Quality of Government and Well-being: An Empirical Analysis of 158 European Regions

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Abstract

The aim of the study is twofold: on the one hand, it assesses the association between well-being and the quality of government, on the other it evaluates the impact exerted on the same well-being by the different components into which the quality of government can be broken down. The analysis is conducted at the regional level. A composite indicator derived from OECD data on regional well-being is used to assess its association with the quality of government. The latter is measured using the European Quality of Government Survey Index (EQI) data. The EQI breaks down the quality of government into three key elements: the impartiality of administration, the quality of services provided and the degree of corruption. The association between well-being and quality of government is verified considering, at first, the EQI index as a whole, being the product of the three different components, and then separately considering its key elements.

The results confirmed the existence of a strong positive association between well-being and the overall quality of government, as between the former and the single components of the EQI index. Furthermore, the same association is observed when the assessment is made on the whole sample, but also when subsamples are made, considering the geographical macro-area to which the regions belong.

Keywords: corruption, impartiality, institutional quality, well-being.

1. Introduction

Public sector organisations are under investigation by multiple disciplines; literature usually focuses on their management, the way a government performs and its contribution to collective well-being (Andrews, 2010; Charron et al., 2014).

Researchers investigate these concepts and relationships by resorting to different theoretical constructs; in recent years, the conceptual frameworks of the New Public Management - NPM - and of the New Public Governance - NPG - have had great relevance (Dickinson, 2016; Osborne, 2006; Moore, 1995; Talbot, 2009). The different papers usually analyse single characteristics which affect well-being and are rarely based on a broader perspective.

Some broad-based analyses were performed by Helliwell et al. (2014, 2018), who showed how good governance might directly or indirectly influence well-being. A direct connection occurs when people are happier to live in a context of good government (Bjørnskov et al., 2010; Helliwell, 2003; Frey and Stutzer, 2005; Helliwell and Huang, 2008; Ott, 2010 a,b, 2011). Indirect influence occurs when the good government permits people to achieve higher levels in various aspects of their well-being – e.g., income, education or the environment (Holmberg et al., 2009; Rothstein and Teorell, 2008; Peiró-Palomino et al., 2019). However, mixed cases are likely, and good government may affect well-being both directly and indirectly. The control of corruption represents an example of such mixed influence. In fact, on the one hand, the absence of corruption increases the efficiency of public and private enterprises and thus creates favourable conditions for economic growth; on the other hand, at the same time, it helps maintain social trust making citizens happier (Helliwell et al., 2018).

Moreover, several studies that discuss the link between well-being and quality of government have considered two major government characteristics: the first relates to the reliability and responsiveness of governments in their design and delivery of services (quality of delivery). The second is concerned with the presence and pervasiveness of key features of democratic electoral elections and representation (democratic quality) (Helliwell

et al., 2018; Helliwell, 2003). The characteristics mentioned above have shown different relevance between rich and poor countries. For all countries, the quality of delivery mattered more for well-being than the presence or absence of democracy. In particular, the quality of delivery was, on average, more important for poorer countries than for richer ones, while the democracy variable had a positive effect among richer countries offset by a negative effect among the poorer countries (Helliwell and Huang, 2008; Halliwell et al., 2014).

The present paper contributes to the aforementioned literature by considering not only QoG but also its components, to assess how differences in the institutional environment could affect well-being. The analysis is conducted at the European regional level. As a matter of fact, many of the policies that affect people's lives more directly are local or regional. Moreover, the European context is characterised by significant disparities in well-being and quality of government; a better understanding of the relationship between these two variables could help policymakers enhance policy design and targeting policies.

To achieve the research objective, the European Quality of Government Index (henceforth EQI) is used as a QoG measure. EQI is a composite indicator based on the pillars of corruption, impartiality and quality of public services, which provides data for a wide sample of European regions (Charron et al., 2014; Charron e Lapuente, 2018; Charron et al., 2019).

The Organization for Economic Co-operation and Development (OECD) recently developed a well-being measure promoting the Better Life Initiative. This initiative is based on a framework that measures well-being by considering 11 dimensions considering both material living conditions and quality of life. It features a regularly updated set of well-being indicators published in the "How's Life?" reports that are also combined in a composite indicator called Better Life Index (Durand, 2015). Besides, OECD makes a step further by giving the measures of those indicators at the regional level through the publication How's life in your region? (OECD, 2018).

The rest of the paper is structured as follows. Section 2 provides the literature background on well-being and quality of government; Section 3 illustrates the research questions and method; Section 4 presents the data analysis; Section 5 discusses results and offers conclusions and implications for future research.

2. Literature Review

During the last 20 years, the debate on what well-being is and means has grown significantly (McNaught, 2011; Dodge et al., 2012). Initially anchored in the field of psychology, well-being has since moved into fields like organisational development, health, education, economics, and policy expansion.

The question of how well-being should be defined and measured remains unresolved mainly as it is considered an intangible, complex, and multi-faceted construct. According to most researchers, well-being is a multidimensional concept that goes far beyond income and includes mental/psychological, physical, cognitive, social and economic aspects such as jobs, education, health, safety, environment, positive relationships with others, ability to fulfil goals, happiness and life satisfaction (Ryff, 1989; Yarcheski et al., 1984; Pollard & Lee, 2003; Diener & Suh, 1997; Diener, 2009; Dodge et al., 2012; Forgeard et al., 2011; Rojas, 2011; Ven, 2015; Fleurbaey, 2015; Naci, Ioannidis, 2015). However, all those researchers have focused on dimensions or descriptions of well-being rather than on definitions.

In a broad sense, the term well-being is used interchangeably with quality of life. The World Health Organization defined quality of life as: "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment" (World Health Organization, 1998, p 11).

Quality of life depends on people's objective conditions and capabilities, such as "people's health and education, their everyday activities, their participation in the political process, the social and natural environment in which they live, and the factors shaping their personal and economic security. Measuring all these features requires both objective and subjective data" (Stiglitz et al. 2009, p.15).

Once again, according to Dodge et al. (2012), it might seem that quality of life cannot adequately help to define well-being, as it appears to be a dimension of well-being rather than an all-embracing definition.

Given the multiplicity of approaches to defining and conceptualising well-being, McNaught (2011) has attempted to develop a definitional framework in which he identifies the main factors and relationships that create what is perceived to be well-being. The framework reflects the conceptual complexity of well-being that includes objective and subjective elements and is articulated in four domains: individual well-being, family well-being, community well-being, and societal well-being (McNaught, 2011; La Placa et al., 2013).

According to this framework, well-being is no longer conceived as a static element but as dynamically constructed by its actors through an interaction between their circumstances, locality, activities and psychological resources. Individuals possess the ability to evaluate their own lives concerning the four identified domains; they can choose different models of relationships and act if they are not satisfied. For example, individuals can decide to move to a new community or setting that offers economic opportunities and psychological resources that better satisfy their previously unmet needs (La Placa et al., 2013).

As global policymakers are progressively adopting well-being as a framework by which assessing and responding to human development challenges and opportunities, there is a greater necessity to be clear about what is being measured and how the resulting data should be interpreted (Dodge 2012; Lambert et al., 2020).

For several decades, policymakers and researchers have used Gross Domestic Product (GDP) to measure social or economic welfare and interpret countries' progress (Kubiszewski et al., 2013; Van den Bergh, 2009).

Nonetheless, GDP has been criticised as an inadequate measure of well-being because it is only a quantitative measure of how rich a country is in terms of the monetary value of its overall production. However, GDP says nothing about the distribution of wealth among citizens nor about the quality of life that wealth guarantees (Burchi and Gnesi, 2013; Helliwell et al., 2018; Peiró-Palomino et al., 2019).

Due to the above critiques, international institutions, research centres, and several researchers invested time and resources to build a series of well-being indicators that differ from GDP and include elements that qualitatively affect people's lives.

Among the indicators proposed, the OECD initiative plays a key role, "How's life?", which contains the Better Life Index (BLI). It is a composite indicator used to measure well-being through a large set of indicators for 11 domains in the areas of material living conditions and quality of life: income, jobs, health, education, environment, safety, civic engagement, accessibility of services, housing, community, life satisfaction. (Durand, 2015; OECD, 2018). What is also interesting in the OECD approach to measuring well-being is the effort to generate statistically relevant data at a national and regional level through the project "How's life in your region?" (OECD, 2018).

The OECD conceptual framework for measuring regional well-being has seven distinctive features (OECD, 2018: p. 5):

1.   "It measures well-being where people experience it. It focuses both on individuals and on place-based characteristics, as the interaction between the two shapes people's overall well-being.

2.   It concentrates on well-being outcomes that provide direct information on people's lives rather than on inputs or outputs.

3.   It is multidimensional and includes both material and non-material dimensions.

4.   It assesses well-being outcomes not only through averages but also by how they are distributed across regions and groups of people.

5.   It is influenced by citizenship, governance and institutions.

6.   It takes account of complementarities and trade-offs among the different well-being dimensions.

7.   It looks at the dynamics of well-being over time, at its sustainability and at the resilience of different regions".

As for QoG, the most frequently used definition rests on the World Bank's notion of 'good governance. It is broadly defined as "the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced, the capacity of the government to formulate and implement sound policies effectively, and the respect of citizens and the state for the institutions that govern economic and social interactions among them" (Kaufmann et al.,2009: p. 5). According to this notion, the World Bank Institute created the World Governance Indicators (WGI), which are widely considered the most accurate and reliable measures of national governance (Charron *et al.*, 2014; Holmberg *et al.*, 2009 Rodrıguez-Pose and Di Cataldo, 2014), however, almost exclusively at the national level. Data were collected for countries without considering that regional differences in QoG are at times greater than national ones (Charron et al., 2014). This hypothesis was pursued by researchers of the Quality of Government Institute in Gothenburg, who created the European Quality of Government Index (EQI) (Rodrıguez-Pose and Di Cataldo, 2014). The EQI is based on a survey that views QoG as a government that acts impartially, efficiently, and without corruption (Charron et al., 2019). The EQI survey is the largest multi-country survey mainly concerned with the governance of public sector institutions at the sub-national level. Questions are framed around the concepts of quality, impartiality, and

corruption and ask about citizens' perceptions and experiences of the three main public sector services in the region where they reside: education, health care, and law enforcement (Charron, Dijkstra & Lapuente, 2015).

Many theories have been used to underlie linkages between QoG and well-being. Halliwell et al. (2014), for instance, found some specific aspects that authors considered important in their review article. However, they pointed out that the list must be incomplete as there may be other aspects not taken into account by researchers. Those most pertinent to the empirical analysis will be considered among the various.

The first feature is inclusive institutions and inclusive law-making and policy-making processes. According to some authors (Bjørnskov, Dreher and Fischer, 2010; Frey and Stutzer, 2005; Helliwell et al., 2014), providing people with a voice in policymaking and the governance of institutions could impact their well-being. In fact, allowing citizens to participate in the direct democratic process should create a government that better suits their needs (Frey and Stutzer, 2000). Furthermore, if people perceive that law-making procedures are fair and inclusive, well-being could be improved as a feeling of self-determination would arise (Helliwell et al. 2014). Lastly, according to Helliwell et al. (2014: p. 18), "*it is possible that improving the inclusiveness of government decreases corruption if citizens who are directly involved are better able to discover and stop improper behaviour*".

The second issue addressed by researchers is represented by voting and political participation. In particular, democracy should have greater positive effects on the well-being of more developed countries. In wealthier countries, where the quality of delivery is high, people are more interested in how public services are provided and by whom (Ott, 2010). Conversely, in poorer countries, the effects of democracy are often small or absent compared to the quality of delivery (Bjørnskov, Dreher, Fischer, 2010; Samanni and Holmberg, 2010; Helliwell et al., 2014).

Another aspect is the fair playing field. According to philosophers, individual happiness is a composite phenomenon where one's own needs and desires mesh with the interests of others for the benefit of all (Sachs, 2013; Helliwell et al., 2014). Then we should expect that people often act against their own interests to achieve fairness, and they are happier living in a fair system where they and others do not attempt to cheat the tax system (Verme, 2009; Helliwell, 2003). Corruption is an element that undermines the fair system since it is inherently unjust in its application and more likely to affect people less able to protect themselves (Kaufmann et al., 2005). Because of its pervasiveness and the strong negative impact of the phenomenon on well-being (Welsch, 2008; Heukamp, Ariño 2011), corruption and how to contrast it are under investigation by numerous public sector studies (Klitgaard, 1988; Mauro, 1995; Rose-Ackerman, Palifka, 2016; Bauhr Grimes, 2017).

Trust and the rule of law are other elements related to well-being. According to Helliwell et al. (2014; 20), the influence of law depends "both on the nature of the law and on people's general views on the extent to which good behaviour should be internally motivated or externally governed". Empirical evidence suggests that law plays an essential role in increasing people's satisfaction (Wagner, Schneider, Halla, 2009); for example, well-functioning legal systems, protecting life and property rights and providing economic opportunities contribute to average happiness (Bjønskov et al., 2010; Graafland, Compen, 2012).

Concerning trust, people are happier living where trust levels are high, whether it is social trust or trust in institutions (Hudson, 2006; Böhnke, 2008; Kuroki, 2011; Helliwell et al., 2014). The former can be defined as the belief that others around you can be trusted (Kuroki 2011). Institutional trust is the extent people trust the institution to fulfil its role satisfactorily (Hudson, 2006; Mishler and Rose, 2001). Thus, trust in institutions is an abstract concept that includes a complex array of relationships, such as trust in the police, parliament members, the regulatory environment, the legal system, civil servants, and government-provided services. Indicators used to quantify trust in institutions should therefore account for this abstract nature. Previous studies have shown that social and institutional trust positively impacts well-being (Böhnke, 2008; Hudson, 2006; Hommerich, 2012; Kuroki, 2011).

A further aspect related to QoG and well-being is the *quality of delivery*. The last is related to the government's reliability, responsiveness, efficiency and effectiveness in the design and delivery of services (Helliwell et al., 2018). According to Helliwell et al. (2014: 21), "people are happier when they have governments that efficiently and reliably deliver what is needed when it is needed". Earlier research confirmed that a government would positively influence well-being if it acts reliably, responsively, and effectively (Bjønskov, Fischer, Dreher, 2010; Ott, 2010a; Kim, 2012).

3. Research Method

The sample used in this analysis consists of 158 regions from 18 EU member states (Austria, Belgium, the Czech

Republic, Germany, Denmark, Spain, Finland, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Poland, Portugal, Sweden, Slovakia and the United Kingdom).

The selection of such a sample makes it possible to consider the differences in welfare levels and government quality in a specific region. This is the level closer to citizens and less sensitive to major international political issues.

As already pointed out, well-being is measured using data from the OECD dataset on Regional Well-being for the year 2018. The dataset distinguishes 11 dimensions along which well-being is measured, as reported in Table 1.

Table 1. OCED Dimensions of Regional Well-being

Dimension	Indicators
Income	household disposable income per capita (in real USD PPP)
Jobs	employment rate and unemployment rate (%)
Health	life expectancy at birth (years) and age-adjusted mortality rate (per 1,000 people)
Education	share of the labour force with at least secondary education (%)
Environment	estimated average exposure to air pollution (μg /m3)
Safety	homicide rate (per 100,000 people)
Civic engagement	voter turnout (%)
Accessibility of services	share of households with broadband access (%)
Housing	number of rooms per person (ratio)
Community	Percentage of people who have friends or relatives to rely on in case of need
Life satisfaction	Average self-evaluation of life satisfaction on a scale from 0 to 10

Source. OECD Regional Well-Being: A user's guide.

As to measure the different indicators on the same scale, the OECD database provides normalised data computed using the min-max method (OECD, Union, & Commission, 2008) so that they all range on a scale from 0 to 10. For each dimension, the normalisation process starts with sorting the data from the lowest to the highest value. Values below the 4th percentile and above the 96th are eliminated to reduce the skewness of the distribution. After that, extreme values are assigned scores of 0 and 10, while all the other values are assigned a score of $\hat{x}_i$ as follows:

$$\hat{x}_i = \left(\frac{x_i - \min(x)}{\max(x) - \min(x)}\right) \times 10 \qquad\qquad \hat{x}_i = \left(\frac{\max(x) - x_i}{\max(x) - \min(x)}\right) \times 10$$

Finally, as two indicators measure Job and Health, their scores are defined by the arithmetic mean of the normalised value of the respective indicators.

The normalised data are used to build a composite indicator of Well-being, which following Peiró-Palomino (2019), is computed as the arithmetic mean of each region's score.

As for the quality of government, data from the European Quality of Government Index Survey are used. The research data are drawn from the EQI 2017 survey (Charron & Lapuente, 2018). As already stated, questions are framed around the concepts of the quality of services provided, the impartiality of public administrations and corruption, which represent the three EQI index pillars.

The three pillars recall the relationships between well-being and quality of government as pointed out by (Halliwell et al., 2014) and highlighted above. In particular, the impartiality pillar allows capturing the relation between the quality of government and well-being mediated by trust in the public administrations and the quality of democracy. The quality of services underlines the relation mediated by the quality of delivery, while corruption highlights the role of the system fairness.

To determine the EQI index, 18 questions from the survey are considered. The variables are adjusted so that high values are attributed to the high quality of the government itself. Then the 18 questions/indicators are brought back to the three pillars through factor analysis. Finally, the average of the three pillars forms the final index for each region. (Note 1)

In the present analysis, the standardised z-values (distributed according to a standard distribution with a mean equal to 0 and variance equal to 1) are used both for the measurement of the quality of government variable through the EQI and for the measurement of the variables coinciding with the three pillars (quality of public

services, impartiality of public administration and both perceived and experienced corruption). As the standardisation process represents a linear transformation procedure, using such values does not invalidate the analysis and allows the results to be interpreted in terms of deviation from the average.

Five models are used to establish the key relationships between the quality of government and welfare at the regional level among regions belonging to EU member states.

The first model looks at the relationship between the quality of government and well-being without introducing covariates or area-specific effects:

$$WB_{it} = \alpha + \beta_0 QoG_{it} + \varepsilon_{it} \tag{1}$$

Within the model, the index i indicates the region, while the index t is the reference year.

The dependent variable WB_{it} represents the average well-being within region i at time t and can assume a value between 0 and 10 based on the arithmetic mean of the values determined by the OECD for the 11 dimensions used to determine the regional quality of life.

The variable QoG_{it} represents the quality of government within region i at time t and is measured employing the EQI for 2017, while ε_{it} is the error term.

In this first model, the coefficient β_0 estimates the impact of the quality of government on well-being to assess whether a relationship between these variables is present and its intensity.

With the second model, fixed effects attributable to the region's geographical area are introduced into the analysis:

$$WB_{it} = \alpha + \beta_1 QoG_{it} + \beta_2 EM_i + \beta_3 EO_i + \beta_4 EC_i + \varepsilon_{it} \tag{2}$$

These areas are represented by the variables EM (Southern Europe, comprising the regions of Portugal, Spain, Italy and Greece), EO (Western Europe, comprising the regions of France, Belgium, Luxembourg, the Netherlands, Ireland and the United Kingdom) and EC (Central Europe, comprising the regions of Germany, Austria, Poland, the Czech Republic and Slovakia), leaving out a possible variable ES (Northern Europe, comprising Denmark, Sweden and Finland) as it is not a sufficiently large sample. These variables represent the geographical allocation of the different European regions as identified by the Council of European Regions and Municipalities. They are binary variables that take the value 1 when the region i is included within the specific geographical area and the value 0 when it is not.

In this second model, it is interesting to observe at the same time how the β coefficient varies by introducing the fixed effects of the geographical area to which it belongs (which will be referred to as β_1) and whether the geographical, cultural, social, etc. characteristics that distinguish the different areas have a statistically significant impact on well-being (this correlation will be identified by the β_2, β_3, β_4 coefficients). In this way, it is possible to remove from the analysis any distortions arising from region-specific factors that may influence the level of an individual's well-being and the relationship between government and well-being.

Finally, in the third, fourth and fifth models, the quality of government is broken down into the three pillars identified by the Quality of Government Institute.

First, a model is created where only impartiality and quality of services are considered; this is because the third pillar, corruption, is by its very nature a variable highly correlated to the first two. Furthermore, its inclusion within the model with impartiality and quality of services may not allow its effects to be captured and could cause multicollinearity. The model is:

$$WB_{it} = \alpha + \beta_5 Qua_{it} + \beta_6 Imp_{it} + \beta_2 EM_i + \beta_3 EO_i + \beta_4 EC_i + \varepsilon_{it} \tag{3}$$

The variable Qua_{it} measures the quality of the services delivered by the public administrations within region i at time t, while Imp_{it} measures impartiality.

β_5 and β_6 make it possible to assess the impact of the quality of services offered - β_5 - and of impartiality - β_6 - on welfare, respectively.

The fourth model only considers the variable corruption, and it is the following:

$$WB_{it} = \alpha + \beta_7 Cor_{it} + \beta_2 EM_i + \beta_3 EO_i + \beta_4 EC_i + \varepsilon_{it} \tag{4}$$

Cor_{it} represents the level of corruption in region i at time t; the β_7 coefficient indicates the correlation between corruption and the region's well-being.

Finally, in the fifth model, corruption is broken down into perceived corruption and experienced corruption

(Note 2); the model equation is:

$$WB_{it} = \alpha + \beta_8 PerCor_{it} + \beta_9 ExpCor_{it} + \beta_2 EM_i + \beta_3 EO_i + \beta_4 EC_i + \varepsilon_{it} \qquad (5)$$

$PerCor_{it}$ represents the level of perceived corruption within region i at time t, while the variable $ExpCor_{it}$ represents the level of experienced corruption.

β_8 and β_9 are used to determine the correlation between perceived and experienced corruption and welfare, respectively.

In order to test whether the same correlations are present at the regional macro-area level, further regressions are carried out using models (1), (3), (4) and (5) considering each region's geographic macro-area (Southern Europe, Western Europe, Central Europe and Northern Europe). Furthermore, models (1),(2), (3), (4) and (5) are also used to assess the association of the quality of governance, both in overall terms and in its components, on the 11 elements of well-being.

4. Data Analysis

Regarding the geographical distribution of the 158 regions in the sample, it can be observed (Table n.2) that they are almost evenly distributed between Southern Europe (comprising 49 regions), Western Europe (comprising 43 regions) and Central Europe (comprising 53 regions), with the smallest sub-sample being the regions belonging to Northern Europe (comprising only 13 regions).

With regard to average well-being, the index shows its highest value among the northern European regions with 7.66 points (on a 10-point scale), and the same regions score best with regard to the quality of government as measured by the EQI index. The respective EQI index is 1.47 points on a standardised value with a mean equal to zero and a variance of one. It is thus above the average of the regions for which the EQI was calculated. Moreover, these regions perform better than regions in the other macro-areas on all three pillars of government quality.

Within this macro-area, Northern Sweden is the region with the highest absolute level of well-being of all those within the sample used with an average regional level of well-being of 7.91.

There are also the Aland Islands, where it is possible to observe the highest absolute values for EQI (2.32 points), quality of government (2.03), government impartiality (2.18) and the highest absolute levels of overall corruption (higher levels of the index meaning lower levels of corruption) (2.51) and perceived corruption (2.83 points).

Finally, the lowest absolute level of experienced corruption is in the region of Western Finland (1.50 points).

By contrast, the regions belonging to Southern Europe (with a level of 5.76 points) present the lowest average level of well-being, which also have the lowest average levels in terms of EQI (-0.65), service quality (-0.47), impartiality (-0.61) and the lowest average level of corruption: overall (-0.79), perceived (-0.56) and experienced (-0.12).

Within this geographical macro-area, there is also the region with the lowest absolute value of well-being, Northern Greece (with an average level of well-being of 4.05) and the region with the lowest absolute values for EQI, the quality of services offered and the impartiality of public administrations. Calabria region presents, in fact, values equal to -2.18, -2.57 and -2.29, respectively, in the abovementioned dimensions. Here there are also the regions with the highest levels of overall (-2.54) and experienced (-3.45) corruption, namely Abruzzo, and the region with the lowest levels of perceived corruption (-1.65), which is the Campania region.

As for the homogeneity within macro-regions, it can be noted (Table n. 2) that Northern Europe has the highest internal homogeneity level concerning all variables, as it presents the lowest standard deviation values for each of them among all the identified geographical macro-areas.

On the other hand, internal variability is highest for well-being (1.23 standard deviation points), quality of public administration (0.75), impartiality (0.82) and overall corruption (0.79) among the Central European regions.

With regard to the quality of services and experienced corruption, the highest heterogeneity occurs among the Southern European countries (standard deviation equal to 0.88 and 1.02, respectively). Western European countries show the least internal homogeneity concerning perceived corruption (standard deviation equal to 0.75).

Table 2. Summary statistics

| Variable | South Europe | | | | West Europe | | | |
	Average	Standard Deviation	min.	max	Average	Standard Deviation	min.	max
Well-being	5.75	0.87	4.05	7.32	7.21	0.44	6.095	7.81
EQI	-0.65	0.72	-2.18	0.65	0.84	0.41	-0.105	1.35
Quality of services	-0.47	0.88	-2,57	0.95	0.76	0.46	-0.34	1.42
Impartiality	-0.61	0.72	-2.29	0.73	0.79	0.45	-0.48	1.43
Overall corruption	-0.79	0.69	-2.54	0.365	0.86	0.38	-0.02	1.40
Perceived corruption	-0.56	0.49	-1.65	0.42	0.29	0.75	-0.6	1.51
Experienced corruption	-0.12	1.02	-3.45	0.99	0.56	0.39	-0.33	1.05
n	49				43			
Variables	Central Europe				North Europe			
	Average	Standard deviation	min.	max	Average	Standard Deviation	min.	max
well-being	6.13	1.23	4.13	7.83	7.66	0.19	7.36	7.91
EQI	0.20	0.75	-1.01	1.34	1.47	0.28	1.23	2.32
Quality of services	0.21	0.64	-0.74	1.92	1.26	0.295	0.86	2.03
Impartiality	0.23	0.82	-1.12	1.41	1.35	0.27	1.13	2.18
Overall corruption	0.12	0.79	-1.29	1.19	1.63	0.27	1.42	2.51
Perceived corruption	0.37	0.70	-1.29	1.36	2.02	0.48	1.35	2.83
Experienced corruption	0.04	0.95	-2.56	1.04	1.03	0.18	0.79	1.50
n	53				13			

Table 3 shows the results for the five regression models applied to the 158 regions sample under analysis. In model 1, which only considers the relationship between regional well-being and the quality of government, $\beta 0$ has a significance level of 99%. No changes can be observed in the second model after introducing the regional control variables. The respective coefficients, on the contrary, are only significant for Western regions (p-value < 0.1), where the well-being level is slightly higher compared to the other regions.

Within Model 3, two of the three variables that outline the EQI index are introduced: the impartiality of public administrations and the quality of services. Both the variables appear significant, with the impartiality that shows a higher impact on the model. Geographical location continues to be not significant, except for the Central European countries (p-value < 0,05). In these regions, geographic location appears to have a negative impact on well-being.

Finally, models 4 and 5 consider the impact of corruption on well-being. When overall corruption is considered (in model 4), a positive correlation with well-being can be observed ($\beta 7 = 0,91474$, p-value < 0,01). Geographic location is only significant for West Europe regions. Perceived and experienced corruption also show a significant positive correlation with well-being (p-value < 0,01), and, once again, geographic location only appears significant for West Europe regions.

Table 3. Sample analysis

| | Dependent variable: Well-being | | | | |
	(1)	(2)	(3)	(4)	(5)
EQ	0.98358***	1.02438***			
	(0.06156)	(0.09183)			
Impartiality			0.74392***		
			(0.12494)		
Quality of services			0.29700** (0.13815)		
Overall corruption				0.91474***	
				(0.10874)	
Perceived corruption					0.5456*** (0.10836)
Experienced corruption					0.4319*** (0.09806)
South Europe		0.26340	0.07596	0.31255	0.0007
		(0.24212)	(0.21217)	(0.29867)	(0.26563)
Central Europe		-0.23378	-0.38794**	-0.15188	-0.20581

		(0.15718)	(0.14424)		(0.19541)	(0.17518)
West Europe		0.20155* (0.11458)	0.12055 (0.11064)		0.25468* (0.1298)	0.69566*** (0.21211)
Constant	6.22301	6.15614	6.27756		6.16852	6.11169
	(0.0602)	(0.15691)	(0.13809)		(0.19405)	(0.20118)
R^2	0.6673	0.7044	0.7196		0.6346	0.6525
Observations	158	158	158		158	157[1]

Notes. *p<0.1; **p<0.05; ***p<0.01.

1) experienced and perceived corruption data for Luxembourg are not available.

Table four shows the results of regression models 1, 3, 4 and 5 applied to the Southern and Western regions.

In the Southern regions, the value of R2 in regression models 1, 3 and 4 is between 0.1 and 0.29, thus definitely low, while it is equal to 0.49 in model 5. In model 3, the coefficient for quality of service is not statistically significant.

As for Western Regions, the value of R2 varies between a minimum of 0.48 for model 5 and a maximum of 0.69 for model 1. Beta coefficients are always statistically significant, but a negative correlation appears in model 5 with regard to perceived corruption.

Table 4. Subsample analysis

Dependent variable: Well-being								
Southern Europe					West Europe			
	(1)	(3)	(4)	(5)	(1)	(3)	(4)	(5)
EQI	0.579***				0.893***			
	(0.166)				(0.083)			
Impartiality		0.402*				0.409***		
		(0.213)				(0.134)		
Quality of services		0.239				0.405***		
		(0.176)				(0.122)		
Overall corruption			0.411**				0.855***	
			(0.196)				(0.106)	
Perceived corruption				1.156***				-0.181***
				(0.168)				(0.062)
Experienced corruption				0.257***				0.872***
				(0.076)				(0.117)
Constant	6.131	6.116	6.083	6.432	6.468	6.582	6.475	6.77
	(0.158)	(0.144)	(0.203)	(0.099)	(0.08)	(0.084)	(0.109)	(0.093)
R^2	0.233	0.289	0.103	0.49	0.687	0.646	0.545	0.485
Observations	49	49	49	49	43	43	43	42

Note. *p<0.1; **p<0.05; ***p<0.01.

For the regions belonging to Central Europe (table 5), the coefficients concerning the quality of government, impartiality, quality of services and overall corruption are statistically significant (p-value < 0.01). The coefficient related to the impact of perceived corruption, on the other hand, is significant at the 95% level, and finally, there does not appear to be a statistically significant correlation with experienced corruption. R^2 varies between a minimum of 0.68 for model 5 and a maximum of 0.82 for model 2.

Finally, when the Northern regions are considered, the R^2 values appear very low, so the regression models are not as fit to explain variations in well-being. Furthermore, the coefficients for quality of government, perceived corruption and experienced corruption are not significant. When analysing the results obtained within this macro-area, it must be considered that the Northern European countries represent a relatively small sub-sample.

Table 5. Analysis

Dependent variable: Well-being								
Central Europe					**North Europe**			
	(1)	(3)	(4)	(5)	(1)	(3)	(4)	(5)
EQI	1.483*** (0.106)				-0.098 (0.139)			
Impartiality		0.753*** (0.163)				-1.113*** (0.328)		
Quality of services		0.844*** (0.204)				0.993*** (0.302)		
Overall corruption			1.302*** (0.111)				-0.234*** (0.075)	
Perceived corruption				0.813** (0.375)				0.065 (0.119)
Experienced corruption				0.487 (0.291)				-0.102 (0.189)
Constant	5.831 (0.086)	5.772 (0.084)	5.970 (0.101)	5.805 (0.186)	7.802 (0.232)	7.914 (0.156)	8.04 (0.153)	7.632 (0.388)
R^2	0.812	0.829	0.703	0.684	0.020	0.391	0.112	0.029
Observations	53	53	53	53	13	13	13	13
*p<0.1; **p<0.05; ***p<0.01								

Note. *p<0.1; **p<0.05; ***p<0.01.

As the last step of the analysis, the relationship between the quality of government and the 11 elements making up the well-being indicator is analysed using the five regression models (Table A1). For seven determinants (Education, Job, Health, Environment, Access to services, Housing and Life satisfaction) it is possible to observe significant beta coefficients in all five models and R^2 values higher than 0.5. As for Education, a negative association can be observed in model two, for and in model five with regard to experienced corruption. Besides, Quality of Services appears to be positively correlated only with Job and Access to Services.

When the regression models 1, 3, 4 and 5 are applied at the macro-area level (Tables A2-A5), it is possible to observe that the macro-area with more consistent results is Central Europe. In this area, models 1, 3 and 4 show a good explanatory power for Education (the association, in this case, is always negative whatever independent variable is considered), Income, Health, Environment, Civic Engagement, Access to Services and Housing, with R^2 ranging between 0.584 and 0.808. For the remaining four elements of well-being, on the contrary, R^2 presents lower values varying between 0.188 and 0.386. The only exception is Life Satisfaction for which models 1 and 3 present a high R^2, respectively 0.534 and 0.601, while model 4 only scores an R^2 equal to 0.386. The results for model 5, instead, appear less consistent, with perceived corruption and expected corruption that are never significant at once. In the remaining macro-areas results are weaker and less consistent; in Western countries, the four regression models only exhibit a good explanatory power for Job and Access to services, while in Northern regions the same can be observed concerning Civic Engagement and Housing. In the Southern Regions, R^2 values are generally low, with few exceptions where values around 0.4 can be observed. However, given the low number of observations in the subsamples, the latter results should be taken cautiously.

5 Discussion and Conclusions

Public administrations in today's society play a central role in meeting human needs. Ideally, they should aim to improve well-being within the community of reference. Studies in this field have tried to explain how governments can influence well-being, often focusing on life satisfaction (Mizobuchi, 2014).

In this respect, the study's first aim was to investigate the relationship between the quality of government at the regional level and citizens' well-being within regions. The latter is here intended not as mere life satisfaction but as a function of different factors affecting people's life which are captured by the OECD's survey on regional well-being. Quality of government, instead, was here considered a function of the Impartiality of institutions, the Quality of the services provided and the Control of corruption. These three pillars, as reported in the second section, are relevant in the well-being literature and find operationalisation in the EQI quality of government index, which therefore represented the independent variables in the analysis conducted.

Consistent with the existing literature (Helliwell, Huang, Grover, & Wang, 2014, 2018; Peiro-Palomino, Picazo-Tadeo, & Rios, 2020), a positive correlation between well-being and overall quality of government was observed. The empirical analysis found that higher levels of overall quality of government are related to higher

levels of overall well-being. A significant positive effect of geographic location on well-being was found in the Western regions. This positive correlation is present both when the analysis was conducted on the whole sample, as well as when it was conducted at the level of macro geographical areas. The only exception was represented by the Northern Europe regions, which nevertheless, as highlighted, represent a very small sub-sample.

As the quality of government in the EQI index is a function of the quality of services provided to the citizens, the impartiality of public administrations and the level of corruption, the study also investigated whether and how these variables affect well-being.

In this regard, it can be said that both impartiality and service quality are positively associated with well-being and service quality appears to have a lesser impact on well-being than government impartiality. These results are consistent with previous literature stating that in advanced economy countries, as most of the EU countries in the sample, where sufficient levels of quality of public services are present, aspects such as the quality of democracy have a higher impact on well-being than the quality of services (Bjørnskov, Dreher, & Fischer, 2010; Helliwell et al., 2014, 2018; Samanni & Holmberg, 2010). The positive association between well-being and impartiality is also consistent with those studies which argue that trust in government has a positive impact on well-being (Böhnke, 2008; Hudson, 2006; Hommerich, 2012; Kuroki, 2011). In this case, a significant negative effect of geographic location can be observed with regard to the Central Europe regions.

With regard to corruption, it was possible to assess, through two separate models, the presence of higher levels of well-being within regions with lower levels of corruption. Consistently with previous studies (Bauhr & Grimes, 2017; Helliwell et al., 2014; Heukamp & Arino, 2011; Klitgaard, 1988; Mauro, 1995; Rose-Ackerman & Palifka, 2016; Welsch, 2008), the data analysis confirmed the existence of a negative relationship between overall corruption within public administrations and collective well-being. It was also possible to establish a negative correlation with both perceived and experienced corruption. Once again geographic location seems to exert a significant positive effect when Western Europe countries are considered, both when corruption is considered as a whole and when it is split into its two determinants.

The study thus provided an affirmative answer regarding the presence of an empirical correlation between the quality of government and well-being. However, it must be noted that this relationship is determined by the indicators selected for the measurement of well-being; the choice fell on a complex indicator composed of variables that, in turn, can be influenced by several factors, which can transcend the mere quality of public administrations. Furthermore, this composite indicator was obtained by computing the simple average of the OECD's 11 dimensions of well-being, which is clearly a limit. However, as highlighted by Peiró-Palomino (2019), although the simple average does not identify what accounts most for overall well-being, it does allow an objective regional comparison (Peiró-Palomino, 2019, p.199). In view of this, the research also tried to assess whether and to what extent the quality of government as a whole, as well as its determinants, are associated with the 11 drivers of well-being. The results of this part of the analysis highlight a significant association between the Eqi variables and Education, Job, Health, Environment, Access to Services, Housing and Life Satisfaction. It must be noted that except for Access to Services, in all the regression models the impact of geographic location was higher than that of the Eqi components.

When the analysis was repeated at the macro-area level, high values of R^2 were observed mainly in Central European regions; in Northern and Southern regions, on the contrary, R^2 values were generally low, while in West Europe regions high R^2 values could only be observed with regard to Job, Access to Services and Life Satisfaction limited to the Eqi score and expected and perceived corruption. However, as already stated, the analysis at the macro-area level is affected by the low sub-sample size and hence its results should be taken cautiously.

Concluding it is possible to state that well-being and its components are influenced by several factors which can be better analysed and explained at a subnational level. For instance, one can think about life expectancy, which is one of the elements identified for measuring the Health dimension, and how it is affected by cultural factors such as regional dietary habits, which allows for lower incidences of specific diseases and positively impact well-being. Nonetheless, the research results highlight that the quality of government is also relevant and confirm that in advanced economies, as those considered in the present analysis, impartiality and trust in institutions together with control of corruption matter more than the quality of the services provided. As for corruption, specifically, the present study only considered petty corruption which is captured by the EQI index, thus disregarding the grand one. Future studies might address specifically this issue by analysing and comparing the impact of grand corruption and petty corruption on well-being. Furthermore, the sample analysed does not include East European regions; while on the one hand, this does not allow for a complete picture of the European

context, leaving room for future analysis, on the other it allows for a more homogeneous sample which facilitates comparisons.

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Notes

Note 1. More information about the construction of the EQI index can be found in (Charron, Dijkstra, & Lapuente, 2015; Charron & Lapuente, 2018; Charron, Lapuente, & Annoni, 2019)

Note 2. Perceived corruption refers to the interviewees' opinions on the spread of corruption in various areas of public administration. Experienced corruption, on the other hand, refers to the actual experiences of the interviewees with corrupt acts in which they were active or passive subjects.

Appendix A

Table A1: Well-being pillars and Eqi components regressions table

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
Eqi	0.665***	1.766***	0.573***	0.214	0.002	1.363***	1.085***	1.158***	0.984***	1.035***	1.959***
	(0.14)	(0.17)	(0.08)	(0.13)	(0.16)	(0.18)	(0.20)	(0.09)	(0.13)	(0.12)	(0.12)
Constant	7.039***	6.287***	3.782***	9.256***	7.017***	4.811***	5.482***	7.484***	4.538***	7.662***	5.098***
	(0.19)	(0.17)	(0.08)	(0.10)	(0.19)	(0.19)	(0.18)	(0.08)	(0.15)	(0.12)	(0.13)
R-squared	0.078	0.441	0.244	0.042	0.000	0.269	0.178	0.571	0.231	0.337	0.568
Eqi	-0.675***	1.600***	0.847***	0.528***	0.834***	1.722***	0.992***	1.218***	1.694***	0.985***	1.491***
	(0.14)	(0.20)	(0.12)	(0.15)	(0.20)	(0.20)	(0.26)	(0.13)	(0.15)	(0.20)	(0.20)
EM	-4.797***	-0.361	1.274***	0.884***	3.378***	0.753	0.048	0.255	3.436***	-0.007	-2.037**
	(0.52)	(0.57)	(0.33)	(0.20)	(0.61)	(0.59)	(0.90)	(0.31)	(0.36)	(0.57)	(0.62)
EO	-0.758**	0.334	0.645***	-0.188	1.091***	-0.705	0.512	0.099	1.823***	0.246	-0.902***
	(0.26)	(0.34)	(0.18)	(0.16)	(0.31)	(0.36)	(0.79)	(0.21)	(0.20)	(0.27)	(0.25)
EC	0.489	1.948***	0.764***	0.245	-0.731	-2.224***	-1.260	0.054	0.008	0.142	-2.049***
	(0.31)	(0.36)	(0.22)	(0.22)	(0.38)	(0.37)	(0.80)	(0.21)	(0.27)	(0.32)	(0.36)
Constant	8.856***	5.691***	2.896***	8.884***	5.739***	5.438***	5.770***	7.347***	2.821***	7.560***	6.764***
	(0.31)	(0.39)	(0.20)	(0.24)	(0.36)	(0.38)	(0.77)	(0.22)	(0.25)	(0.35)	(0.33)
R-squared	0.796	0.593	0.300	0.143	0.515	0.499	0.270	0.574	0.702	0.340	0.616
Impartiality	-0.343*	0.977**	0.589**	0.404*	0.797**	1.603***	0.577	0.542**	1.313***	0.569	1.260***
	(0.17)	(0.34)	(0.20)	(0.20)	(0.28)	(0.44)	(0.41)	(0.18)	(0.21)	(0.32)	(0.32)
Quality	-0.291	0.641*	0.211	0.183	0.075	0.058	0.446	0.686***	0.344	0.455	0.336
	(0.20)	(0.31)	(0.20)	(0.11)	(0.31)	(0.48)	(0.42)	(0.19)	(0.19)	(0.35)	(0.31)
EM	-4.546***	-0.711	1.006**	0.880***	3.314***	0.369	-0.142	-0.065	3.036***	-0.182	-2.127***
	(0.49)	(0.56)	(0.30)	(0.21)	(0.54)	(0.55)	(0.88)	(0.28)	(0.35)	(0.52)	(0.56)
EO	-0.669**	0.193	0.546**	-0.203	1.049***	-0.863*	0.433	-0.022	1.663***	0.171	-0.968***
	(0.26)	(0.34)	(0.18)	(0.17)	(0.31)	(0.35)	(0.80)	(0.21)	(0.20)	(0.26)	(0.24)
EC	0.661*	1.676***	0.564*	0.215	-0.825*	-2.568***	-1.410	-0.169	-0.321	0.001	-2.189***
	(0.29)	(0.35)	(0.22)	(0.22)	(0.35)	(0.37)	(0.80)	(0.19)	(0.26)	(0.29)	(0.32)
Constant	8.695***	5.907***	3.077***	8.881***	5.789***	5.721***	5.882***	7.535***	3.095***	7.661***	6.821***
	(0.30)	(0.37)	(0.19)	(0.26)	(0.33)	(0.38)	(0.77)	(0.20)	(0.25)	(0.32)	(0.29)
R-squared	0.084	0.449	0.236	0.060	0.001	0.264	0.177	0.574	0.233	0.345	0.584
Corruption	-0.707***	1.442***	0.879***	0.371***	0.696**	1.715***	0.854**	1.104***	1.639***	0.834***	1.170***
	(0.13)	(0.21)	(0.12)	(0.10)	(0.22)	(0.20)	(0.27)	(0.15)	(0.16)	(0.21)	(0.23)
EM	-5.080***	-0.257	1.608***	0.667**	3.297***	1.258	0.017	0.349	3.817***	-0.073	-2.361**
	(0.53)	(0.61)	(0.36)	(0.20)	(0.71)	(0.65)	(0.95)	(0.39)	(0.41)	(0.66)	(0.74)
EO	-0.873**	0.427	0.783***	-0.237	1.097***	-0.480	0.540	0.175	2.007***	0.262	-0.949**
	(0.27)	(0.36)	(0.19)	(0.15)	(0.32)	(0.36)	(0.80)	(0.22)	(0.21)	(0.30)	(0.29)
EC	0.278	2.096***	1.017***	0.136	-0.738	-1.820***	-1.228	0.176	0.334	0.152	-2.174***

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
	(0.32)	(0.39)	(0.25)	(0.19)	(0.44)	(0.39)	(0.82)	(0.25)	(0.29)	(0.37)	(0.44)
Constant	9.018***	5.688***	2.707***	9.053***	5.829***	5.171***	5.833***	7.335***	2.636***	7.646***	7.045***
	(0.32)	(0.42)	(0.23)	(0.19)	(0.42)	(0.41)	(0.78)	(0.27)	(0.29)	(0.40)	(0.40)
R-squared	0.800	0.561	0.317	0.084	0.496	0.496	0.253	0.521	0.680	0.300	0.558
N. of cases	158.000	158.000	158.000	158.000	158.000	158.000	158.000	158.000	158.000	158.000	158.000
Perceived	0.279*	1.077***	0.767***	0.280	0.769***	0.513*	0.511	0.388*	0.673***	0.438*	0.492*
Corruption	(0.13)	(0.25)	(0.12)	(0.19)	(0.19)	(0.24)	(0.30)	(0.16)	(0.17)	(0.18)	(0.23)
Experienced	-0.600***	0.430*	0.234**	0.059	0.274	1.069***	0.243	0.586***	0.934***	0.523**	0.715***
Corruption	(0.12)	(0.18)	(0.08)	(0.09)	(0.14)	(0.22)	(0.23)	(0.14)	(0.16)	(0.20)	(0.20)
EM	-3.420***	-0.432	1.748***	0.562*	3.936***	-0.208	-0.428	-0.576	2.773***	-0.298	-3.016***
	(0.42)	(0.66)	(0.36)	(0.28)	(0.53)	(0.75)	(0.97)	(0.40)	(0.44)	(0.51)	(0.58)
EO	-0.206	1.443**	1.509***	-0.010	2.028***	-0.264	0.842	0.317	2.471***	0.748*	-0.558
	(0.32)	(0.44)	(0.30)	(0.31)	(0.51)	(0.50)	(0.95)	(0.28)	(0.35)	(0.32)	(0.41)
EC	1.133***	2.161***	1.205***	0.099	-0.225	-2.376***	-1.411	-0.202	0.003	0.193	-2.338***
	(0.32)	(0.40)	(0.27)	(0.26)	(0.42)	(0.44)	(0.83)	(0.26)	(0.31)	(0.30)	(0.40)
Constant	8.001***	5.379***	2.331***	9.028***	5.103***	5.697***	5.919***	7.676***	2.874***	7.520***	7.137***
	(0.33)	(0.49)	(0.28)	(0.31)	(0.43)	(0.49)	(0.84)	(0.31)	(0.33)	(0.33)	(0.41)
R-squared	0.800	0.559	0.369	0.070	0.541	0.494	0.232	0.482	0.684	0.345	0.570
N. of cases	157.000	157.000	157.000	157.000	157.000	157.000	157.000	157.000	157.000	157.000	157.000

Table A2: Well-being pillars and Eqi components regressions table for South European Regions

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
Eqi	-0.625	1.685***	0.094	0.587	-0.268	1.982***	-0.578	0.683**	0.933***	0.998*	0.792*
	(0.33)	(0.37)	(0.16)	(0.34)	(0.31)	(0.43)	(0.30)	(0.21)	(0.16)	(0.42)	(0.39)
Constant	4.091***	5.385***	3.684***	9.806***	8.405***	6.359***	4.804***	7.257***	5.766***	7.562***	4.275***
	(0.38)	(0.37)	(0.18)	(0.07)	(0.39)	(0.41)	(0.34)	(0.17)	(0.17)	(0.43)	(0.46)
R-squared	0.075	0.249	0.005	0.088	0.015	0.256	0.062	0.199	0.390	0.116	0.082
Impartiality	-0.264	1.368*	-0.084	0.729	-0.309	2.157*	-0.699	0.092	0.459	0.461	0.685
	(0.41)	(0.64)	(0.33)	(0.57)	(0.38)	(0.89)	(0.48)	(0.26)	(0.25)	(0.61)	(0.59)
Quality	-0.266	0.314	0.146	0.021	0.128	-0.053	0.168	0.577*	0.464*	0.620	0.269
	(0.31)	(0.46)	(0.26)	(0.18)	(0.37)	(0.75)	(0.45)	(0.22)	(0.22)	(0.53)	(0.45)
Constant	4.209***	5.283***	3.640***	9.885***	8.448***	6.378***	4.827***	7.142***	5.661***	7.490***	4.309***
	(0.37)	(0.39)	(0.18)	(0.13)	(0.34)	(0.39)	(0.32)	(0.17)	(0.16)	(0.42)	(0.46)
R-squared	0.057	0.242	0.009	0.141	0.010	0.287	0.059	0.254	0.405	0.149	0.117
Corruption	-0.771*	1.763***	0.097	0.314	-0.560	2.040***	-0.853**	0.494	0.836***	0.629	0.417
	(0.33)	(0.40)	(0.17)	(0.22)	(0.34)	(0.47)	(0.30)	(0.25)	(0.19)	(0.49)	(0.45)
Constant	3.887***	5.684***	3.699***	9.675***	8.137***	6.685***	4.506***	7.205***	5.821***	7.412***	4.091***
	(0.43)	(0.38)	(0.20)	(0.10)	(0.45)	(0.49)	(0.38)	(0.23)	(0.20)	(0.52)	(0.56)
R-squared	0.101	0.242	0.005	0.022	0.060	0.241	0.120	0.092	0.277	0.041	0.020
Perceived	0.766	3.013***	1.094***	1.005	1.138***	-0.429	1.210***	0.791**	0.808**	1.281*	2.161***
Corruption	(0.47)	(0.51)	(0.23)	(0.61)	(0.25)	(0.60)	(0.33)	(0.28)	(0.27)	(0.52)	(0.36)
Experienced	-0.473*	0.629**	-0.024	0.034	-0.169	1.257**	-0.473**	0.384*	0.528***	0.616*	0.494*
Corruption	(0.18)	(0.22)	(0.11)	(0.07)	(0.14)	(0.39)	(0.16)	(0.14)	(0.12)	(0.29)	(0.19)
Constant	4.867***	6.051***	4.231***	9.992***	9.194***	4.985***	5.798***	7.301***	5.675***	7.703***	5.027***
	(0.31)	(0.39)	(0.17)	(0.17)	(0.20)	(0.57)	(0.24)	(0.17)	(0.21)	(0.44)	(0.26)
R-squared	0.144	0.411	0.300	0.117	0.144	0.214	0.219	0.230	0.357	0.163	0.323
N. of cases	49.000	49.000	49.000	49.000	49.000	49.000	49.000	49.000	49.000	49.000	49.000

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table A3: Well-being pillars and Eqi components regressions table for Central European Regions

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
Eqi	-0.772***	1.033***	1.719***	0.376***	2.243***	1.914***	2.933***	1.306***	2.509***	1.038***	2.018***
	(0.09)	(0.23)	(0.14)	(0.09)	(0.18)	(0.22)	(0.28)	(0.15)	(0.22)	(0.19)	(0.25)
Constant	9.364***	7.751***	3.488***	9.159***	4.728***	3.176***	4.125***	7.384***	2.668***	7.691***	4.610***
	(0.06)	(0.20)	(0.10)	(0.08)	(0.13)	(0.19)	(0.23)	(0.12)	(0.17)	(0.17)	(0.20)
R-squared	0.613	0.289	0.808	0.234	0.759	0.584	0.694	0.621	0.733	0.374	0.534
Impartiality	-0.315*	0.314	0.683**	0.155	1.202***	0.804	1.385**	0.428	1.922***	0.457	1.372***
	(0.12)	(0.37)	(0.20)	(0.16)	(0.27)	(0.41)	(0.52)	(0.28)	(0.35)	(0.45)	(0.36)
Quality	-0.514**	0.941**	1.191***	0.273	1.207***	1.269*	1.824**	1.048**	0.588	0.597	0.829*
	(0.16)	(0.35)	(0.19)	(0.23)	(0.29)	(0.54)	(0.56)	(0.32)	(0.43)	(0.43)	(0.37)
Constant	9.397***	7.681***	3.411***	9.138***	4.626***	3.092***	3.984***	7.317***	2.573***	7.660***	4.501***
	(0.06)	(0.20)	(0.11)	(0.08)	(0.13)	(0.19)	(0.23)	(0.12)	(0.18)	(0.17)	(0.19)
R-squared	0.593	0.342	0.800	0.252	0.776	0.577	0.713	0.643	0.753	0.331	0.601
Corruption	-0.719***	0.801**	1.571***	0.318***	1.976***	1.747***	2.574***	1.154***	2.244***	1.038***	1.619***
	(0.09)	(0.23)	(0.14)	(0.08)	(0.18)	(0.21)	(0.27)	(0.15)	(0.23)	(0.19)	(0.26)
Constant	9.297***	7.861***	3.642***	9.195***	4.938***	3.347***	4.400***	7.505***	2.898***	7.774***	4.817***
	(0.06)	(0.20)	(0.10)	(0.07)	(0.16)	(0.19)	(0.25)	(0.13)	(0.19)	(0.15)	(0.22)
R-squared	0.596	0.195	0.757	0.188	0.661	0.547	0.600	0.545	0.659	0.419	0.386
Perceived Corruption	-0.267	1.788**	0.719	-0.168	0.760	1.888**	1.290	1.362**	1.231	-1.083	1.425
	(0.26)	(0.58)	(0.41)	(0.32)	(0.61)	(0.66)	(0.91)	(0.48)	(0.72)	(0.80)	(0.87)
Experienced Corruption	-0.356	-0.493	0.701*	0.361	1.142*	0.037	1.090	-0.060	1.026	1.533*	0.375
	(0.20)	(0.42)	(0.30)	(0.23)	(0.44)	(0.50)	(0.75)	(0.34)	(0.57)	(0.62)	(0.68)
Constant	9.325***	7.317***	3.533***	9.280***	4.845***	2.857***	4.185***	7.143***	2.668***	8.232***	4.468***
	(0.11)	(0.27)	(0.20)	(0.16)	(0.29)	(0.31)	(0.45)	(0.22)	(0.35)	(0.24)	(0.45)
R-squared	0.495	0.334	0.652	0.170	0.691	0.523	0.528	0.528	0.684	0.406	0.421
N. of cases	53.000	53.000	53.000	53.000	53.000	53.000	53.000	53.000	53.000	53.000	53.000

* p<0.05, ** p<0.01, *** p<0.001

Note. * p<0.05, ** p<0.01, *** p<0.001

Table A4. Well-being pillars and Eqi components regressions table for West European Regions

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
Eqi	-0.505*	3.674***	-0.020	0.968**	-0.918	0.026	-0.342	2.974***	1.061*	0.844*	2.056***
	(0.21)	(0.33)	(0.21)	(0.32)	(0.47)	(0.39)	(0.64)	(0.40)	(0.39)	(0.37)	(0.45)
Constant	7.955***	4.291***	4.267***	8.328***	8.294***	6.150***	7.397***	5.979***	5.173***	7.923***	5.389***
	(0.18)	(0.29)	(0.15)	(0.33)	(0.49)	(0.34)	(0.58)	(0.41)	(0.42)	(0.33)	(0.41)
R-squared	0.118	0.662	0.000	0.252	0.099	0.000	0.006	0.699	0.214	0.136	0.401
Impartiality	-0.229	2.358***	-0.288	0.390	-0.558	2.033***	-3.115***	1.353*	-0.151	1.607***	1.047
	(0.32)	(0.53)	(0.23)	(0.34)	(0.75)	(0.43)	(0.68)	(0.56)	(0.58)	(0.31)	(0.58)
Quality	-0.225	0.921	0.229	0.517	-0.086	-2.106***	2.932***	1.182*	0.993*	-0.765*	0.907
	(0.34)	(0.60)	(0.24)	(0.49)	(0.64)	(0.42)	(0.60)	(0.58)	(0.44)	(0.36)	(0.63)
Constant	7.886***	4.794***	4.304***	8.435***	8.033***	6.164***	7.349***	6.493***	5.424***	7.937***	5.588***
	(0.19)	(0.28)	(0.15)	(0.27)	(0.51)	(0.27)	(0.45)	(0.46)	(0.41)	(0.22)	(0.37)
R-squared	0.108	0.606	0.015	0.252	0.058	0.209	0.235	0.576	0.188	0.283	0.411
Corruption	-0.498*	3.735***	0.078	0.861*	-1.401***	0.377	-0.807	3.314***	1.320***	0.671	1.760**
	(0.19)	(0.43)	(0.28)	(0.40)	(0.37)	(0.38)	(0.66)	(0.39)	(0.27)	(0.46)	(0.54)
Constant	7.964***	4.133***	4.183***	8.393***	8.737***	5.847***	7.809***	5.600***	4.919***	8.049***	5.586***
	(0.15)	(0.43)	(0.19)	(0.41)	(0.37)	(0.31)	(0.54)	(0.39)	(0.28)	(0.41)	(0.49)
R-squared	0.099	0.590	0.002	0.172	0.199	0.012	0.028	0.749	0.286	0.074	0.254
Perceived Corruption	0.494***	-0.143	0.218	-0.136	-0.081	1.470***	-1.912***	-0.555***	-0.219	0.202	-1.332***
	(0.12)	(0.23)	(0.12)	(0.15)	(0.24)	(0.16)	(0.19)	(0.14)	(0.17)	(0.17)	(0.16)
Experienced Corruption	-0.769***	3.540***	-0.388*	0.812*	-1.434***	-0.310	-0.273	3.361***	1.552***	0.775*	2.718***
	(0.19)	(0.49)	(0.18)	(0.33)	(0.36)	(0.38)	(0.46)	(0.42)	(0.33)	(0.35)	(0.33)
Constant	7.828***	5.437***	4.344***	8.717***	8.325***	5.929***	7.740***	6.716***	5.256***	8.195***	5.983***

(0.10)	(0.32)	(0.10)	(0.27)	(0.28)	(0.26)	(0.35)	(0.31)	(0.23)	(0.23)	(0.24)
R-squared	0.351	0.522	0.101	0.131	0.247	0.633	0.709	0.675	0.344	0.212	0.661
N. of cases	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000

* p<0.05, ** p<0.01, *** p<0.001

Table A5. Well-being pillars and Eqi components regressions table for North European Regions

	Education	Job	Income	Security	Health	Environment	Civic Engagement	Access to Services	Housing	Sense of Community	Life Satisfaction
Eqi	-0.282	1.512**	0.749**	0.366	0.085	1.240*	-6.649***	0.065	1.833***	0.002	-0.007
	(0.53)	(0.48)	(0.17)	(0.17)	(0.60)	(0.55)	(1.09)	(0.22)	(0.40)	(0.44)	(0.21)
Constant	8.279***	5.819***	3.040***	9.121***	6.838***	6.146***	16.980***	9.039***	2.618***	9.002***	8.961***
	(0.94)	(0.88)	(0.30)	(0.34)	(0.99)	(1.02)	(1.68)	(0.37)	(0.59)	(0.75)	(0.39)
R-squared	0.009	0.178	0.205	0.079	0.001	0.140	0.487	0.003	0.517	0.000	0.000
Impartiality	0.210	-0.856	0.601	1.607	-3.049	1.801	-14.177**	-0.385	2.836*	-1.163	-0.161
	(2.38)	(2.55)	(1.19)	(0.84)	(1.57)	(2.32)	(3.50)	(0.71)	(1.11)	(1.56)	(0.65)
Quality	-0.554	2.240	0.118	-1.201	3.031	-0.509	7.334	0.473	-0.998	1.225	0.194
	(2.62)	(2.45)	(1.21)	(0.82)	(1.66)	(2.50)	(3.90)	(0.77)	(0.96)	(1.48)	(0.60)
Constant	8.280***	6.373***	3.178***	8.996***	7.269***	6.168***	17.172***	9.060***	2.725**	9.034***	8.923***
	(0.78)	(1.15)	(0.34)	(0.32)	(0.60)	(1.03)	(1.41)	(0.31)	(0.60)	(0.82)	(0.40)
R-squared	0.019	0.212	0.183	0.240	0.220	0.150	0.598	0.030	0.527	0.040	0.004
Corruption	-0.064	1.369*	0.790***	0.506*	-0.263	1.234**	-7.619***	-0.068	2.014***	-0.338	-0.122
	(0.57)	(0.50)	(0.14)	(0.19)	(0.33)	(0.33)	(0.63)	(0.09)	(0.27)	(0.37)	(0.21)
Constant	7.970***	5.806***	2.853***	8.834***	7.391***	5.954***	19.639***	9.245***	2.025**	9.555***	9.149***
	(1.06)	(0.88)	(0.32)	(0.37)	(0.71)	(0.76)	(1.31)	(0.24)	(0.53)	(0.77)	(0.44)
R-squared	0.000	0.141	0.220	0.145	0.009	0.134	0.617	0.003	0.602	0.017	0.008
Perceived Corruption	-1.704**	1.449**	-0.287	-0.441	-0.814	-1.648**	4.194**	-0.308	-0.292	1.153**	0.503*
	(0.41)	(0.34)	(0.21)	(0.24)	(0.45)	(0.46)	(0.97)	(0.30)	(0.34)	(0.31)	(0.21)
Experienced Corruption	0.202	0.575***	0.553***	0.332**	0.067	0.956*	-4.552***	0.171	1.056**	-0.449*	-0.184
	(0.19)	(0.12)	(0.10)	(0.10)	(0.19)	(0.31)	(0.63)	(0.20)	(0.24)	(0.14)	(0.10)
Constant	11.048***	4.466***	4.074***	10.158***	8.516***	10.161***	4.093	9.553***	4.668***	7.213***	8.155***
	(0.55)	(0.81)	(0.46)	(0.34)	(0.80)	(0.76)	(2.08)	(0.52)	(0.69)	(0.63)	(0.35)
R-squared	0.711	0.664	0.332	0.291	0.205	0.534	0.761	0.130	0.538	0.403	0.265
N. of cases	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000	13.000

Note. * p<0.05, ** p<0.01, *** p<0.001.

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