

## **APPENDIX SECTION 1.**

### **BACKGROUND ON THE 2021 SURVEY AND SAMPLE**

The field work for the full sample began during the month of October, 2020 and concluded in the first week of February 2021. The interviews were conducted in the local majority language in each country/region. The results were returned to the Quality of Government Institute in February, 2021. The E.U. regional survey was undertaken by Efficienc 3 (E3), a French market-research, Survey Company specializing in public opinion throughout Europe for researchers, politicians and advertising firms. E3 has also conducted the 2010, 2013 and 2017 rounds of the EQI and were thus familiar with the question format and goals of the survey. E3 conducted the interviews themselves in several countries and used sub-contracting partners in others. The respondents, from 18 years of age or older, were contacted randomly via telephone in the local language. Computer Assisted Telephone interviews (CATI) were conducted via both landlines and mobile phones, with both methods being used in most countries. Decisions about whether to contact residents more often via land or mobile lines was based on local expertise of market research firms in each country. Online interviews were also included this year as a compliment to the traditional CATI interviews, thus increasing access to certain demographic groups (namely younger people) and increasing the sample size significantly compared to previous years. Moreover, for the first time, all EU countries, including even the smaller member states, are included in the survey. For purposes of regional placement, respondents were asked the post-code of their address to verify the area/ region of residence if mobile phones were used, or if they were an online respondent.

To achieve a representative sample, random digit dialing (RDD) was used for all CATI respondents (mobile and landline) and for landline respondents, what was known in survey-research as the ‘next birthday method’ was used. To avoid interviewing the person who answers the phone, the next birthday method asks to interview the person within the household whose birthday is next. The ‘next-birthday’ method, which simply requires the interviewer to ask the person who answers the phone who in their household will have the next birthday, still obtains a reasonably representative sample of the population. The interviewer must take the person who has the next coming birthday in the household (if this person is not available, the interviewer makes an appointment), thus not relying on whomever might simply be available to respond in the household. The next-birthday method was thus chosen to make up for what might be lost in demographic representation in the sample would by a better distribution of opinion. For personal mobile phone CATI interviews, the individual who is randomly contacted is asked to conduct the interview.

Along with the CATI sample, we add online respondents to the 2021 EQI survey. With respect to the online sample, for reasons of access, a random sample is not possible, thus the standard quota method was employed, based on gender, age and education demographics at the NUTS 2 regional level. In addition to the added value of lower costs and reaching a wider group of younger respondents that would not otherwise answer their mobile phones, the online administration is of particular interest for a topic such as the EQI, where sensitive questions about perceptions and experiences with corruption, for example, could be affected by social desirability biases from interviewer-administered surveys, such as face-to-face or over a telephone. In other words, many argue that respondents are more likely to answer truthfully about such sensitive topics when taking self-administered surveys, thus providing more accurate data (Kreuter et al 2008; Heerwegh 2009). However, in contrast to the telephone interviews where respondents are randomly contacted, these respondents participate voluntarily, which renders this sample less representative. To increase the number of possible participants in online sample, E3 worked with local partners to create a multi-channel communication of online and off-line networks to recruit potential respondents. These channels include using banners on various portals and websites, email recruitment via panel owner’s databases, newsletters, brand communications, loyalty website and social media platforms. The firm also actively recruited via telephone and face-to-face interactions. All survey email invitations included a general description of the survey, confidentiality and anonymity statements, for panel members, the opportunity to unsubscribe or opt-out of future research; and an appropriate privacy policy or statement.

In addition, to compensate for some key demographic over/under-representation upon receiving the final sample, E3 provides weights based on age, gender and education for each region, comparing the sample drawn to actual demographic statistics from the latest figures provided by Eurostat. This is done for both the CATI and online sample, which we could use to calculate an individual weight for each individual in the sample. In the end, we find variation in response and refusal rates by country, which could have to do with many factors including the sensitivity of one of the primary the topics at hand – corruption. A breakdown of the sample is listed in Table A1 below by country.

**TABLE A1.**  
**Sample by country**

Country	NUTS regions	Target n per NUT	Online	CATI	Total respondents	% of sample
Germany†	38(16)	500 (1188)	9647	9646	19293	14.84%
Romania	8	500	2084	2084	4168	3.21%
Italy	21	600	6454	6453	12907	9.93%
Austria	9	500	2258	2258	4516	3.47%
Poland	17	600	5279	5280	10559	8.12%
Spain	17	600	5204	5205	10409	8.01%
Sweden	8	500	2039	2038	4077	3.14%
Finland	5	500	1248	1248	2496	1.92%
Denmark	5	500	1277	1278	2555	1.97%
Ireland	3	500	754	753	1507	1.16%
Belgium†	11 (3)	500 (1834)	2857	2856	5713	4.39%
Netherlands	12	500	3081	3082	6163	4.74%
Hungary	8	500	2041	2042	4083	3.14%
Slovakia	4	500	1041	1040	2081	1.60%
Croatia	2	500	520	519	1039	0.80%
Bulgaria	6	500	1541	1541	3082	2.37%
France	27	500	6646	6646	13292	10.23%
Republic	8	500	2474	2474	4948	3.81%
Portugal	7	500	1788	1787	3575	2.75%
Greece	13	500	3421	3421	6842	5.26%
Luxembourg	1	500	260	260	520	0.40%
Estonia	1	1000	533	533	1066	0.82%
Latvia	1	1000	519	519	1038	0.80%
Lithuania	2	1000	1020	1019	2039	1.57%
Slovenia	2	500	508	508	1016	0.78%
Malta	1	500	0	505	505	0.39%
Cyprus	1	500	0	502	502	0.39%
<i>total</i>			<i>64494</i>	<i>65497</i>	<i>129991</i>	100%

**Note:** † indicates that the target sample was collected at the NUTS 2 level and the aggregation for the EQI was done at NUTS 1 (and average sample per NUTS 1)

**TABLE A2.**  
**Demographic Characteristics of the 2021 Sample, by Survey Administration**

Variable	CATI	Online	Total
Female	51.5	51.7	51.6
Male	48.5	48.3	48.4
Age:18-29	16.8	20.6	18.6
Age:30-49	34.9	38.5	36.7
Age: 50-64	25.6	25.2	25.4
Age:65+	22.5	15.6	19.1
Education:<secondary	27.6	11.8	19.8
Education: secondary	38.4	39	38.7
Education: tertiary	33.9	49.2	41.4
Population: <10k	34.1	28.1	31.1
Population: 10k-100k	37.1	38.4	37.8
Population: 100k-1m	18.8	23.2	21
Population: >1m	5.2	6.9	6.1
Employment: Public sec.	19.2	19	19.1
Employment: Private sec.	40.9	42.8	41.8
Employment: Not working	38.7	33	35.9

**Note:** rounded percentages by cell reported.

## APPENDIX SECTION 2.

### 2021 SURVEY QUESTION AND THE CONSTRUCTION OF THE EQI

#### 2.1: 2021 SURVEY QUESTIONS

Several empirical (based on Annoni and Charron, 2019) and conceptual improvements were made to the question items to EQI index in 2017 that are continued here. In sum, two key changes were been made. First, the scale of the questions has been changed. Namely, in previous years we used an odd-numbered 11 point scale. However, we found that the '5' response (mid-point) was overused and might be lead to misleading results. An even '10 point' scale is now employed to keep the variation of a larger scale but to eliminate the middle category, which may have been representing 'don't know' at times. We continue this in 2021. Second, two questions from the 2013 round were removed due to poor performance, and three others have been added, for a total of 17 question items (compared with 16 in the first two rounds). In this year's set of questions, we adjusted the question on corruption in elections based on the poor performance of the previous wording elucidated from a Rasch analysis of the 2017 data.

We begin however by highlighting the 'core' questions that have remained in the three rounds of the survey over time. First, in question 4-6 in the current survey, respondents rate the quality of their three public services in question on a scale of '1' (extremely poor quality) to '10' (extremely high quality):

Q4. How would you rate the quality of public education in your area?

Q5. How would you rate the quality of the public health care system in your area?

Q6. How would you rate the quality of the police force in your area?

The next six questions try to capture the extent to which public services are delivered impartially in the regions of Europe. 'Impartiality' is admittedly a more complicated concept to put forth to respondents than 'quality', so we framed this question in two ways –with a more negative tone, and a more positive tone. In the first three questions (7-9), we asked citizens to rate whether they agreed that 'certain people' get special advantages when dealing with the public service in question from 1 (strongly disagree) to 10 (strongly agree) (**'Impartiality 1' in main table 1**). The second set of questions (10-12) asks respondents whether all people in their region are 'treated equally' by the service in question on a four point scale (1. Agree, 2. rather agree, 3. rather disagree or 4. Disagree) (**'Impartiality 2' in main table 1**).. We use all six questions in the final index to allow for as much variation as possible while not letting either the 'positively' or 'negatively' framed question determine the impartiality data alone.

Q7. "Certain people are given special advantages in the public education system in my area."

Q8. "Certain people are given special advantages in the public health care system in my area."

Q9. "The police force gives special advantages to certain people in my area."

Please respond to the following 4 questions with 'Agree, rather agree, rather disagree or Disagree'

Q10. "All citizens are treated equally in the public education system in my area"

Q11. "All citizens are treated equally in the public health care system in my area"

Q12. "All citizens are treated equally by the police force in my area" The next question, on elections, has been re-phrased as the following:

Q13. "In the area where I live, elections are conducted freely and fairly"

The next three questions deal with respondents' perception of the extent to which corruption is present in their public services, along with two general questions of how often they believe that 'others in their area' use corruption to obtain public services. Again, perceptions may not capture the full story, but, as Kaufmann, Kraay, and Mastruzzi (2009) argue "perceptions matter because agents base their actions on their perceptions, impression, and views", thus if citizens believe their public services are inefficient or corruption, they are less likely to use their services, likewise with foreign firms and investment in countries perceived to be plagued with problems of rent-seeking and public sector mismanagement. However, we complement these questions with additional questions about respondents' actual experience with bribery later on. The perceptions questions are scaled as 1-10, with '1' being "strongly disagree" and '10' being "strongly agree". In addition, we define the concept of corruption for the respondents to provide a baseline of common understanding, which we expect gives additional comparative validity to these items. The respondents thus hear/see the following:

*In this survey, we define corruption to mean 'the abuse of entrusted public power for private gain'. This 'abuse' could be by any public employee or politician and the 'private gain' might include money, gifts or other benefits.*

Q14. "Corruption is prevalent in my area's local public school system"

Q15. "Corruption is prevalent in the public health care system in my area"

Q16. "Corruption is prevalent in the police force in my area"

The following two questions were added in 2017. Here, instead of asking citizens about either 'how often others engage in bribery to obtain public services' (2010), or asking respondents about corruption for 'special advantages' (2013), we split these ideas of so called 'need' and 'greed' corruption (see Bauhr, 2017) into the following two questions (1-10, with '1' being "strongly disagree" and '10' being "strongly agree"):

Q17a. "People in my area must use some form of corruption just to get some basic public services."

Q17b. "Corruption in my area is used to get access to special unfair privileges and wealth."

In addition to corruption perceptions questions, we ask about citizens' direct experience with corruption. In contrast to 2010 and 2013, where we only inquired about whether a respondent paid a bribe for one of the public service in question, we follow the 2017 survey and inquire whether the respondent was asked to pay a bribe by a public sector employee at one of the services in question, as well as whether they paid, so as to attempt to capture the direction of who is the 'initiator'. For the final index, we code a respondent as '1' for Q17 or 18 if they answered 'yes' to any of the four sub-questions.

Q18. In the last 12 months, have you or anyone in your family been asked by a public official to give an informal gift or bribe in (1=yes, 2=No, 99=DK/refuse): (a) Schools or other education services? (b) Health or medical services? (c) Police authorities? (d) Any other government-run agency?

Q19. In the last 12 months, have you or anyone in your family given an informal gift or paid a bribe to (1=yes, 2=No, 99=DK/refuse): (a) Schools or other education services? (b) Health or medical services? (c) Police authorities? (d) Any other government-run agency?

Table 1 summarizes the questions and elucidates the name for each survey item in our dataset.

**TABLE A3.**  
**List of survey items and dataset name**

Pillar	Variable Description			Variable name in dataset
Corruption Items				
a. perceptions				
	corruption in education			stEdCorr
	corruption in health care			stHelCorr
	corruption in law enforcement			stLawCorr
	need corruption			stNeedCorr
	greed corruption			stGreedCorr
	elections clean and fair			stElecCorr
b. experiences				
	asked to pay a bribe for public service			stnoAskB_any1
	paid a bribe for public service			stnopayB_any1
Impartiality Items				
	some get special advantages in education			stEdImpart1
	some get special advantages in health care			stHelImpart1
	some get special advantages in law enforcement			stLawImpart1
	all treated equally in education			stEdImpart2
	all treated equally in health care			stHelImpart2
	all treated equally in law enforcement			stLawImpart2
Quality Items				
	quality of education			stEdQual
	quality of health care			stHelQual
	quality of law enforcement			stLawQual

## INDEX CONSTRUCTION

First, we begin with the acknowledgement that there are certainly unobserved country-level factors that are – by design - not captured in the regional survey. In other words, regions are embedded in a country context, and QoG embodies more than the services inquired in our question. To account for this empirically, we take a pragmatic approach, whereby we center our regional estimates on each Member State's relative QoG levels within the EU according to the World Bank's 'World Governance Indicators' (WGI). In all rounds, we have chosen to anchor the regional estimates using WGI's: '*control of corruption*', '*government effectiveness*', '*rule of law*' and '*voice and accountability*'. The data is taken for the most recent year of publication (in this case 2019)<sup>1</sup>. We first standardize each of the four measures for the EU-27 sample (or in past rounds, the EU-28). This figure is used as country's mean score for each of the three

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<sup>1</sup> The latest national-level WGI scores by country and indicator can be found in appendix table 2

pillars the *EQI*<sup>2</sup>. Regional corruption questions are centered on the WGI's 'control of corruption', impartiality items are centered on 'rule of law', while the quality questions are centered on the mean of the 'government effectiveness' and 'voice and accountability' WGI data.

Second, we then aggregate the individual level responses to the NUTS region of interest, which is NUTS 2 in all cases save Germany and Belgium. In this aggregation step, we weight the individual level responses by post-stratification weights, based on gender, education and age, to better ensure representativeness. The population figures by region for these parameters are taken from the latest year of Eurostat.

Third, the regional data itself combines 17 survey questions about QoG in the region, which yield a high degree of internal consistency (Cronbach's Alpha=0.971, see the appendix for pairwise correlations among the 17 regional indicators). To harmonize the regional QoG indicators such that all are coded in the same direction, we recode variables where necessary so that higher values indicate better regional QoG<sup>3</sup>. For example, question on corruption indicate that higher values imply more perceived corruption, thus we reverse the scale on questions such as these. Upon combining each pillar's respective regional items and centering them on the respective WGI measure, we then take the arithmetic mean of the three pillars. The data are standardized (z-score) at each stage of aggregation. Although they are included in the regional survey in 2021, the EU27 members - Estonia, Latvia, Malta, Luxembourg and Cyprus do not have multiple NUTS 2 regions, therefore there is nothing to center on their respective WGI Country score. The EQI score for these five member states thus relies on the WGI data as the QoG estimate alone, as we do not observe any regional variation. As per all other members states with at least two NUTS 2 regions, our EQI regional indicators explain within-country variation around the within-EU27 standardized national average of the WGI is used for each pillar. In addition, we provide margins of error around all regional estimates.

In this 2021 round we make a few slight adjustments to past years in order to make comparisons with 2020 data. As our data is standardized around an EU mean of '0', one needs a common sample of regions to make valid comparisons over time (see Charron 2021). As noted in the previous sections, we have added several new regions to the 2021 data, and lost the UK regions from previous rounds. For those interested in using the data to track trends in QoG over time, we have retroactively adjusted previous years (2010, 2013 and 2017) so that the regional units are consistent for all four years<sup>4</sup>. In addition, we also publish the 2010-2017 as an EU28 time series, keeping the previous values of the EQI as they originally were.

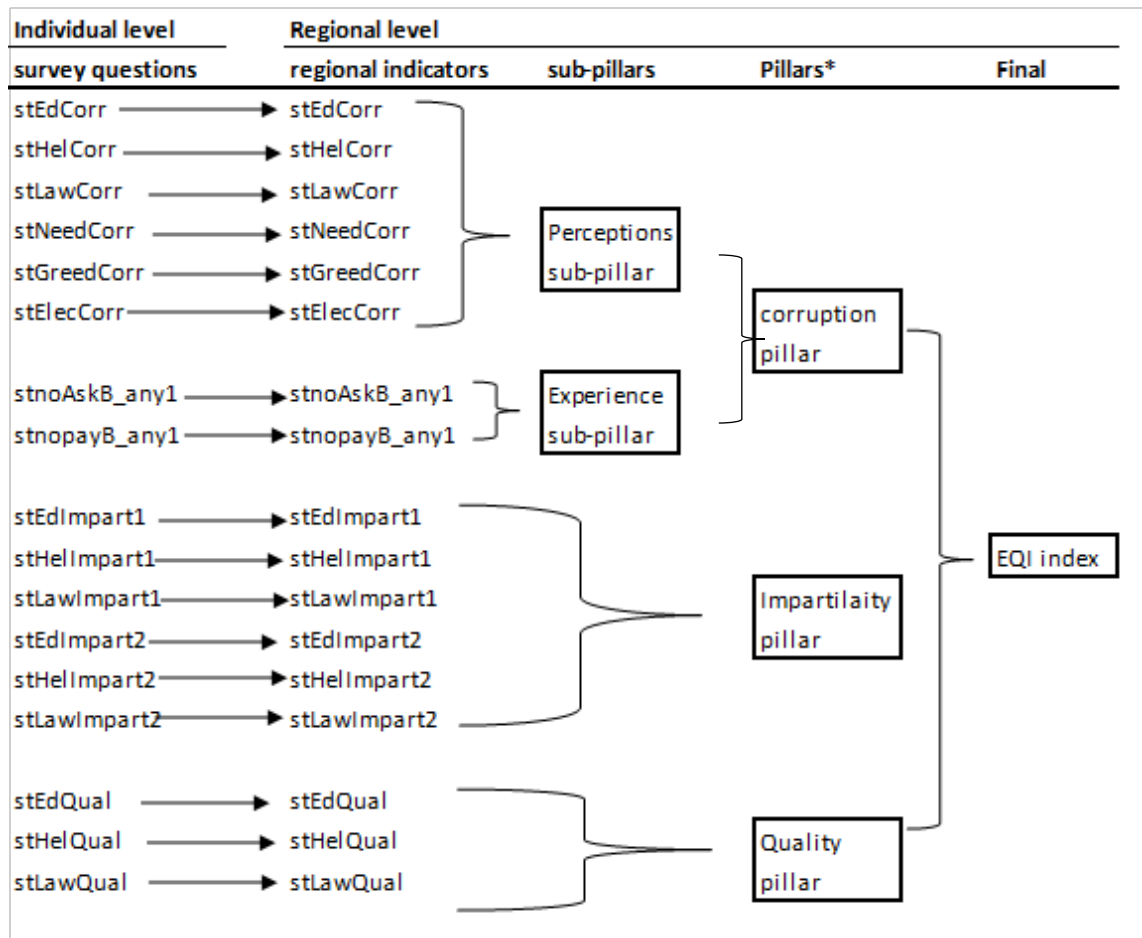
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<sup>2</sup> Charron et al. 2013 provides more on this point.

<sup>3</sup> Results of the factor analysis can factor weights are found in the appendix 2, Table A.3 of this paper. In all years, the underlying pillars were determined by the concepts, and confirmed with a principle component factor analysis.

<sup>4</sup> In the case of regional splits, such as HU11 (Budapest) and HU12 (Pest) from the former HU11 region which combined the two, we use the regional scheme for previous years, giving each region the same score. For Ireland, which re-drew its current three NUTS 2 boundaries such that there is no overlap with the previous two, the 2010-2017 take the current three regions take the WGI country level data and only the 2020 regional variation is observed.

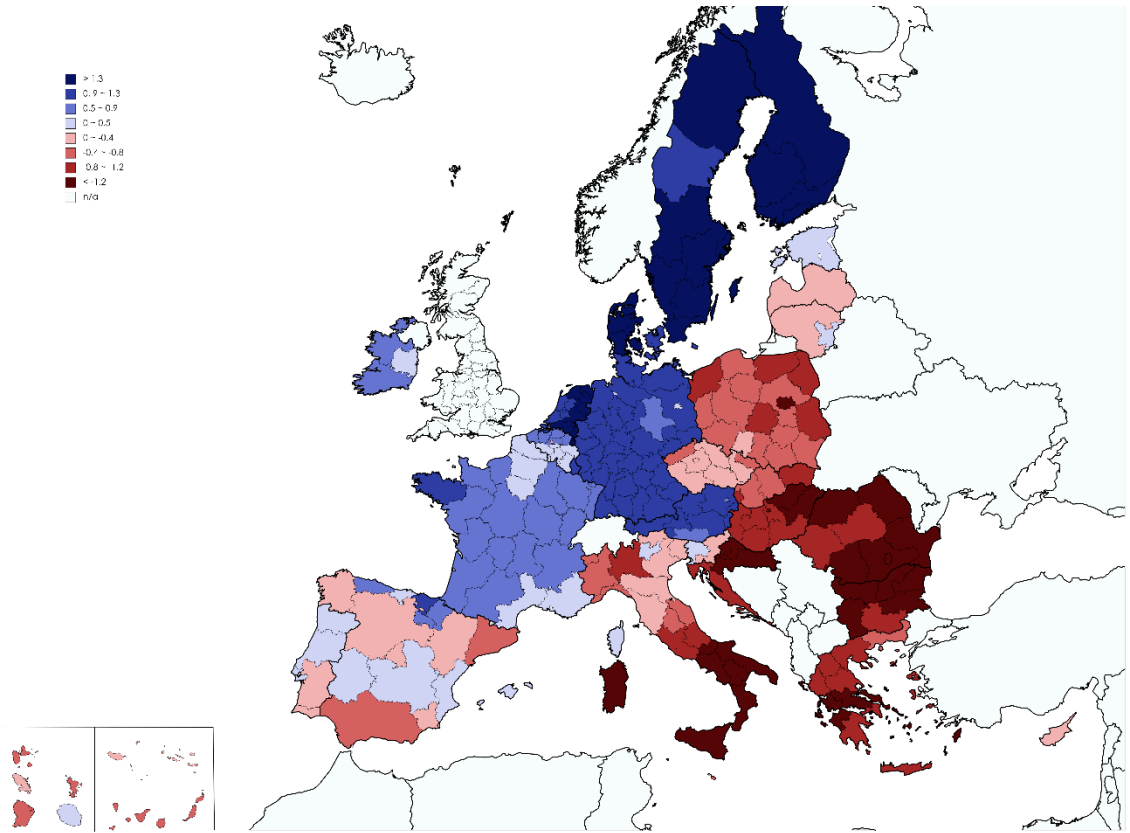
FIGURE A1.  
Roadmap for 2021 EQI



**Note:** \* indicates level of centering on country's WGI score.



FIGURE A2.  
The 2021 European Quality of Government Index



## APPENDIX SECTION 3.

### DESCRIPTION OF RETROSPECTIVE CHANGE TO PREVIOUS YEARS FOR THE EU27 TIME SERIES AND FULL UPDATED DATA

Due to our method of standardization, regional estimates of the EQI are in relation to the EU mean. Thus to be able to compare a region's relative position over time, the same sample is needed across years. As a consequence of Brexit, the 2021 sample is the first to only include regions from the EU27 countries, rather than EU28. Moreover, there are several other changes in the number of NUTS 2 regions, either due to change in the targeted region, or due to regional splits.

To account for sampling differences with past rounds of the EQI, we made several retrospective changes to past rounds, in order to create an 'EU27' time series using the following steps:

1. *re-calculate the country-level WGI data for all years with only EU27 countries (e.g. remove UK from past calculations)*

2. *add regions retrospectively where appropriate for past years.*

-In the case of some countries, we moved from NUTS1 to NUTS 2 in 2021. These are Sweden, Greece, Slovenia. For Sweden and Greece, the respective NUTS1 regional score for each survey item was applied to the NUTS 2 regions. In the case of Slovenia the country WGI score was applied to both NUTS 2 regions for the 2010-2017 years.

-In other cases, there were regional splits, where the EU Commission has created new NUTS2 regions recently. These are in Poland (PL12 is now PL91 and PL92), Hungary (HU10 is now NU11 and HU12), and Lithuania (LT01 is now LT01 and LT02). As these regions are within a previously measured region, we simply added these new regions to past years and apply the past (larger) region's score to both regions. In the case of Lithuania, the country WGI score was applied to both NUTS 2 regions for the 2010-2017 years.

3. *adjust for border changes due to NUTS 2 alterations – the case of Ireland.*

- Previously, there were two NUTS 2 regions (IE01 - Border, Midland and Western and IE02 - Southern and Eastern), and due to reforms, there are three NUTS 2 regions - IE04 (Northern and Western), IE05 (Southern) and IE06 (Eastern and Midland). Unfortunately, unlike the cases above in Poland and Hungary, there is a complete discontinuity from the previous scheme to the current one, whereby none of the previous two regions exist as they were geographically. These changes mean that there are no clean comparisons over time at the NUTS 2 level in Ireland from this EQI round with the previous ones

-as previous years did not yield any noticeable within-country variation (while 2021 did demonstrate significantly more), we apply the country-level WGI averages to the three current Irish regions for the 2010-2017 years so that we have the same number of Irish regions in all years of the data. This essentially wipes away any past variation observed in the previous data, yet is most valid for the current NUTS scheme.

With these three sampling adjustments, we then re-calculate the scores from the raw regional indicators for each year, centering on the updated WGI national scores for each pillar and calculate a final EU27 EQI score for each past year that is comparable with the 2021 data<sup>5</sup>.

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<sup>5</sup> All data is publically available at: <https://www.gu.se/en/quality-government/qog-data/data-downloads/european-quality-of-government-index>

## SOURCES

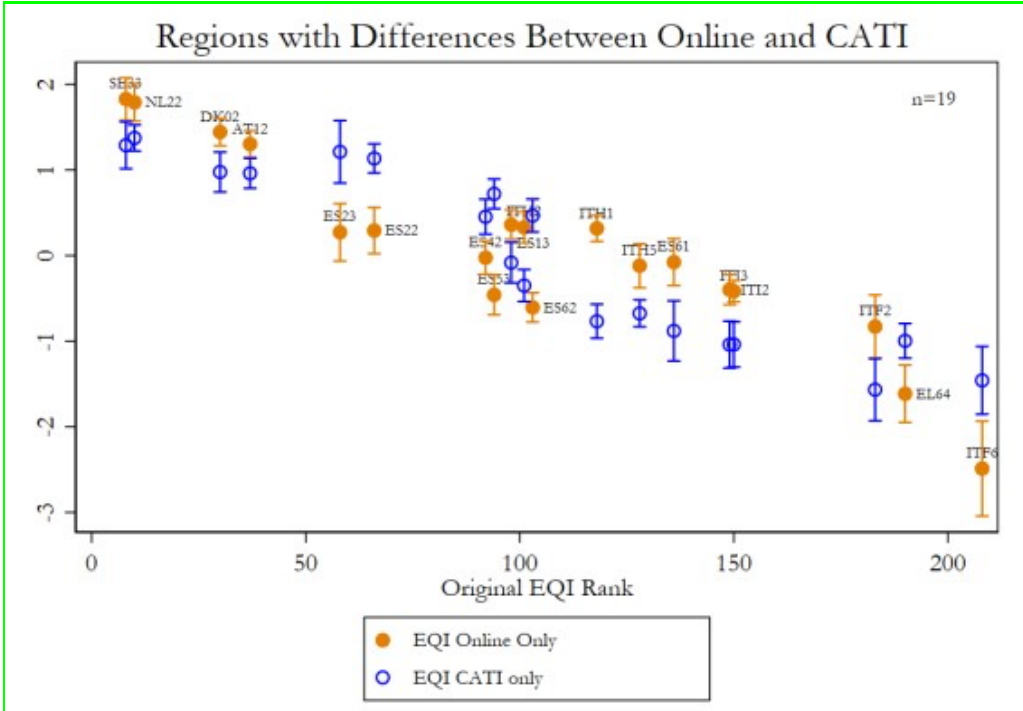
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APPENDIX SECTION 4.

ANALYSIS OF QoG PERCEPTIONS AND EXPERIENCES BY SURVEY ADMINISTRATION

As this is the first year in which the EQI data is collected via hybrid survey administration, we assess the degree to which the assessments of QoG are consistent between the two groups of respondents, along with how this affects the results across regions. To do so, we rebuilt the 2021 EQI based on separated samples (CATI only and online only) and compared the results other two to each other and the final combined index. In sum, using our margin of error confidence intervals, we found that in 91% of the regions there is no significant difference between the online and CATI estimates for the full index. Yet in 9% of the regions (19) we found that the margins of error do not overlap, and they are shown above in Figure A3. For regions in which the orange full circle is above the hollow blue circle, such as ITH1 (Bolzano), these are ‘favoured’ by the online sample, while the regions in which the blue hollow circle is above the orange circle are ‘favoured’ by the CATI respondents. Although it is difficult to say why we observe these differences in just these 19 regions, various demographic differences in the sample groups could be a contributing factor.

FIGURE A3.  
Regions with significant differences in QoG based on Survey Administration Type



**Note:** estimates produced using separate samples and margins of error calculated via method shown in section 5. Regions with non-significant differences are not shown. Y-axis is overall EQI score, and x-axis is the region's rank on the original EQI index for 2021.

## APPENDIX SECTION 5.

### HOW CLOSELY DO EXPERT AND CITIZEN ASSESSMENTS OF QoG CORRESPOND? A FURTHER VALIDATION OF THE MEASUREMENT

Until the 2021 round, only the member states with multiple NUTS 2 regions were included in the EQI survey. The 2021 round thus offers a unique opportunity to compare expert assessments and citizen assessments of quality of government for all 27 EU member states, which permits an important validity check on the measure. We begin by a comparison of each of the three EQI pillar data with its WGI counterpart. In Table A4, we provide the standardized data for the EQI and WGI measures for each respective pillar, the country rank (1-27) for each measure along with the rank difference between the EQI and WGI measures. In addition, the Spearman rank coefficient is provided for each pillar to show rank correspondence. On caveat in comparing the EQI and WGI here is that they are measured in different years (WGI pre-pandemic) and the underlying questions going into the respective measures are not exactly the same, thus we do not expect perfect correspondence.

TABLE A4.  
Comparison of EQI and WGI Data and Rankings in 27 EU Member States

		Quality				Corruption					Impartiality					
MS	EQI	rank	WGI	rank	diff	EQI	rank	WGI	rank	diff	EQI	rank	WGI	rank	diff	AVE
AT	1.01	4	0.76	7	-3	0.94	9	0.76	8	1	0.80	5	1.34	4	1	0
BE	0.68	8	0.30	10	-2	0.70	10	0.76	7	3	-0.29	19	0.47	10	9	3
BG	-2.58	27	-1.56	25	2	-1.79	26	-1.41	27	-1	-1.77	26	-1.75	27	-1	0
HR	-0.88	24	-1.31	24	0	-2.12	27	-1.04	23	4	-2.13	27	-1.19	23	4	3
CY	-0.86	23	-0.07	15	8	-1.39	25	-0.44	17	8	-0.21	17	-0.54	19	-2	5
CZ	0.56	10	-0.33	19	-9	0.10	11	-0.56	18	-7	0.69	6	-0.05	14	-8	-8
DK	0.53	11	1.54	1	10	1.16	3	1.47	3	0	0.69	7	1.38	3	4	5
EE	0.76	7	0.28	12	-5	1.04	8	0.75	9	-1	1.76	1	0.34	11	-10	-5
FI	1.47	1	1.54	2	-1	1.36	1	1.53	1	0	1.46	2	1.58	1	1	0
FR	-0.22	17	0.43	9	8	-0.01	13	0.45	11	2	-0.92	22	0.55	8	14	8
DE	0.08	13	0.88	6	7	1.10	5	1.21	6	-1	0.40	11	0.91	7	4	3
EL	-0.74	22	-0.86	22	0	-0.55	20	-1.22	25	-5	0.13	14	-1.48	26	-12	-6
HU	-0.17	15	-1.56	26	-11	0.02	12	-1.22	24	-12	0.53	10	-0.99	21	-11	-11
IE	0.93	5	0.54	8	-3	1.12	4	0.65	10	-6	1.26	3	0.52	9	-6	-5
IT	-0.33	19	-0.75	21	-2	-0.11	15	-0.90	21	-6	0.35	13	-1.34	25	-12	-7
LV	-0.49	21	-0.15	17	4	-0.08	14	-0.59	19	-5	-0.10	16	-0.12	16	0	0
LT	0.68	9	-0.08	16	-7	-0.19	16	-0.34	14	2	0.03	15	-0.10	15	0	-2
LU	1.45	2	1.24	5	-3	1.06	7	1.47	4	3	0.65	8	1.19	6	2	1
MT	1.23	3	-0.18	18	-15	-0.55	21	-0.90	22	-1	-0.76	21	-0.22	18	3	-4
NL	0.81	6	1.36	4	2	1.07	6	1.34	5	1	1.13	4	1.23	5	-1	1
PL	-1.99	26	-0.92	23	3	-0.41	19	-0.44	16	3	-1.66	25	-1.06	22	3	3
PT	-0.05	14	0.29	11	3	-0.85	22	-0.24	13	9	-0.93	23	0.10	12	11	8
RO	-0.27	18	-2.12	27	-9	-0.94	23	-1.37	26	-3	-0.52	20	-1.21	24	-4	-5
SK	-1.46	25	-0.61	20	5	-1.34	24	-0.79	20	4	-1.28	24	-0.87	20	4	4
SI	0.34	12	-0.04	14	-2	-0.28	17	-0.05	12	5	0.40	12	0.07	13	-1	1
ES	-0.19	16	-0.04	13	3	-0.31	18	-0.38	15	3	-0.26	18	-0.17	17	1	2

SE	-0.34	20	1.43	3	17	1.26	2	1.49	2	0	0.56	9	1.39	2	7	8
	Spearman: 0.62					Spearman: 0.83					Spearman: 0.65					

Note: combined perceptions from EQI 2021 compared with latest year of WGI data (2019). ‘diff’ is the EQI rank (from 1-27, highest to lowest QoG) minus the WGI rank. ‘AVE’ is the simple mean of the rank difference of the three pillars. All variables are z-score standardized (mean=0, s.d.=1).

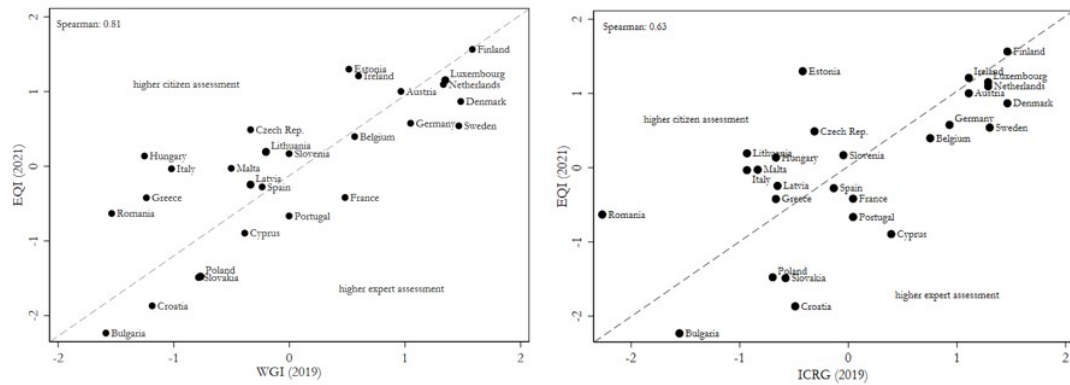
Overall, we observe that in all cases, the EQI and WGI measures are positively and significantly correlated ( $p < 0.01$  in all cases). The strongest correspondence is in the corruption pillar (Spearman rank = 0.83), while the weakest correspondence is in the Quality pillar (Spearman rank = 0.62). The red ‘diff’ figures represent the country with the lowest correspondence between the EQI and WGI measures. In this case, we see that experts in Sweden provide far more favorable assessments in the quality pillar than do Swedish citizens (difference in rank by 17). Conversely, Hungarian citizens perceive far lower corruption than the expert assessments, while Greek and Italian citizen rate their services as far more impartial as do the outside experts. Overall, the country with the lowest level of correspondence by far is Hungary (-11), which implies that according to the citizens, it would be ranked 11 places higher compared with the QoG assessments of the experts.

In addition, we highlight the five smaller member states with just one NUTS 2 region, which would have been excluded in previous years (Estonia, Cyprus, Latvia, Luxembourg and Malta). Overall, we see a remarkably strong correspondents between the citizens and experts in Luxembourg and Latvia – as the EQI and WGI rankings on all of the three pillars are within five places, and the overall average rank differences are ‘1’ and ‘0’ respectively. Malta, Estonia and Cyprus show an average rank difference of -4, -5 and 5 respectively. In these three cases, citizens are generally more favorable of QoG in their countries in Malta (in particular on ‘quality’) and Estonia (in particular on ‘impartiality’, in which citizens rank it 1<sup>st</sup>), while experts are more favorable of Cyprus than are citizens (save ‘impartiality’). Overall however, we can reasonably conclude that the WGI measure is a suitable proxy for QoG in the five smaller member states.

Figure A4 shows a scatterplot of the combined EQI and WGI on the y-axis and x-axis respectively (left side), and the EQI with an exclusively expert-driven assessment from the International Country Risk Guide (ICRG) on the right side. The closer to the dashed line, the greater the correlation between the citizen and expert assessments. The combined QoG data show a rather high level of correspondence between the two measures, which corroborates findings from previous years (see Charron 2016). While we observe especially strong correspondence among the top third of the ranked counties, as well as some the bottom (e.g. Bulgaria, Croatia, Slovakia and Poland), there is the least correspondence in the mid-lower range of the WGI rank order, where we see the furthest outliers between EQI and WGI are Hungary, Italy, Czech Republic, Greece and Romania – in all of which the citizens provide more favorable QoG ratings than the WGI. We find high correspondence between EQI and ICRG despite measuring at different years and with some underlying differences in the concepts measured, with the most notable outliers being Estonia and Romania.

Among the five smaller countries never previously included in the EQI survey, we again observe overall strong correlations between the two combined measures. The country with the lowest correspondence between the EQI and WGI/ICRG is Estonia, which overall, would be ranked 2<sup>nd</sup> according to the citizens, yet is ranked 10<sup>th</sup> overall in the WGI and 16<sup>th</sup> on the ICRG. This discrepancy is largely driven by the impartiality pillar, where Estonian citizens perceive the highest degrees of impartiality in their institutions in the EU. Overall, we see these data as showing a high degree of validity to the measure in that we come to similar rankings despite two sets of diverse assessors.

**FIGURE A4.**  
**Citizen and Expert Assessments of Quality of Government in 27 EU Member States**



**Note:** EQI is impartiality, quality and corruption pillars combined, while WGI is the ‘control of corruption’, ‘rule of law’, ‘voice and accountability’ and ‘government effectiveness’ measures combined. ICRG is the combined measure of ‘rule of law’, ‘bureaucratic accountability’, ‘political stability’ and ‘corruption ‘risks’. Each measure is z-score standardized (mean=0, s.d.=1) and then re-standardized after aggregating. EQI measures are aggregated from the micro-data using post-stratification and design weights.

## APPENDIX SECTION 5.

### LIST OF REGION-YEAR EQI AND 3 PILLARS

Name	Nuts	EQI_2021	Quality_21	Impartiality_21	Corruption_21	EQI_17	EQI_13	EQI_10
Burgenland (AT)	AT11	0.939	0.842	1.108	0.763	0.859	1.165	1.222
Niederösterreich	AT12	1.123	0.865	1.491	0.889	0.792	1.217	1.263
Wien	AT13	0.716	0.503	0.965	0.6	0.926	0.639	1.146
Kärnten	AT21	0.892	0.677	1.168	0.733	0.721	1.004	1.301
Steiermark	AT22	1.042	0.742	1.571	0.697	0.827	1.227	1.038
Oberösterreich	AT31	0.951	0.61	1.373	0.766	0.767	1.111	1.158
Salzburg	AT32	1.012	0.922	1.342	0.659	0.96	1.005	1.016
Tirol	AT33	0.989	1.037	1.042	0.778	1.097	1.455	1.477
Vorarlberg	AT34	1.062	1.159	1.089	0.819	1.153	0.695	1.14
Region Brussels	BE1	-0.121	-0.191	-0.076	-0.081	-0.045	0.09	-0.273
Flanders	BE2	0.71	0.559	0.6	0.889	1.04	1.091	0.828
Wallonie	BE3	0.436	0.052	0.446	0.764	0.282	0.052	0.032
Severozapaden	BG31	-1.581	-1.732	-1.89	-0.946	-2.158	-2.134	-2.528
Severen tsentralen	BG32	-1.238	-1.349	-1.383	-0.846	-0.879	-1.569	-2.106
Severoiztochen	BG33	-1.596	-1.223	-1.829	-1.557	-1.248	-0.416	-1.115
Yugoiztochen	BG34	-1.403	-1.046	-1.585	-1.423	-2.064	-1.747	-2.171
Yugozapaden	BG41	-1.81	-1.66	-1.528	-2.042	-1.758	-2.654	-1.904
Yuzhen tsentralen	BG42	-1.184	-1.216	-1.257	-0.948	-1.436	-1.16	-1.269
Cyprus	CY	-0.315	-0.019	-0.44	-0.452	-0.022	0.058	0.31
Praha	CZ01	-0.073	-0.096	0.451	-0.566	-0.077	-0.468	-0.897
Strední Cechy	CZ02	-0.295	-0.409	0.149	-0.592	-0.573	-0.423	-0.313
Jihozápad	CZ03	-0.322	-0.307	-0.1	-0.524	-0.205	-0.288	-0.12
Severozápad	CZ04	-0.613	-0.613	-0.403	-0.754	-0.914	-0.902	-0.896
Severovýchod	CZ05	-0.117	-0.118	0.197	-0.417	-0.084	-0.33	-0.206
Jihovýchod	CZ06	-0.217	-0.222	-0.004	-0.401	0.101	-0.224	-0.495
Strední Morava	CZ07	-0.339	-0.159	-0.169	-0.65	0.063	-0.391	-0.569
Moravskoslezsko	CZ08	-0.431	-0.255	-0.195	-0.797	-0.192	-0.589	-0.426
Baden-Württemberg	DE1	0.911	0.93	0.694	1.007	1.135	0.905	0.991
Bayern	DE2	1.161	1.17	0.986	1.198	1.399	0.961	0.777
Berlin	DE3	0.308	-0.083	0.177	0.795	0.671	0.447	0.983
Brandenburg	DE4	0.995	0.401	1.219	1.255	0.801	0.542	0.978
Bremen	DE5	0.461	-0.074	0.301	1.105	1.162	0.774	0.966
Hamburg	DE6	0.967	1.089	0.803	0.902	1.307	0.713	0.973
Hessen	DE7	1.032	0.815	0.902	1.265	1.128	0.778	0.698
Mecklenburg-Vorpommern	DE8	1.123	0.819	1.1	1.325	1.233	0.771	0.959



Niedersachsen	DE9	1.139	0.958	1.014	1.318	1.311	0.978	0.948
Nordrhein-Westfalen	DEA	0.96	0.82	0.847	1.108	0.817	0.663	0.775
Rheinland-Pfalz	DEB	1.266	1.087	1.029	1.541	1.19	0.946	0.859
Saarland	DEC	1.034	0.854	1.052	1.082	1.095	0.94	1.045
Sachsen	DED	0.997	0.815	0.742	1.323	0.879	0.733	1.084
Sachsen-Anhalt	DEE	0.859	0.423	0.821	1.237	0.648	0.362	0.886
Schleswig-Holstein	DEF	1.255	1.025	1.295	1.305	1.172	1.006	1.236
Thüringen	DEG	1.071	0.778	1.084	1.233	1.01	0.462	1.277
Hovedstaden	DK01	1.27	1.438	1.224	1.006	1.395	1.514	1.569
Sjælland	DK02	1.23	0.765	1.137	1.651	1.285	1.35	1.684
Syddanmark	DK03	1.527	1.515	1.292	1.606	1.416	1.568	1.674
Midtjylland	DK04	1.701	1.762	1.434	1.719	1.705	1.63	1.885
Nordjylland	DK05	1.645	1.713	1.471	1.568	1.407	1.627	1.575
Estonia	EE	0.48	0.298	0.358	0.729	0.31	-0.004	0.001
Attiki	EL30	-1.173	-0.922	-1.224	-1.244	-1.54	-1.21	-0.259
Voreio Aigaio	EL41	-1.137	-0.349	-1.262	-1.674	-1.062	-0.835	-0.801
Notio Aigaio	EL42	-1.262	-0.564	-1.213	-1.869	-1.062	-0.835	-0.801
Kriti	EL43	-1.194	-0.502	-1.462	-1.486	-1.062	-0.835	-0.801
Anatoliki Makedonia, Thraki	EL51	-0.771	-0.063	-1.345	-0.817	-1.042	-1.062	-1.213
Kentriki Makedonia	EL52	-1.088	-1.05	-1.207	-0.885	-1.042	-1.062	-1.213
Dytiki Makedonia	EL53	-0.998	-0.752	-1.321	-0.809	-1.042	-1.062	-1.213
Ipeiros	EL54	-0.809	0.299	-1.318	-1.317	-1.042	-1.062	-1.213
Thessalia	EL61	-1.044	-0.349	-1.453	-1.214	-1.291	-1.128	-0.929
Ionia Nisia	EL62	-1.417	-1.191	-1.376	-1.527	-1.291	-1.128	-0.929
Dytiki Ellada	EL63	-1.462	-0.664	-1.706	-1.853	-1.291	-1.128	-0.929
Stereia Ellada	EL64	-1.337	-1.147	-1.385	-1.329	-1.291	-1.128	-0.929
Peloponnisos	EL65	-0.956	-0.609	-1.095	-1.058	-1.291	-1.128	-0.929
Galicia	ES11	-0.304	-0.097	-0.354	-0.428	-0.34	-0.443	0.531
Principado de Asturias	ES12	0.617	0.554	0.853	0.375	0.314	0.452	0.475
Cantabria	ES13	0.107	0.114	0.197	-0.003	0.522	0.434	0.167
País Vasco	ES21	0.969	1.042	1.17	0.586	0.748	0.317	0.615
Comunidad Foral de Navarra	ES22	0.712	1.032	0.775	0.251	0.595	0.298	0.195
La Rioja	ES23	0.845	1.374	0.632	0.435	0.335	0.399	0.249
Aragón	ES24	-0.192	0.009	-0.254	-0.309	0.189	0.153	0.318
Comunidad de Madrid	ES30	-0.227	0.328	-0.45	-0.533	-0.133	0.296	-0.032
Castilla y León	ES41	-0.221	-0.308	-0.08	-0.251	-0.239	0.279	-0.007
Castilla-la Mancha	ES42	0.274	0.323	0.344	0.124	-0.209	-0.165	0.223
Extremadura	ES43	0.442	0.549	0.5	0.229	0.114	0.184	0.401
Cataluña	ES51	-0.70	-0.484	-0.526	-1.011	-0.303	-0.127	-0.344
Comunitat Valenciana	ES52	0.283	0.274	0.623	-0.079	-0.358	-0.217	0.173

Illes Balears	ES53	0.178	0.039	0.374	0.102	-0.455	0.02	0.137
Andalucía	ES61	-0.537	-0.431	-0.565	-0.555	-0.654	-0.066	-0.123
Región de Murcia	ES62	-0.046	0.024	0.351	-0.507	-0.045	0.358	0.28
Canarias	ES70	-0.515	-0.226	-0.464	-0.797	-0.62	-0.267	0.276
Länsi-Suomi	FI19	1.433	1.328	1.456	1.355	1.385	1.728	1.522
Helsinki-Uusimaa	FI1B	1.629	1.582	1.505	1.621	1.546	1.406	1.522
Etelä-Suomi	FI1C	1.434	1.311	1.405	1.425	1.456	1.406	1.522
Pohjois- ja Itä-Suomi	FI1D	1.623	1.556	1.561	1.572	1.492	1.406	1.522
Åland	FI20	2.284	2.19	2.403	2.004	2.377	2.818	1.522
Île de France	FR10	0.134	-0.051	0.468	-0.03	0.606	0.455	0.664
Centre - Val de Loire	FRB0	0.718	0.368	0.894	0.811	0.442	0.32	0.354
Bourgogne	FRC1	0.536	0.352	0.516	0.68	0.512	0.32	0.599
Franche-Comté	FRC2	0.523	0.446	0.399	0.665	0.559	0.377	0.296
Basse-Normandie	FRD1	0.759	0.764	0.696	0.732	0.527	0.811	0.721
Haute-Normandie	FRD2	0.563	0.432	0.62	0.575	0.499	0.726	0.625
Nord-Pas-de-Calais	FRE1	0.403	0.745	0.379	0.04	0.388	0.349	0.604
Picardie	FRE2	0.335	0.432	0.278	0.256	0.397	0.214	0.662
Alsace	FRF1	0.733	0.928	0.577	0.611	0.338	0.416	0.404
Champagne-Ardenne	FRF2	0.572	0.655	0.38	0.616	0.483	0.602	0.6
Lorraine	FRF3	0.513	0.459	0.576	0.446	0.293	0.56	0.617
Pays-de-la-Loire	FRG0	0.833	0.686	0.854	0.868	0.827	0.622	0.5
Bretagne	FRH0	0.981	0.989	0.806	1.041	0.877	0.989	1.088
Aquitaine	FRI1	0.791	0.806	0.734	0.743	0.425	0.761	0.856
Limousin	FRI2	0.705	0.534	0.67	0.834	0.8	0.804	0.898
Poitou-Charentes	FRI3	0.716	0.529	0.713	0.827	0.542	0.76	0.529
Languedoc-Roussillon	FRJ1	0.369	0.285	0.382	0.4	0.727	0.593	0.812
Midi-Pyrénées	FRJ2	0.7	0.731	0.641	0.65	0.685	0.668	0.873
Auvergne	FRK1	0.601	0.461	0.558	0.718	0.547	0.734	0.679
Rhône-Alpes	FRK2	0.541	0.65	0.519	0.394	0.237	0.424	0.647
Provence-Alpes-Côte d'Azur	FRL0	0.442	0.417	0.581	0.28	0.324	0.129	0.372
Corse	FRM0	0.322	0.481	0.583	-0.135	0.182	0.242	0.284
Guadeloupe	FRY1	-0.526	-1.158	-0.265	-0.096	-0.929	-0.31	-0.318
Martinique	FRY2	-0.271	-1.031	-0.159	0.408	-0.627	-0.022	-0.193
Guyane	FRY3	-0.66	-1.578	-0.379	0.05	-1.454	-0.518	-0.284
La Réunion	FRY4	0.182	0.289	0.282	-0.046	-0.305	-0.022	0.046
Mayotte	FRY5	-1.159	-2.275	-0.3	-0.772	-0.359	-0.218	-0.187
Jadranska Hrvatska	HR03	-0.819	-1.157	-0.736	-0.472	-1.161	-1.399	-1.45
Kontinentalna Hrvatska	HR04	-1.289	-1.184	-1.183	-1.356	-1.077	-1.267	-1.312
Budapest	HU11	-1.317	-1.398	-0.749	-1.658	-1.345	-0.89	-1.153
Pest	HU12	-0.908	-1.271	-0.425	-0.927	-1.345	-0.89	-1.153

Közép-Dunántúl	HU21	-1.072	-1.475	-0.746	-0.876	-0.856	-0.541	-0.549
Nyugat-Dunántúl	HU22	-1.122	-1.283	-0.905	-1.052	-0.91	-0.541	-0.549
Dél-Dunántúl	HU23	-1.022	-1.25	-0.872	-0.83	-0.871	-0.541	-0.549
Észak-Magyarország	HU31	-1.528	-1.907	-1.078	-1.43	-0.98	-0.726	-0.65
Észak-Alföld	HU32	-1.482	-1.396	-1.353	-1.534	-1.165	-0.726	-0.65
Dél-Alföld	HU33	-1.018	-1.175	-0.662	-1.104	-0.638	-0.726	-0.65
Northern and Western	IE04	0.532	0.441	0.652	0.444	0.908	0.756	0.916
Southern	IE05	0.867	0.761	0.716	1.029	0.908	0.756	0.916
Eastern and Midland	IE06	0.417	0.431	0.35	0.424	0.908	0.756	0.916
Piemonte	ITC1	-0.517	-0.258	-0.831	-0.404	-1.091	-0.805	-0.27
Valle d'Aosta	ITC2	-0.524	0.011	-0.769	-0.757	-0.563	0.369	0.438
Liguria	ITC3	-0.63	-0.497	-0.831	-0.493	-1.147	-0.978	-0.6
Lombardia	ITC4	-0.813	-0.236	-1.219	-0.894	-0.385	-0.705	-0.71
Abruzzo	ITF1	-1.111	-1.013	-1.254	-0.944	-1.85	-1.202	-0.995
Molise	ITF2	-1.221	-1.316	-1.29	-0.922	-1.07	-1.708	-1.2
Campania	ITF3	-1.931	-2.114	-1.567	-1.896	-1.779	-2.23	-1.709
Puglia	ITF4	-1.347	-1.391	-1.413	-1.088	-1.44	-1.658	-1.948
Basilicata	ITF5	-1.438	-1.317	-1.638	-1.198	-1.546	-1.496	-1.351
Calabria	ITF6	-2.087	-2.145	-2.238	-1.646	-2.089	-1.731	-1.715
Sicilia	ITG1	-1.364	-1.095	-1.509	-1.335	-1.451	-1.64	-1.865
Sardegna	ITG2	-1.268	-1.159	-1.571	-0.932	-1.12	-1.391	-1.3
Bolzano/Bozen	ITH1	-0.251	0.322	-0.732	-0.316	-0.253	0.685	0.552
Trento	ITH2	0.01	0.658	-0.352	-0.282	-0.253	0.718	0.307
Veneto	ITH3	-0.15	0.409	-0.648	-0.193	-0.355	-0.383	-0.554
Friuli-Venezia Giulia	ITH4	-0.061	0.358	-0.422	-0.111	-0.383	0.118	0.005
Emilia-Romagna	ITH5	-0.385	0.331	-0.909	-0.535	-0.357	-0.412	-0.458
Toscana	ITI1	-0.36	0.033	-0.63	-0.442	-0.751	-0.695	-0.637
Umbria	ITI2	-0.734	-0.331	-1.131	-0.658	-1.407	-0.661	-0.325
Marche	ITI3	-0.746	-0.609	-0.986	-0.559	-1.268	-0.697	-0.556
Lazio	ITI4	-1.207	-1.087	-1.241	-1.158	-1.431	-1.573	-1.158
Sostines regionas	LT01	0.025	0.042	0.161	-0.132	-0.181	-0.732	-0.89
Vidurio ir vakaru LT regionas	LT02	-0.22	-0.058	-0.121	-0.457	-0.181	-0.732	-0.89
Luxembourg	LU	1.281	1.121	1.135	1.444	1.262	1.226	1.157
Latvia	LV	-0.312	-0.244	-0.058	-0.601	-0.425	-0.722	-0.833
Malta	MT	-0.408	-0.12	-0.149	-0.909	0.005	0.074	0.407
Groningen	NL11	1.346	1.361	1.391	1.137	1.416	1.297	0.986
Friesland (NL)	NL12	1.651	1.562	1.465	1.743	1.416	1.331	0.988
Drenthe	NL13	1.54	1.315	1.558	1.575	1.416	1.128	0.984
Overijssel	NL21	1.481	1.357	1.318	1.603	1.394	1.519	0.783
Gelderland	NL22	1.604	1.477	1.537	1.62	1.394	1.231	0.803

Flevoland	NL23	1.221	1.028	1.132	1.368	1.394	1.196	0.766
Utrecht	NL31	1.157	1.141	1.22	0.981	1.163	1.331	0.76
Noord-Holland	NL32	1.019	1.249	0.899	0.794	1.163	1.123	0.794
Zuid-Holland	NL33	1.261	1.228	1.051	1.363	1.163	1.276	0.812
Zeeland	NL34	1.24	1.056	1.389	1.139	1.163	1.178	0.739
Noord-Brabant	NL41	1.326	1.363	1.088	1.38	1.287	1.16	0.703
Limburg (NL)	NL42	1.318	1.269	1.051	1.489	1.287	1.216	0.672
Malopolskie	PL21	-0.714	-0.507	-0.924	-0.632	-0.335	-0.496	-0.827
Slaskie	PL22	-0.557	-0.6	-0.758	-0.252	-0.415	-0.848	-1.026
Wielkopolskie	PL41	-0.587	-0.473	-0.888	-0.334	-0.402	-0.592	-0.928
Zachodniopomorskie	PL42	-0.888	-1.126	-0.981	-0.457	-0.303	-0.478	-0.818
Lubuskie	PL43	-0.557	-0.627	-0.772	-0.208	-0.568	-0.373	-0.845
Dolnoslaskie	PL51	-0.77	-0.697	-0.742	-0.785	-0.342	-0.852	-0.868
Opolskie	PL52	-0.34	-0.688	-0.348	0.055	-0.413	-0.199	-1.028
Kujawsko-Pomorskie	PL61	-0.689	-0.74	-0.73	-0.521	-0.224	-0.235	-0.594
Warminsko-Mazurskie	PL62	-0.81	-0.936	-0.914	-0.49	-0.265	-0.437	-0.883
Pomorskie	PL63	-0.489	-0.755	-0.836	0.177	-0.272	-0.364	-0.643
Lódzkie	PL71	-0.852	-0.964	-0.801	-0.696	-0.059	-0.704	-0.803
Swietokrzyskie	PL72	-0.783	-0.824	-0.984	-0.455	-0.594	-0.655	-0.795
Lubelskie	PL81	-1.089	-1.084	-1.465	-0.598	-0.447	-0.611	-0.759
Podkarpackie	PL82	-0.711	-0.837	-0.836	-0.379	-0.56	-0.722	-0.8
Podlaskie	PL84	-0.878	-0.76	-1.105	-0.671	-0.392	-0.339	-0.889
Warszawski stoleczny	PL91	-1.229	-1.558	-1.345	-0.647	-0.457	-0.748	-0.924
Mazowiecki regionalny	PL92	-0.748	-0.733	-0.921	-0.508	-0.457	-0.748	-0.924
Norte	PT11	0.025	0.612	0.083	-0.624	0.013	-0.226	-0.289
Algarve	PT15	-0.076	-0.125	0.153	-0.248	-0.209	0.191	0.161
Centro (PT)	PT16	0.161	0.411	0.132	-0.078	0.156	-0.071	-0.044
Área Metropolitana de Lisboa	PT17	0.142	-0.052	0.307	0.156	0.19	-0.169	0.105
Alentejo	PT18	-0.05	0.057	0.05	-0.25	0.329	0.791	0.615
Região Autónoma dos Açores	PT20	-0.012	0.422	-0.015	-0.442	0.089	0.44	0.425
Região Autónoma da Madeira	PT30	-0.213	0.508	-0.393	-0.73	0.246	-0.009	0.227
Nord-Vest	RO11	-1.419	-1.514	-1.307	-1.279	-1.743	-1.79	-1.115
Centru	RO12	-0.842	-1.417	-0.45	-0.564	-1.323	-1.279	-1.499
Nord-Est	RO21	-1.758	-1.936	-1.271	-1.871	-1.462	-1.824	-1.875
Sud-Est	RO22	-1.628	-2.323	-0.897	-1.483	-1.866	-2.058	-1.884
Sud - Muntenia	RO31	-1.414	-1.924	-0.971	-1.19	-0.995	-1.65	-1.668
Bucuresti - Ilfov	RO32	-2.163	-2.352	-1.698	-2.198	-1.466	-2.323	-2.693
Sud-Vest Oltenia	RO41	-1.45	-2.119	-0.801	-1.27	-1.505	-1.815	-1.408
Vest	RO42	-1.195	-1.736	-0.829	-0.888	-1.223	-1.754	-2.07
Stockholm	SE11	1.459	1.42	1.327	1.467	1.51	1.461	1.419

Östra Mellansverige	SE12	1.368	1.405	1.172	1.376	1.51	1.461	1.419
Småland med öarna	SE21	1.643	1.598	1.559	1.589	1.375	1.437	1.489
Sydsverige	SE22	1.366	1.364	1.295	1.288	1.375	1.437	1.489
Västsverige	SE23	1.438	1.28	1.309	1.566	1.375	1.437	1.489
Norra Mellansverige	SE31	1.318	1.022	1.282	1.502	1.535	1.321	1.323
Mellersta Norrland	SE32	1.22	1.093	1.429	1.002	1.535	1.321	1.323
Övre Norrland	SE33	1.625	1.552	1.412	1.73	1.535	1.321	1.323
Vzhodna Slovenija	SI03	-0.221	-0.061	-0.319	-0.258	-0.214	-0.143	-0.084
Zahodna Slovenija	SI04	0.283	0.072	0.596	0.149	-0.214	-0.143	-0.084
Bratislavský kraj	SK01	-0.912	-1.092	-0.696	-0.847	-0.859	-0.838	-0.532
Západné Slovensko	SK02	-0.615	-0.341	-0.714	-0.721	-0.915	-0.648	-0.784
Stredné Slovensko	SK03	-0.574	-0.484	-0.559	-0.616	-0.529	-0.656	-0.698
Východné Slovensko	SK04	-0.855	-0.51	-0.938	-1.021	-0.588	-0.895	-0.705

**Note:** all data standardized such that the EU27 mean of ‘0’ with a standard deviation of ‘1’. Data for previous years have been retrospectively adjusted such that the sample of regions is consistent across years (see Appendix 3).