

# **Does the Quality of Regional Government Matter to Regional Well-Being?**

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## **Abstract**

This research tries to establish the relation between the quality of regional government and the regional well-being. Making use of data of the OECD 'Regional Well-Being Index' and the 'European Quality of Government Index', the research is based on a quantitative analysis. The well-being index consists of eleven dimensions. These dimensions each cover a different aspect of well-being. Eleven simple linear regressions examined nine out of the eleven dimensions to be significant. Education, jobs, accessibility to services, income, housing, community, life satisfaction, environment and civic engagement all turns out to be positively correlated to the quality of regional government. Safety and health appear to have no proven relation to the quality of regional well-being. Further research should dig deeper into the different dimensions individually.

Keywords: Well-Being, Quality of Regional Government, Statistical Analysis.

## 1. Introduction

Over the last 50 years, well-being has become a more and more returning subject of research. New research is digging deeper into patterns of well-being. Well-being can be interpreted in many ways. The OECD splits well-being up into eleven different dimensions (OECD, 2016). The OECD is an organization, consisting of 36 countries, which goal is to observe and improve the cooperation and development of economic activities. With these eleven dimensions, the concept of well-being is largely covered. A higher level of well-being benefits the individual as it is strongly connected to a higher level of happiness (de Neve et al., 2013). A higher level of happiness is associated with greater cooperation, motivation and creativity. Furthermore, a higher level of happiness is associated with better health circumstances. Yet there are different drivers of well-being. Furthermore, well-being can be linked to the quality of governments? The quality of governments is dependent on several indicators. Impartiality, quality of public service delivery and corruption are well-known indicators of quality of regional governments (Charron et al., 2019). Identifying the drivers of well-being is important. By identifying these drivers, the government can improve its policies and institutions to increase the level of well-being of its citizens.

This research will contribute to the research field about well-being. It will highlight the importance of quality of regional government on well-being. This research will examine the linkages and relations between well-being and the quality of governments. More specifically, this research will try to link the quality of regional governments to regional well-being. The question this research will try to answer is: *‘To what extent does the quality of regional government influence the regional well-being?’*. This research firstly tries to find linkages and relations between the quality of the regional governments and the regional well-being. Secondly, it will try to point out why the quality of the regional government is important. By indicating the importance of quality of regional governments, one can be more able to reform this to improve the well-being of the population.

This study is structured into different sections. The first section covers the theoretical framework. Furthermore, in this section will a conceptual model be created, which will be used in the paper. This section ends with the hypothesis of the research question. The second section covers the methodology. In this section, the research method will be defined and explained. Additionally, the data collection method will be discussed. The third section will cover the results of the analysis and the discussion. The last section will be used for the concluding remarks. The main points of the paper will be briefly summarized. The last section will be concluded by recommendations for further research.

## 2. Theoretical Framework

In the last decades, central governments are distributing more and more of their tasks and occasions towards lower governments. By distributing some of these tasks, the central governments are giving responsibilities more to the regional governments. Giving these responsibilities away to lower governments both has advantages and disadvantages. These will be discussed later during the theoretical framework.

In the next part, the quality of governance will be discussed, followed by the concept of well-being and the linkages between these two concepts.

### 2.1 Quality of Government

Governance can be linked directly to the government. Governance is a tool the government and authorities can make use of. It is the government’s ability to make

and carry out rules (Fukuyama, 2013). Besides making rules, governance also delivers public services. The quality of governance is complicated to determine, as it can be used in different ways. An often-used measurement is originating from the Worldwide Governance Indicators (WGI). This index ranks countries on the quality of governance, based on six indicators: Voice and Accountability, Political Stability and Violence, Government Effectiveness, Rule of Law and Control of Corruption (Kaufmann & Kraay, 2021). A lower level of the quality of governance result in negative consequences for the country (Charron et al., 2019). Less developed governments are an incentive to poorer health in a region/country, less economic development and more environmental pollution. High quality of governance has positive out-turns. Strengthening the institutions and administrative capacity leads to higher social welfare and higher labour market participation (di Cataldo & Rodríguez-Pose, 2017).

The quality of regional governances can be determined by the EQI, the European Quality of governance Index. This index focuses on the level of corruption and the quality of institution on the regional level. This index exclusively focuses on the regional level within the European Union. This index will be further discussed during the methodology section.

## **2.2 Well-Being**

Well-being is a concept which became topical during the second half of the 20<sup>th</sup> century (Alatartseva & Barysheva, 2016). Enhancing well-being was seen as both a worldwide and regional goal. The United Nations Development Programme (UNDP) is an organization specially founded to support the development of well-being. Since then, much more research about well-being is done. Various branches of sciences, in particular social, philosophical and economic sciences, have done more research related to well-being. Still, there is not one general definition of well-being. In economics, individual well-being cannot be completely captured, for example, satisfaction is subjective and therefore the interpretation differs (Stutzer & Frey, 2010). In the early stages of the research about well-being, GDP per capita was most commonly used to measure well-being (Peiró-Palomino, 2019). Since then, the concept of well-being is far more interrelated and based on multiple indicators. (van de Ven, 2015) and (Fleurbaey, 2015) defined well-being as a multifaced concept that incorporates several dimensions that defines living conditions beyond just macroeconomic and monetary indicators. These researches state that while income and GDP per capita are important, well-being and happiness goes beyond these economic and financial indicators. This interpretation of well-being is on the same line as the conceptualisation of Helliwell & Putnam (2004). This research directly links well-being to happiness and life satisfaction. As these two concepts are subjective of nature, they can be measured by relatively simple self-rating questions. This research states that, on the one hand, happiness is reflected in the short term, while on the other hand satisfaction is more reflected in the long term. Big influencers of individuals' well-being are among other things, marital status, education, race and employment (Helliwell & Putnam, 2004).

For this research, I will use the concept of well-being as it is used in the OECD, the Organisation for Economic Co-operation and Development (OECD, 2016) The OECD uses a framework to measure well-being. This framework indicates well-being from more different perspectives than mentioned in the earlier mentioned researches (Fleurbaey, 2015; Helliwell & Putnam, 2004; van de Ven, 2015). The OECD's framework is based on eleven different topics. These topics are shown in Table 1. In the next section, these eleven indicators will be briefly discussed individually.

Table 1, *The Eleven Dimensions of Well-Being (OECD, 2016)*

|           |        |                           |             |                  |        |
|-----------|--------|---------------------------|-------------|------------------|--------|
| Education | Jobs   | Accessibility to Services | Housing     | Income           | Safety |
| Community | Health | Life Satisfaction         | Environment | Civic Engagement |        |

### 2.2.1. Education

The effects of education on well-being were first discussed in the 1970s and 1980s. In this period, a positive link between the level of education and well-being was discovered (Witter et al., 1984). The research nevertheless stated that the influence of education on well-being is limited. Zanin (2017) concludes the same findings as to the earlier researches. This research focuses on the relations between life satisfaction, education and social trust. The research examined a positive relationship between life satisfaction and education. Moreover, higher education level results in better governance (Botero et al., 2012).

### 2.2.2. Jobs

Jobs do have an impact on well-being. Researches by Clark & Oswald (1994) and Frey & Stutzer (2000) concludes that unemployed people do have a lower level of subjective well-being, compared to employed people. Moreover, does the unemployment rate negatively influence the overall well-being of the employed (Blanchflower et al., 2014). This means that in a region with a higher unemployment rate, the employed population experience a lower level of subjective well-being too.

### 2.2.3. Accessibility to Services

Accessibility to services can be widely interpreted. In this research, the concept of access to services will be used as it is in the research of the OECD (2016). The accessibility to services can be broken down into three domains, physical accessibility, economic accessibility and institutional accessibility. Physical accessibility is related to access to a specific place that provides services. economic accessibility is related to the affordability of the services and institutional accessibility focuses on the extent to which the access is constrained by norms, values and laws.

### 2.2.4. Housing

The physical state of a dwelling, consisting of the quality and safety of the dwelling itself, contribute to the well-being of individuals (Bratt, 2002). Better living conditions are positively related to well-being. People with better-quality dwellings feel more attached to their homes, which, in turn, fosters the well-being of those.

### 2.2.5. Income

Income plays a role in people's daily life, and therefore correlate with well-being (Ferrer & Carbonell, 2005; Lucas & Schimmack, 2009). Lucas & Schimmack (2009) states that there is a correlation between income and well-being, but this correlation is rather small. Ferrer & Carbonell (2005) concludes in their research that the larger an individual's income is compared to the reference group, the happier the individual is. Kahneman & Deaton (2010) see a different correlation between income and well-being. This research focused on the effects of income on the evaluation of life and emotional well-being. They referred to emotional well-being as the frequency and intensity of experiences of joy, stress, anger and sadness. Life evaluation refers to what people think of their own life. The research examined that a higher income increases the life evaluation, but only increases the emotional well-being until a specific level of income. Above this level, a higher income does not lead to a higher level of emotional well-being.

### *2.2.6. Safety*

Safety is a broad concept, which can make it difficult to conceptualize it. This research will, therefore, make use of the definition given by the OECD (2016). Safety is based on crimes, which includes homicide and theft. It also includes to what extent the people feel safe on the street. Research by Feddes & Jonas (2020) suggests that some groups in society which experienced hate crimes do have a significantly lower psychological well-being, compared to non-victims. Those victims also experienced a lower trust in the police. The local crime rate does not only have a negative influence on direct victims, but it also increases the fear of crime of the local community (Hanslmaier, 2013). Which in turn results in a lower level of psychological well-being.

### *2.2.7. Community*

The concept of community in this research can be torn down to the 'Sense of Community' (SOC). Sense of Community is based on the communicative behaviours and attitudes of the community/neighbourhood (McMillan & Chavis, 1986). It describes to what extent individuals feel connected to their direct community and neighbourhood. A study from Coulombe & Krzesni (2019) suggests that a sense of community predict emotional well-being, but at a marginal level.

### *2.2.8. Health*

The status of an individual's health is an important determinant of someone's well-being. Higher life expectancy and lower mortality rates indicate a better health status. Good health does also have a positive influence on education and jobs (OECD, 2016). Health can be divided into three stages: Physical, Mental and Social health (Cloninger & Zohar, 2011). These three stages of health together have a positive relation to happiness.

### *2.2.9. Life Satisfaction*

Life satisfaction is a key part of well-being. As written before, life satisfaction is, together with happiness, the most used indicator of well-being. Therefore, it is hard to split life satisfaction apart from well-being. Life satisfaction can be interpreted as subjective well-being.

### *2.2.10. Air Pollution*

Air pollution plays a role in the overall well-being of individuals. Bad air pollution is negatively related to health. Citizens in cities with a high level of atmospheric pollution and traffic congestion experienced significantly lower levels of well-being. In cities with more parks and less atmospheric pollution, citizens experience a significantly higher level of well-being (Smyth et al., 2008).

### *2.2.11. Civic Engagement*

Civic engagement refers to the engagement and participation concerning public life. a well-functioning democracy needs civic engagement and participation to function. Some sorts of civic engagement enhance well-being (Wray-Lake et al., 2019). This research states that civic engagement benefits individuals, but it is not a panacea for well-being.

## **2.3 Conceptual model**

The conceptual model is based on the theoretical framework in the previous section. The conceptual model is represented in Figure 1. The quality of government has a positive relation towards well-being (Holmberg et al., 2009). A better quality of government can achieve more compared to poorer governments. This leads to higher standards of the government. High quality of government has positive effects on social well-being. A better government results in less corruption, which results in better public sectors, especially the health sector. Study from Besley et al. (2006) shows that health policy interventions are superior in democracies. This study explored that the

life expectancy of democratic countries is significantly higher, compared to autocratic countries.



Figure 1, Conceptual Model

## 2.4 Hypothesis

The research question is ‘To what extent does the quality of regional government influence the regional well-being?’. Based on the literature review, the hypothesis of this research is:

*“the quality of government has a positive influence on the level of well-being.”*

As formulated in the conceptual model, the quality of the regional governance and the social well-being have a positive correlation. Regions with a higher level of governance quality will likely have better regional well-being.

## 3. Methodology

This research tries to establish to answer the research question ‘To what extent does the quality of regional government influence the regional well-being?’. This research will be based on quantitative analysis. As this research tries to establish patterns and correlation between the quality of regional governments and regional well-being, a quantitative analysis is more suitable. To make statements about potential patterns, a large database is necessary to support the findings. Due to the limited amount of time and the necessity of a large database, this research will make use of secondary data. Gathering primary data is very time consuming, which is not available for this research, due to the deadline. Furthermore, is it hard to make claims about correlations and relation if the database is small and rather homogenous.

This research will make use of two different secondary data sources. One is originating from the OECD. This source is called the ‘OECD Regional Well-Being Index’ (Peiró-Palomino, 2019) . This database shows the well-being of around 400 different regions of the OECD countries. The second source originates from Charron et al. (2019). This data source shows the quality of regional government, called the EQI. In the next section, both data sources will be discussed individually,

### 3.1 OECD Well-Being Index

The database of the ‘OECD Regional Well-Being Index’ consists of 395 OECD regions (Peiró-Palomino, 2019). All the regions are selected on the NUTS 1 or NUTS 2 level. The purpose of this research is to gain insights into well-being determinants. The research tries to discover the reasons behind the inequality and convergence within the member states of the OECD. As well-being goes further than income, the OECD

constructed a well-being framework. This well-being framework takes eleven indicators to determine the well-being index. These indicators are education, jobs, accessibility to services, housing, income, safety, community, health, life satisfaction, environment and civic engagement. All these indicators are explained and discussed in section 2. These dimensions are all based on different characteristics, these are shown in Table 2. As one can see, these dimensions are based on widely diverse indicators. This enables one to see well-being on a wider scale. The dimensions Income, Jobs and Housing are material conditions of well-being. Health, Education, Environment, Safety, Civic Engagement and Accessibility of Services are seen as quality-of-life dimensions. Community and Life Satisfaction are subjective well-being dimensions.

All the data from the OECD index are gathered between 2000 and 2017 and is classified to the intended dimension. Once all data was rightly classified, the index scores of all the different dimensions are calculated. These indexes are calculated based on the min-max formula. To reduce the skewness of the distribution, a threshold has been used to remove values that are below the 4th percentile and above the 96th percentile. The most extreme values are assigned to the scores 0 and 10, and all the other values come out between these two values. If a dimension has multiple indicators, for example, the dimension Jobs, the score of the dimension is defined by the arithmetic mean of the normalised value of the respective indicator (Peiró-Palomino, 2019). This ends up with eleven different dimensions, which can be compared between regions. Forming one all-telling score of well-being cannot be formed, as different dimensions cannot be compared and it cannot be determined which dimensions should be weighted more.

### **3.2 European Quality of Governance Index**

EQI stands for the European Quality of Government Index (Charron et al., 2019). The index is created by the University of Gothenburg. The purpose of the research was to map the quality of the regional governments across the European Union. The researchers created this index to gain insights into the quality of regional governments and to be able to compare the quality of regional governments. The EQI is since its first appearance frequently used by a different organization. The European Commission also uses the EQI for its research.

The index measures the quality of regional governments of 193 regions in 21 countries. All the countries are EU members, except Serbia, Turkey, Ukraine and the United Kingdom. The data used for the index is originated from a survey and data of the WGI, World Governance Index. The survey will be discussed first, followed by the data of the WGI.

The surveys were sent to households of the 21 participating countries. In total, 77.966 people filled in the questionnaires. The survey contains twenty questions, related to the quality of the regional government and corruption. The first questions react to public services, followed by questions concerning discrimination of the institutions. The survey ended with a couple of questions related to corruption. The data was gathered on the NUTS 1 and NUTS 2 level.

The WGI reports aggregate and individual indicators of governance of over 200 countries over a period of 1996-2019 (Kaufmann & Kraay, 2021). Four indicators of the WGI are used to build the EQI, “control of corruption”, “government effectiveness”, “rule of law” and “voice and accountability”. These four indicators together form one of the three main pillars of the EQI index. For the EQI of 2017, data from the 2015 WGI is used.

Combining the data from the survey and the WGI, the EQI is formed. The EQI is based on three pillars. The corruption pillar, the impartiality pillar and the quality pillar. The corruption pillar contains the questions and data about the level of

corruption in the region. The impartiality pillar includes if there is some sort of discrimination or unequally treatment by the public institutions. The quality pillar contains the quality of education, health care and law enforcement of the region, as it is seen by its inhabitants. These three together makes up the EQI index. The index is scaled from 0 to 100 (Charron et al., 2019).

### 3.3 Data Analysis

Combining both the datasets from the OECD and the EQI will together form one database. In this database, the well-being index of the region is coupled to the correct EQI of the same region. In this way, only matched indexes will remain, while unmatched indexes will not be used in the analyses.

The analysis will make use of the statistical program SPSS, version 27. The analysis will seek a relationship between the quality of regional governance and the regional well-being. This research will therefore make use of a regression model. The research will use multiple single ANOVA models to analyse every single dimension of well-being individually. Making use of a linear regression model, I will try to seek a relation for every single dimension and the quality of the regional government. This means that eleven simple linear regression models will run. For every individual dimension, one will seek a correlation with the regional government's quality.

In the next section, the results from the eleven simple linear regression models will be showed and comprehensively discussed.

| Dimensions                | Indicators   |
|---------------------------|--|
| Education                 | Educational attainment (%)   |
| Jobs                      | Employment rate, Unemployment rate (%)   |
| Accessibility to services | Broadband connection (%)   |
| Housing                   | Number of rooms per person (ratio)   |
| Income                    | Household disposable income (In real USD PPP)  |
| Safety                    | Homicide rate (per 100 000 people)   |
| Community                 | Social network support (Percentage of people who have friends or relatives to rely on in case of need) |
| Health                    | Life expectancy at birth (years), Age adjusted mortality rate (per 1000 people)                        |
| Life satisfaction         | Average self-evaluation of life satisfaction, (on a scale from 1 to 10)                                |
| Environment               | Air quality (estimated average exposure to air pollution in PM 2.5 ( $\mu\text{g}/\text{m}^3$ ))       |
| Civic Engagement          | Voter turnout (%)  |

*Table 2, The eleven dimensions, based on OECD (2016)*

## 4. Results and Discussion

In this section, the results of the statistical analysis will be shown, followed up by a discussion, in which the results will be tested by the existing literature. First, the descriptive statistics of the dimensions will be discussed, followed by the results of the dimensions. The descriptive statistics and the results of the models are represented in Table 3 and 4.

| <i>Dimension</i>              | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Std. Deviation</i> |
|-------------------------------|----------|----------------|----------------|-------------|-----------------------|
| <i>Accessibility Services</i> | 180      | 3.714          | 9.999          | 7.580       | 1.558                 |
| <i>Income</i>                 | 177      | 1.701          | 6.779          | 3.773       | 1.143                 |
| <i>Safety</i>                 | 176      | 7.531          | 9.999          | 9.424       | 0.490                 |
| <i>Environment</i>            | 181      | 0.001          | 9.999          | 4.949       | 2.464                 |
| <i>Community</i>              | 180      | 0.002          | 9.999          | 7.646       | 1.898                 |
| <i>Life Satisfaction</i>      | 180      | 0.002          | 9.999          | 5.159       | 2.700                 |
| <i>Housing</i>                | 181      | 0.004          | 7.778          | 4.546       | 1.895                 |
| <i>Civic Engagement</i>       | 181      | 0.001          | 9.999          | 5.585       | 2.430                 |
| <i>Health</i>                 | 181      | 0.001          | 9.999          | 6.839       | 2.305                 |

Table 3, Descriptive Statistics

#### 4.1 Education

For Education, 180 cases are used. These scores of the regions are between 0.38 and 9.99. the mean of the education index is 7.11, with a standard deviation of 2.18. the simple linear regression of the EQI, with education as a dependent variable, is significant. The p-value of the model is 0.002. As one can see, the constant value of unstandardized  $\beta$  is 5.850, and of the EQI is 0.24. this means that with each one-point increase of the EQI, the score of 'education' increases by 0.24. One can see that there is a positive correlation between the score of education and the quality of the regional government. Nevertheless, this correlation is rather small, compared to other dimensions of well-being. This agrees with the research of Botero et al. (2012), which demonstrates that higher educated people do complain more about misuses of the government, crimes and violation. These complaints contribute to better governmental institutions and this results in a higher quality of government. A higher educational level directly improves well-being, to a limited extent (Zanin, 2017). The same phenomenon can be stated about employment concerning the quality of the regional government.

#### 4.2 Jobs

181 cases for jobs are used. The scores of the jobs are between 0.00 and 9.99. the mean of the scores is 6.40, with a standard deviation of 2.74. as one can see in Table 2, the simple regression model is significant. The p-value of the model is less than 0.001. The model has a constant value of 1.612, with an unstandardized b value of 0.088. with the p-value be less than 0.05, and the positive  $\beta$  value, there is a positive correlation between the quality of the regional governance and the score of jobs. The influence of the regional governmental quality on the employment rate is rather large, compared to other dimensions of well-being. The study from di Cataldo & Rodríguez-Pose (2017) shows the same results as the statistical analysis. This research concludes that a stronger government helps to decrease the unemployment rate. Especially low-skilled employment grows in regions with a stronger government. The results are furthermore in line with research from Rios & Gianmoena (2020). This research states that a strong regional government is more resilient and can maintain more jobs during the Great Recession of the late 2000s. A lower unemployment rate is also benefiting the well-being of the already employed (Blanchflower et al., 2014). The quality of the government has a double positive effect on well-being, for both the newly employed and its surrounding.

### **4.3 Accessibility to Services**

Accessibility to services observed in 180 cases. The scores of this dimension are between 3.71 and 9.99. The mean of accessibility to services is 7.58, with a standard deviation of 1.56. The p-value of the simple linear regression is less than 0.001, which shows that the model is significant. The value of the unstandardised  $\beta$  of the EQI is 0.61 and of the constant is 4.25. the value of the unstandardised b shows the presence of a positive correlation between the accessibility to services and the quality of the regional government. This claim is supported by Picot & Wernick (2007). This research examined the influence of government on broadband access in multiple countries from the OECD. The research concluded that a better organized and stronger government results in a higher broadband-access rate.

### **4.4 Income**

The dimension income reported 177 cases. Table 1 shows that the scores of this dimension are between 1.70 and 6.78. the mean is 3.77 with a standard deviation of 1.14. one can see that the values of income are rather low, compared to the other dimensions. The simple linear regression model, with income as a dependent variable and EQI as the independent variable, appears to be very significant. The p-value of the model is less than 0.001. the EQI and income seem to have a positive correlation, with an unstandardised  $\beta$  of 0.034, and a constant value of 1.89. A one-point increase of EQI results in a 0.034 increase of the income score. a better regional government results in a higher GDP per household. A higher GDP does not automatically lead to a higher level of well-being, as Kahneman & Deaton (2010) examined. As the results show that a better regional government lead to a higher disposable GDP per household, it cannot be stated that it will improve well-being. Ferrer & Carbonell (2005) and Lucas & Schimmack (2009) state that a higher disposable income in truth contributes to a higher level of well-being. Admittedly, the effect of disposable income on well-being is rather minor.

### **4.5 Housing**

The dimension 'housing' has 181 observations and the scores are between 0.004 and 7.78. the mean of the values is 4.55, with a standard deviation of 1.90. the simple linear regression model comes across as being very significant, with a p-value of less than 0.001. Housing and the quality of the regional government appear to have a positive correlation, as the unstandardised  $\beta$  is 0.05, with a constant value of 1.84. The value of the unstandardized b expresses a medium influence of the quality of the regional government on the dimension 'housing'. This means that a one-point increase of the EQI increases to 0.05 of the score of housing. This is compared to the other dimension around the mean (mean is 0.052). the result is in line with the hypothesis, which suggested a positive correlation between the quality of regional government and the dimension of 'housing'. A better regional quality results in better housing conditions and more rooms per household.

### **4.6 Safety**

The dimension safety seems to have a couple of outliers at the bottom. While almost all of the scores were above 7.00, a couple of cases scored much lower. This is showed in a histogram in Appendix 1. For example, the region Sicily, Italy scored 0.0033 and Ceuta, Spain scored 4.691 on safety. For the sake of the analysis and the reliability of the results, the extreme outliers are removed. By removing these outliers, respectively the skewness and kurtosis improved from -2.046 and 7.007 to -0.961 and 1.149. Still, the linear regression showed to be insignificant. The p-value of 0.203 is above 0.05, which shows the significance of the test. This claim is contradictory to earlier research. The research of Cole & Gramajo (2009) claims that institutions are a

significant predictor of homicide rates. Quality of the government, law enforcement and political stability are factors that influence the homicide rate. Homicide rates tend to be less in regions with more political stability, stronger law enforcement and a higher quality of government. The regions in this analysis tend to have a rather homogenous score for safety, which can be an explanation for the insignificance of the model. With most of the cases be scored within the 9.00 and 10.00, see Appendix 1, most cases are around the same index score.

#### **4.7 Community**

The dimension 'community' reported 180 cases. The values are between 0.002 and 9.99. The mean of the values is 7.65, with a standard deviation of 1.90. the model seems to be very significant, as the p-value is less than 0.001. the dimension 'community' and the quality of the regional governance appear to have a positive correlation, as the value of the unstandardized  $\beta$  is 0.059. the value of the constant is 4.39. With a one-point increase of the EQI, the score of the community increases by 0.059. the model suggests that in regions with a better government, people tend to have more friends and relatives to rely on in case of need. In this case, the quality of regional government plays an active role in the regional well-being. As (Coulombe & Krzesni, 2019) suggests that people with stronger social relations tend to have a higher level of well-being.

#### **4.8 Health**

181 cases are reported of the dimension 'health'. the values of the dimension are between 0.0003 and 9.99. the mean is 6.84, with a standard deviation of 2.31. the model seems to be insignificant, as the p-value is 0.108. unstandardized  $\beta$  is 0.013, with a constant value of 6.09. As the p-value shows, is it not proven that the quality of regional government plays a role in the health of its citizens. The model tells us that the regional governance quality does not influence the life expectancy at birth and the age-adjusted mortality rate. This is contractionary to the research of Holmberg et al. (2009). This research, among other things, studied relations between the QoG (Quality of Government) and the GSI (Good Society Index). The CSI consists of three quality-of-life variables: life expectancy, infant mortality and life satisfaction. The results of this research demonstrate that a high QoG increases the chances of a higher 'Good Society Index'. This difference in results can be explained because lower governments are less able to depict mortality rates among their population (Liang et al., 2020). This research examined a negative relation between Covid-19 mortality and countries with lower government effectiveness scores. This study demonstrates that regions with higher governmental effectiveness are better able to arrange the mortality rates, which therefore can result in higher mortality rates.

#### **4.9 Life Satisfaction**

The dimension life-satisfaction has 180 reported cases. The minimum value is 0.002 and the maximum value is 9.99. the regression model appears to be very significant, as the p-value is less than 0.001. the EQI and life satisfaction seem to have a positive correlation, as the unstandardised  $\beta$  is 0.103, and the value of the constant is -0.506. With each one-point increase of the EQI, the life satisfaction score is increasing by 0.103. This is, compared to the other dimensions, rather large. Existing literature suggests a positive correlation between life satisfaction and quality of the government (Helliwell & Huang, 2008; Liu et al., 2020). The government's trustworthiness and responsiveness are important to the life satisfaction of the population. The capability of delivering public services honestly and efficiently is positive related to life satisfaction (Helliwell & Huang, 2008).

#### 4.10 Environment

Environment reports 181 cases. the values of the dimension are between 0.001 and 9.99. the mean value of this dimension is 4.95, with a standard deviation of 2.46. the simple regression model appears to be very significant, as the p-value is less than 0.001. as the unstandardized  $\beta$  is 0.07, and the constant 1.09, the quality of the regional government and the dimension environment seems to have a positive correlation. A one-point increase of the EQI results in a 0.070 increase in environment score. This is in line with earlier research from Holmberg et al. (2009). This research states that environmental outcomes correlate positively with the quality of government. Furthermore, does governmental quality improve carbon emissions. An explanation is that stronger governments are more able to observe and tackle air pollution.

#### 4.11 Civic Engagement

The last of the eleven dimensions of well-being, civic engagement, has 181 reported cases. the values of this dimension are between 0.001 and 9.99. the mean is 5.58 and the standard deviation is 2.44. the model seems to be significant, with a p-value of less than 0.001. As the simple regression models show, do the EQI and civic engagement have a positive correlation. The value is the unstandardised  $\beta$  is namely 0.06, with a constant value of 2.32. Every one-point increase of the EQI results in a 0.060 increase in civic engagement. This is in line with research from Dahlberg & Solevid (2016). The level of voter turnout tends to be lower when political corruption is perceived as high. Regions with a low level of corruption do have a higher voter turnout rate compared to regions with a higher level of corruption.

| Model | Dependant variable                            | $\beta$ | Std. Error | T      | Sig.   |
|-------|---|---------|------------|--------|--------|
| 1     | Education ( <i>Constant</i> )                 | 5.850   | 0.445      | 13.155 | <0.001 |
|       | EQI   | 0.024   | 0.008      | 3.138  | 0.002  |
| 2     | Jobs ( <i>Constant</i> )                      | 1.612   | 0.412      | 3.909  | <0.001 |
|       | EQI   | 0.088   | 0.007      | 12.593 | <0.001 |
| 3     | Accessibility to Services ( <i>Constant</i> ) | 4.249   | 0.199      | 21.391 | <0.001 |
|       | EQI   | 0.061   | 0.003      | 17.836 | <0.001 |
| 4     | Income ( <i>Constant</i> )                    | 1.880   | 0.202      | 9.296  | <0.001 |
|       | EQI   | 0.034   | 0.003      | 10.008 | <0.001 |
| 5     | Housing ( <i>Constant</i> )                   | 1.837   | 0.202      | 5.427  | <0.001 |
|       | EQI   | 0.050   | 0.003      | 8.613  | <0.001 |
| 6     | Safety ( <i>Constant</i> )                    | 9.297   | 0.105      | 88.616 | <0.001 |
|       | EQI   | 0.002   | 0.002      | 1.279  | 0.203  |
| 7     | Community ( <i>Constant</i> )                 | 4.393   | 0.311      | 14.124 | <0.001 |
|       | EQI   | 0.059   | 0.005      | 11.063 | <0.001 |
| 8     | Health ( <i>Constant</i> )                    | 6.091   | 0.490      | 12.443 | <0.001 |
|       | EQI   | 0.013   | 0.008      | 1.617  | 0.108  |
| 9     | Life Satisfaction ( <i>Constant</i> )         | -0.506  | 0.356      | -1.423 | 0.157  |
|       | EQI   | 0.103   | 0.006      | 16.990 | <0.001 |
| 10    | Environment ( <i>Constant</i> )               | 1.094   | 0.414      | 2.639  | 0.009  |

|    |                                |  |       |       |       |        |
|----|--------------------------------|--|-------|-------|-------|--------|
|    | EQI                            |  | 0.070 | 0.007 | 9.994 | <0.001 |
| 11 | Civic Engagement<br>(Constant) |  | 2.324 | 0.439 | 5.291 | <0.001 |
|    | EQI                            |  | 0.060 | 0.007 | 8.046 | <0.001 |

Table 4, Coefficients Simple Linear Regression

## 5. Conclusion

This research tried to link the quality of regional government to regional well-being by answering the question: ‘To what extent does the quality of regional government influence the regional well-being?’. Making use of databases of the ‘OECD Regional Well-Being Index’ and the ‘European Quality of government Index’, this research made use of statistical analysis. Well-being was based on eleven dimensions which covered each a different aspect of well-being. Existing literature showed to the utmost extent a positive relationship between the quality of the regional government and the regional well-being. this corresponds with the analysis of this research. Of the eleven linear regressions, nine of these turned out to be significant. Education, jobs, accessibility of services, income, housing, community, life satisfaction, environment and civic engagement showed significance.

Linking the results to the existing literature, this research came to conclusion that stronger governments are more capable of achieving higher well-being. Strong governments have less corruption. Also, do these strong governments have less to no discrimination of their institutions and are much more capable to achieve and deliver their public services. On average regional governments are more able to provide their population with what it needs. These governments are better able to provide the citizens with a good level of education, which in turn improves the quality of the government, as Botero et al. (2012) mentioned. Stronger governments are more able to deliver the services its citizens need. The quality of the government does have a significant impact on the unemployment rate, as these are strongly negative related to each other. Furthermore, is a stronger regional government more capable of connecting its population to broadband access. The quality of the regional government showed to have little influence on the income and housing conditions of its citizens. People who live in an area with a stronger government tend to have more friends and relatives, which has a positive effect on well-being. Life satisfaction is strongly influenced by the quality of the regional government. The trustworthiness and responsiveness of the regional government are important influences on the life satisfaction of its population. Moreover, a stronger regional government is able to observe and tackle air pollution, which results in better air conditions in the region. Lastly, is the quality of regional government positive related to voter turnout in its region.

Further research should focus more on the individual dimensions which contain well-being. ‘Broadband Access’ as indicator of accessibility to services can be seen as an outdated measurement for example. This can result in a wrong interpretation of the dimension. this study researched all the eleven dimensions of well-being, but due to the limited number of words, it was not possible to dig deeper into all the eleven different dimensions. This can be accomplished by qualitative research, next to quantitative research. Qualitative research is more able to dig deeper into the specific

dimensions, by conducting interviews. Besides that, new studies should focus on the two insignificant dimensions, safety and health.

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# Appendix 1

Figure 2, Histogram Safety

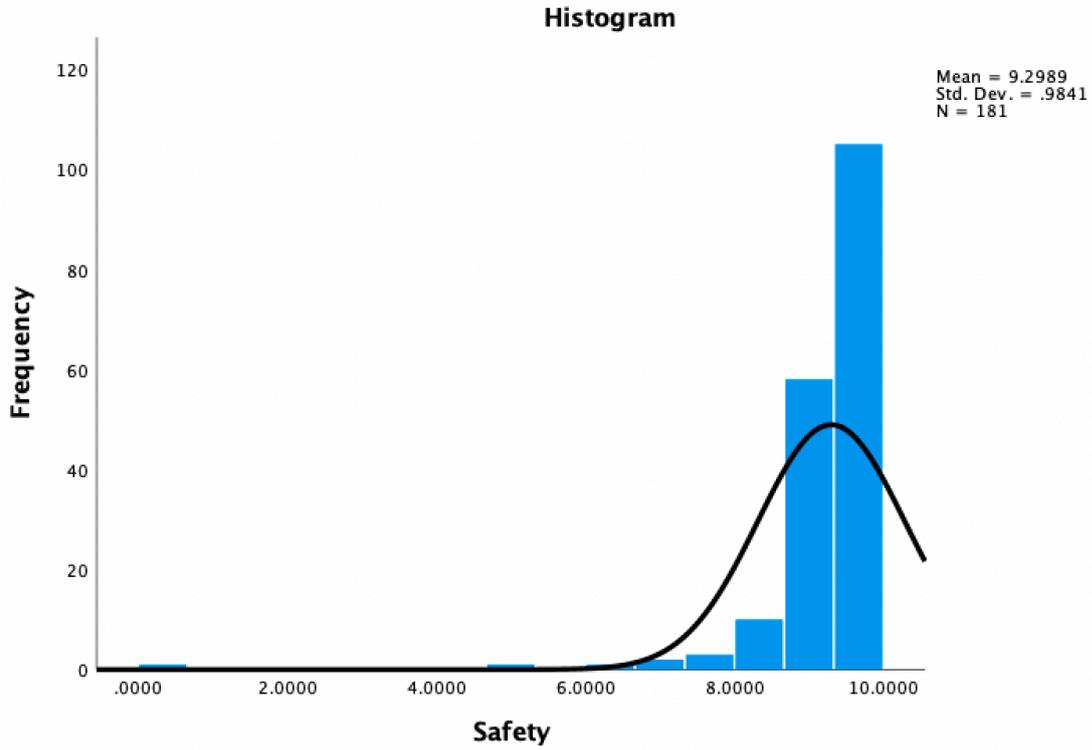


Figure 3, Histogram Safety

