points. Slovenia (16th with 57 points) and the Czech Republic (18th with 55 points) are next in the ranking.

Hungary is last among its peers with 29th place and 32 points, Bulgaria is 28th with 39 points and Romania is 27th with 40 points.

Media freedom is measured through the Freedom House Freedom of the Press score and the Reporters without Borders Press Freedom Index. Estonia scores (6th, 66 points) above the average benchmark and is even close to the maximum of the EU14+2. The next in the ranking are Lithuania (13th place with 58 points) and Latvia (15th place with 55 points). The last among their peers are Bulgaria – 33rd place out of 35 countries with 26 points and Hungary with 28th place and 31 points.

Media Freedom		
Country	Score 2021	Rank 2021
Maximum EU14+2	77	2
Estonia	66	9
Average EU14+2	62	
Lithuania	58	13
Latvia	55	15
Czech Republic	54	16
Slovenia	53	18
Slovakia	51	21
Romania	42	24
Poland	40	25
Croatia	37	26
Minimum EU14+2	34	27
Hungary	31	28
Bulgaria	26	33

Civil and Political Rights		
Country	Score 2021	Rank 2021
Maximum EU14+2	68	1
Estonia	63	11
Average EU14+2	60	
Lithuania	59	13
Slovenia	59	14
Czech Republic	57	16
Latvia	56	17
Poland	46	22
Croatia	43	24
Minimum EU14+2	42	27
Romania	42	26
Bulgaria	41	27
Slovakia	41	28
Hungary	30	32

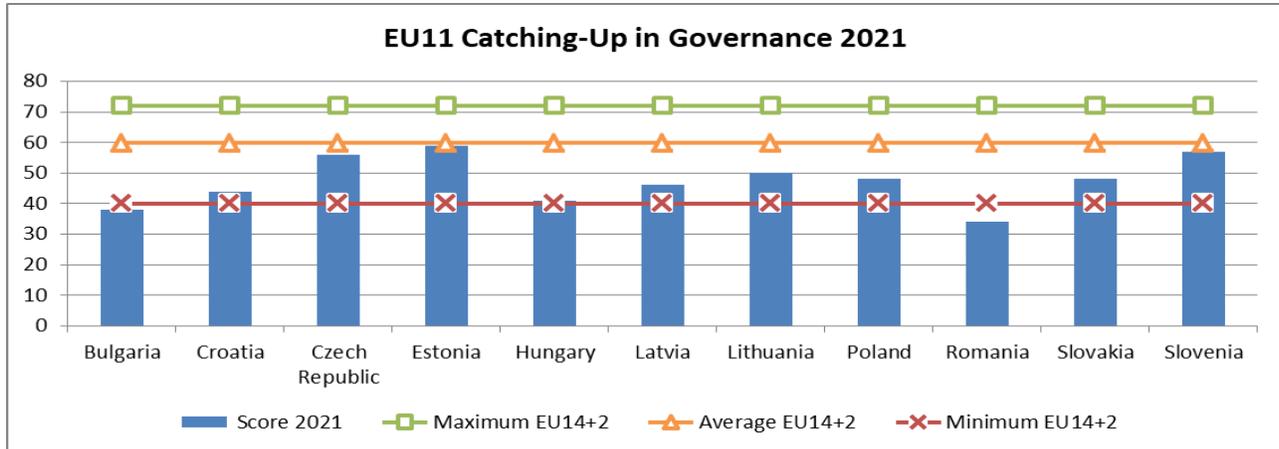
This indicator is based on two sub-indicators - Voice and Accountability of the World Bank and the Political Terror indicator of the Global Peace Index. Estonia is performing above the average benchmark with 11th place and 63 points. Next are Lithuania (13th with 59 points) and Slovenia (14th with 59 points), with identical scores. The last among their peers are Bulgaria (27th place with 41 points) and Slovakia (28th place with 41 points) with identical scores and Hungary (32nd with 30 points).

The E-participation indicator measures the "ICT-supported participation in processes involved in government and governance", referring to citizen participation in the process. Estonia is even above the EU14+2 maximum with several others following suit – Poland, Bulgaria, Croatia and Slovenia.

E-participation		
Country	Score 2021	Rank 2021
Estonia	80	1
Maximum EU14+2	76	2
Poland	74	6
Bulgaria	62	10
Croatia	62	11
Slovenia	56	14
Average EU14+2	55	
Romania	48	23
Lithuania	36	27
Czech Republic	34	28
Slovakia	30	30
Hungary	26	31
Minimum EU14+2	22	32
Latvia	10	34

EU11 Catching-Up in the Governance Category in Index 2021

Estonia (13th out of 35 countries), Slovenia (15th out of 35) and the Czech Republic (16th out of 35) are the top ranking EU11 countries in the Governance category. The scores of these countries are equal (Estonia) or very close to the average benchmark of 60 points of the EU14+2 group. No EU11 country is close enough to the top performers in the EU14+2 group with 72 points. Bulgaria and Romania are below the EU14+2 minimum score of 40 points with Hungary barely above this threshold.



The long-term trends in the period 2011-2021 show that Estonia and Lithuania register the most significant improvements. Latvia and Croatia have modest progress too. Hungary show the most significant deterioration in the Governance category with 4 positions down the ranking compared to the period 2011-2014. The Czech Republic, Poland, Slovakia and to a lesser extent Romania also have problematic development over the years.

Governance: Change in Ranks and Scores 2011-2021																				
Group	Country	Score 2021	Rank 2021	Score change vs 2019	Score change vs 2018	Score change vs 2017	Score change vs 2016	Score change vs 2015	Score change vs 2014	Score change vs 2013	Score change vs 2012	Score change vs 2011	Rank Change vs 2018	Rank Change vs 2017	Rank Change vs 2016	Rank Change vs 2015	Rank Change vs 2014	Rank change vs 2013	Rank change vs 2012	Rank change vs 2011
	Maximum EU14+2	72	1																	
	Average EU14+2	60																		
EU11	Estonia	59	13	2	3	3	4	4	6	7	9	9	2	3	1	2	1	2	6	6
EU11	Slovenia	57	15	1	1	1	4	5	4	2	2	0	1	2	0	2	3	2	1	-1
EU11	Czech Republic	56	16	-1	-1	1	1	2	3	1	-1	0	-2	-2	0	0	0	0	-2	1
EU11	Lithuania	50	19	3	2	1	0	3	5	7	8	9	1	1	1	1	3	4	5	5
EU11	Poland	48	21	2	2	1	-1	-4	-3	-3	-2	0	1	2	1	0	-1	-1	-1	-1
EU11	Slovakia	48	22	1	1	0	2	0	0	-2	1	1	-1	0	-1	0	-1	-1	-1	-1
EU11	Latvia	46	23	1	-1	-1	1	0	2	2	6	6	0	-2	0	0	0	1	0	2
EU11	Croatia	44	25	3	2	3	4	4	5	5	5	5	1	1	1	1	1	1	1	2
EU11	Hungary	41	26	-2	-2	-3	-3	-2	-5	-8	-5	-6	-2	-2	-2	-2	-2	-4	-4	-4
	Minimum EU14+2	40	26																	
EU11	Bulgaria	38	28	0	1	3	5	6	5	3	3	3	0	-1	0	1	1	1	0	0
EU11	Romania	34	29	0	-1	-2	-1	-1	1	0	0	1	0	-1	-2	-2	-2	-1	0	0

Indicators in the Governance Category in Index 2021

Corruption		
Country	Score 2021	Rank 2021
Maximum EU14+2	79	1
Estonia	68	11
Average EU14+2	62	
Slovenia	54	14
Lithuania	51	17
Poland	47	19
Latvia	46	20
Czech Republic	45	21
Slovakia	40	24
Minimum EU14+2	36	25
Croatia	36	26
Hungary	33	27
Romania	31	29
Bulgaria	30	30

The corruption indicator uses data from two sub-indicators - the Corruption Perception Index of Transparency International and Control of Corruption of the World Bank. Estonia performs above the EU15+2 average with 11th place and a score of 68 points. Slovenia is next, but below the average benchmark with 14th place and 54 points. Lithuania is third in its group with 17th place among 35 countries and a score of 51 points. The last among their peers are Bulgaria (30th with 30 points), Romania (29th with 31 points) and Hungary (27th with 33 points).

The political stability indicator uses two sub-indicators - Political Instability of the Economist Intelligence Unit and Political Stability and Absence of Violence of the World Governance Indicators. Slovenia (10th place and 62 points) scores above the average benchmark, the Czech Republic (11th with 58 points), Lithuania (14th with 58 points) and Hungary (14th with 59 points) following closely. The most politically unstable countries are Bulgaria (22nd with 49 points) and Romania (23rd with 49 points) with identical scores, Poland (27th with 45 points), and Latvia (28th with 44 points).

Political Stability		
Country	Score 2021	Rank 2021
Maximum EU14+2	74	2
Slovenia	62	10
Average EU14+2	59	
Czech Republic	59	11
Lithuania	58	14
Hungary	58	15
Slovakia	53	17
Croatia	53	18
Estonia	50	20
Bulgaria	49	22
Romania	49	23
Poland	45	27
Latvia	44	28
Minimum EU14+2	43	29

Government Effectiveness		
Country	Score 2021	Rank 2021
Maximum EU14+2	76	1
Average EU14+2	62	
Estonia	61	12
Latvia	59	14
Slovenia	57	15
Lithuania	56	16
Czech Republic	52	20
Slovakia	48	22
Poland	46	23
Hungary	43	24
Croatia	40	26
Minimum EU14+2	39	27
Bulgaria	38	28
Romania	9	34

The Governance Effectiveness indicator of the World Bank shows that no new EU member state outperforms the average benchmark, But Estonia (12th with 6 points), Latvia (14th with 59 points), (Slovenia (15th with 57 points) and Lithuania (16th with 56 points) are closest to it. The last among these 11 countries are Bulgaria (28th with 38 points) and Romania (34th with 9 points).

In Regulatory Quality, Estonia has surpassed the average benchmark with a score of 69 points and 8th place out of 35 countries. Next, but below the benchmark, is the Czech Republic (14th with 59 points). The last among their peers are Croatia (26th with 37 points), Bulgaria (27th with 35 points), and Romania (30th with 30 points).

Regulatory Quality		
Country	Score 2021	Rank 2021
Maximum EU14+2	77	1
Estonia	69	8
Average EU14+2	61	
Czech Republic	59	14
Latvia	55	15
Lithuania	54	16
Poland	51	18
Slovenia	50	20
Slovakia	49	21
Hungary	38	25
Croatia	37	26
Bulgaria	35	27
Minimum EU14+2	35	28
Romania	30	30

Rule of Law		
Country	Score 2021	Rank 2021
Maximum EU14+2	77	1
Estonia	62	13
Average EU14+2	62	
Slovenia	59	15
Czech Republic	56	16
Lithuania	56	17
Latvia	55	18
Slovakia	45	22
Hungary	41	23
Poland	39	24
Croatia	38	25
Romania	37	26
Minimum EU14+2	33	28
Bulgaria	26	30

In the Rule of Law indicator, part of the World Governance Indicators, Estonia has surpassed the desired average benchmark with 13th place and 62 points. Next are Slovenia (15th and 59 points) and the Czech Republic (16th place and 56 points), but below the average benchmark. Bulgaria is last in the group with 30th position and 26 points. Croatia (25th place with 38 points) and Romania (26th place with 37 points) also perform poorly.

This indicator is composed of two sub-indicators by selected Global Peace Index data and the homicide rates per 100,000 people. The Czech Republic's score far above the desired average benchmark and are on par with the best performing EU15+2 state with 4th place and 66 points. Croatia and Slovenia is next in the group and it reaches the average benchmark with 6th and 9th place and 64 and 63 points respectively. The worst performing countries in the group are Latvia (34th place with 18 points), Lithuania (33rd with 24 points) and Hungary (29th with 36 points).

Internal Conflict and Crime		
Country	Score 2021	Rank 2021
Maximum EU14+2	71	1
Czech Republic	66	4
Croatia	64	6
Slovenia	63	9
Poland	58	13
Average EU14+2	58	
Slovakia	54	18
Romania	53	20
Bulgaria	50	22
Minimum EU14+2	41	27
Estonia	39	28
Hungary	36	29
Lithuania	24	33
Latvia	18	34

E-government		
Country	Score 2021	Rank 2021
Maximum EU14+2	87	1
Estonia	80	2
Average EU14+2	60	
Lithuania	59	12
Slovenia	56	14
Poland	56	15
Czech Republic	45	21
Minimum EU14+2	43	22
Bulgaria	42	24
Slovakia	37	25
Latvia	37	26
Hungary	35	27
Croatia	35	28
Romania	32	30

The E-government indicator is based on the UN's E-government surveys and scores. It is included in the Index because it is a measure of government efficiency and delivery of services to citizens. Estonia is leader in the CEE group with 2th place out of 35 and 80 points. The country scores well above the average benchmark. Lithuania is next with 12th place and 59, close to the average benchmark. The last in their group are Romania (30nd with 32 points), Croatia (28th with 35 points) and Hungary (27th with 35 points) with identical scores.

Something New: The Global Catch-Up Index 2021

The Catch-Up Index was created in 2010 to measure the convergence and divergence of the then new EU member states with the old ones. The EU candidate and potential candidate countries were also added to the list and thus, the choice of countries followed the logic of level of association with the EU with a total of 35 countries. .

This however limited comparing the EU members from CEE to the generally most developed, wealthiest, democratic and best governed countries. This often made for a somewhat depressing reading for the laggards in the rankings. Thus, the Global Catch-Up Index came into existence expanding the comparison to 57 countries. The Global Index includes several groups of countries – the EU member states – “old” and “new”, the candidate and potential candidate countries, those closely associated with the EU – such as the European Economic Area and Switzerland, EU’s neighbors that are former socialist countries too and in different ways engaged with the EU, including those in Central Asia. The rest are a number of countries around the world – Canada, the US, China, Russia, Australia, Japan, South Korea and Israel.

The methodology followed largely the model of the Catch-Up Index with the indicators divided into Economy, Quality of Life, Democracy and Governance categories. At the same time, a much smaller number of indicators were included. Not all indicators of the two indices are the same. This was done for practical reasons – even for the EU members and candidate countries, there wasn’t readily available, regularly released data. As the Global Index, comparable, but different indicators had to be selected with available and comparable for all the 57 countries.

Although the Catch-Up Index and the Global Index are very similar, the Global Index uses a smaller number of indicators, which has impact on the results, including differences in the ranking of countries.

As with the regular index, the data, where applicable, is on per capita basis, which eliminates the size of the country and is fairer comparison. This model of the index, such as any model, has its limitations and imperfections, so the results should be viewed as a good starting point for comparisons.

Category	Indicator	Weight
Economy	GDP per capita, PPP (current international \$, World Bank	90%
	High Tech Exports as Share of Global Exports, World Bank, UN	10%
Quality of Life	Gini (inequality), World Bank	15%
	PISA Science, OECD	10%
	PISA math, OECD	10%
	PISA reading, OECD	10%
	Tertiary Education enrolment, World Bank	10%
	Life Expectancy at birth, WHO	45%
Democracy	Democracy Index, Economist Intelligence Unit	40%
	Global Freedom Score, Freedom House	40%
	World Press Freedom Index, Reporters without Borders	20%

Governance	Corruption Perception Index, Transparency International	35%
	World Governance Indicators, World Bank	65%

Something good, something bad: the results of the Global Index

As with the regular Index, the Global Index is presented in the following ways – ranking of the countries according to their overall score, which is the average of the scores of the four categories as well as ranking according to the score in each of the categories. Cluster analysis was also made, dividing the countries into clusters with similar characteristics. The different political and geographic groups are color-coded, so are the different clusters, which are hierarchical - from the best performers to those last in the ranking.

- In the global ranking, the winner is Norway (1st out of 74 countries with 74 points), followed by Ireland with an identical score (2nd with 74 points) with a minimal difference after the decimal separator.
- The best performing EU11 country in the global ranking is Estonia (20th out of 57 countries with 60 points), followed closely by Slovenia (21st with 59 points), which are part of the third cluster of good performers.
- In Economy global ranking, Ireland and Luxembourg are 1st and 2nd with identical score of 94 points with minimal difference, followed by Norway (3rd) and Switzerland (4th) with identical score of 77 points and a minimal difference.
- The best performer among the EU11 countries in the Economy ranking is the Czech Republic (20th with 56 points), In the Quality of Life global ranking, South Korea (1st with 73 points) and Japan (2nd with 69 points) top the ranking, following by two North European countries with identical scores - Finland (3rd with 68 points) and Norway (4th with 68 points).
- Among the EU11 countries in the Quality of Life category, the best performers are the Czech Republic (21st with 59 points) and Estonia (22nd with 59) with identical scores and part of the second cluster of very good performers.
- In the Democracy global index, the North European countries dominate the ranking with Norway (1st with 74 points), followed by Sweden (2nd with 72 points) and Finland (3rd with 72 points).
- The best performer among the EU11 in Democracy is Estonia (17th with 63 points), which is the best achievement of any EU11 country in any of the categories; it is followed by Slovenia (22nd with 60 points), the Czech Republic (23rd with 60 points) and together with three other EU11 countries are part of the second cluster of very good performers.
- In the Governance global ranking, the top spot is shared by four countries with identical scores - Denmark (1st with 77 points), Switzerland (2nd with 77 points), Norway (3rd with 77 points) and Sweden (4th with 77 points).
- Among the EU11 countries, Estonia is the best performer in Governance (16th with 67 points) and part of the first cluster of top achievers.

There are several outtakes of results as far as the EU as a block and the EU11 countries are concerned:

- The EU countries dominate the best performing clusters, along with those most closely associated with them such as the EEA and Switzerland or recent member UK.
- The other developed Western-style democracies around the world perform generally remarkably well in each of the four categories and in the overall global ranking.
- In Quality of Life, which is measured by education, life expectancy and inequality indicators, the European countries give up the first two spots to two Asian democracies – South Korea and Japan – but continue to perform excellently.
- Several of the EU11 countries hold their own against a number of developed countries, including in Quality of Life, Democracy and Governance, with Slovenia, the Czech Republic and the three Baltic countries generally outshining the others.
- Several of the EU11 countries punch below their weight – Bulgaria, Romania, Croatia, Hungary and Poland – such as in Democracy or Governance – though they are performing better than their counterparts outside of the EU.

As the already quoted Economist article (12 February 2022 edition) says to the EU member states in CEE “You don’t know how lucky you are”, when comparing the catching-up of the former communist bloc countries, which is supported by the data of the Global Catch-up Index. This comes to say that:

- As a whole, the EU11 countries outperform their counterparts outside of the EU - i.e. the other former socialist block members - across the board, performing better than the candidate countries and those with no prospect for EU membership in all categories.
- The EU’s candidate countries generally fall behind the EU11 in the ranking, but themselves perform better than the countries in EU’s neighborhood and in Central Asia.
- The EU neighbors – Moldova, Ukraine, Georgia and Armenia fare better than their counterparts further East, despite they lag behind the countries in CEE, who are EU member states.
- The Central Asian countries as a whole perform poorly and occupy the last two clusters, with the exception of Kyrgyzstan in Democracy and Kazakhstan in Economy, Quality of Life and Governance.

Global Catch-Up Index: ranking and clusters by overall score

Global Catch-Up Index 2021			
Overall Score: Ranking and Clusters			
Country	Overall Score	Rank	Cluster
Norway	74	1	1
Ireland	74	2	
Luxembourg	72	3	
Switzerland	72	4	
Netherlands	70	5	
Denmark	70	6	
Sweden	70	7	
Iceland	70	8	
Finland	69	9	
Australia	67	10	
Canada	67	11	
Austria	66	12	
Belgium	65	13	
Germany	65	14	
Japan	63	15	
UK	63	16	
France	63	17	
South Korea	62	18	
USA	61	19	
Estonia	60	20	3
Slovenia	59	21	
Spain	59	22	
Malta	58	23	
Portugal	58	24	
Czech Republic	58	25	
Italy	57	26	
Cyprus	56	27	
Israel	55	28	
Lithuania	53	29	
Greece	52	30	
Poland	52	31	
Latvia	51	32	
Slovakia	51	33	
Croatia	49	34	
Hungary	47	35	
Romania	44	36	
Bulgaria	41	37	
Montenegro	39	38	5
Albania	38	39	
Serbia	37	40	
Georgia	37	41	
North Macedonia	36	42	
Turkey	35	43	
Armenia	35	44	
Ukraine	34	45	
Moldova	33	46	
BiH	33	47	
China	33	48	6
Kazakhstan	32	49	
Belarus	31	50	
Kosovo	30	51	
Russia	30	52	
Kyrgyzstan	23	53	
Azerbaijan	23	54	
Uzbekistan	16	55	
Tajikistan	14	56	
Turkmenistan	11	57	

The results by overall scores show that the Western and Northern EU member states and the developed Western countries in the world dominate the ranking. Actually, Norway is on top of the index, the EU's EEA partner country as well as Iceland and Switzerland. The two best performing clusters are composed of such countries.

The EU11 countries are in the third and fourth clusters with the rest, South European EU member states. The only exclusion in these two clusters is Israel, which fits in the middle of these two clusters. The EU candidate countries are in the fifth cluster, which contains also EU's neighbors to the East – Georgia, Armenia, Ukraine and Moldova with Belarus further down the ranking but in the same cluster. Kazakhstan is the only Central Asian country in the fifth cluster. The rest of the Central Asian countries are in the last, sixth cluster.

*Legend - groups of countries	
	EU "old" member states
	EU "new" member states
	EU candidates and potential candidate
	EEA and Switzerland
	Other European countries, EU neighbors
	Central Asian countries
	Other countries

Global Catch-Up Index: scores, ranking and clusters in the Economy category

Global Catch-Up Index 2021			
Economy Scores, Ranking and Clusters			
Country	Score	Rank	Cluster
Ireland	94	1	1
Luxembourg	94	2	
Norway	77	3	2
Switzerland	77	4	
USA	74	5	
Iceland	72	6	
Netherlands	70	7	
Denmark	69	8	3
Austria	67	9	
Germany	66	10	
Sweden	65	11	
Belgium	64	12	
Australia	64	13	
France	63	14	
Canada	61	15	
UK	61	16	
Finland	61	17	
Malta	61	18	
South Korea	58	19	
Czech Republic	56	20	
Israel	56	21	
Italy	55	22	
Japan	55	23	
Cyprus	55	24	
Spain	53	25	
Slovenia	52	26	
Lithuania	51	27	
Estonia	50	28	
Portugal	48	29	
Hungary	48	30	5
Poland	47	31	
Latvia	46	32	
Romania	45	33	
Kazakhstan	45	34	
Slovakia	45	35	
Greece	44	36	
Russia	43	37	
Croatia	43	38	
Turkey	39	39	
Bulgaria	39	40	
China	37	41	
Montenegro	36	42	6
Belarus	33	43	
Serbia	33	44	
North Macedonia	32	45	
BiH	30	46	
Armenia	30	47	
Azerbaijan	30	48	
Georgia	30	49	
Turkmenistan	29	50	
Ukraine	28	51	
Moldova	28	52	
Albania	28	53	
Kosovo	27	54	
Uzbekistan	22	55	
Kyrgyzstan	21	56	
Tajikistan	19	57	

In Economy, the best performing countries in the first, second and third cluster are older EU member states and Western countries in Europe and the world.

The “new” member states are in the fourth and fifth cluster with some additional members – Kazakhstan, Russia, China, Turkey, among others.

In the last, sixth cluster are the EU’s candidate countries, EU’s eastern neighbors and those in Central Asia.

*Legend - groups of countries	
	EU "old" member states
	EU "new" member states
	EU candidates and potential candidate
	EEA and Switzerland
	Other European countries, EU neighbors
	Central Asian countries
	Other countries

Global Catch-Up Index: scores, ranking and clusters in the Quality of Life category

Global Catch-Up Index 2021			
Quality of Life Scores, Ranking and Clusters			
Country	Score	Rank	Cluster
South Korea	73	1	1
Japan	69	2	
Finland	68	3	
Norway	68	4	
Australia	66	5	
Netherlands	66	6	
Sweden	66	7	
Slovenia	66	8	
Iceland	65	9	
Belgium	65	10	
Italy	65	11	
Switzerland	65	12	
Ireland	64	13	2
Spain	64	14	
Denmark	64	15	
Canada	64	16	
Austria	63	17	
France	62	18	
Greece	61	19	
Malta	60	20	
Czech Republic	59	21	
Estonia	59	22	
Portugal	57	23	3
UK	57	24	
Germany	56	25	
Poland	56	26	
China	56	27	
Israel	55	28	
Luxembourg	54	29	
Cyprus	54	30	
Croatia	52	31	
Slovakia	51	32	
USA	50	33	
Belarus	48	34	
Hungary	47	35	
Turkey	46	36	
Latvia	46	37	
Lithuania	45	38	
Albania	44	39	
Ukraine	41	40	
Russia	39	41	
Serbia	38	42	
BiH	38	43	
Montenegro	37	44	
Romania	36	45	
Moldova	34	46	
Kazakhstan	34	47	
North Macedonia	34	48	
Bulgaria	33	49	
Armenia	33	50	5
Azerbaijan	32	51	
Georgia	28	52	
Kosovo	28	53	
Kyrgyzstan	25	54	
Tajikistan	19	55	
Uzbekistan	16	56	
Turkmenistan	5	57	

In the Quality of Life ranking, which is composed of indicators for quality of education, life expectancy and inequality, two Asian countries lead the way – South Korea and Japan, followed by a mix of Scandinavian and Western European countries as well as Australia. But there is one “new” EU member state – Slovenia – which is 8th among 57 countries.

The second cluster is composed of „old” EU member states, Canada as well as two “new” EU member states – the Czech Republic and Estonia with identical score of 59 points and 21st and 22nd place.

The third and fourth clusters are composed of a considerable and diverse number of countries from all the groups in the index. The last fifth and sixth clusters include the Central Asian countries without Kazakhstan

*Legend - groups of countries	
	EU "old" member states
	EU "new" member states
	EU candidates and potential candidate
	EEA and Switzerland
	Other European countries, EU neighbors
	Central Asian countries
	Other countries

Global Catch-Up Index: scores, ranking and clusters in the Democracy category

Global Catch-Up Index 2021			
Democracy Scores, Ranking and Clusters			
Country	Score	Rank	Cluster
Norway	74	1	1
Sweden	72	2	
Finland	72	3	
Denmark	70	4	
Netherlands	70	5	
Canada	69	6	
Ireland	69	7	
Iceland	69	8	
Switzerland	69	9	
Australia	67	10	
Luxembourg	66	11	2
Germany	66	12	
Portugal	65	13	
UK	64	14	
Austria	64	15	
Belgium	63	16	
Estonia	63	17	
Spain	62	18	
Japan	61	19	
Cyprus	61	20	
France	61	21	
Slovenia	60	22	
Czech Republic	60	23	
Italy	60	24	
South Korea	59	25	
Latvia	59	26	
USA	58	27	
Lithuania	58	28	
Malta	58	29	
Slovakia	57	30	
Greece	56	31	
Israel	54	32	3
Poland	53	33	
Croatia	53	34	
Romania	52	35	
Bulgaria	49	36	
Hungary	48	37	
Albania	45	38	4
Serbia	45	39	
North Macedonia	44	40	
Moldova	43	41	
Montenegro	42	42	
Ukraine	42	43	
Georgia	41	44	
Armenia	40	45	
Kosovo	40	46	
BiH	38	47	
Kyrgyzstan	28	48	5
Turkey	26	49	
Russia	18	50	6
Kazakhstan	18	51	
Belarus	13	52	
Uzbekistan	11	53	
Azerbaijan	11	54	
Tajikistan	8	55	
China	7	56	
Turkmenistan	3	57	

Norway leads a group of North European countries and Canada in the first cluster in the Democracy ranking. While the first cluster consists of a limited number of countries, the second cluster consists of larger number of European and Western countries – from Australia and UK to South Korea and the US. Among them are 6 out of 11 “new” member states. In the third cluster there are only new EU member states – Poland, Croatia, Romania, Bulgaria and Hungary – as well as Israel.

The fourth cluster is composed of the EU’s candidate countries and EU’s neighbors. The fifth cluster is the smallest and consists of Turkey and Kyrgyzstan. The last, sixth cluster is composed of Central Asian countries, Belarus, Azerbaijan and China.

*Legend - groups of countries	
	EU "old" member states
	EU "new" member states
	EU candidates and potential candidate
	EEA and Switzerland
	Other European countries, EU neighbors
	Central Asian countries
	Other countries

Global Catch-Up Index: scores, ranking and clusters in the Governance category

Global Catch-Up Index 2021			
Governance Scores, Ranking and Clusters			
Country	Score	Rank	Cluster
Denmark	77	1	1
Switzerland	77	2	
Norway	77	3	
Sweden	77	4	
Finland	76	5	
Luxembourg	75	6	
Netherlands	74	7	
Australia	72	8	
Canada	72	9	
Iceland	72	10	
Germany	71	11	
Austria	71	12	
UK	69	13	
Ireland	68	14	
Japan	68	15	
Estonia	67	16	
Belgium	67	17	
France	64	18	
USA	62	19	2
Portugal	61	20	
Slovenia	59	21	
Lithuania	58	22	
South Korea	58	23	
Spain	57	24	
Czech Republic	56	25	
Cyprus	55	26	
Malta	55	27	
Latvia	55	28	
Israel	54	29	3
Poland	53	30	
Slovakia	51	31	
Italy	50	32	
Georgia	48	33	
Greece	47	34	
Croatia	47	35	
Hungary	45	36	
Bulgaria	43	37	
Romania	41	38	
Montenegro	40	39	4
Armenia	38	40	
Serbia	34	41	
North Macedonia	33	42	
Albania	33	43	
China	32	44	
Kazakhstan	31	45	
Belarus	31	46	
Turkey	30	47	
Moldova	28	48	
Kosovo	27	49	5
BiH	27	50	
Ukraine	23	51	
Russia	22	52	6
Azerbaijan	20	53	
Kyrgyzstan	20	54	
Uzbekistan	14	55	
Tajikistan	10	56	
Turkmenistan	7	57	

In Governance, the top spots are occupied by the Scandinavian and Western European countries, with Australia, Canada, UK and Japan joining the first cluster. But Estonia is also among the top performers in this cluster with 15th place.

The new EU member states are mostly in the second and third cluster, along with several old member states and others countries across the world, among them Georgia.

The fourth cluster is composed of EU’s candidate countries and two of the neighbors – Belarus and Moldova.

The last, fifth and sixth clusters consists of Ukraine, Russia and the Central Asian countries.

*Legend - groups of countries	
	EU "old" member states
	EU "new" member states
	EU candidates and potential candidate
	EEA and Switzerland
	Other European countries, EU neighbors
	Central Asian countries
	Other countries

Supplements

Supplement I: Country Scores by Indicators and Categories

Catch-Up Index 2021: Economy Scores (in z-scores on a scale 100-0)*															
Economy Scores	GDP per capita	Employment	Research and Development		Energy Intensity	Transport infrastructure				Government debt	Market development		Information Society	Credit ratings	Economy Score
	GDP per capita in PPS with EU27=100	Employment as percentage of population, age group 15-64	Patents granted by USPTO per capita	High-tech exports as % of manufactured exports	Energy intensity of the economy	Motorways per area 1000 km ²	Motorways per 100000 inhabitants	Other roads per 1000 km ²	Other roads per 100000 inhabitants	General government debt (% of GDP)	Doing Business rank	Economic Freedom score	Information and Communication Technology	Sovereign credit ratings	
	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	
Country	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0
Austria	63	63	72	47	67	52	61	51	54	45	61	62	63	73	61
Belgium	60	45	61	48	57	92	52	93	51	30	44	48	59	64	54
Cyprus	47	57	37	66	61	77	80	59	53	28	36	53	58	38	48
Denmark	68	68	84	48	74	63	67	54	50	66	83	77	78	79	71
Finland	59	62	94	41	55	33	55	37	64	52	68	70	60	73	61
France	54	48	58	83	65	53	56	57	29	29	57	31	68	65	55
Germany	62	72	83	58	67	70	53	55	40	52	66	57	71	79	65
Greece	37	25	36	49	61	45	56	44	47	0	13	13	46	25	32
Ireland	100	52	74	80	76	45	61	50	64	57	64	90	63	61	73
Italy	50	29	47	38	68	55	44	42	33	9	32	28	42	38	40
Luxembourg	100	51	63	35	70	98	74	47	34	74	19	70	73	79	73
Malta	51	66	42	89	33	30	20	100	36	60	59	48	60	53	54
Netherlands	67	76	76	73	64	100	53	77	41	60	47	73	73	79	69
Portugal	43	55	37	36	62	66	82	35	27	20	50	38	44	39	43
Spain	47	36	39	36	65	63	88	37	31	27	59	47	58	49	47
Sweden	63	70	100	54	65	35	63	38	63	67	77	65	72	79	68
UK	54	70	61	74	70	47	32	54	38	35	79	79	77	64	60
Bulgaria	33	52	36	45	13	38	44	35	31	74	30	49	38	43	41
Czech Republic	50	68	41	68	46	48	45	53	49	68	48	62	45	61	55
Estonia	47	66	40	33	42	34	45	49	100	78	70	78	66	61	57
Hungary	42	57	37	60	48	50	57	61	69	47	38	37	40	39	45
Latvia	41	61	36	60	48	30	20	44	86	65	69	56	47	52	51
Lithuania	47	61	35	48	48	37	50	49	85	63	76	73	45	55	54
Poland	42	54	36	43	48	36	29	49	47	58	49	46	39	51	47
Romania	41	47	35	46	51	34	29	38	34	63	35	46	30	36	43
Slovakia	40	51	36	43	50	41	39	44	41	57	45	34	43	55	46
Slovenia	48	59	43	37	56	63	81	56	61	47	52	41	49	55	51
Croatia	37	38	35	39	54	55	87	39	38	43	39	23	46	32	41
North Macedonia	26	21	34	30	27	44	54	40	39	61	71	42	20	27	34
Turkey	37	4	34	27	61	35	28	37	31	66	56	25	22	18	36
Montenegro	30	11	34	27	35	30	20	40	50	43	40	23	29	17	29
Iceland	63	82	67	100	3	31	26	35	94	47	62	75	84	53	59
Albania	23	35	34	20	27	30	20	35	28	48	10	29	1	19	26
BiH	24	1	34	32	2	34	30	37	35	71	2	21	7	12	24
Serbia	28	37	35	28	11	44	49	40	38	56	45	37	33	30	34

The table shows the standardized scores on a scale 0-100 (lowest to highest) for the indicators in this category of the index. Data no later than 30 November 2021. Missing data were replaced using the imputation procedures as explained in the annex of the Catch-Up Index report. More information on the used sources and methodology in the report.

The Catch-Up Index 2021

Catch-Up Index 2021: Quality of Life Scores (in z-scores on a scale 100-0)*															
Quality of Life Scores	Welfare of consumers	Social issues			Education					Health			Human Development	Quality of Life Score	
	Actual individual consumption with EU27=100	Inequality-Gini coefficient	Relative median at-risk-of-poverty gap (%)	Long term unemployment rate (%)	Share (%) of early school leavers	Share of population (%) with university degree	PISA score in reading literacy	PISA score mathematical literacy	PISA score in scientific literacy	Healthy life expectancy at birth in years	Infant mortality by age of 5	Life expectancy in years	EuroHealth Consumer Index		Human Development Index
Country	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0
Austria	71	65	54	61	55	54	57	63	60	62	58	63	71	65	63
Belgium	70	72	74	56	55	70	62	68	65	59	59	60	82	69	67
Cyprus	58	55	72	57	42	76	23	32	29	77	70	70	36	52	56
Denmark	77	64	64	63	50	60	67	69	61	63	55	65	83	72	68
Finland	71	67	81	61	55	75	77	68	79	63	69	69	80	71	71
France	67	55	57	53	56	64	62	60	61	74	48	70	71	57	61
Germany	78	32	27	62	44	41	65	63	67	62	55	61	68	75	62
Greece	42	47	41	12	73	47	42	34	37	62	55	62	32	52	46
Ireland	55	59	78	61	68	82	76	63	63	64	60	75	44	78	66
Italy	58	39	31	43	35	20	53	55	47	72	62	70	47	54	50
Luxembourg	85	46	69	59	55	78	49	53	52	69	66	66	73	63	67
Malta	46	50	74	62	20	46	37	46	40	68	23	72	36	55	50
Netherlands	74	63	71	63	60	67	58	75	67	67	52	64	89	74	69
Portugal	48	46	49	56	52	39	62	59	61	63	56	61	60	43	51
Spain	49	42	33	42	23	66	64	52	56	74	62	70	50	58	52
Sweden	69	65	62	62	57	71	69	65	65	72	67	70	71	74	68
UK	68	36	53	63	44	78	68	65	69	55	50	60	56	69	61
Bulgaria	29	7	37	56	36	40	21	24	21	18	25	8	27	24	27
Czech Republic	49	78	80	64	57	31	60	63	64	42	61	41	57	57	57
Estonia	43	49	57	61	58	68	79	77	83	46	69	44	56	54	55
Hungary	35	59	12	62	39	35	53	52	54	27	56	23	21	39	39
Latvia	37	28	37	56	59	59	54	55	58	17	57	23	30	43	42
Lithuania	57	29	52	55	66	72	53	52	55	22	56	19	34	50	49
Poland	46	64	59	64	66	48	73	73	72	41	49	30	26	49	52
Romania	43	35	25	60	25	16	25	21	22	23	23	13	18	29	30
Slovakia	38	92	51	51	57	35	42	55	44	39	35	32	55	41	46
Slovenia	44	81	72	58	72	54	63	69	70	60	72	58	46	63	60
Croatia	33	59	37	57	79	31	54	41	49	40	45	38	38	38	43
North Macedonia	15	48	25	4	65	26	6	0	14	16	31	32	37	8	21
Turkey	37	0	39	50	0	25	47	35	47	38	0	46	37	26	30
Montenegro	29	33	22	6	68	31	21	21	15	25	70	32	43	29	31
Iceland	79	78	71	65	28	68	51	60	51	73	73	75	71	76	70
Albania	12	32	36	25	18	26	12	25	16	45	0	47	17	16	21
BIH	14	38	22	0	66	26	11	6	5	27	34	35	37	10	21
Serbia	21	37	25	45	66	28	32	32	30	24	39	25	50	20	30

The table shows the standardized z-scores on a scale 0-100 (lowest to highest) for the indicators in this category of the index. Data no later than 30 November 2021. Missing data were replaced using the imputation procedures as explained in the annex of the Catch-Up Index report. More information on the used sources and methodology in the report.

Catch-Up Index 2021: Democracy Scores (in z-scores on a scale 100-0)*										
Democracy Scores	Satisfaction with democracy	Trust in People	Democracy Indices		Media Freedom		Voice and Accountability	Human Rights	E-participation	Democracy Score
	Satisfaction with democracy %	Trust in people	Freedom House score Freedom in the World	Economist Intelligence Unit Democracy Index	Freedom of the Press score by Freedom House	Press Freedom Index by Reporters without Borders	Voice and Accountability - WGI	Disrespect for human rights by Global Peace Index	E-participation index	
Country	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0
Austria	64	54	60	61	59	62	67	48	76	60
Belgium	50	63	64	51	72	72	69	64	22	61
Cyprus	36	37	61	51	58	55	56	48	72	52
Denmark	89	99	65	77	72	79	72	64	74	76
Finland	79	92	69	78	72	82	72	64	72	75
France	49	61	56	58	54	49	61	64	64	57
Germany	74	53	61	69	62	65	69	64	38	64
Greece	31	29	52	49	32	36	51	33	44	41
Ireland	76	71	65	75	64	72	68	64	56	69
Italy	52	51	56	54	48	48	53	48	50	52
Luxembourg	81	60	65	69	69	60	70	64	30	66
Malta	52	39	56	53	58	33	58	48	52	51
Netherlands	83	86	67	74	73	76	71	64	74	74
Portugal	47	45	64	57	66	75	63	48	50	58
Spain	49	54	56	60	52	54	56	33	54	53
Sweden	84	71	69	79	73	81	73	64	50	74
UK	29	50	60	67	56	51	64	64	76	57
Bulgaria	37	31	40	38	34	19	34	48	62	37
Czech Republic	44	42	57	53	61	48	51	64	34	53
Estonia	60	62	61	56	67	65	62	64	80	62
Hungary	51	40	28	35	32	30	28	33	26	34
Latvia	44	52	55	46	54	56	48	64	10	51
Lithuania	49	57	56	44	61	54	55	64	36	54
Poland	44	38	47	40	44	36	44	48	74	44
Romania	36	53	47	33	39	44	35	48	48	42
Slovakia	37	36	56	42	54	48	49	33	30	45
Slovenia	22	57	63	51	58	48	54	64	56	53
Croatia	34	38	50	34	36	38	37	48	62	40
North Macedonia	35	17	25	24	7	30	18	48	52	26
Turkey	46	38	0	2	0	0	0	0	62	10
Montenegro	20	36	21	22	32	25	20	48	4	26
Iceland	81	73	61	81	68	64	68	64	42	69
Albania	44	6	25	27	23	33	26	33	54	27
BIH	21	28	7	7	23	37	12	33	14	18
Serbia	20	31	22	30	26	30	19	48	50	28

The table shows the standardized z-scores on a scale 0-100 (lowest to highest) for the indicators in this category of the index. Data no later than 30 November 2021. Missing data were replaced using the imputation procedures as explained in the annex of the Catch-Up Index report. More information on the used sources and methodology in the report.

Catch-Up Index 2021: Governance Scores (in z-scores on a scale 100-0)*											
Governance Scores	Corruption		Political Stability		Government	Regulations	Rule of Law	Conflict and tensions		E-government	Governance Score
	Corruption Perception Index (TI)	Control of Corruption (WGI)	Political instability EIU	Political Stability and Absence of Violence (WGI)	Government Effectiveness (WGI)	Regulatory Quality (WGI)	Rule of Law (WGI)	Global Peace Index	Homicide rates (UN)	E-government Development Index	
Country	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0	100-0
Austria	70	68	68	67	68	67	73	71	59	66	68
Belgium	70	69	61	44	55	61	64	58	44	43	58
Cyprus	46	50	47	45	53	50	50	40	53	61	49
Denmark	84	75	68	68	76	68	74	71	58	87	72
Finland	81	76	68	63	76	76	77	71	45	79	72
France	61	66	54	40	65	66	65	53	54	61	60
Germany	75	72	68	49	70	74	68	62	59	56	67
Greece	38	35	61	39	39	35	33	22	59	43	39
Ireland	65	67	61	67	62	70	64	53	61	53	63
Italy	41	41	43	43	42	44	34	49	67	48	44
Luxembourg	75	75	68	81	72	73	72	63	72	49	71
Malta	41	40	43	74	51	45	54	51	46	56	50
Netherlands	77	74	68	59	73	77	72	62	67	74	71
Portugal	51	55	68	76	59	46	59	80	62	49	60
Spain	52	52	54	41	54	52	55	53	66	63	54
Sweden	81	76	68	71	74	75	75	62	56	77	72
UK	71	71	64	46	66	70	67	62	54	77	65
Bulgaria	30	30	50	49	38	35	26	49	52	42	38
Czech Republic	43	47	54	64	52	59	56	66	66	45	56
Estonia	68	68	50	51	61	69	62	44	35	80	59
Hungary	30	37	61	54	43	38	41	44	27	35	41
Latvia	46	47	47	42	59	55	55	35	0	37	46
Lithuania	50	53	57	59	56	54	56	49	0	59	50
Poland	45	49	43	47	46	51	39	53	64	56	48
Romania	30	31	50	48	9	30	37	53	52	32	34
Slovakia	37	43	50	56	48	49	45	53	55	37	48
Slovenia	50	58	68	57	57	50	59	58	69	56	57
Croatia	34	39	50	55	40	37	38	62	67	35	44
North Macedonia	19	19	15	27	23	33	17	35	54	18	26
Turkey	25	24	0	0	25	10	15	0	25	35	15
Montenegro	32	34	12	28	30	27	29	31	32	16	28
Iceland	68	70	68	86	69	64	71	80	60	70	70
Albania	21	13	29	34	20	24	9	26	31	27	22
BiH	19	10	5	9	0	0	17	13	54	0	12
Serbia	23	17	26	25	24	18	21	40	53	28	26

The table shows the standartized scores on a scale 0-100 (lowest to highest) for the indicators in this category of the index. Data no later than 30 November 2021. Missing data were replaced using the imputation procedures as explained in the annex of the Catch-Up Index report. More information on the used sources and methology in the report.

Supplement II: Indicators Data by Country

Catch-Up Index 2021 Data

Catch-Up Index 2021: Economy Indicators Data														
Indicators/ Country	GDP per capita	Employment	Research and Development		Energy Intensity	Transport infrastructure				Government debt	Market development		Information Society	Credit ratings
	GDP per capita in PPS with EU27=100 (the higher the better)	Employment as percentage of population, age group 15-64 (the higher the better)	Patents granted by USPTO per capita (recalculated; the higher the better)	High-tech exports as % of manufactured exports (the higher the better)	Energy intensity of the economy (the lower the better)	Motorways per area 1000 km2 (recalculated; the higher the better)	Motorways per 100000 inhabitants (recalculated; the higher the better)	Other roads per 1000 km2 (recalculated; the higher the better)	Other roads per 100000 inhabitants (recalculated; the higher the better)	General government debt (% of GDP) (0-100; the lower the better)	Doing Business rank (1-190; 1 is highest, 190 lowest rank)	Economic Freedom score (0-100; the higher the better)	Information and Communication Technology (scale 1-10; the higher the better)	Sovereigns credit ratings (recalculated on a scale 1-10; the higher the better)
Austria	124	72.4	18.00	11.498671	102.45	20.782	19.513	1,534	1440.16	83.9	27	73.9	8.02	9.5
Belgium	117	64.7	12.81	12.020893	157.36	57.750	15.243	5,026	1326.70	114.1	46	70.1	7.81	8.8
Cyprus	87	69.9	1.56	19.874214	134.46	43.589	28.683	2,172	1429.12	118.2	54	71.4	7.77	6.8
Denmark	136	74.4	23.53	12.044409	62.42	30.352	22.397	1,704	1257.42	42.2	4	77.8	8.71	10.0
Finland	115	72.1	28.05	9.2145411	168.17	2.736	16.734	321	1963.16	69.2	20	76.1	7.88	9.5
France	103	66.1	11.29	26.992412	112.80	21.455	17.306	2,008	1619.84	115.7	32	65.7	8.24	8.9
Germany	121	76.2	23.06	16.426327	103.07	36.915	15.854	1,805	775.03	69.8	22	72.5	8.39	10.0
Greece	64	56.3	1.18	12.51487	137.02	13.965	17.251	877	1083.66	205.6	79	60.9	7.23	5.8
Ireland	211	67.7	18.81	25.973487	50.93	14.159	19.873	1,394	1956.94	59.5	24	81.4	8.02	8.6
Italy	94	58.1	6.40	7.8332642	97.37	23.041	11.717	757	384.97	155.8	58	64.9	7.04	6.8
Luxembourg	266	67.2	13.71	6.5609371	87.33	63.805	25.995	1,127	459.09	24.9	72	76.0	8.47	10.0
Malta	97	73.7	3.88	29.781676	285.61	0.000	0.000	9,035	553.19	54.3	30	70.2	7.86	8.0
Netherlands	133	77.8	19.55	23.064811	121.02	74.691	15.965	3,685	787.70	54.5	42	76.8	8.49	10.0
Portugal	77	69.0	1.55	6.9422153	129.74	33.283	29.762	122	109.22	133.6	39	67.5	7.13	6.9
Spain	86	60.9	2.48	6.8609323	113.03	30.678	32.753	297	316.58	120.0	30	69.9	7.79	7.7
Sweden	123	75.5	32.86	14.612669	114.57	4.737	20.551	438	1899.58	39.9	10	74.7	8.41	10.0
UK	102	75.4	12.71	23.46813	84.15	15.657	5.706	1,725	628.53	104.5	8	78.4	8.65	8.8
Bulgaria	55	67.6	0.85	10.852453	396.43	7.125	11.422	172	275.99	25.0	61	70.4	6.86	7.2
Czech Republic	94	74.4	3.18	20.804636	219.86	16.180	11.923	1,641	1209.25	38.1	41	73.8	7.16	8.6
Estonia	86	73.7	2.71	5.7727112	239.89	3.560	12.105	1,306	4440.90	18.2	18	78.2	8.14	8.6
Hungary	74	69.7	1.69	17.457801	205.98	18.523	17.709	2,351	2247.28	80.4	52	67.2	6.93	6.9
Latvia	72	71.6	0.95	17.241521	206.49	0.000	0.000	902	3077.34	43.5	19	72.3	7.26	7.9
Lithuania	87	71.6	0.75	12.030128	204.22	6.172	14.415	1,297	3029.07	47.3	11	76.9	7.19	8.1
Poland	76	68.7	1.15	10.112883	208.95	5.360	4.429	1,359	1122.93	57.5	40	69.7	6.89	7.8
Romania	72	65.6	0.61	11.072565	187.73	3.633	4.514	359	445.76	47.3	55	69.5	6.48	6.7
Slovakia	71	67.5	1.14	9.9125706	196.86	10.094	9.066	912	818.99	60.6	45	66.3	7.06	8.1
Slovenia	89	70.9	4.13	7.3540298	159.86	30.731	29.540	1,875	1801.96	80.8	37	68.3	7.38	8.1
Croatia	64	62.0	0.52	8.3043743	174.04	23.147	32.455	449	629.33	88.7	51	63.6	7.24	6.4
North Macedonia	38	54.7	0.05	4.2225754	321.27	13.028	16.193	563	699.68	51.1	17	68.6	6.01	6.0
Turkey	64	47.5	0.27	3.0435678	133.67	3.905	3.660	316	296.21	41.4	33	64.0	6.08	5.3
Montenegro	46	50.3	0	3.1538489	277.33	0.000	0.000	574	1277.19	87.3	50	63.4	6.44	5.2
Iceland	125	80.3	15.46	38.079204	453.47	0.107	2.983	125	3492.21	79.9	26	77.4	8.98	8.0
Albania	31	60.6	0.04	0.0447019	321.27	0.000	0.000	142	144.54	78.8	82	65.2	5.14	5.4
BiH	33	46.4	0.03	5.2708775	459.52	3.360	4.926	340	498.28	32.2	90	62.9	5.39	4.8
Serbia	43	61.3	0.44	3.6321165	407.54	12.430	14.014	559	629.79	61.5	44	67.2	6.61	6.2

The table shows the raw data (or recalculated in some cases as indicated) used for this category of the index. Data no later than 30 November 2021. Missing data were replaced using the imputation procedures as explained in the annex of the Catch-Up Index report. More information on the used sources and methodology in the report.

Catch-Up Index 2021: Quality of Life Indicators Data														
Indicators/ Country	Welfare of consumers	Social issues			Education					Health				Human Development
	Actual individual consumption with EU27=100 (the higher the better)	Inequality-Gini coefficient (the lower the better)	Relative median at-risk-of-poverty gap (%) (the lower the better)	Long term unemployment rate (%) (the lower the better)	Share (%) of early school leavers (the lower the better)	Share of population (%) with university degree (the higher the better)	PISA score in reading literacy (the higher the better)	PISA score in mathematical literacy (the higher the better)	PISA score in scientific literacy (the higher the better)	Healthy life expectancy at birth in years (the higher the better)	Infant mortality by age of 5 (the lower the better)	Life expectancy in years (the higher the better)	EuroHealth Consumer Index (the higher the better)	Human Development Index (the higher the better)
Austria	114	27.0	22.7	1.3	8.1	31.3	484	499	490	70.90	3.47	81.3	799	0.922
Belgium	113	25.4	16.2	2.3	8.1	37.6	493	508	499	70.60	3.41	80.9	849	0.931
Cyprus	98	29.3	16.9	2.1	11.5	40.2	424	448	439	72.40	2.3	82.3	635	0.887
Denmark	121	27.3	19.3	0.9	9.3	33.7	501	509	493	71.00	3.77	81.6	855	0.94
Finland	114	26.5	13.7	1.2	8.2	39.8	520	507	522	71.00	2.38	82.2	839	0.938
France	109	29.3	21.5	2.8	8.0	35.3	493	495	493	72.10	4.46	82.3	796	0.901
Germany	123	34.4	31.5	1.1	11.0	26.0	498	500	503	70.90	3.81	81.1	785	0.947
Greece	78	31.1	26.9	10.9	3.8	28.5	457	451	452	70.90	3.75	81.2	615	0.888
Ireland	94	28.3	14.8	1.3	5.0	42.8	518	500	496	71.10	3.28	83.	669	0.955
Italy	97	32.8	30.0	4.7	13.1	17.9	476	487	468	71.90	3.14	82.4	687	0.892
Luxembourg	131	31.2	17.7	1.7	8.2	40.9	470	483	477	71.60	2.75	81.8	809	0.916
Malta	83	30.3	16.0	1.1	16.7	28.0	448	472	457	71.5	6.98	82.6	631	0.895
Netherlands	117	27.5	17.1	0.9	7.0	36.6	485	519	503	71.4	4.04	81.5	883	0.944
Portugal	85	31.2	24.4	2.3	8.9	25.4	492	492	492	71	3.68	81.1	745	0.864
Spain	87	32.1	29.4	5.0	16.0	36.0	496	481	483	72.1	3.1	82.4	698	0.904
Sweden	111	26.9	19.9	1.1	7.7	38.3	506	502	499	71.9	2.57	82.4	800	0.945
UK	110	33.5	23.0	0.9	10.9	41.0	504	502	505	70.1	4.27	81.	728	0.932
Bulgaria	61	40.0	28.3	2.3	12.8	25.6	420	436	424	66.3	6.73	73.6	591	0.816
Czech Republic	87	24.0	14.1	0.6	7.6	22.1	490	499	497	68.8	3.18	78.3	731	0.9
Estonia	79	30.5	21.8	1.2	7.5	37.1	523	523	530	69.2	2.4	78.6	729	0.892
Hungary	69	28.3	36.3	1.1	12.1	23.6	476	481	481	67.2	3.67	76	565	0.854
Latvia	72	35.2	28.2	2.2	7.2	33.2	479	486	487	66.2	3.61	75.7	605	0.866
Lithuania	96	35.1	23.2	2.5	5.6	38.7	476	481	482	66.7	3.65	75.1	622	0.882
Poland	83	27.2	21.0	0.6	5.4	28.9	512	516	511	68.7	4.39	76.6	585	0.88
Romania	79	33.8	31.9	1.5	15.6	16.2	428	430	426	66.8	6.98	74.2	549	0.828
Slovakia	73	20.9	23.7	3.2	7.6	23.9	458	486	464	68.5	5.75	76.9	722	0.86
Slovenia	80	23.5	16.9	1.9	4.1	31.5	495	509	507	70.7	2.08	80.6	678	0.917
Croatia	67	28.3	28.0	2.1	2.2	22.0	479	464	472	68.6	4.78	78	644	0.851
North Macedonia	44	30.7	32.0	12.4	5.7	20.0	393	394	413	66.1	6.12	77	638	0.774
Turkey	72	41.7	27.4	3.3	26.7	19.7	466	454	468	68.4	10.05	79.	638	0.82
Montenegro	61	34.1	33.1	12.0	5.0	22.0	421	430	415	67	2.33	77.	668	0.829
Iceland	124	24.1	17.0	0.5	14.8	36.8	474	495	475	72	1.97	83.1	797	0.949
Albania	40	34.3	28.6	8.3	17.4	20.0	405	437	417	69.1	9.68	79.1	544	0.795
BiH	43	33.0	33.1	17.1	5.4	20.0	403	406	398	67.2	5.85	77.4	638	0.78
Serbia	52	33.3	32.1	4.3	5.6	21.0	439	448	440	66.9	5.32	76.	699	0.806

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Catch-Up Index 2021: Democracy Indicators Data									
Indicators/ Country	Satisfaction with democracy	Trust in People	Democracy Indices		Media Freedom		Voice and Accountability	Human Rights	E-participation
	Satisfaction with democracy % (the higher the better)	Trust in people (0-10; the higher the better)	Freedom House score Freedom in the World (0-100; the higher the better)	Economist Intelligence Unit Democracy Index (0-10; the higher the better)	Freedom of the Press score by Freedom House (0-100; the lower the better)	Press Freedom Index by Reporters without Borders (the lower the better)	Voice and Accountability - WGI (0-100; the higher the better)	Disrespect for human rights by Global Peace Index (1-5; the lower the better)	E-participation index (0-1; the higher the better)
Austria	64	5.5	93	8.16	22	16.34	93.60	1.5	0.9762
Belgium	51	5.8	96	7.51	12	11.69	95.57	1.0	0.6548
Cyprus	38	5.0	94	7.56	23	19.85	82.27	1.5	0.9524
Denmark	87	6.7	97	9.15	12	8.57	98.52	1.0	0.9643
Finland	78	6.5	100	9.2	12	6.99	99.01	1.0	0.9524
France	50	5.7	90	7.99	26	22.6	87.68	1.0	0.9048
Germany	73	5.5	94	8.67	20	15.24	95.07	1.0	0.75
Greece	33	4.8	87	7.39	44	29.01	77.34	2.0	0.7857
Ireland	75	6.0	97	9.05	18	11.91	94.58	1.0	0.8571
Italy	53	5.4	90	7.74	31	23.39	79.80	1.5	0.8214
Luxembourg	80	5.7	97	8.68	14	17.56	96.55	1.00	0.7024
Malta	53	5.1	90	7.68	23	30.46	84.24	1.50	0.8333
Netherlands	82	6.4	98	8.96	11	9.67	97.54	1.0	0.9643
Portugal	48	5.3	96	7.9	17	10.11	89.16	1.5	0.8214
Spain	50	5.5	90	8.12	28	20.44	82.76	2.0	0.8452
Sweden	83	6.0	100	9.26	11	7.24	99.51	1.0	0.8214
UK	31	5.4	93	8.54	25	21.59	90.64	1.0	0.9762
Bulgaria	39	4.9	78	6.71	42	37.29	60.59	1.5	0.8929
Czech Republic	45	5.2	91	7.67	21	23.38	77.83	1.0	0.7262
Estonia	60	5.7	94	7.84	16	15.25	88.67	1.0	1
Hungary	52	5.1	69	6.56	44	31.76	54.68	2.0	0.6786
Latvia	45	5.4	89	7.24	26	19.26	74.38	1.0	0.5833
Lithuania	50	5.6	90	7.13	21	20.15	81.77	1.0	0.7381
Poland	45	5.1	83	6.85	34	28.84	70.94	1.5	0.9643
Romania	38	5.5	83	6.4	38	24.91	61.58	1.5	0.8095
Slovakia	39	5.0	90	6.97	26	23.02	75.37	2.0	0.7024
Slovenia	25	5.6	95	7.54	23	23.1	80.79	1.0	0.8571
Croatia	36	5.1	85	6.5	41	27.95	64.04	1.5	0.8929
North Macedonia	37	4.5	66	5.89	64	31.67	44.83	1.5	0.8333
Turkey	47	5.1	32	4.48	76	49.79	24.63	4.5	0.8929
Montenegro	23	5.0	63	5.77	44	34.33	46.31	1.5	0.5476
Iceland	80	6.0	94	9.37	15	15.37	94.09	1.0	0.7738
Albania	45	4.2	66	6.08	51	30.59	52.22	2.0	0.8452
BIH	24	4.8	53	4.84	51	28.34	38.92	2.0	0.6071
Serbia	23	4.9	64	6.22	49	32.03	45.81	1.5	0.8214

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Catch-Up Index 2021: Governance Indicators Data										
Indicators/ Country	Corruption		Political Stability		Government	Regulations	Rule of Law	Conflict and tensions		E- government
	Corruption Perception Index (TI) (0-100; the higher the better)	Control of Corruption (WGI)(1-100; the higher the better)	Political instability EU (1-5; the lower the better)	Political Stability and Absence of Violence (WGI) (1-100; the higher the better)	Government Effectiveness (WGI) (1-100; the higher the better)	Regulatory Quality (WGI) (1-100; the higher the better)	Rule of Law (WGI) (1-100; the higher the better)	Global Peace Index (1-5; the lower the better)	Homicide rates (UN) (per 100,000 inhabitants; the lower the better)	E- government Development Index (0-1; the higher the better)
Austria	76	90.87	1.0	82.86	91.83	91.35	97.12	1.3	1.0	0.8914
Belgium	76	91.35	1.3	61.90	80.77	87.50	88.46	1.6	1.7	0.8047
Cyprus	57	71.63	1.8	63.33	78.85	80.77	76.44	2.0	1.3	0.8731
Denmark	88	97.60	1.0	83.81	99.04	92.31	98.08	1.3	1.0	0.9758
Finland	85	99.04	1.0	79.05	98.56	97.60	100.00	1.3	1.6	0.9452
France	69	88.94	1.5	58.57	89.42	90.87	89.42	1.7	1.2	0.8718
Germany	80	95.19	1.0	66.67	93.27	96.15	92.31	1.5	0.9	0.8524
Greece	50	56.25	1.3	57.14	66.83	70.67	60.58	2.4	0.9	0.8021
Ireland	72	89.42	1.3	82.38	86.54	93.27	88.94	1.7	0.9	0.8433
Italy	53	62.02	1.9	60.95	69.23	76.92	61.54	1.8	0.6	0.8231
Luxembourg	80	98.08	1.0	95.71	95.67	95.19	95.67	1.5	0.3	0.8272
Malta	53	61.54	1.9	89.05	77.40	77.40	79.81	1.8	1.6	0.8547
Netherlands	82	96.63	1.0	75.71	96.63	98.08	96.15	1.5	0.6	0.9228
Portugal	61	77.40	1.0	90.95	84.13	77.88	84.62	1.1	0.8	0.8255
Spain	62	73.56	1.5	59.05	79.81	81.73	80.29	1.7	0.6	0.8801
Sweden	85	98.56	1.0	86.67	97.12	96.63	98.56	1.5	1.1	0.9365
UK	77	93.75	1.1	63.81	90.38	93.75	91.35	1.5	1.2	0.9358
Bulgaria	44	50.48	1.6	66.19	65.38	71.15	54.81	1.8	1.3	0.798
Czech Republic	54	68.75	1.5	80.48	78.37	86.54	81.73	1.4	0.6	0.8135
Estonia	75	90.38	1.6	68.10	85.58	92.79	87.02	1.9	2.1	0.9473
Hungary	44	57.69	1.3	71.43	70.19	72.60	68.27	1.9	2.5	0.7745
Latvia	57	68.27	1.8	60.00	83.65	83.65	80.77	2.1	4.4	0.7798
Lithuania	60	74.52	1.4	75.24	81.25	83.17	81.25	1.8	4.6	0.8665
Poland	56	71.15	1.9	64.29	73.08	81.25	66.35	1.7	0.7	0.8531
Romania	44	51.44	1.6	65.24	40.38	67.31	64.42	1.7	1.3	0.7605
Slovakia	49	64.42	1.6	72.38	74.04	79.81	71.15	1.7	1.1	0.7817
Slovenia	60	80.29	1.0	73.81	82.21	80.29	84.13	1.6	0.5	0.8546
Croatia	47	60.10	1.6	71.90	67.31	72.12	64.90	1.5	0.6	0.7745
North Macedonia	35	38.94	2.9	46.67	52.40	69.71	46.15	2.1	1.2	0.7083
Turkey	40	44.71	3.9	10.00	54.33	54.81	44.71	3.4	2.6	0.7718
Montenegro	45	55.29	3.0	47.62	58.65	65.38	57.21	2.2	2.2	0.7006
Iceland	75	92.79	1.0	99.52	92.31	89.90	95.19	1.1	0.9	0.9101
Albania	36	33.17	2.4	52.86	50.48	63.94	38.94	2.3	2.3	0.7399
BiH	35	30.29	3.3	30.48	28.85	47.12	46.63	2.6	1.2	0.6372
Serbia	38	37.02	2.5	45.24	53.37	60.10	50.00	2.0	1.2	0.7474

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Global Catch-Up Index 2021 data

Global Catch-Up Index 2021 Indicators Data													
Category	Economy		Quality of Life					Democracy			Governance		
Weight	90%	10%	15%	10%	10%	10%	10%	45%	40%	40%	20%	35%	65%
Country	GDP per capita, PPP (current international \$), World Bank	HighTech Exports as Share of Global Exports, World Bank, UN	Gini Index (inequality) in %, World Bank	PISA Science, OECD	PISA math, OECD	PISA reading, OECD	Tertiary Education enrolment, World Bank	Life Expectancy at birth, years, WHO	Democracy Index, Economist Intelligence Unit	Global Freedom Score Freedom House	World Press Freedom Index, Reporters without Borders	Corruption Perception Index, Transparency International	World Governance Indicators (recalculated average) World Bank
Albania	14224.1	0.045	33.2	405	437	417	57.81	78.6	6.08	66	30.59	36	49
Armenia	14231.2	9.795	34.4	389	420	398	50.82	75.1	5.35	55	28.83	49	48
Australia	52203.1	21.525	34.4	503	491	503	115.95	82.9	8.96	97	19.79	77	93
Austria	58649.7	11.499	30.8	484	499	490	86.48	81.8	8.16	93	16.34	76	91
Azerbaijan	15010.4	4.956	26.6	389	420	398	35.25	73.0	2.68	10	58.77	30	28
Belarus	19683.8	4.252	25.2	474	472	471	86.60	74.2	2.59	11	50.82	47	37
Belgium	54693.4	12.021	27.2	493	508	499	80.14	81.7	7.51	96	11.69	76	84
BiH	15817.1	5.271	33	403	406	398	37.92	77.4	4.84	53	28.34	35	37
Bulgaria	24579.2	10.852	41.3	420	436	424	73.38	74.9	6.71	78	37.29	44	61
Canada	50510.7	16.513	33.3	520	512	518	75.70	82.0	9.24	98	15.25	77	93
China	16846.8	30.785	38.5	555	591	590	58.42	76.9	2.27	9	78.72	42	41
Croatia	30246.0	8.304	29.7	479	464	472	67.72	78.4	6.5	85	27.95	47	67
Cyprus	41514.5	19.874	32.7	424	448	439	88.49	81.0	7.56	94	19.85	57	76
Czech Republic	43004.5	20.805	25	490	499	497	65.59	79.1	7.67	91	23.38	54	79
Denmark	60334.8	12.044	28.2	501	509	493	81.84	81.2	9.15	97	8.57	88	95
Estonia	38819.3	5.773	30.3	523	523	530	74.23	78.5	7.84	94	15.25	75	85
Finland	51619.8	9.215	27.3	520	507	522	92.96	81.8	9.2	100	6.99	85	96
France	49377.1	26.992	32.4	493	495	493	68.36	82.6	7.99	90	22.6	69	84
Georgia	15623.2	2.568	36.4	380	398	383	66.69	73.8	5.31	60	28.64	56	63
Germany	55891.2	16.426	38.5	498	500	503	73.52	80.9	8.67	94	15.24	80	90
Greece	30869.2	12.515	32.9	457	451	452	148.53	81.9	7.39	87	29.01	50	65
Hungary	33949.6	17.458	29.6	476	481	481	52.44	76.0	6.56	69	31.76	44	66
Iceland	58512.7	38.079	26.1	474	495	475	77.59	82.6	9.37	94	15.37	75	94
Ireland	87212.0	25.973	31.4	518	500	496	75.18	82.3	9.05	97	11.91	72	89
Israel	41947.6	23.092	39	470	463	462	60.33	82.8	7.84	76	30.9	60	71
Italy	44821.0	7.833	26.1	476	487	468	66.05	83.2	7.74	90	23.39	53	68
Japan	42338.0	17.023	32.9	504	527	529	64.10	84.4	8.13	96	28.88	74	88
Kazakhstan	27466.2	29.775	27.8	387	423	397	70.68	73.2	3.14	23	50.28	38	43
Kosovo	11931.0	6.768	29	353	366	365	75.70	72.5	5.35	54	30.32	36	37
Kyrgyzstan	5223.5	0.725	27.7	359	368	377	46.45	71.6	4.21	28	30.37	31	27
Latvia	32047.3	17.242	35.1	479	486	487	94.86	75.2	7.24	89	19.26	57	75
Lithuania	38756.1	12.030	35.7	476	481	482	72.01	76.1	7.13	90	20.15	60	80
Luxembourg	120962.2	6.561	35.4	470	483	477	18.43	82.4	8.68	97	17.56	80	96
Malta	46071.2	29.782	28.7	448	472	457	64.87	82.6	7.68	90		53	78
Moldova	13572.7	2.964	25.7	424	421	428	57.98	71.9	5.78	61	31.61	34	40
Montenegro	23343.9	3.154	38.5	421	430	415	55.53	76.9	5.77	63	34.33	45	55
Netherlands	59469.1	23.065	28.1	485	519	503	87.10	82.0	8.96	98	9.67	82	93
North Macedonia	17583.4	4.223	33	393	394	413	43.12	75.8	5.89	66	31.67	35	50
Norway	67978.7	22.618	27.6	499	501	490	83.23	82.9	9.81	100	6.72	84	97
Poland	34151.8	10.113	30.2	512	516	511	69.18	77.9	6.85	83	28.84	56	71
Portugal	36760.1	6.942	33.5	492	492	492	67.93	80.7	7.9	96	10.11	61	84
Romania	32349.2	11.073	35.8	428	430	426	51.35	75.5	6.4	83	24.91	44	58
Russia	29188.9	13.003	37.5	479	488	478	86.40	73.1	3.31	20	48.71	30	31
Serbia	18929.9	3.632	38.5	439	448	440	68.14	75.7	6.22	64	32.03	38	49
Slovakia	32545.0	9.913	25	458	486	464	46.43	77.5	6.97	90	23.02	49	73
Slovenia	41193.8	7.354	24.6	495	509	507	77.88	81.3	7.54	95	23.1	60	80
South Korea	42728.0	32.407	26.1	514	526	519	98.45	83.2	8.01	83	23.43	61	78
Spain	42185.6	6.861	34.7	496	481	483	92.88	83.5	8.12	90	20.44	62	76
Sweden	55027.4	14.613	30	506	502	499	77.33	83.0	9.26	100	7.24	85	96
Switzerland	70276.6	12.914	33.1	505	515	495	63.31	83.7	8.83	96	10.55	85	97
Tajikistan	3650.1	0.36262403	34	359	368	377	31.26	71.1	1.94	8	55.52	25	12
Turkey	27318.4	3.044	41.9	466	454	468	115.04	77.7	4.48	32	49.79	40	39
Turkmenistan	15200.2	0.725	40.8	340	353	357	15.61	68.2	1.72	2	80.03	19	12
UK	48438.6	23.468	38.5	504	502	505	65.77	81.2	8.54	93	21.59	77	87
Ukraine	13350.5	5.579	26.1	466	453	469	82.67	71.8	5.81	60	32.96	33	32
USA	65279.5	18.934	41.4	505	478	502	87.89	78.8	7.92	83	23.93	67	82
Uzbekistan	7335.6	0.725	35.3	340	353	357	15.92	71.7	2.12	11	50.74	26	20

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Supplement III: About the Catch Up Index. How is the “Catching-Up” Measured?

The Catch-Up Index is a composite index, using a specifically designed model developed by EuPI of OSI-Sofia. The Catch-Up Index includes 35 countries selected on a political criteria as it covers the 28 EU member states, the candidate and potential candidate countries. The only exception is Kosovo, as there is not enough comparable statistical data available about it and despite the efforts, the lack of data left Kosovo outside of the Index.

The metric is based on rescaling the raw data on a scale from 0 to 100 (lowest to highest) to establish each country's score, and ranking each country from 1 to 35 (highest to lowest). The standardized scores make possible different rankings, comparisons, benchmarking, monitoring of performance for countries and groups of countries across categories and indicators and contribute to policy analysis and recommendations.

The Catch-Up Index contains four categories - Economy, Quality of Life, Democracy and Governance for the 35 countries included in the Index. There are scores for each category: Economy Score, Quality of Life Score, Democracy Score and Governance Score and each category has an equal weight with the other categories. There is an Overall Score, composed of the scores for the four categories.

Each category is measured through selected indicators and sub-indicators. The various data for the indicators is converted into scores, weighted on the basis of the Index methodology. The indicator scores make up the scores for the four different categories. The weights have been attributed to the indicators or sub-indicators by the expert team, based on the importance assigned to them.

The Catch-Up Index was initially designed to capture the progress of the EU10 countries in matching the rest of the EU in the categories of Economy, Quality of Life, Democracy and Governance.

But the Index allows for much broader observations and findings to be made by examining the performance of the 35 countries, comparing them across the four categories and 47 indicators and sub-indicators, and eliciting conclusions from the interdependence between the factors that define the performance. The Index allows for what is essentially multi-dimensional mapping of present-day Europe by superimposing the four fundamental categories. The index data do not only indicate a country's progress or degree of similarity relative to its peers, but also how far it is from the desired goals.

Benchmarking the EU11

In addition to the ranking of countries according to their score, there are also several benchmarks to help measure the catch up index - the average, maximum and minimum scores by groups. There are four main and one additional such benchmarks. First, there is the EU14+2 Average Score, calculated as the compare means scores of the 15 "old" EU member states plus Cyprus and Malta, which are considered as part of this group too ("Western" countries vs post-communist countries). Second, there is the EU14+2 Max (maximum) score of the highest ranking country in this group. Third, there is the

EU14+2 Min (minimum) score of the lowest ranking country in this group. Fourth, there is the EU11 Average Score, calculated as the compare means scores of the 11 "new" EU member states scores. Fifth, there is the EU28 Average Score, calculated as the compare means of the scores of all 28 EU member states.

Being aware of the limitations of Catch Up Index model and in order to provide readers with the opportunity to take advantage of the Catch-Up Index data, a special online platform has been created at www.TheCatchUpIndex.eu , where users can both view and work interactively with the data. The users of the platform can create their own “catching up” models and comparisons across countries and indicators, and visualize the outcomes in different ways.

The Economy category explained: Methodology notes

The Economy category measures the economic performance and potential of the countries in the index. Each of the four categories in the Catch Up Index are ascribed equal importance in terms of calculating a country’s overall score.

The Economy category is measured through a set of nine indicators, each of which captures a different aspect of economic performance. Some indicators gauge more than one aspect of economic performance. The metrics of the indicators are based on 14 sub-indicators, of varying weightings. The specific indicators and the weightings assigned to the sub-indicators reflect the unique model of the Catch Up Index.

The raw data used for the indicators (e.g. GDP per capita or other composite indicator scores or coefficients) are converted into a Catch-Up Index score on a scale of 0 to 100 (lowest to highest) to allow for a standardized score that can be compared across countries or categories and indicators. Each of the indicators has different weight assigned to it, according to its importance in the Catch Up Index model.

Economy Indicators	Sub-indicators	Weight*
GDP per capita	GDP per capita in PPS, EU28=100	25% (0,25)
Government debt	General government debt (% of GDP)	13% (0,125)
Credit ratings	Sovereign credit ratings	13% (0,125)
Employment	Employment rate %	8% (0,083)
Energy Intensity	Energy intensity of the economy	8% (0,083)
Information Society	Information and Communication Technology	8% (0,083)

Research and Development	Patents granted by USPTO per capita	4% (0,042)
	High-tech exports as % of manufactured exports	4% (0,042)
Market development	Doing Business rank	4% (0,042)
	Economic Freedom score	4% (0,042)
Transport infrastructure	Motorways per area 1000 km ²	2% (0,021)
	Motorways per 100,000 inhabitants	2% (0,021)
	Other roads per 1000 km ²	2% (0,021)
	Other roads per 100,000 inhabitants	2% (0,021)
<p>***The weight in percentages is an approximation, and the weight is also provided in fractions (the total sum is 100% or 1).</p>		

GDP per Capita (PPS with EU28=100 basis, Eurostat) remains the most important indicator of economic activity and is assigned 25% (0.25) weight in the total Economy category.

Government Debt, measured as a % of GDP, is second in importance with 12.5%. The global economic calamities of recent years, and especially the ongoing debt crisis in Europe, have clearly demonstrated the critical importance of government debt as a factor for the economic vitality of a country.

The **Sovereign Credit Ratings** – or creditworthiness and level of investment risk - of a country are also attributed high importance in the index, with a 12.5% (0,125) weight. The index uses a composite, rescaled score of the ratings of the three major agencies (Fitch, Moody's and Standard & Pours).

Employment, with a weight of 8% (0,083) is a measure of an economy's potential to generate jobs and integrate as much as possible of the labor force in the labor market; this is measured through the share of working-age people in employment.

Energy Intensity, also ascribed an 8% weighting, is a measure of an economy's energy efficiency, calculating energy consumption divided by GDP as kilogram of oil equivalent per €1000. Energy intensity is also an important measure of an economy's competitiveness, because high energy inefficiency incurs more costs in production and services.

Research and Development, again with a weight of 8% (0,083) is a measure of the level of development and the “quality” of contemporary economies, including their competitiveness. The index uses two sub-indicators. The first is the number of patents registered from a country with the United States Patent and Trademark Office (USPTO) annually on a per capita basis. The second indicator is the share of high-tech exports in a country’s manufactured exports.

The **Market Development** indicator (also 8% (0,083)) is the composite score of two sub-indicators – the World Bank’s Ease of Doing Business ranking and the Heritage Foundation/Wall Street Journal Index of Economic Freedom. The latter defines the highest form of economic freedom as “an absolute right of property ownership, fully realized freedoms of movement for labor, capital, and goods, and an absolute absence of coercion or constraint of economic liberty beyond the extent necessary for citizens to protect and maintain liberty itself.”

The **Transport Infrastructure Indicator** (8% (0,083)) is a measure of a country’s economic development and its potential for economic activity. The index uses four sub-indicators, based on calculating coefficients of motorways and other roads on a per capita and country area basis.

The ingredients of democracy: Methodology notes

Catching up in Democracy is essential for the post-communist member states of the EU, particularly given that the Copenhagen accession criteria for EU membership primarily focused on democracy. But although EU membership has often been perceived as a watershed in the political transition of the EU11 group, or even the end of that transition, it now appears that the newer members may not have achieved parity with more developed European nations in their progress in building democratic institutions and societies.

The Catch-Up Index was designed to analyse several aspects of democracy that are of particular significance for the newer member states, and those that are aspiring to be.

The Democracy category has equal weighting with the other three categories in the Catch-Up Index (Economy, Quality of Life and Governance). This category is measured through a set of seven indicators, which use nine sub-indicators. The raw data drawn from opinion polls and other composite indicator scores are converted into the Catch-Up Index score on a scale of 0 to 100 (lowest to highest) to give a standardized score that allows for comparison across countries, categories and indicators. Each of the indicators has a different weight assigned to it according to its importance in the index model.

Democracy Indicators	Sub-indicators	Weight
Democracy Indices	Freedom House score Freedom in the World	20% (0,195)
	Economist Intelligence Unit Democracy Index	20% (0,195)
Media Freedom	Freedom House Freedom of the Press score	10% (0,98)
	Reporters without Borders Press Freedom Index	10% (0,98)
Satisfaction with democracy	Satisfaction with democracy %	10% (0,98)
Trust in People	Trust in people	10% (0,98)
Voice and Accountability	Voice and Accountability - WGI	10% (0,98)
Human Rights	Political terror by Global Peace Index	10% (0,98)
E-participation	E-participation index	2% (0,024)
<p><i>***The weight in percentages is an approximation, and the weight is also provided in fractions (the total sum is 100% or 1).</i></p>		

The first indicator used to measure democracy is composed of two established **composite democracy indexes** – those of **Freedom House** and the **Economist Intelligence Unit (EIU)**. Each was attributed very high importance in the Democracy category with 20% (0,195) weight (or 40% for both) because they assess the overall democracy in a country. The Freedom of the World index was used from Freedom House, rather than the specialized post-communist states’ Nations in Transit index, because it does not encompass the Western European states. The EIU Democracy Index was used because its scores are more nuanced than the Freedom of the World scores, which allows for better distinction between the quality of democracies in the European states.

Media Freedom was attributed special attention in the Catch-Up Index because the media is essential to the democratic process – especially in the post-communist states. The Catch-Up Index relies again on two established media freedom indexes – of Freedom House and of Reporters without Borders. Each is assigned 10% (0,98) weight, giving the Media Freedom indicator a 20% overall weight.

Satisfaction with Democracy measures the attitude of citizens towards the democratic systems of governance in their countries. This is one of the only two indicators (along with Trust in People) that relies on public opinion surveys (in this case the main source is Eurobarometer), and the scores are based on the proportion of citizens who approve their countries’ democratic systems.

Trust in People measures the level of people’s trust of those who are outside of their immediate family or close friends. Literature abounds on the importance of trust for democracy - above all Francis Fukuyama’s “Trust”, – or economy and the successful organization of society. In this case, the Catch-Up Index employs the measure of Trust in People as a proxy for civil society development, given the limitations of available data on similar indicators for all the countries in the index.

Voice and Accountability, with a weight of 10% (0,98) , is a composite indicator of the World Bank’s World Governance Indicators (WGI). This includes perceptions of the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. The WGI scores also use World Bank assessments and reports that are not publicly available.

Absence of **Political terror** is also deemed essential for a functioning democracy and carries a weight of 10%. The scores are based on Global Peace Index “Political terror” indicator, e.g. identifying state terror, or violations of physical and personal integrity rights carried out by the state.

E-participation (2% (0,024)) measures the level of participation in decision-making, governance or similar activities that is enabled by Information and Communication Technologies. For example, the facilitation of citizens’ political participation through internet or cellular technologies within the broader “e-democracy” concept. Facebook advocacy or the “twitter revolutions” offer specific examples of similar phenomena.

Quality of Life: Methodology notes

Quality of Life is the category most influenced by the “bottom-up” approach in constructing the index. The metrics of the category have been designed to establish how wealthy people are and to what degree social issues affect them, such as income inequality, risk of poverty and long-term unemployment. The indicators also aim to assess levels of access to higher education and the quality of education available, as well as whether people are living longer, healthier lives with access to good quality healthcare services.

These criteria are prerequisites for individuals to have good quality of life and for the “health” and successful development of society at large. It does not come as a surprise that the majority of the citizens of the newer member states (and the candidates) associate EU membership above all with improved quality of life, at least closer to that of their more established EU counterparts.

The raw data used for the indicators (e.g. life expectancy in years, and other composite indicator scores or coefficients) are converted into the standardized Catch-Up Index score, on a scale from 0 to 100 (lowest to highest), to allow for comparison across countries’ categories and indicators. As was the case in the other categories, each of the indicators has a different weight assigned to it, reflecting its importance in the Catch-Up Index model.

Quality of Life Indicators	Sub-indicators	Weight
Welfare of consumers	Actual individual consumption with EU28=100	20% (0,2)
Social issues	Inequality - Gini coefficient	7% (0,067)

	Relative median at-risk-of-poverty gap (%)	7% (0,067)
	Long-term unemployment rate (%)	7% (0,067)
Education	Share (%) of early school leavers	5% (0,05)
	Share of population (%) with university degree	5%(0,05)
	PISA* score in reading literacy	3% (0,033)
	PISA score mathematical literacy	3% (0,033)
	PISA score in scientific literacy	3% (0,033)
Health	Healthy life expectancy at birth in years	5% (0,05)
	Life expectancy in years	5% (0,05)
	Infant mortality by age of 5	5% (0,05)
	EuroHealth Consumer Index	5% (0,05)
Human Development	Human Development Index (UN)	20% (0,2)
<p>* Programme for International Student Assessment (OECD).</p> <p>**The weight in percentages is an approximation, and the weight is also provided in fractions (the total sum is 100% or 1).</p>		

Welfare of Consumers is attributed 20% (0,2) weight in the category. It is based on data from Eurostat's Actual Individual Consumption dataset, which is calculated on EU28=100 basis (rescaling each country's data as a fraction of the EU mean).

The **Social Issues** indicator, with a total weight of 21%, comprises three sub-indicators that measure different aspects of social problems in a society. The first assesses social inequality using the Gini coefficient – the greater the inequality, the lower a country's score in the index. The second sub-indicator is based on Eurostat's relative median at-risk-of-poverty gap indicator. The third sub-indicator measures long-term unemployment in society, which signals the existence of more deep-seated social problems than the basic unemployment rate.

The **Education** indicator has been designed to reflect primarily the quality of education, rather than the quantity, given that the GDP share of education or the number of teachers or students do not always correspond to good outcomes. This is especially valid with regard to the new member states, where often inefficient and unreformed systems produce poor results, notwithstanding the funds or manpower channelled into them.

As is the case with many of the index indicators, their data can also be useful in assessing other aspects of the same category or, in this case, other categories. For example, as well as being a key indicator for

Quality of life, education is relevant in assessing economic potential, democracy and good governance. The sub-indicator on early school-leavers assesses the share of young people giving up education and training prematurely; this may also help to gauge broader social problems. The second sub-indicator is the share of the population that hold university degrees. The next three education-related sub-indicators are based on the results of the Organisation for Economic Co-operation and Development's *Programme for International Student Assessment (PISA)*. The PISA scores go beyond the performance of high-school students and survey the broader state of a country's education sector, for example qualification levels of teachers and the quality of universities.

The **Health** indicator is likewise designed to focus more on the outcomes than on less indicative criteria such as share of GDP or the number of medical workers. One sub-indicator is life expectancy, measuring how many years a person is expected to live, while another is healthy life expectancy, specifically taking into account life without major illness. The indicator for infant mortality is also indicative of the broader state of health services or social services in a country (or even the state of society more broadly) because it assesses the likelihood of children surviving to the age to 5. The fourth sub-indicator is a composite of the EuroHealth Consumer Index by the Health Consumer Powerhouse, which measures the quality of healthcare systems in a country (including by outcome).

The United Nations' **Human Development Index** is a composite index measuring life expectancy, literacy, education and standards of living for countries worldwide. It has similar dimensions to the Catch-Up Index, but includes additional data and methodology, which complements the other indicators but does not overlap with them.

Governance category explained: Methodology notes

The newer and aspiring members typically perceive established EU member states to be well-governed, politically stable, have low levels of corruption, effective governance, a successful rule of law, and an absence of substantial tensions, conflicts and crime. Indeed, from a wider perspective this impression is accurate. The EU is truly an oasis of stable and well-governed states by comparison with some of the more unstable or failing states in other parts of the world. The EU is very much geared toward instilling "good governance" through its common institutions and the *acquis communautaire*.

But comparisons between EU members and aspiring candidates reveal differences even among relatively homogenous groups. Some of these differences are made strongly apparent, as in the case of the EU's monitoring of the progress of members Bulgaria and Romania in fighting corruption, organized crime and judicial reform, and the conditionality imposed on candidates.

The Catch-Up Index measures the quality of governance in a country through seven indicators based on ten sub-indicators.

Governance Indicators	Sub-indicators	Weight
Corruption	Corruption Perceptions Index - Transparency International	8% (0,08)
	Control of Corruption - World Governance Indicators	8% (0,08)
Political stability	Political instability by Economist Intelligence Unit	8% (0,08)
	Political Stability and Absence of Violence - World Governance Indicators	8%(0,08)
Government effectiveness	Government effectiveness - World Governance Indicators	16% (0,16)
Regulatory quality	Regulatory quality - World Governance Indicators	16% (0,16)
Rule of law	Rule of Law – World Governance Indicators	16% (0,16)
Conflict, tensions and crime	Conflicts and tensions in the country - selected Global Peace Index indicators	8% (0,08)
	Homicide rates per 100,000 population	8% (0,08)
E-government	E-government development index	4% (0,04)
<p><i>*The weight in percentages is an approximation, and the weight is also provided in fractions (the total sum is 100% or 1)</i></p>		

The **Corruption** indicator is essential for gauging the quality of governance because corruption affects all aspects of the decision-making and implementation process. The Corruption indicator has a weighting of 16% in the Governance category, divided between two sub-indicators – Transparency International’s Corruption Perceptions Index and the Control of Corruption dimension of the World Bank’s World Governance Indicators. The first indicator measures public perceptions of the level of corruption in a country. The second indicator as defined by its authors “captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.”

The second indicator measures a country’s level of **Political stability**, as in the threat of government destabilization through social unrest or unconstitutional or violent means through two sub-indicators. These are the Economist Intelligence Unit’s Political Instability Index and the Political Stability and Absence of Violence dimension of the World Bank’s World Governance Indicators. The EIU scores “show the level of threat posed to governments by social protest.” The World Bank indicator measures “the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism.” The level of political stability indicates any flaws in governance. Although this indicator also relates to democracy – in terms of the channelling of discontent through the process of representation and problem solving – political

stability is more of a measure of governance. The indicator's weight is 16% divided between the two sub-indicators.

Government effectiveness is an indicator of whether governance is being conducted well; the World Bank states that it “captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.” Government effectiveness also has a weighting of 16% in the Governance category.

Regulatory quality is another World Governance Indicators that “captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.” This indicator too has a 16% weighting.

Rule of law is essential for good governance, as the newest EU members and candidates have found out the hard way. The indicator is again based on the World Governance Indicators, which state that it “captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.”

Conflict, tensions and crime is a composite indicator, based on two sub-indicators relating to a country's crime levels and conflicts and tensions. The conflicts and tensions sub-indicator is based on selected data from the Global Peace Index (Institute for Economics and Peace/Economist Intelligence Unit). The homicide rate on a per capita basis serves as a proxy for measuring the crime levels in a country, because data pertaining to other reported crimes is less easily comparable (different definitions or practices for registering crimes) or country data is unavailable. The indicator's weight of 16% is divided between the two sub-indicators.

The **E-government** indicator is based on the UN's E-government surveys and scores. It is included in the index because it is a measure of government efficiency and delivery of services to citizens, and because it facilitates transparency and accountability as the world grows more connected. Moreover, e-government indicates the level of development of contemporary societies. As the UN survey has identified, the scores comprise two basic aspects of e-government, 'government to citizen' (G to C) and 'government to government' (G to G), with a smaller element of 'government to business' interactions. Given that e-government is indicative of many aspects of good governance, but not indispensable, it is ascribed a weight of 4%.

Note on data sources, timeframe and replacing missing data

The Catch-Up Index data collection relied on single sources for each of the indicators, but in case such data was missing, compatible data from other sources based on the same methodology was included. If country data for a specific year was missing, data from the closest period was included in the Index. In case there was no compatible data, the data imputation method was used as explained in the methodological notes. The missing data was replaced using either the statistical procedure, described in the annex or in a limited number of cases - expert-based imputations. In the case with the Index when

the data set is about multiple countries, missing data for a given country was replaced with data for a country with very similar characteristics.

Where a single sub-indicator included several sources or the data was not numerical (e.g. Credit Agencies Index; Doing Business ranking), the data was rescaled in advance by the project team before being recalculated into z-scores.

The data used was mainly released in 2020 and 2021 and it is the most recently available, but not later than 30 November 2021 so there is a necessarily a time lag in the index.

Economy Indicators	Sub-indicators	Weight	Sources
GDP per capita	GDP per capita in PPS with EU28=100	0,250	Eurostat, European Central Bank, national statistics
Government debt	General government debt (% of GDP)	0,125	Eurostat, national statistics
Credit ratings	Sovereigns credit ratings	0,125	Fitch, Moody's, Standard and Poor's (own calculations of rescaled credit ratings)
Employment	Employment as percentage of population, age group 15-64	0,083	Eurostat, national statistics
Energy Intensity	Energy intensity of the economy	0,083	Eurostat, national statistics
Information Society	Information and Communication Technology	0,083	ICT Development Index, International Telecommunication Union
Research and Development	Patents granted by USPTO per capita	0,042	United States Patent and Trademark Office
	High-tech exports as % of manufactured exports	0,042	World Bank
Market development	Doing Business rank	0,042	Ease of Doing Business, World Bank (Rescaled ranking)
	Economic Freedom score	0,042	Index Economic Freedom, Heritage Foundation and Wall Street Journal
Transport infrastructure	Motorways per area 1000 km ²	0,021	Eurostat, national statistics
	Motorways per 100000 inhabitants	0,021	Eurostat, national statistics
	Other roads per 1000 km ²	0,021	Eurostat, national statistics
	Other roads per 100000 inhabitants	0,021	Eurostat, national statistics

Democracy Indicators	Sub-indicators	Weight	Source
Democracy Indices	Freedom House score Freedom in the World	0,195	Freedom in the World, Freedom House
	Economist Intelligence Unit Democracy Index	0,195	Democracy Index, Economist Intelligence Unit
Media Freedom	Freedom of the Press score by Freedom House	0,098	Freedom of the Press, Freedom House
	Press Freedom Index by Reporters without Borders	0,098	Press Freedom Index by Reporters without Borders
Satisfaction with democracy	Satisfaction with democracy %	0,098	Eurobarometer, European Values Study, World Values Survey
Trust in People	Trust in people	0,098	European Quality of Life Survey by Eurofound, European Values Study, World Values Survey
Voice and Accountability	Voice and Accountability - WGI	0,098	Voice and Accountability of the World Governance Indicators, World Bank
Political terror	Political terror by Global Peace Index	0,098	Political terror indicator, Global Peace Index by the Institute for Economics and Peace
E-participation	E-participation index	0,024	E-government survey, United Nations Department of Economic and Social Affairs

Quality of Life Indicators	Sub-indicators	Weight	Sources
Welfare of consumers	Actual individual consumption with EU28=100	0,200	Eurostat, national statistics
Social issues	Inequality - Gini coefficient	0,067	Eurostat, national statistics
	Relative median at-risk-of-poverty gap (%)	0,067	Eurostat, national statistics
	Long term unemployment rate (%)	0,067	Eurostat, national statistics, UNDP
Education	Share (%) of early school leavers	0,050	Eurostat, national statistics, UNDP
	Share of population (%) with university degree	0,050	Eurostat, national statistics, UNDP
	PISA score in reading literacy	0,033	OECD Programme for International Student Assessment (PISA)
	PISA score mathematical literacy	0,033	OECD Programme for International Student Assessment (PISA)
	PISA score in scientific literacy	0,033	OECD Programme for International Student Assessment (PISA)
Health	Healthy life expectancy at birth in years	0,050	World Health Statistics, World Health Organization
	Life expectancy in years	0,050	World Health Statistics, World Health Organization
	Infant mortality by age of 5	0,050	World Health Statistics , World Health Organization
	EuroHealth Consumer Index	0,050	EuroHealth Consumer Index, Health Consumer Powerhouse
Human Development	Human Development Index	0,200	Human Development Index, United Nations

Governance Indicators	Sub-indicators	Weight	Sources
Corruption	Corruption Perception Index	0,080	Corruption Perception Index, Transparency International
	Control of Corruption - World Governance Indicators	0,080	Control of Corruption - World Governance Indicators, World Bank
Political Stability	Political instability by Economist Intelligence Unit	0,080	The Political Instability Index, Economist Intelligence Unit
	Political Stability and Absence of Violence - World Governance Indicators	0,080	Political Stability and Absence of Violence - World Governance Indicator, World Bank
Government Effectiveness	Government Effectiveness - World Governance Indicators	0,160	Government Effectiveness - World Governance Indicators, World Bank
Regulatory Quality	Regulatory Quality - World Governance Indicators	0,160	Regulatory Quality - World Governance Indicators, World Bank
Rule of Law	Rule of Law - World Governance Indicators	0,160	Rule of Law - World Governance Indicators, World Bank
Conflict, tensions and crime	Conflicts and tensions in the country - selected Global Peace Index indicators	0,080	Conflicts and tensions in the country, based on selected Global Peace Index (GPI) indicators, GPI is created by the Institute for Economics and Peace
	Homicide rates per 100,000 population	0,080	United Nations Office on Drugs and Crime
E-government	E-government development index	0,040	E-government Development Surveys, United Nations

Supplement IV: Methodology of the Statistical Analysis for the Catch-Up Index

1. Basic Indicators. Sources of information

The Catch-Up Index uses 47 basic indicators for 35 European countries. The data is gathered from different sources. Supplement III: “About the Catch-Up Index. How is the “Catching-Up” Measured?” contains descriptions for each of the basic indicators as well as the time period of the data and their respective sources. The indicators are divided thematically into four categories:

- Economy – 14 indicators;
- Democracy – 9 indicators;
- Quality of Life – 14 indicators;
- Governance – 10 indicators.

2. Procedure for replacing missing data (*Data Imputation*)

The basic information represents a table (a matrix), size 35 x 47, i.e. 47 indicators for 35 countries, which contain 1,645 absolute values. About 0.5% of them are missing values either because there is no such information gathered or there is no up-to-date data. In these cases, the procedure for data imputation to replace missing data – values – was applied. The procedure was done separately for each of the four basic categories.

Algorithm for data imputation

- a. Any of the four categories that contain a basic indicator with a missing value is fixed. It represents a matrix with a size of 35 multiplied by the number of basic indicators, where the countries are in the rows and the indicators are in the columns.
- b. All indicators (rows) that contain at least one missing value are deleted, thus creating a new matrix with the same number of rows and a smaller number of columns (k).
- c. Each of the 35 countries included in the index is a point in the k-dimensional space. The Euclidian distances between the side with a missing value and all the other sides are then calculated.
- d. After the minimal Euclidian distance is calculated, the result is checked against the existing data for the remaining 34 countries and this value is taken to replace the missing value.
- e. The steps are then repeated until all missing values of the basic indicators in a given category are replaced.

3. Calculation of standardized value (z-scores)

The Catch Up Index uses basic indicators with different raw data (percentages, diverse index scores, years, etc.). This necessitates the standardization of the values according to a statistical procedure, which recalculates them in one and the same scale and at the same time preserves the order and proportions between them. The standardizing is done following the normalization method of z-scores, which uses mean weighed score and standard deviation.

Algorithm for calculating the standardized values of the basic indicators (z-scores)

4. The mean arithmetic values **mean_j** for the countries **x_{ij}** are calculated for each of the basic indicators, according to the formula:

$$\text{mean}_j = \Sigma (x_{ij}) / 35$$

where **j** varies from 1 to 47 (the total number of basic indicators), and **i** changes from 1 to 35 (the total number of countries).

5. The dispersions for the values on sides **x_i** is calculated for each of the indicators:

$$\text{sigma}_j = \Sigma [(x_{ij} - \text{mean}_j)^2] / (N-1),$$

where **j** varies from 1 to 47, and **i** varies from 1 to 35.

This quantity shows how diverse are, on average, the different cases from their mean value.

6. The standardized values – so-called *z-scores* – are calculated:

$$z_{ij} = (x_{ij} - \text{mean}_j) / \sqrt{\text{sigma}_j}.$$

Through this procedure the distribution of the values for the countries for each of the indicators is translated and the mean 0 and dispersion 1 are calculated, while the order and proportions between the values for the different countries are preserved.

In order to transform the standardized values into scores on a scale from 0 to 100, one more transformation is necessary:

$$z_{ij} = z_{ij} * 20 + 50.$$

The values smaller than 0 and bigger than 100 (“extreme values”), i.e. those different from the mean value of more than 2.5 standard deviation receive scores 0 and 100, respectively.

The standardized values, achieved as a result of the calculations above, are suitable for further procedures. There is a simple correspondence between these scores and the absolute values (the raw data) of the basic indicators and the only exceptions are the “extreme values” or so-called outliers.

7. Weighting the standardized values. Formation of the four categories

Each of the four categories – Economy, Quality of Life, Democracy and Governance contain different numbers of basic indicators with different levels of importance. The level of importance is defined by the authors of the index. That is why the online platform of the Index (www.TheCatchUpIndex.eu) offers two options for its users.

- a. The standard index is calculated on the basis of the already defined weights of the basic indicators;
- b. The creation of custom index – My Index in the online platform – for which each individual user can define the weights for the indicators.

The weights for each indicator, ascribed by the research team, can be found in this section. For each of the four categories, the weights represent a column vector consisting of the respective number of basic indicators. When calculating the weighted standardized values, the formula for matrix multiplication is used. The matrix contains the non-weighted standardized values with rows representing the countries, the columns the basic indicators and the vector the weights. For each separate country, the procedure is to calculate the weighted sum.

8. Formation of the composite Catch Up Index and its Overall Score

The composite Catch Up Index is calculated as an un-weighted mean of the values of each of the four basic categories for each of the 35 European countries included in the index. In other words, each of the four basic categories is equal in importance in respect to the composite Catch Up Index.

$$\text{Overall_score}_i = (\text{Economy_score}_i + \text{Quality_of_life_score}_i + \text{Democracy_score}_i + \text{Governance_score}_i) / 4,$$

where i varies from 1 to 35 (the total number of countries in the model).

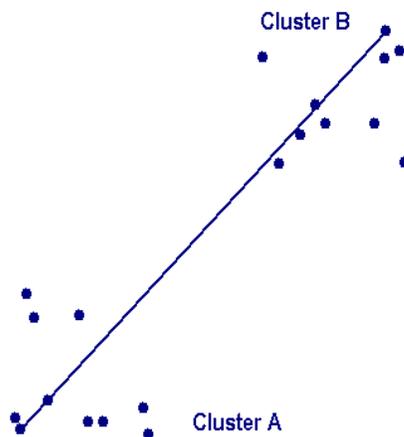
The resulting index is at the basis of the overall ranking of the countries and is subjected to further statistical processing (cluster analysis, correlation analysis, tests for statistical significance, trend analysis).

9. Cluster analysis

The research included hierarchical agglomerative cluster analysis of the Complete Linkage (Furthest Neighbor) with the help of the SPSS statistical package for analysis and processing of data. The metric system used is the standard Euclidian distance.

Algorithm of the cluster analysis

- a. First, each country is defined as the only one in a single group – i.e. cluster.
- b. Second, the standard Euclidian distances (2-norm distance) are calculated between the values (the scores) of each pair of countries with the aim to group the countries with the most similarities in one group in relation to their values – the overall score of the Catch Up Index or the scores in any of the four categories.
- c. The agglomeration of the clusters continues with each other step until all the countries are included in one common group. This process is defined by the distance between two clusters. In the case of the Complete Linkage (Furthest Neighbor) clustering the distance is defined through the maximum standard Euclidian distance between elements from the two clusters.
 - a. $D(r,s) = \text{Max} \{d(i,j) : \text{where element } i \text{ belongs to cluster } r, \text{ and } j \text{ to cluster } s\}$



- d. The decision for the number of clusters is taken by the researcher, in accordance with the desired maximum distance between the elements in each cluster. The bigger the distance, the smaller the number of clusters.
- e. The cluster analysis is best represented in a dendrogram, which shows the distances between the different clusters as well the elements they are composed of.

10. Tests for statistical significance of differences. The five point rule.

The data on the basis of which the Catch Up Index is calculated are bound to have certain errors. The reason is that some of the basic indicators are based on sociological surveys, others though objective (e.g. GDP per capita) also contain certain errors as a result of the method of their calculation. The procedure for missing data replacement also contributes to the size of the overall error. This necessitates the implementation of tests for statistical significance of differences (compare means) between the different standardized values (z-scores) of the Overall Score and the scores of countries in different categories. The results of these tests show that a difference of five or less standardized scores is not statistically significant with a significance level of $\alpha = 0.05$. This means that with a *confidence level* $\gamma = 1 - \alpha = 0.95 = 95\%$ it can be claimed that the standardized values of the countries in the Catch Up Index and the four categories vary within ± 5 z-points. This conclusion should be taken into account when analyzing the results of the cluster analysis.

11. Correlation analysis

The Pearson correlation coefficients are calculated for each of the pairs in the vectors: Overall Score, Economy Score, Quality of Life Score, Democracy Score and Governance Score. They demonstrate *that at a significant level* $\alpha = 0.01$, each of the two pair vectors have strong linear correlation, with each correlation coefficients are bigger than 0.9.

12. Graphs, linear trends and their confidence intervals

The direct consequence of the correlation analysis is that between two of the five indices – i.e. *Overall Score, Economy Score, Quality of Life Score, Democracy Score and Governance Score* – there is a strong direct correlation, which is represented by a corresponding linear trend (straight line with a positive slope). The coefficients in the equations of these straight lines are calculated using the method of linear regression. Each of the straight lines should be observed and analyzed in the corresponding confidence interval, which is determined by the value of their determination coefficient (*R-square*), *which in this case is equal to the square of the respective Pearson correlation*.

The European Catch-Up Index Project

Catch-Up Index methodology

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Catch-Up Index online platform at www.TheCatchUpIndex.eu

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About EuPI

The European Policy Initiative (EuPI) of Open Society Institute – Sofia Foundation aims to contribute to improving the ability of new member states to effectively impact common European policies through good quality research, policy recommendations, networking and advocacy. The initiative operates in the ten new member states from CEE through a network of experts and policy institutes.

Web-site www.osis.bg

Web-site: <http://www.TheCatchUpIndex.eu>

Main research reports:

“Running on Fumes: Findings of the European Catch-Up Index 2019”

“How Hard Can It Be? Findings of the European Catch-Up Index 2018”

“The Media Literacy Index 2019: Just Think about It”

“Try harder. Findings of the European Catch-Up Index 2017”

“Common Sense Wanted: Resilience to ‘Post-Truth’ And Its Predictors In The New Media Literacy Index 2018”

“Can this be true? Predictors of media literacy and resilience to the post-truth phenomenon in Europe”

“Don’t Stop Now Findings of the European Catch-Up Index 2016” contains the findings of the Catch-Up Index 2016 edition.

“Don't Panic: Findings of the European Catch-Up Index 2015” contains the findings of the Catch-Up Index 2015 edition.

“The Gravity Effect: Findings of the European Catch-Up Index 2014”, contains the findings of the Catch-Up Index 2014 edition.

“It’s a Process: Findings of the European Catch-Up Index 2013” contains the findings of the Catch-Up Index 2013 edition.

“Aftershocks: What Did the Crisis Do to Europe?” contains the findings of the Catch-Up Index 2012 edition.

“State of the Union: A Big Bang Theory of Europe” contains the findings of the first edition of the Catch-Up Index 2011.

“The Unfinished Business of the Fifth Enlargement Countries” analyzes the problems faced by the ten new member states after their accession to the EU in eleven policy areas including political development, the economy, the healthcare system and education.

A series of reports "The EU New Member States as Agenda Setters in the Enlarged European Union" look at the positions of the new Central and Eastern European EU Member States on a selected number of issues on the EU agenda in seven policy areas: economic issues, minority integration, energy and climate, common agriculture policy, foreign and security policy, justice and home affairs and institutional issues.

The publication "Economic and Political Challenges of Acceding to the Euro area in the post-Lehman Brothers' World" (Summary report and nine Country Reports) is developed within the project “Economic and Political Challenges of Acceding to the Euro area in the post-Lehman Brothers' World”.

www.TheCatchUpIndex.eu

A special online platform was created at www.TheCatchUpIndex.eu, where users can view and work interactively with the data of the index, make comparisons across countries and indicators and visualize the outcomes in different ways.

There are basically three modes of usage. There is the Catch-Up Index standard format, which is generated on the basis of EuPI's own model. Alternatively, users can produce their own custom catch-up index by selecting categories and indicators and changing their weights. The third usage mode allows for country by country comparison across selected indicators or benchmarks.