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**Article (Accepted version)  
(Refereed)**

**Original citation:**

Rodríguez-Pose, Andrés and Tselios, Vassilis (2018) Well-being, political decentralisation and governance quality in Europe. [Journal of Human Development and Capabilities](#). ISSN 1945-2829 (In Press)

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Available in LSE Research Online: January 2019

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# **Well-being, political decentralisation and governance quality in Europe**

by

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# **Well-being, political decentralisation and governance quality in Europe**

## **Abstract**

European nations allocate public sector resources with the general aim of increasing the well-being and welfare of their citizens through a fair and efficient distribution of these public goods and services. However, ‘who’ delivers these goods and services and ‘how well’ they are delivered are essential in determining outcomes in terms of well-being. Drawing on data from the European Social Survey database, this paper uses Amartya Sen’s social welfare index framework – accounting for the trade-off between the maximization of public sector resources and an equitable distribution of these resources – to examine the influence of political decentralisation (‘who’ delivers the resources) and whether this influence is moderated by governance quality (‘how well’ they are delivered) on individual subjective well-being. The findings of the econometric analysis reveal that decentralisation does not always lead to higher well-being, as the benefits of political decentralisation are highly mediated by the quality of national governance. In countries with high governance quality, political decentralisation results in a greater satisfaction with health provision, while in lower quality governance countries, a more decentralized government can increase the overall satisfaction with life, the economy, government, democracy and the provision of education, but not necessarily with health-related services.

**Keywords:** well-being, political decentralisation, quality of governance, Europe, European Social Survey

**JEL classification:** I31; H70; H11

## 1. Introduction

European nations allocate tangible and intangible public sector resources (e.g. public transport, public health, public housing and national security), paid for or controlled by public sector agencies, with the general aim of increasing the welfare and well-being of their citizens. The distribution of public goods and services is generally aimed at achieving both a fairer (leading to lower inequality) and more efficient (leading to higher well-being overall) distribution of social welfare. However, some nations have been more successful at increasing efficiency and/or reducing interpersonal inequalities in well-being (e.g. by reducing inequalities in income, education, and in access to health) than others. The geographically uneven capacity of nations to jointly deal with both efficiency and equity issues raises profound challenges for researchers and policy-makers seeking to better understand what determined citizen's well-being.

Differences in well-being efficiency and equity outcomes across countries are often determined by two factors: i) 'who' delivers the public sector resources, i.e. whether the allocation of public goods and services is conducted at the national, regional or local level (Bjørnskov, Drehe, and Fischer 2008; Díaz-Serrano and Rodríguez-Pose 2012; Rodríguez-Pose and Maslauskaitė 2012); and ii) 'how well' these goods and services are provided (Hessami 2010; Ezcurra and Rodríguez-Pose 2014; Rodríguez-Pose and Di Cataldo 2015). Both the level of political decentralisation of a country and the overall efficiency and quality of the administration in charge can play an important role in determining the well-being of its citizens. In particular, the effectiveness of 'who' supplies the public goods and services and sets the rules that

govern social and economic activity for the well-being of the individuals living in any given territory can be affected by ‘how well’ this is done. This raises a number of questions: is it better for overall well-being to have public goods and services mostly delivered by national or, conversely, subnational governments?; and to what extent does the quality local governments, in particular, and of overall governance, in general, influence the relationship between political decentralisation and citizen’s well-being?

In this paper, we argue that any potential well-being benefits related to the transfer of powers to subnational tiers of government and to providing public goods and services at the local level may not emerge because of governance problems. These aspects have until now attracted relatively limited attention (e.g. Hessami 2010; Kyriacou, Muinelo-Gallo, and Roca-Sagales 2015).

We base our concept of well-being on Amartya Sen’s (1974, 1976) social welfare framework, which accounts for the trade-off between the maximization of public sector resources and an equitable distribution across the population of these resources. We operationalize Sen’s framework at the European level by means of the European Social Survey (ESS) dataset. These data allows us to create a number of well-being proxy variables, mirroring Sen’s social welfare index. Hooghe et al.’s (2016) regional authority index is used as our measure of political decentralisation (‘who’ delivers the resources), while governance quality (indicating ‘how well’ they are delivered) is measured by means of Kaufmann, Kraay, and Mastruzzi’s (2010) Worldwide Governance Indicators (WGI). The influence of political decentralisation on well-being and the mediating role of governance quality are estimated by means

of econometric analysis using an interaction model, for the period between 1997 and 2014.

The main contributions of the paper centre on the following aspects. First, the paper uses the multidimensionality of Sen's social welfare conceptual framework, by considering different dimensions of subjective welfare – usually equated to 'well-being', which is concerned with a person's achievement, i.e. how 'well' is his/her 'being' (Sen 1985) – such as life-, economy-, government-, democracy-, education-, health-, and happiness-related subjective well-being aspects.<sup>1</sup> This is in contrast to most previous scholarly work, which has tended to measure Sen's social welfare by means of objective indices (e.g. Ezcurra, Gil, and Pascual 2005; Ram 1992; Rodríguez-Pose and Tselios 2015). Moreover, the links between the subjective well-being approach, and specifically happiness economics, and Sen's approach remain underexplored (Comim 2008). The measurement of subjective welfare or well-being in this paper is based on self-reported satisfaction or happiness measures.<sup>2</sup> We examine how different levels of political decentralisation affect a fair and efficient distribution of all of the above aspects of well-being and whether this potential influence is shaped by the quality of local governance. The paper also aims to

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<sup>1</sup> Resorting to Sen's social welfare conceptual framework using subjective measures can have significant advantages, but is also not devoid of problems. Sen himself does not favour a subjective appraisal of well-being. That represents a problem for the adaptation of his framework. However, a subjective approach can complement information extracted using an objective one and add greater nuance. This may compensate for the fact that often subjective indicators do not necessarily replicate exactly objective ones. But neither objective nor subjective capability analyses can always adequately capture all the dimensions that shape individual well-being. Hence, "a list of central human capabilities [...]" can be seen as an entry point for 'asking the questions' rather than 'giving the answers'" (Comim 2008: 153), when it comes to exploring subjective well-being.

<sup>2</sup> The use of subjective indices to measure subjective welfare has advantages, but also faces the risks that responses may vary depending on the understanding or interpretation of individual participants of the specific questions on which the survey is based.

increase our understanding of the role that equity and efficiency play in the functioning and performance of variations in well-being by providing evidence of the interaction between ‘who’ and ‘how well’ the resources are delivered. The overarching aim of the research is to strengthen the capacity of political decentralisation and quality of governance to formulate policies aimed at achieving more prosperous and cohesive communities and a greater equalisation of subjective welfare at a time when territorial differences in well-being are creating growing social and political upheaval (Rodríguez-Pose 2018).

To achieve this aim, the paper adopts the following structure. The section after the introduction reviews Sen’s (1974, 1976, 1973) social welfare index. The theoretical linkages between political decentralisation and subjective welfare and the mediating role of governance quality are also discussed in Section 2. Section 3 introduces the proxies used to measure well-being, political decentralisation, and quality of governance, and then presents the empirical specification used to test the relationship between political decentralisation and well-being. It also looks at whether this relationship differs between low- and high-quality of governance, after controlling for country-specific socioeconomic characteristics. The regression results are discussed in Section 4. The final section sums up the analysis and considers the implications of the results for social welfare policies.

## 2. Theoretical background

### 2.1 Sen's social welfare index

Published studies on welfare can be divided into two groups: studies that measure welfare as a subjective variable (i.e. perceived welfare or well-being) and studies that measure welfare as an objective variable (i.e. factual welfare) (Mishan 1974). From an analytical perspective, the main problem of the concept of welfare is that it is extremely difficult to operationalise (Sen 1973). Several indices have been proposed, but Sen's (1973, 1974, 1976) social welfare index is still the most widely used. Sen's index accounts for the trade-off between the maximisation of benefits (i.e. economic, social and political benefits), on the one hand, and an equitable distribution of those benefits, on the other. *Vis-à-vis* alternative indices that rely too a much larger extent on GDP – widely acknowledged as a poor measure of social welfare (England 1998; Torras 2008) – Sen's index has the advantage that it places equal weight on the distributional effects of wealth. We therefore rely on Sen's index as our indicator of social welfare for our measurement of perceived or subjective welfare or, in other word, well-being.

Social welfare is shaped by what Amartya Sen (1985) labelled capabilities and functionings (Muller and Trannoy 2011). Capabilities are what people are able to do or able to be, while functionings represent the things a person actually does and experiences.<sup>3</sup> Income – which is a key variable in Sen's social welfare index and, according to him, is a mean and not an achievement – only represents one

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<sup>3</sup> For a review of the capabilities indicators see the work by Anand et al. (2009).



dimension of these capabilities and functionings. This has been acknowledged in developing indicators, such as the UN's Human Development Index (HDI) that adopts a more encompassing view of development. The HDI is based on three attributes: real GDP per capita at purchasing power parity (income), education – measured by the adult literacy rate and of the combined primary, secondary and tertiary gross enrolment ratios – and health – proxied by life expectancy at birth. Hence, in a similar way to economic development, social welfare encompasses much more than income.<sup>4</sup> Education and health, among a raft of other factors, determine in no mean way the well-being of individuals. This is why in this paper we use Sen's conceptual framework of social welfare and consider factors such as overall life-satisfaction, government and democratic quality, education, health, and happiness as major ingredients of the capabilities and functionings that inform citizen's perceived welfare or well-being. All these factors are based on self-reported satisfaction and happiness measures, an approach that Sen himself does not favour (see footnote 1). However, the use of subjective indicators can contribute to create a substantive, not formal, account of well-being, allowing us to analyse the individual's behaviour and choices in different but complementary way to that derived from the use of objective indicators.

The measures of well-being used in this article are self-reported and may be subject to issues of adaptive preferences (Elster 1983; Sen 1999; Nussbaum 2000) and to problems of endogeneity (Anand, Krishnakumar, and Tran 2011). As a consequence, more 'objective' alternatives have been sought in order to evaluate people's well-being in terms of capabilities and functionings (Teschl and Comim 2005; Comim

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<sup>4</sup> The 2010 Human Development Report introduced an inequality-adjusted HDI.

2008; Gasper 2007). For example, Teschl and Comim (2005) point out that an alternative way to assess people's subjective well-being – although more in line with the capability approach – is Daniel Kahneman's (1999) objective happiness approach where a person's objective happiness level at a moment is defined as the extent to which he wants the experience he is having at that moment to continue. Another option is, for example, Székely, Foster and López-Calva's (2005) inequality adjusted HDI (i.e. a new parametric class of human development indices that includes the original HDI as well as a family of distribution sensitive indices that satisfy all the basic properties for an index of human development). Other authors tend to adopt alternative approaches, including different considerations for selecting capabilities for quality of life measurement (Robeyns 2005) or distinguishing between different capabilities when comparing subjective with objective measures (Anand and van Hees 2006). Other studies (e.g. Anand, Krishnakumar, and Tran 2011; Anand et al. 2009) argue that within the conventions of individual, household and social surveys, human capabilities can be measured with the aid of suitably designed statistical indicators, such as income or related socioeconomic indicators. However, these so-called 'more objective' options are also not themselves exempt from problems, meaning that using self-reported data on well-being has now become mainstream in social science research (Kahneman, Wakker, and Sarin 1997). The number of papers using this type of data is now legion (e.g. Anand et al. 2009; Anand, Krishnakumar, and Tran 2011; Díaz-Serrano and Rodríguez-Pose 2015). As self-reported well-being may be affected by the personality of the individual being surveyed or by the conditions of the place where he or she lives and taking into account that most of the well-being variables used in the analysis are aggregated at country-level, we

control for a number of country-specific factors that may influence individual responses.

One of the main points that behavioural economics and the happiness literature has been stressing since Easterlin's paradox (Clark 2016) is that subjective well-being assessments are not absolute and relative concerns can affect judgements.<sup>5</sup> This aspect is not mitigated by considering regional or country level variables. Richer regions might present lower subjective well-being due to different reference points.

Overall, we feel that we use a 'pluralistic' capabilities and functionings approach to personal well-being – involving life-satisfaction, government, democracy, education, health, and happiness as major ingredients of personal well-being<sup>6</sup> – can provide a more accurate picture of the true level of well-being of individuals in a given country. Income, by contrast, can be a misleading indicator of well-being.

## ***2.2 The effect of political decentralisation on well-being***

Political decentralisation, i.e. 'who' delivers public resources, can strongly determine subjective welfare outcomes. It refers to the degree to which a central government allows subnational government tiers, such as regional and municipal governments, to undertake the political functions of governance (Pike et al. 2012). The key aim of decentralisation is to give citizens or their elected representatives more power in public decision-making, promoting pluralistic politics and representative

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<sup>5</sup> We would like to thank an associate editor for this point.

<sup>6</sup> The inclusion of these dimensions has been considered taking into account the multidimensional nature of capabilities and functionings as well as data availability in the ESS database (European Social Survey Round 7 Data 2014) (see Section 3.1).

government, and supporting democratisation. Although there are virtually as many forms of political decentralisation as the number of countries that exist in the world, political decentralisation requires, to a greater or lower degree, constitutional, legal and regulatory enshrinement, the development of a pluralistic political system, the strengthening of legislatures, the creation of local and regional political units, and the encouragement of effective public interest groups.<sup>7</sup>

The relationship between political decentralisation and well-being has not attracted much attention and, in the limited past research available, the connection between both factors remains unclear. On the one hand, decentralisation may lead to *higher well-being* (through higher efficiency and/or equity) because it can provide information advantages and better insight into the preferences of citizens. Decentralisation also increases competition among jurisdictions, which can, in turn, lead to increases in the efficient provision of public goods and services, to improvements in the transfers from rich to poor, and to increases in participation, transparency and accountability in policy-making. By bringing government closer to the people, decentralisation can increase social capital and make the welfare state more participatory and responsive to differences in the needs and preferences of citizens living in different territories (Rodríguez-Pose and Ezcurra 2010, 2011; Tselios et al. 2012; Costa-Font 2010).

On the other hand, decentralisation can also result in *lower well-being* (through lower efficiency and/or equity). The mechanisms through which it can undermine individual well-being are linked to the loss of economies of scale, especially in

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<sup>7</sup> <http://www1.worldbank.org/publicsector/decentralization/political.htm>

regions with already existing pockets of extreme poverty. Decentralisation very often also reduces the political influence of poorer regions over the allocation of financial resources and transfers, generating greater inequities between poorer and richer regions (Rodríguez-Pose and Ezcurra 2010, 2011; Tselios et al. 2012).

Therefore, the relationship between political decentralisation and individual well-being cannot be assessed *a priori* and requires additional empirical scrutiny.

### ***2.3 The mediating role of governance quality***

A key factor that limits the possibility of establishing a clear cut relationship between political decentralisation and well-being is related to local governance quality. The quality of institutions, in general, and the quality of governance, in particular, i.e. 'how well' the public goods and services are delivered, is central to understanding the extent to which political decentralisation can affect, if at all, individual well-being. The World Bank WGI (Kaufmann, Kraay, and Mastruzzi 2010) decomposes governance quality into six basic 'pillars' – voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. These indicators have become widely considered as the most accurate and reliable measures of national governance and will be used as such in the analysis.

But how does governance quality affect well-being? It is generally assumed that good governance positively influences the capacity of governments to efficiently and equitably deliver public goods and services, meaning that good governance shapes well-being. First, high-quality institutions usually lead to a better design and

implementation of public policies and a better provision of public goods and services which, in turn, result in higher economic growth and development (Acemoglu and Johnson 2005; Amin and Thrift 1994). Places with governments that are capable of designing and implementing effective policies, while, at the same time, keeping corruption at bay, are much more innovative and efficient than those where corruption is rife and governments ineffective (Rodríguez-Pose and Di Cataldo 2015). Generally, countries and regions with weak or inefficient institutions suffer from pervasive corruption, rent-seeking, insider-outsider problems, and clientelism and nepotism. Different combinations of these problems make for imperfectly functioning markets, institutional and government failure and loss of efficiency and growth potential. In countries with good institutions, macroeconomic stability generally ensues, which supports entrepreneurship, innovation and knowledge spillovers. The overall result is greater efficiency and growth.

Second, governments that adequately design and efficiently deliver public goods and policies usually increase equity. Accountable and transparent governments, staffed by well-trained civil servants and led by trust-worthy politicians who have the interests of the local community at heart, will, in all likelihood, design and implement policies and deliver public goods and services that are needed by the citizenry, benefitting the community as a whole and thus reducing inequalities (Rodríguez-Pose and Garcilazo 2015). This creates opportunities for weakening the hold of local elites and empowering underrepresented groups in society, including the poor, those less well-off, and local marginal groups (Brenner 2004; Le Galès 2002). Moreover, good governance facilitates negotiation and dialogue, mobilizes stakeholders and integrates them into the development process. It also enhances

policy contiguity and strengthens the voice of people and territories, reducing territorial and interpersonal inequalities (Pike, Rodríguez-Pose, and Tomaney 2017). In contrast, unaccountable and poorly staffed governments with inept or corrupt politicians at the helm will, in all likelihood, deliver policies for a small, self-serving local elite, contributing to an increase in inequalities. Hence, greater individual and collective well-being is usually associated with nations with healthy governance institutions.

Overall, hence, governance quality at the local level can alter how different levels of decentralisation – or who is responsible for the design and implementation of public policies – may impinge on citizen's well-being. Taking into account the positive relationship between well-being and the quality of institutions, if decentralised governments lower the overall quality of government intervention, political decentralisation may end up being detrimental for individual well-being in some countries. If, by contrast, local governments are of a similar or higher quality than central governments, the effect on well-being may be the opposite. Therefore, the questions of 'who' delivers social welfare and 'how well' it is delivered should be considered simultaneously. In other words, there is a need to examine the effects of decentralisation and quality of governance on well-being, both independently and through their interaction, as a means to assess the marginal effect of political decentralisation on subjective welfare due to variations in government quality.

### 3. Data and model

#### 3.1 Data

In order to assess whether differences in governance quality deliver better or worse results depending on the level of decentralisation, we resort to the ESS database (European Social Survey Round 7 Data 2014) to proxy for *individual well-being*. The ESS database includes data for 36 countries<sup>8</sup> between 2002 and 2014. We use Sen's (1974, 1976) social welfare conceptual framework by considering that individual well-being goes beyond the levels and distribution of GDP and income in a territory and examine seven different dimensions of subjective welfare which rely on the subjective assessment of individuals of their own well-being. These dimensions cover different but core aspects of functionings and capabilities. One fundamental reason for accounting for seven different dimensions of well-being is to give a broader epistemological and empirical footing to the subjective social welfare concept and to reflect the variety of realms that define well-being (Alkire 2002; Alkire 2007). Table 1 displays the well-being dimensions considered in the paper.

*Insert Table 1 around here*

The economy- (*'how satisfied are you with the present state of economy in your country?'*), government- (*'how satisfied are you with your national government?'*), democracy- (*'how satisfied are you with the way democracy works in your country?'*),

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<sup>8</sup> Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, and United Kingdom.



education- (*'how satisfied are you with the state of education in country nowadays?'*), and health- (*'how satisfied are you with the state of health services in your country nowadays?'*) measures of well-being are country-related proxies. The life-related (*'how satisfied are you with life as a whole?'*) and happiness-related (*'how happy are you?'*) well-being measures are people-related proxies.

Using Sen's welfare index, the average well-being level ( $W$ ) of a country  $i$  at time  $t$  can be estimated by:

$$W_{i,t} = y_{i,t}(1 - G_{i,t})$$

where  $y_i$  is the mean satisfaction or happiness of individuals in country  $i$  at time  $t$  and  $G_i$  is the Gini coefficient of the individual satisfaction or happiness distribution in country  $i$  at time  $t$ .<sup>9</sup>  $y_i$  denotes the *efficiency* of country  $i$  at time  $t$  and  $1 - G_i$  depicts the *equity* in the country at that time. Overall, not only the level of satisfaction/happiness, but also how that satisfaction/happiness is distributed across the population determines the levels of country well-being.

*Political decentralization* is proxied using the regional authority index (RAI), as defined by Hooghe et al. (2016). The RAI includes data for all countries of the ESS database – with the exception of Ukraine and Kosovo – for the period between 1950 and 2010. The RAI covers two dimensions of regional autonomy: a) 'self-rule', which refers to the authority of a regional government over those living in the region and taps regional authority over institutional depth (i.e. the extent to which a regional government is autonomous rather than deconcentrated), policy scope (i.e. the range

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<sup>9</sup> In this case inequality comparisons with categorical data can be made, as all answers range from 0 to 10. Cowel and Flachaire (2012) address the problem of how to interpret a distribution of inequality measured as ordinal data as categorical variables.

of policies for which a regional government is responsible), fiscal autonomy (i.e. the extent to which a regional government can independently tax its population), borrowing autonomy (i.e. the extent to which a regional government can borrow), and representation (i.e. the extent to which a region is endowed with an independent legislature and executive); and b) 'shared-rule', which refers to the authority a regional government co-exercises in the country as a whole and taps regional authority over law-making (i.e. the extent to which regional representatives co-determine national legislation), executive control (i.e. the extent to which a regional government co-determines national policy in intergovernmental meetings), fiscal control (i.e. the extent to which regional representatives co-determine the distribution of national tax revenues), borrowing control (i.e. the extent to which a regional government co-determines subnational and national borrowing constraints), and constitutional reform (i.e. the extent to which regional representatives co-determine constitutional change). In this paper, we use the aggregate 'self-rule' and 'shared-rule' score which make up the overall RAI. This index is primarily a political decentralisation proxy with some administrative and fiscal decentralisation components. Moreover, the transfer of powers to subnational tiers of government (i.e. political decentralisation) goes hand-in-hand with the transfer of resources to subnational tiers of government (i.e. fiscal decentralisation) and with the transfer of administration to subnational tiers of government (i.e. administrative decentralisation). This political decentralisation proxy has now been used in many empirical studies (e.g. Rodríguez-Pose and Ezcurra 2010; Tselios et al. 2012; Tselios and Tompkins 2017).

*Governance quality* is proxied using the Worldwide Governance Indicators (WGI) constructed by Kaufmann, Kraay, and Mastruzzi (2010). The 2015 version of the dataset covers aggregate governance indicators for all countries of the ESS database from 1996 to 2014. According to this database, governance can be broadly defined as the set of traditions and institutions by which authority in a country is exercised. This includes a) the process by which governments are selected, monitored and replaced, b) the capacity of the government to effectively formulate and implement sound policies, and c) the respect of citizens and the state for the institutions that govern economic and social interactions among them. The indicators used reflect the statistical compilation of responses on governance quality gathered from a large number of enterprise, citizen and expert survey respondents in developed and developing countries, as reported by a number of survey institutes, think tanks, non-governmental organisations, and international organisations. The WGI project constructs aggregate indicators of the following six broad dimensions of governance: a) *voice and accountability*: perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media; b) *political stability and absence of violence/terrorism*: perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism; c) *government effectiveness*: perceptions of the quality of public services, the quality of the civil service, and its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; d) *regulatory quality*: perceptions of the ability of governments to formulate

and implement sound policies and regulations that permit and promote private sector development; e) *rule of law*: perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence; and f) *control of corruption*: perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests (Kaufmann, Kraay, and Mastruzzi 2010). All these indicators range from values of a minimum of -2.5 (weak) to a maximum of 2.5 (strong) governance performance.

Data on the *controls* were obtained from the Penn World Table (PWT)<sup>10</sup> database (Feenstra, Inklaar, and Timmer 2015) (1950-2014) and the World Bank (WB) database (1960-2014). The control variables capture the main structural and socioeconomic features of individual countries and take into account some important sources of heterogeneity. These variables are: a) the natural logarithm of GDP per capita at constant national prices (source: PWT) (e.g. Bardhan 2002); b) an index of human capital per person, based on years of schooling (Barro and Lee 2013) and returns to education (Psacharopoulos 1994) (source: PWT) (e.g. Faguet 2013); c) welfare-relevant total factor productivity (tfp) at constant national prices (source: PWT) (e.g. Thießen 2003);<sup>11</sup> d) the natural logarithm of openness (source: PWT) (e.g.

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<sup>10</sup> The PWT version 9.0 is a database with information on relative levels of income, output, inputs and productivity, covering 182 countries between 1950 and 2014.

<sup>11</sup> The difference between tfp and welfare-relevant tfp is the tfp is based on relative real GDP from the output side, while welfare-relevant tfp is based on relative real domestic absorption (Basu et al. 2012). Thus welfare-relevant tfp is constructed with prices and quantities as perceived by consumers, not firms (Basu et al. 2012).

Dluhosch and Horgos 2013; Hessami 2011); e) tax revenue (% of GDP) (source: WB) (e.g. Hessami 2010); f) public health expenditure (% of total health expenditure) (source: WB) (e.g. Faguet 2013); g) the natural logarithm of unemployment (% of total labour force) (source: WB); and h) urban population (% of total) (source: WB) (e.g. Henderson 2002).

The resulting dataset of combining these five datasets – ESS, Hooghe et al. (2016), WGI, PWT and WB – is an unbalanced database which is amenable to estimation methods that manage potential heterogeneity bias (Rodríguez-Pose and Tselios 2009). Table 2 presents the number of observations, the mean, the standard deviation, and the minimum and maximum of all the proxies for well-being (2002-2014), the proxy for political decentralisation (1997-2009), the proxies for governance quality (1997-2009), and the controls (1997-2009).

Insert Table 2 around here

Based on the summary statistics, people-related well-being (i.e. happiness- and life-related well-being) is higher than the country-related well-being (i.e. economy-, government-, democracy-, education-, and health-related well-being). Moreover, well-being is lowest when it has to do with the government and the economy (Table 2). Despite these differences, the Pearson correlation coefficient between these proxies is high (above 0.67). Considering the quality of governance, governance effectiveness and regulatory quality have the highest mean and political stability the lowest. The Pearson correlation coefficient between the different proxies for governance quality is also high (above 0.69).

### 3.2 Econometric specification

In order to examine whether the relationship between well-being and political decentralisation ('who') is mediated by governance quality ('how well'), we propose the following interaction model:

$$W_{i,t} = \beta_0 + \beta_1 PolDec_{i,t-5} + \beta_2 QualGov_{i,t-5} + \beta_3 PolDec_{i,t-5} * QualGov_{i,t-5} + \beta_4 Controls_{i,t-5} + \varepsilon_{i,t-5}$$

where  $W_{i,t}$  is the well-being for country  $i$  at time  $t$ ;  $PolDec_{i,t-5}$  is the degree of political decentralisation for country  $i$  at time  $t-5$ , which is the main independent variable;  $QualGov_{i,t-5}$  is the governance quality for country  $i$  at time  $t-5$ , known as moderator; and  $Controls_{i,t-5}$  represents a vector of controls (i.e. economic development, human capital, tfp, openness, tax, public health, unemployment and urban population) that may affect well-being in country  $i$  at time  $t-5$ .  $\beta_0$  is the constant;  $\beta_1$  is the coefficient on the  $PolDec_{i,t-5}$  variable;  $\beta_2$  is the coefficient on the  $QualGov_{i,t-5}$  variable;  $\beta_3$  is the coefficient on the interaction term of the political decentralisation variable with the quality of governance; and  $\beta_4$  is a vector of coefficients on the control variables.  $\varepsilon_{i,t-5}$  depicts the error term. All independent variables are time-lagged (5-year lags) in order to minimize the potential risk of simultaneous causation and endogeneity.

The empirical specification is estimated by means of pooled ordinary least squares (OLS), as the time-series variation of the political decentralisation and governance quality variables is very low: changes in political decentralisation and in quality of governance are long-run processes and happen infrequently and when they do – particularly in the case of decentralisation – they do so in steps. The pooled OLS

coefficients are interpreted as long-run effects (Mairesse 1990; Partridge 2005; Rodríguez-Pose, Psycharis, and Tselios 2012). Thus, the  $\beta_3$  coefficient, for example, shows the long-run joint influence of political decentralisation and quality of governance on subjective welfare. Finally, the stochastic part of the empirical specifications also includes time-dummies to control for all time-specific spatial-invariant variables.

#### **4. Is the relationship between well-being and political decentralisation contingent on governance quality?**

Table 3 presents the influence of political decentralisation on well-being in European countries after considering the quality of local governance as a mediating factor, and controlling for economic development, human capital, tfp, openness, tax, public health, unemployment and urban population. All results in the analysis are robust to conducting population weighted regressions.<sup>12</sup> In the unweighted regressions, each country is viewed as a separate realization of certain underlying economic processes and thus each country should be weighted the same, while in the weighted regressions, the emphasis is on European citizens, rather than on European countries (Sala-i-Martin 2003; Firebaugh 2003; Tselios et al. 2012). Finally, in all regressions multicollinearity tests using the variance inflation factors (VIFs) have been conducted. The VIF tests provide evidence that the variance of the estimated regression coefficients is not affected by collinearity, i.e. the VIFs do not exceed the

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<sup>12</sup> The regression results weighted by *population of each country* and by the *population size of the ESS survey* are omitted because of space constraints and can be provided upon authors' request.

‘rule of thumb’ value of 10. The Appendix displays the interpretation of the regression results using the procedures proposed by Dawson and Richter (2006). The figures in the Appendix show the positive or negative relationship between political decentralisation and the different dimensions of well-being for low and high government-quality countries.

*Insert Table 3 around here*

#### **4.1 Country-related well-being variables**

The results for the different dimensions of the country-related well-being indicators are as follows:

***Economy-related well-being*** (Regressions 1-6 and figures 1-6 of Appendix): For low government-quality European countries, the relationship between political decentralisation and well-being is sensitive to the proxy for governance. For example, this relationship is positive when the moderator is ‘voice and accountability’, ‘political stability’ and ‘control of corruption’ and negative when the moderator is ‘regulatory quality’ and ‘rule of law’. For high government-quality countries, the relationship between political decentralisation and social is negative and weak.

***Government-related well-being*** (Regression 7-12 and figures 7-12 of Appendix): The results are robust to the proxy for government-quality: the influence of political decentralisation on well-being is positive for low government-quality countries and negative for high government-quality countries. However, the positive effect outweighs the negative effect.



***Democracy-related well-being*** (Regressions 13-18 and figures 13-18 of Appendix):

While for low European government-quality countries the relationship between decentralisation and welfare is sensitive to the proxy for governance (i.e. positive when the moderator is ‘voice and accountability’, and negative when the moderator is ‘regulatory quality’), for high government-quality countries this relationship is negative, weak and robust.

***Education-related well-being*** (Regressions 19-24 and figures 19-24 of Appendix):

The results are very similar to the government-related well-being ones, i.e. the influence of political decentralisation on well-being is positive for low government-quality countries and negative for high government-quality countries. This influence is robust to the proxy for government-quality. Moreover, the positive effect outweighs the negative effect.

***Health-related well-being*** (Regressions 25-30 and figures 25-30 of Appendix): The results are opposite to those reported for the education- and government-related well-being. The effect of political decentralisation on well-being is negative for low government-quality countries and positive for high government-quality countries.

## ***4.2 People-related well-being variables***

The results for the life- and happiness-related well-being variables are as follows:

***Life-related well-being*** (Regressions 31-36 and figures 31-36 of Appendix): The results show that an increase in political decentralisation for European countries with low quality of governance leads to higher well-being outcomes when the quality of governance is proxied by ‘voice and accountability’, ‘government effectiveness’,

‘rule of law’ and ‘control of corruption’. ‘Political stability’ has less of an effect on life-related well-being, while an increase in political decentralisation for countries with high quality of governance leads to a small reduction in welfare for almost all proxies for quality of governance.

***Happiness-related well-being*** (Regressions 37-42 and figures 37-42 of Appendix):

The results virtually reproduce those of the life-related well-being variable. An increase in political decentralisation in European countries with low quality of governance leads to higher well-being outcomes when the quality of governance is proxied by ‘voice and accountability’, ‘government effectiveness’, ‘rule of law’ and ‘control of corruption’ and less by ‘political stability’. By contrast, an increase in political decentralisation in countries with high quality of governance leads to a small reduction in welfare for almost all proxies for quality of governance.

***Controls*** (Regressions 1-42): The coefficients of the country control variables generally keep the same sign and level of significance, regardless of the dimension of well-being considered. The main exceptions are tax revenue and unemployment levels, whose association with well-being very much depends on the specific dimension of welfare analysed. In general, the results in Table 3 show that an increase in economic development, urbanisation and openness of a country leads to a higher level of well-being. In contrast, increases in tfp contribute to lower well-being outcomes. Of the other control variables, educational endowment displays a positive and significant coefficient in five of the seven well-being dimensions considered, as is the case of public health, albeit with a negative sign. The

coefficients for tax revenue and unemployment are much more sensitive to the proxy for well-being and/or to the proxy for quality of governance.

Overall, the relationship between political decentralisation and well-being in Europe is contingent on the quality of governance after controlling for a wide range of national factors. The results point to the fact that decentralisation *per se* is not well-being enhancing and that its impact is strongly mediated by the governance quality in a particular country. Hence, the influence of 'who' delivers the resources on welfare depends on 'how well' the resources are delivered. This is hardly surprising taking into account that there are both benefits and costs linked to decentralisation. For low government-quality countries (especially in countries with low voice and accountability, political stability, government effectiveness, rule of law and control of corruption, i.e. five out of six pillars), an increase in political decentralisation is generally connected to improvements in life-, government-, education-, and happiness-related well-being, but to a reduction in health-related well-being. Political decentralisation can thus be regarded as generally well-being-enhancing with the exception of health-related subjective welfare. Therefore, in countries with low-quality governance systems, delivering public goods and services at the subnational level may be, as a whole, more welfare enhancing than having it done by central governments. However, the results for the provision of health public goods and services sent a warning sign that decentralisation may not work in all cases. For countries with high levels of government quality (especially those with high voice and accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption, i.e. all pillars) increases in political decentralisation do not necessarily lead to improvements in well-being. The results

point to a small reduction in life-, economy-, government-, democracy-, education-, and happiness-related well-being. Health-related well-being, by contrast, increases when delivered locally. Hence, in countries with a strong governance record, political decentralisation is unlikely to improve what is already a fair and efficient distribution of public goods and services behind increases in well-being.

## **5. Conclusions**

This paper examines – using Amartya Sen’s conceptual framework of social welfare – the influence of political decentralisation (‘who’ delivers public goods and services) and the role of governance quality (indicating ‘how well’ they are delivered) on different dimensions of well-being across European countries for the period between 1997 and 2014. By using variations of Amartya Sen’s social welfare index in order to proxy for seven different dimensions of well-being, we pay more attention to neglected aspects of well-being, such as attitudes and emotional status. However, this approach may also render the analysis somewhat vulnerable, as, although there is a strong relationship between how people say they feel and how their ‘happiness’ or ‘life satisfaction’ is rated by their friends or by independent observers (Layard 2006), this may not always be the case. Hence, relying only on people’s subjective perception of their own well-being represents a limitation, as individuals may have different concepts of ‘happiness’ or ‘life satisfaction’.

Taking this caveat into account, the results of the econometric analysis give clear European policy implications. Governance quality is crucial to the decentralisation-

welfare association. The results indicate that there is no guarantee that a more decentralised country will end up with higher well-being, as the influence of political decentralisation is shaped by the governance quality. The public goods and services at the base of well-being are affected by both 'who' delivers and 'how well' they are delivered. The results point towards the fact that in countries with low quality governance, more decentralized government systems may contribute to the creation of more efficient systems of public goods and service provision, leading to well-being-enhancing results across the board, with the only exception of health-related well-being. In countries with high quality of governance and where the provision of public goods and services is generally more efficient and equitable, political decentralisation will not have the same effects. While a more decentralised service delivery may guarantee greater satisfaction with health care, there is no evidence that providing decentralised public goods and services in high quality governance will have an influence over other aspects of well-being.

Consequently, when considering decentralisation as a potential tool to tackle well-being problems, it has to be borne in mind that the influence of decentralisation on well-being will be highly dependent on the quality of the government tier providing the public goods and services – i.e. the impact of 'who' delivers is strongly determined by 'how well' the public goods and services are delivered. Hence, it is not surprising that decentralisation may only lead to considerable improvements in well-being when the capacity of the national government to supply public goods and services efficiently and fairly is limited. When a high governance quality guarantees a fair and efficient provision of such goods, the benefits of decentralisation for overall well-being are bound to be limited.

These conclusions have to be taken with some caveats in mind. The cross-country and time-series nature of the paper and constraints on data availability and quality mean that further analyses both using objective indicators as well as covering alternative territorial dimensions can provide complementary views to this picture. Further research at the regional level, for example, could complete the views emerging from the country-level analysis we have conducted. Research at the regional level will allow to take into account factors such as regional differences in well-being, political decentralisation and government quality, among others, and to explore how regional disparities between each country could affect the findings of this paper. Finally, our estimates could be refined by considering not only data spanning longer periods but also a larger sample of countries. This is very important because the external validity of the findings of this paper might be challenged by the fact that, for example, institutional quality varies considerably across countries and regions.

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**Table 1: Well-being proxies**

Proxy	Definition	Measurement of efficiency and inequality
<i>Life-related well-being</i>	It is a function of the average levels of life satisfaction of individuals within a given population and of the inequalities in life satisfaction that exist.	Life-satisfaction <i>efficiency</i> is measured by the average life satisfaction of people within a country, based on the question ' <i>how satisfied are you with life as a whole?</i> ' (answers range from 0 'extremely dissatisfied' to 10 'extremely satisfied'). Life-satisfaction <i>inequality</i> is measured by means of the interpersonal Gini coefficient on life satisfaction.
<i>Economy-related well-being</i>	It is a function of the average levels of economic satisfaction of individuals within a given country and the inequalities in economy satisfaction.	Economic satisfaction <i>efficiency</i> is measured by the average economy satisfaction of individuals within a country, based on the question ' <i>how satisfied are you with the present state of economy in your country?</i> ' (answers range from 0 'extremely dissatisfied' to 10 'extremely satisfied'). Economic satisfaction <i>inequality</i> is measured using the interpersonal Gini coefficient on economy satisfaction.
<i>Government-related well-being</i>	It is a function of the average levels of national-government satisfaction of individuals within a given population and the inequalities in national-government satisfaction that exist.	Government-satisfaction <i>efficiency</i> is measured by the average national-government satisfaction of people within a country, based on the question ' <i>how satisfied are you with the national government?</i> ' (answers range from 0 'extremely dissatisfied' to 10 'extremely satisfied'). Government-satisfaction <i>inequality</i> is measured by the interpersonal Gini coefficient on national-government satisfaction.
<i>Democracy-related well-being</i>	It is a function of the average levels of satisfaction with democracy of individuals within a given population and the inequalities in satisfaction with democracy that exist.	The question ' <i>how satisfied are you with the way democracy works in your country?</i> ' (answers range from 0 'extremely dissatisfied' to 10 'extremely satisfied') is used to measure democracy-satisfaction <i>efficiency</i> . The interpersonal Gini coefficient on satisfaction with democracy is employed for measuring democracy-related satisfaction <i>inequality</i> .
<i>Education-related well-being</i>	It is a function of the average levels of the state of education within a given population and of the inequalities in the state of education.	Education <i>efficiency</i> is measured by the average state of education of people in a given country, based on the question ' <i>how satisfied are you with the state of education in your country nowadays?</i> ' (answers range from 0 'extremely bad' to 10 'extremely good'). Education <i>inequality</i> is measured by means of the interpersonal Gini coefficient on the state of education.
<i>Health-related well-being</i>	It is measured by combining the average levels of the state of health services within a given country and the inequalities in health services.	Health <i>efficiency</i> is estimated using the average state of health services within a country, based on the question ' <i>how satisfied are you with the state of the health services in your country nowadays?</i> ' (answers range from 0 'extremely bad' to 10 'extremely good'). Health <i>inequality</i> is measured using the interpersonal Gini coefficient on the state of health services.
<i>Happiness-related well-being</i>	It is a function of the average levels of the happiness of individuals within a given country and the inequalities in happiness across the country.	Happiness <i>efficiency</i> is measured using the average happiness of the individuals sampled within a country, based on the question ' <i>how happy are you?</i> ' (answers range from 0 'extremely unhappy' to 10 'extremely happy'). Happiness <i>inequality</i> is measured by the interpersonal Gini coefficient on happiness.

**Table 2: Descriptive statistics**

<b>Variable</b>	<b>Year</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
<b>Well-being</b>						
Life-related	2002-2014	308	5.8157	1.1351	2.9230	7.8756
Economy-related	2002-2014	308	3.4686	1.3706	0.8966	7.1210
Government-related	2002-2014	306	3.1949	1.0259	1.0226	5.7001
Democracy-related	2002-2014	308	4.1072	1.1833	1.6379	6.5148
Education-related	2002-2014	308	4.4941	1.1032	2.1637	7.3906
Health-related	2002-2014	308	4.1400	1.2938	1.6512	6.9686
Happiness-related	2002-2014	308	6.2330	0.8975	3.9142	7.7707
<b>PolDec</b>						
RAI total	1997-2009	442	11.8082	10.3572	1.0000	36.9899
<b>QualGov</b>						
Voice and accountability	1997-2009	468	0.9352	0.6518	-1.5488	1.8264
Political stability	1997-2009	457	0.6167	0.7341	-1.6230	1.6681
Gov. effectiveness	1997-2009	459	1.0359	0.8549	-0.9168	2.3566
Regulatory quality	1997-2009	458	1.0324	0.6291	-0.7421	2.0766
Rule of law	1997-2009	462	0.8925	0.8779	-1.2445	1.9996
Control of corruption	1997-2009	462	0.9323	1.0399	-1.1547	2.5856
<b>Controls</b>						
GDP per capita (ln)	1997-2009	455	10.1030	0.5815	8.2489	11.3435
Human capital per person	1997-2009	455	3.0641	0.3476	1.9099	3.6833
Welfare-relevant tfp	1997-2009	442	0.9801	0.1427	0.4333	1.3180
Openness (ln)	1997-2009	455	4.4402	0.4209	3.3660	5.7886
Tax revenue	1997-2009	433	20.1180	7.3638	0.5342	49.9678
Public health expenditure	1997-2009	455	71.6407	12.0309	26.7506	92.4834
Unemployment (ln)	1997-2009	455	1.9856	0.5029	0.5878	3.1224
Urban population	1997-2009	455	71.1861	12.0744	40.0350	97.5940

**Table 3: Regression results****Country-related well-being variables****a) Dependent variable: economy-related well-being**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>PolDec</b>						
RAI total	0.0209	-0.0099	-0.0093	-0.0430**	-0.0196	0.0007
<b>QualGov</b>						
Voice and accountability	1.2562***					
Political stability		0.6752***				
Gov. effectiveness			0.6220**			
Regulatory quality				0.0885		
Rule of law					0.3847	
Control of corruption						0.6225***
<b>PolDec x QualGov</b>	-0.0307	-0.0128	-0.0054	0.0203	0.0029	-0.0106
<b>Controls</b>						
GDP per capita (ln)	1.5514***	1.7583***	1.5223***	1.9344***	1.6443***	1.4427***
Human capital per person	0.7516***	0.7464***	0.5037***	0.4060**	0.4801***	0.5215***
Welfare-relevant tfp	-4.0163***	-3.8488***	-4.1626***	-4.4516***	-4.2894***	-3.9603***
Openness (ln)	0.6468***	0.4737***	0.6460***	0.6138***	0.6842***	0.7682***
Tax revenue	-0.0003	0.0024	-0.0030	0.0019	0.0004	-0.0037
Public health expenditure	-0.0159**	-0.0187***	-0.0098*	-0.0071	-0.0100	-0.0110**
Unemployment (ln)	0.1800	0.2584	0.1414	0.1901	0.1661	0.1955
Urban population	0.0263***	0.0355***	0.0189***	0.0247***	0.0239***	0.0189***
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-15.9168***	-17.1295***	-13.8285***	-17.3700***	-15.1808***	-13.8516***
Observations	294	294	294	294	294	294
R-squared	0.6622	0.6706	0.6551	0.6513	0.6520	0.6620

**b) Dependent variable: government-related well-being**

	(7)	(8)	(9)	(10)	(11)	(12)
<b>PolDec</b>						
RAI total	0.0764***	0.0043	0.0303**	0.0132	0.0226*	0.0325***
<b>QualGov</b>						
Voice and accountability	1.7530***					
Political stability		0.7166***				
Gov. effectiveness			1.0012***			
Regulatory quality				0.6027**		
Rule of law (ln)					0.8109***	
Control of corruption						0.8747***
<b>PolDec x QualGov</b>	-0.0720***	-0.0262***	-0.0280***	-0.0181	-0.0250***	-0.0289***
<b>Controls</b>						
GDP per capita (ln)	0.8699***	1.1330***	0.6743***	1.1609***	0.8270***	0.6724***
Human capital per person	0.5359***	0.5283***	0.2171	0.2055	0.2933*	0.3057**
Welfare-relevant tfp	-2.5725***	-2.8267***	-3.1037***	-3.2158***	-3.0378***	-2.8657***
Openness (ln)	0.6792***	0.4854***	0.6522***	0.5639***	0.6664***	0.7485***
Tax revenue	-0.0096	-0.0053	-0.0140**	-0.0078	-0.0106*	-0.0150**
Public health expenditure	-0.0321***	-0.0344***	-0.0258***	-0.0231***	-0.0273***	-0.0273***
Unemployment (ln)	0.1358	0.1299	0.0299	0.0557	0.0750	0.0731
Urban population	0.0289***	0.0362***	0.0183***	0.0233***	0.0231***	0.0178***
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-9.2764***	-9.7372***	-4.3477	-8.9264***	-6.3423**	-5.0478**
Observations	292	292	292	292	292	292
R-squared	0.5892	0.5889	0.5790	0.5556	0.5649	0.5925

**Table 3: Regression results (cont.)**

<b>c) Dependent variable: democracy-related well-being</b>						
	(13)	(14)	(15)	(16)	(17)	(18)
<b>PolDec</b>						
RAI total	0.0268*	-0.0124**	-0.0070	-0.0409***	-0.0101	-0.0069
<b>QualGov</b>						
Voice and accountability	1.5254***					
Political stability		0.5265***				
Gov. effectiveness			0.8635***			
Regulatory quality				0.3265		
Rule of law (ln)					0.7193***	
Control of corruption						0.6545***
<b>PolDec x QualGov</b>	-0.0326**	-0.0051	-0.0044	0.0224**	-0.0005	-0.0021
<b>Controls</b>						
GDP per capita (ln)	1.2604***	1.6749***	1.1217***	1.6440***	1.1792***	1.1312***
Human capital per person	0.4964***	0.3618**	0.1826	0.0671	0.1808	0.1327
Welfare-relevant tfp	-2.3870***	-2.1254***	-2.6001***	-2.9747***	-2.7224***	-2.4577***
Openness (ln)	0.2979**	0.1592	0.2941**	0.2490**	0.3745***	0.4364***
Tax revenue	-0.0006	0.0011	-0.0044	0.0025	-0.0002	-0.0033
Public health expenditure	-0.0231***	-0.0212***	-0.0160***	-0.0126**	-0.0174***	-0.0161***
Unemployment (ln)	0.1239	0.2086*	0.0735	0.1476	0.1171	0.1471
Urban population	0.0298***	0.0375***	0.0194***	0.0266***	0.0259***	0.0217***
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-11.4600***	-14.4112***	-7.8091***	-12.4834***	-8.9296***	-8.6204***
Observations	294	294	294	294	294	294
R-squared	0.7356	0.7182	0.7286	0.7198	0.7244	0.7371

<b>d) Dependent variable: education-related well-being</b>						
	(19)	(20)	(21)	(22)	(23)	(24)
<b>PolDec</b>						
RAI total	0.0747***	-0.0057	0.0096	0.0070	0.0331***	0.0292**
<b>QualGov</b>						
Voice and accountability	2.4930***					
Political stability		1.2758***				
Gov. effectiveness			1.3196***			
Regulatory quality				1.1234***		
Rule of law (ln)					1.5217***	
Control of corruption						1.2194***
<b>PolDec x QualGov</b>	-0.0841***	-0.0379***	-0.0255**	-0.0250**	-0.0449***	-0.0382***
<b>Controls</b>						
GDP per capita (ln)	0.7105***	1.0742***	0.5265***	1.1157***	0.5291***	0.5912***
Human capital per person	0.6222***	0.6830***	0.1482	0.1461	0.3477**	0.3072**
Welfare-relevant tfp	-1.9276***	-1.9073***	-2.5021***	-2.6507***	-2.1338***	-1.8840***
Openness (ln)	0.8045***	0.4943***	0.7717***	0.6702***	0.8883***	0.9737***
Tax revenue	0.0013	0.0077	-0.0046	0.0042	-0.0014	-0.0066
Public health expenditure	-0.0106*	-0.0170***	-0.0002	0.0027	-0.0055	-0.0027
Unemployment (ln)	0.3562**	0.4342***	0.2305	0.2966**	0.3376**	0.3297**
Urban population	0.0282***	0.0435***	0.0135**	0.0193***	0.0190***	0.0135**
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-10.9976***	-12.4798***	-5.1299**	-11.1085***	-7.0511***	-7.6199***
Observations	294	294	294	294	294	294
R-squared	0.6170	0.6600	0.5942	0.5756	0.5961	0.6123

**Table 3: Regression results (cont.)**

<b>e) Dependent variable: health-related well-being</b>						
	(25)	(26)	(27)	(28)	(29)	(30)
<b>PolDec</b>						
RAI total	-0.0430**	-0.0040	-0.0241*	-0.0690***	-0.0045	0.0062
<b>QualGov</b>						
Voice and accountability	-0.0133					
Political stability		-0.0351				
Gov. effectiveness			0.6580***			
Regulatory quality				-0.5644**		
Rule of law (ln)					0.5360**	
Control of corruption						0.5005***
<b>PolDec x QualGov</b>	0.0431***	0.0174**	0.0238***	0.0595***	0.0136	0.0048
<b>Controls</b>						
GDP per capita (ln)	0.7666***	1.0249***	0.1299	1.0995***	0.3352	0.3803*
Human capital per person	-0.1661	-0.2553	-0.2664*	-0.3551**	-0.2381	-0.2375
Welfare-relevant tfp	-2.1600***	-1.3370*	-2.3052***	-2.0128***	-2.0346***	-1.5501**
Openness (ln)	0.2561**	0.3137**	0.2428**	0.3644***	0.4201***	0.4844***
Tax revenue	-0.0023	-0.0046	-0.0050	-0.0007	-0.0019	-0.0050
Public health expenditure	0.0004	0.0037	0.0003	0.0046	-0.0011	-0.0001
Unemployment (ln)	-0.2692**	-0.1293	-0.2733**	-0.1259	-0.1932	-0.1393
Urban population	0.0528***	0.0557***	0.0430***	0.0570***	0.0520***	0.0485***
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-5.7096**	-9.7865***	1.0964	-9.2729***	-2.6542	-3.7313
Observations	294	294	294	294	294	294
R-squared	0.6892	0.6622	0.7268	0.6829	0.6934	0.6893

**People-related well-being variables**

<b>f) Dependent variable: life-related well-being</b>						
	(31)	(32)	(33)	(34)	(35)	(36)
<b>PolDec</b>						
RAI total	0.0310*	-0.0013	0.0216**	-0.0378***	0.0194*	0.0232***
<b>QualGov</b>						
Voice and accountability	1.4343***					
Political stability		0.4763***				
Gov. effectiveness			1.1829***			
Regulatory quality				0.2736		
Rule of law					1.0567***	
Control of corruption						0.9709***
<b>PolDec x QualGov</b>	-0.0305**	-0.0124*	-0.0187***	0.0254***	-0.0173**	-0.0177***
<b>Controls</b>						
GDP per capita (ln)	1.1369***	1.6220***	0.7850***	1.4888***	0.8632***	0.7837***
Human capital per person	0.6900***	0.6384***	0.4285***	0.2654**	0.4837***	0.4401***
Welfare-relevant tfp	-1.7443***	-1.2835**	-1.8303***	-2.3802***	-1.8653***	-1.5991***
Openness (ln)	0.3043***	0.2470**	0.3378***	0.2523**	0.4151***	0.4993***
Tax revenue	0.0168***	0.0187***	0.0109**	0.0199***	0.0157***	0.0112**
Public health expenditure	-0.0152***	-0.0136***	-0.0100***	-0.0051	-0.0125***	-0.0110***
Unemployment (ln)	0.2472**	0.3339***	0.1994*	0.2688**	0.2631**	0.2800**
Urban population	0.0199***	0.0263***	0.0076**	0.0170***	0.0145***	0.0088**
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-10.2993***	-14.6656***	-5.1395**	-10.9864***	-6.7078***	-6.0554***
Observations	294	294	294	294	294	294
R-squared	0.7595	0.7297	0.7706	0.7477	0.7594	0.7866

**Table 3: Regression results (cont.)**

g) Dependent variable: happiness-related well-being						
	(37)	(38)	(39)	(40)	(41)	(42)
<b>PolDec</b>						
RAI total	0.0142	-0.0039	0.0127	-0.0325***	0.0128	0.0142*
<b>QualGov</b>						
Voice and accountability	1.0188***					
Political stability		0.2920***				
Gov. effectiveness			0.9640***			
Regulatory quality				0.2244		
Rule of law (ln)					0.8513***	
Control of corruption						0.7351***
<b>PolDec x QualGov</b>	-0.0160*	-0.0064	-0.0120**	0.0219***	-0.0118**	-0.0114**
<b>Controls</b>						
GDP per capita (ln)	1.0074***	1.4183***	0.6574***	1.2635***	0.7414***	0.7266***
Human capital per person	0.2201**	0.1660*	0.0261	-0.0981	0.0710	0.0316
Welfare-relevant tfp	-1.6485***	-1.1867***	-1.7046***	-2.0868***	-1.7020***	-1.4632***
Openness (ln)	0.1430*	0.1290	0.1708**	0.1147	0.2464***	0.3086***
Tax revenue	0.0082**	0.0091**	0.0034	0.0107***	0.0073**	0.0039
Public health expenditure	-0.0089***	-0.0068**	-0.0054**	-0.0015	-0.0074***	-0.0059**
Unemployment (ln)	0.1674*	0.2450***	0.1342*	0.2005**	0.1905**	0.2080**
Urban population	0.0176***	0.0219***	0.0074**	0.0155***	0.0135***	0.0094***
Time dummies	YES	YES	YES	YES	YES	YES
Constant	-5.9881***	-9.9951***	-1.3427	-6.6279***	-2.9456*	-2.9070**
Observations	294	294	294	294	294	294
R-squared	0.7871	0.7483	0.8079	0.7790	0.7920	0.8120

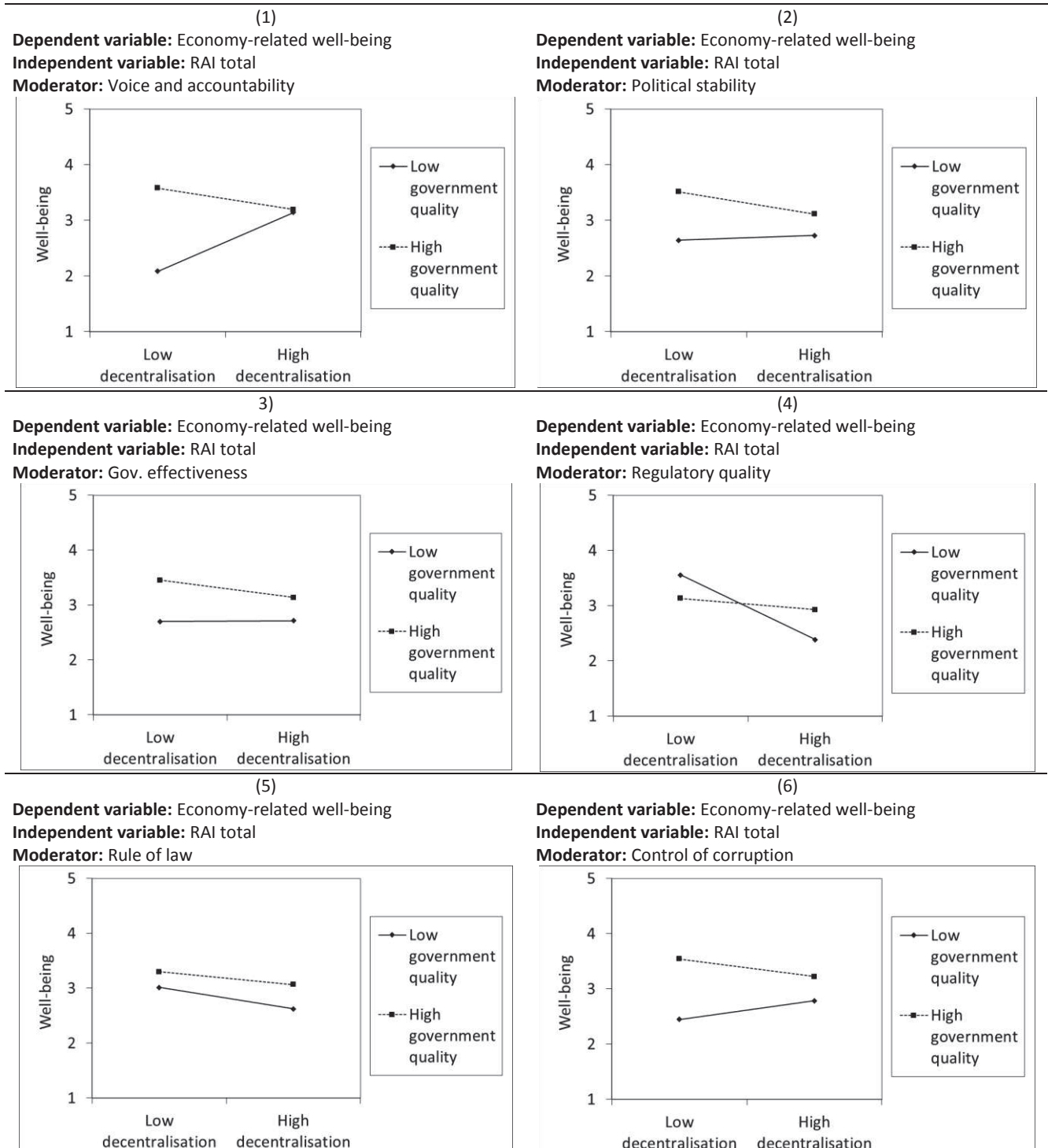
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



## Appendix: Interpretation of the regression results

### COUNTRY-RELATED WELL-BEING VARIABLES

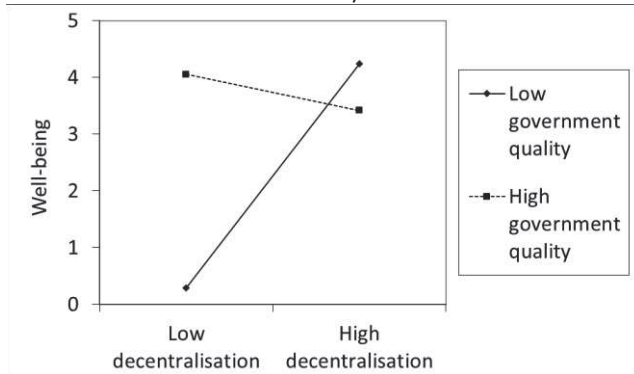
#### a) Dependent variable: Economy-related well-being



**b) Dependent variable: Government-related well-being**

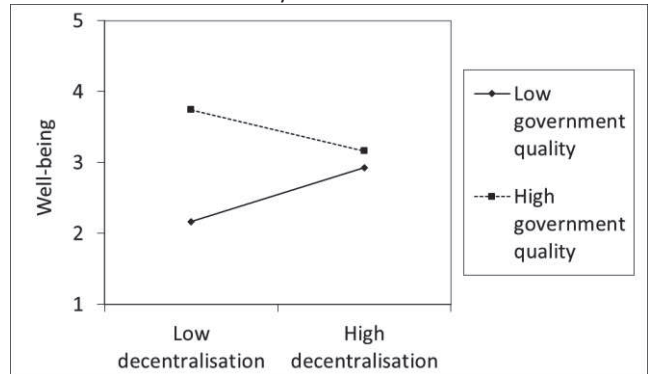
(7)

**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Voice and accountability



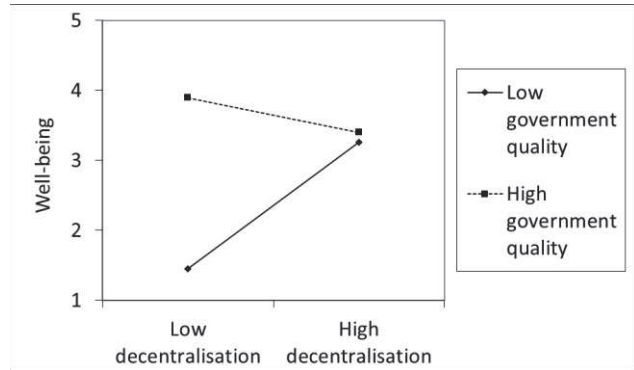
(8)

**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Political stability



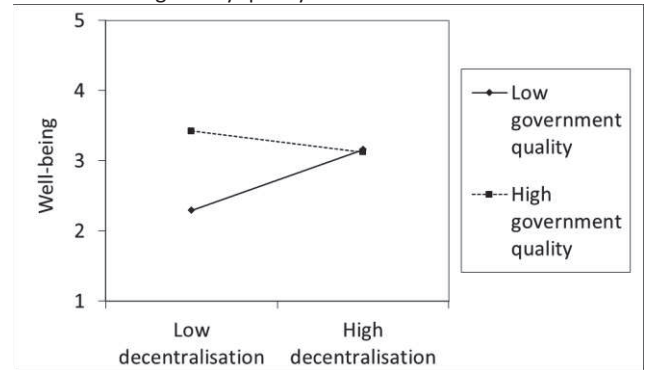
(9)

**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Gov. effectiveness



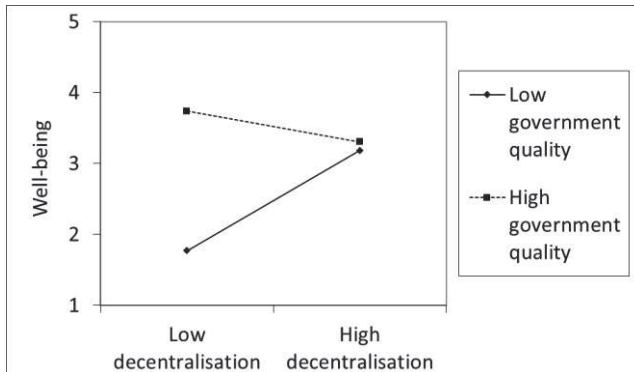
(10)

**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Regulatory quality



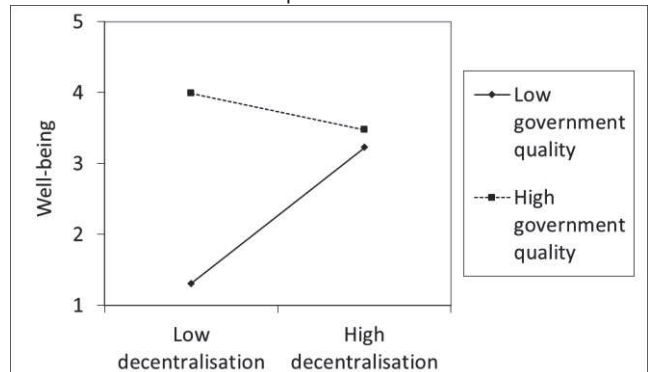
(11)

**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Rule of law



(12)

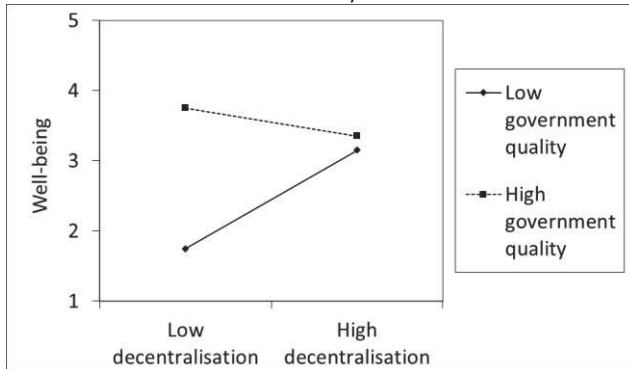
**Dependent variable:** Government-related well-being  
**Independent variable:** RAI total  
**Moderator:** Control of corruption



**c) Dependent variable: Democracy-related well-being**

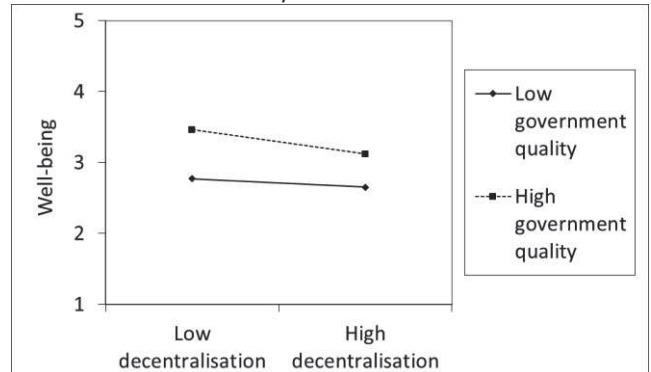
(13)

**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Voice and accountability



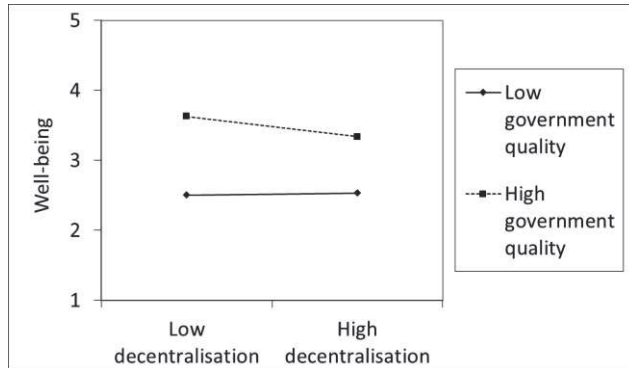
(14)

**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Political stability



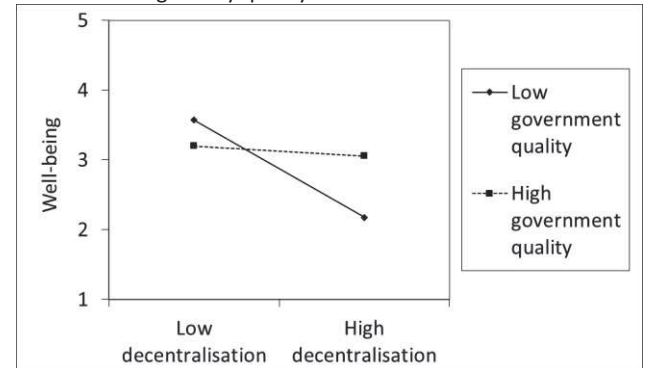
(15)

**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Gov. effectiveness



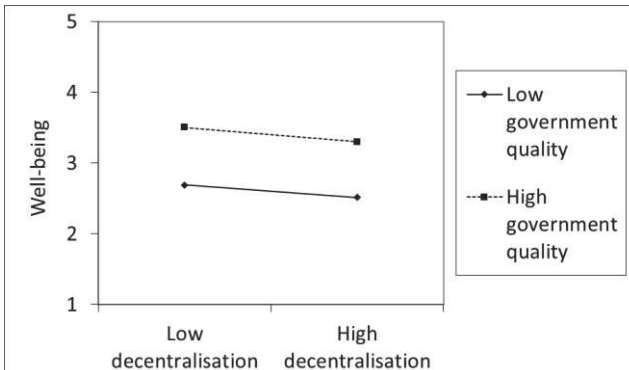
(16)

**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Regulatory quality



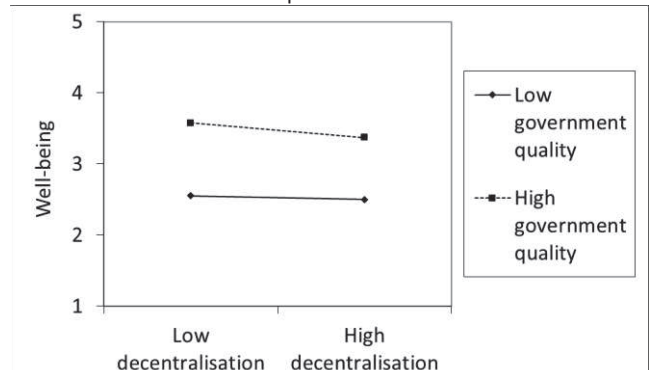
(17)

**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Rule of law



(18)

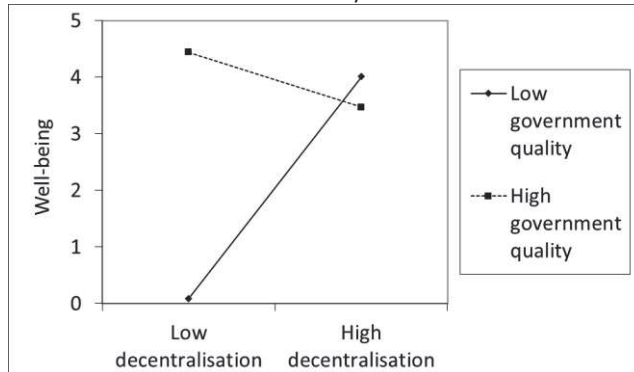
**Dependent variable:** Democracy-related well-being  
**Independent variable:** RAI total  
**Moderator:** Control of corruption



**d) Dependent variable: Education-related well-being**

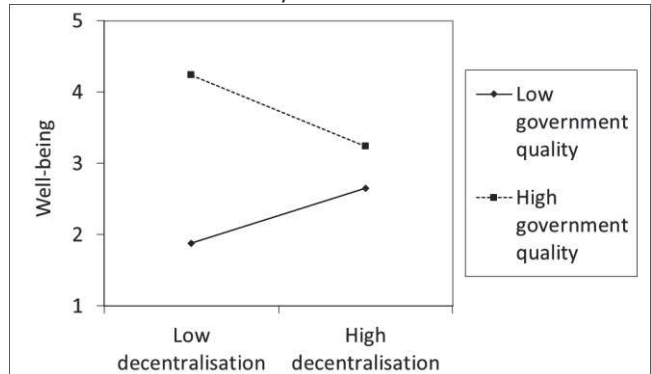
(19)

**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Voice and accountability



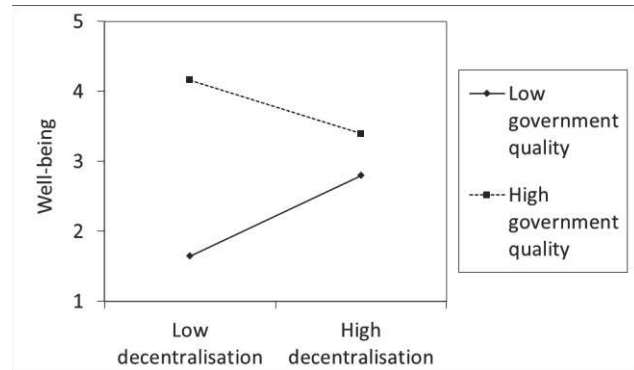
(20)

**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Political stability



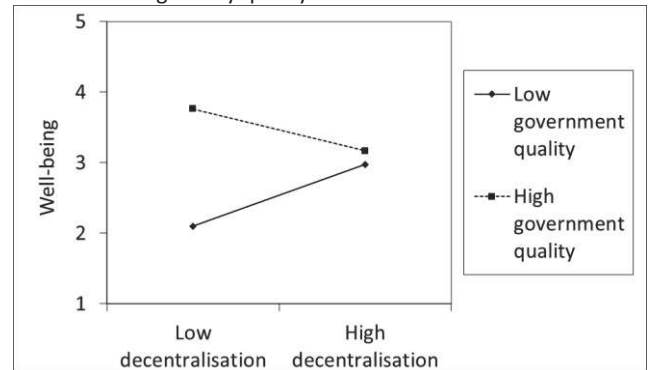
(21)

**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Gov. effectiveness



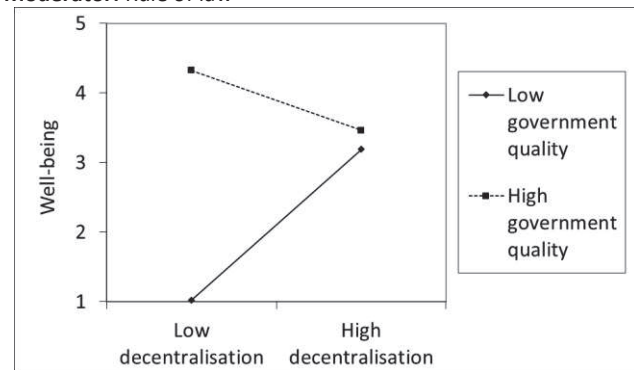
(22)

**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Regulatory quality



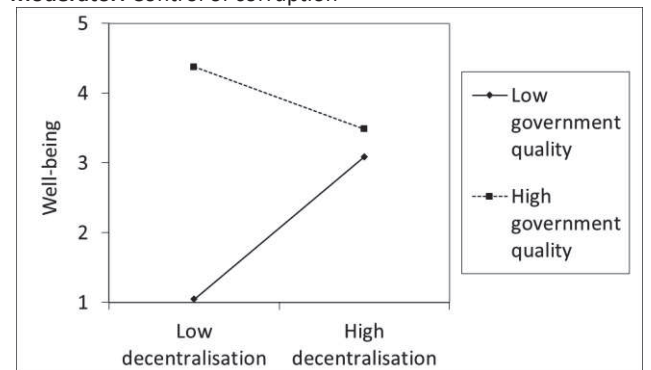
(23)

**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Rule of law



(24)

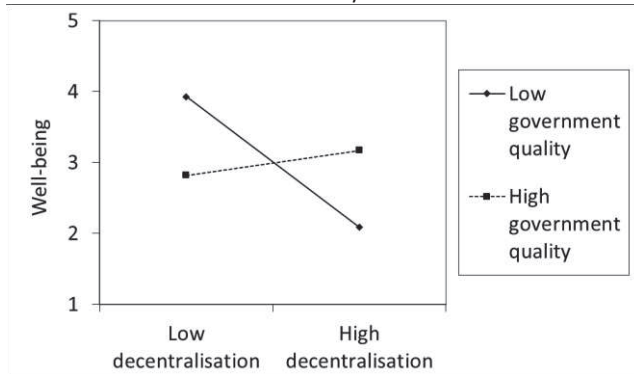
**Dependent variable:** Education-related well-being  
**Independent variable:** RAI total  
**Moderator:** Control of corruption



**e) Dependent variable: Health-related well-being**

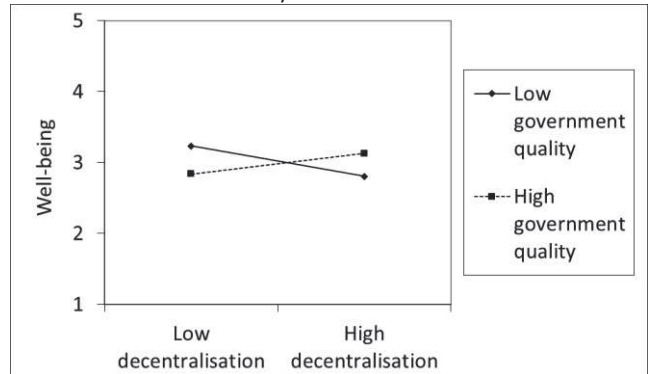
(25)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Voice and accountability



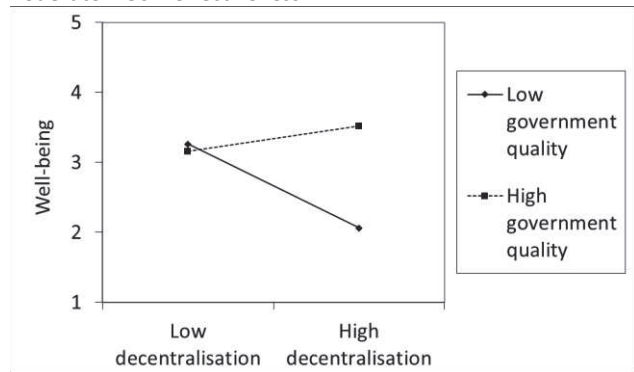
(26)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Political stability



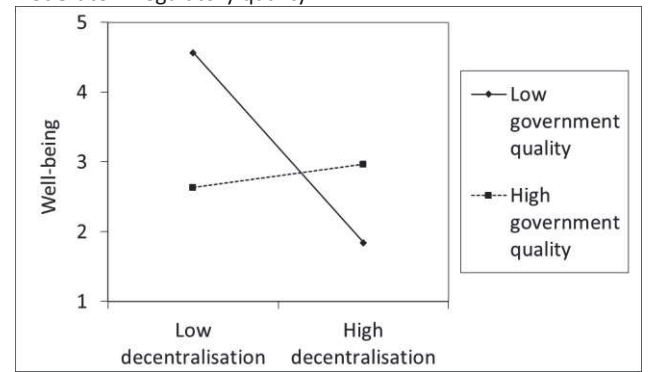
(27)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Gov. effectiveness



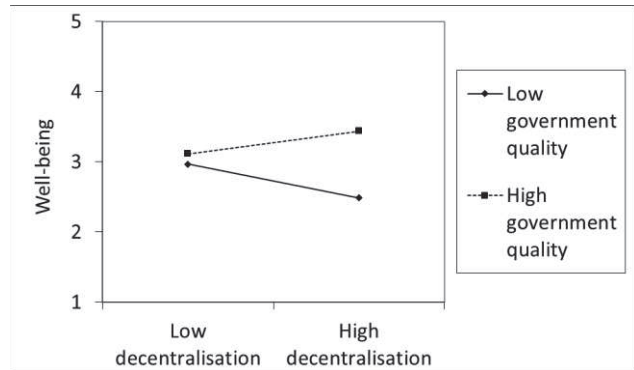
(28)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Regulatory quality



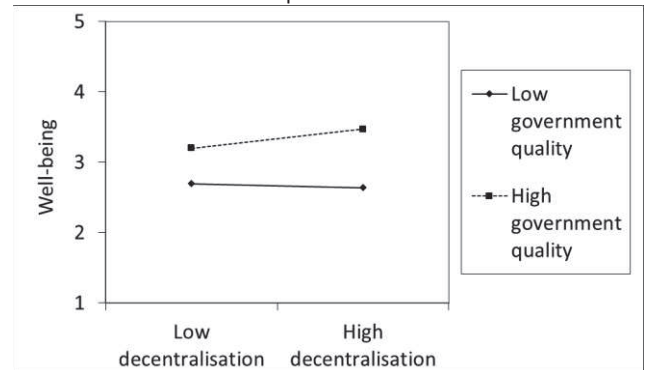
(29)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Rule of law



(30)

**Dependent variable:** Health-related well-being  
**Independent variable:** RAI total  
**Moderator:** Control of corruption



## PEOPLE-RELATED WELL-BEING VARIABLES

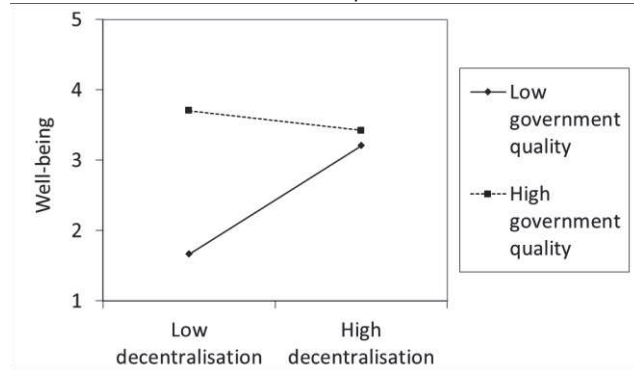
### f) Dependent variable: Life-related well-being

(31)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

**Moderator:** Voice and accountability

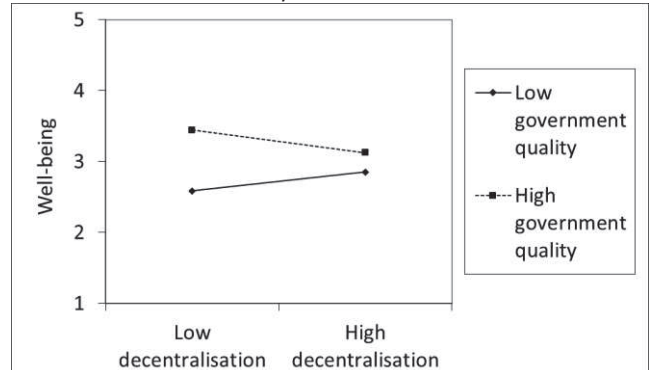


(32)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

**Moderator:** Political stability

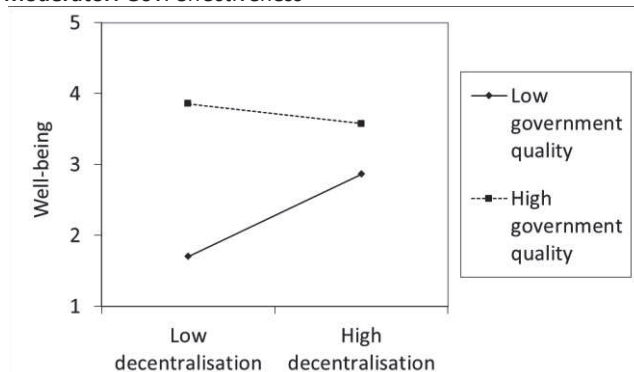


(33)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

**Moderator:** Gov. effectiveness

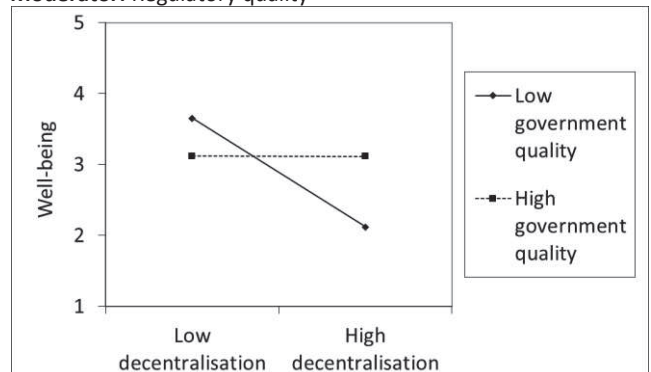


(34)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

**Moderator:** Regulatory quality

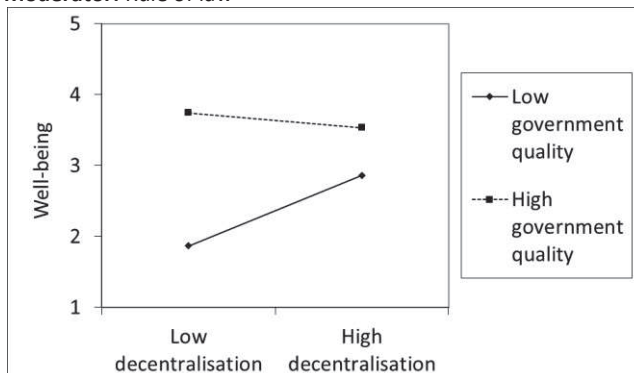


(35)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

**Moderator:** Rule of law

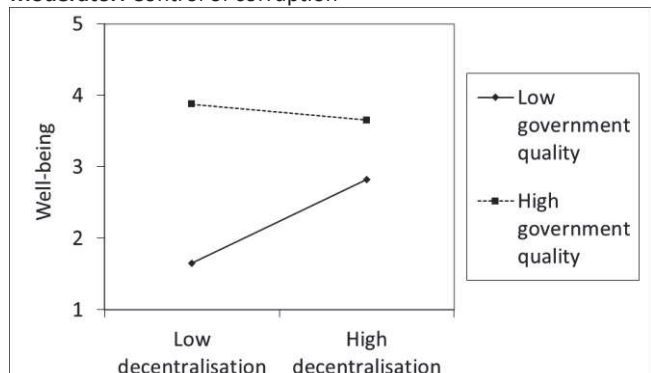


(36)

**Dependent variable:** Life-related well-being

**Independent variable:** RAI total

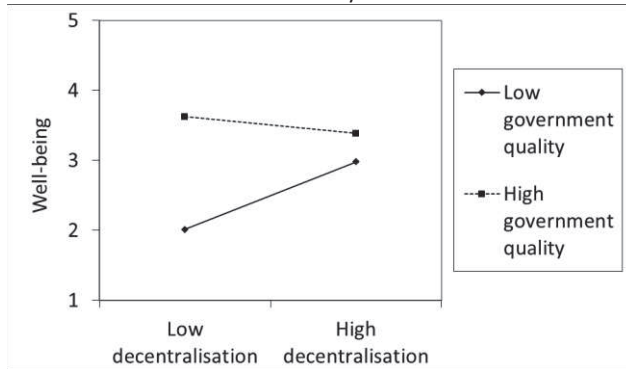
**Moderator:** Control of corruption



**g) Dependent variable: Happiness-related well-being**

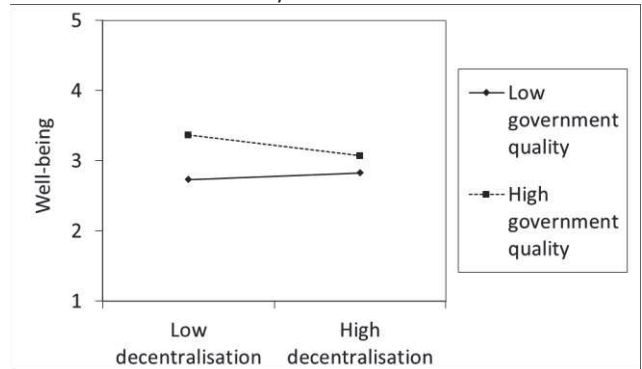
(37)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Voice and accountability



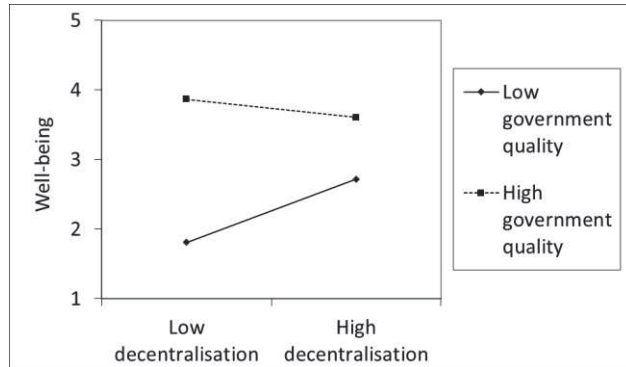
(38)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Political stability



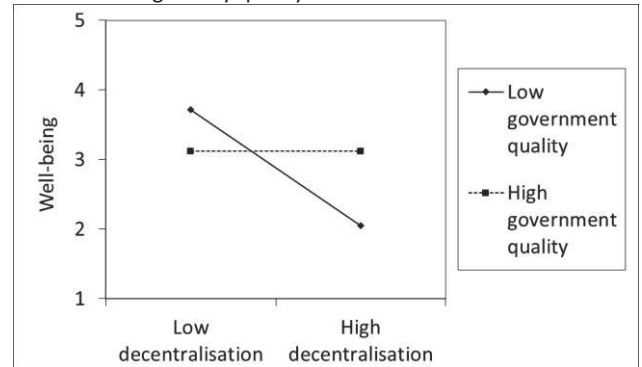
(39)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Gov. effectiveness



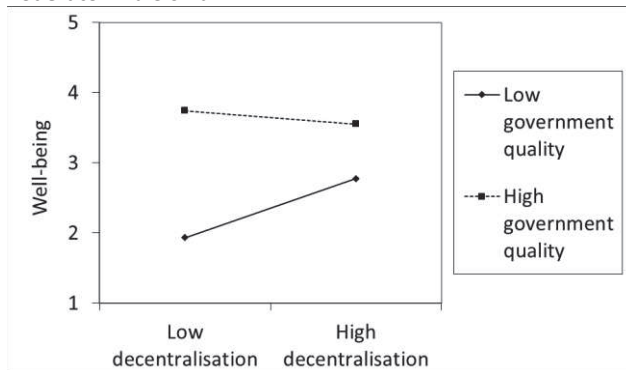
(40)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Regulatory quality



(41)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Rule of law



(42)

**Dependent variable:** Happiness-related well-being  
**Independent variable:** RAI total  
**Moderator:** Control of corruption

