Maastricht University

The virtuous loop of quality of government (QoG) and institutional trust in OECD countries, 2006-2021 and culture

Citation for published version (APA):

Hussain, A., & Ritzen, J. (2023). *The virtuous loop of quality of government (QoG) and institutional trust in OECD countries, 2006-2021 and culture*. UNU-MERIT. UNU-MERIT Working Papers No. 029 https://www.merit.unu.edu/publications/wppdf/2023/wp2023-029.pdf

Document status and date:
Published: 18/09/2023

Document Version:
Publisher's PDF, also known as Version of record

Document license:
CC BY-NC

Please check the document version of this publication:

• A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
• The final author version and the galley proof are versions of the publication after peer review.
• The final published version features the final layout of the paper including the volume, issue and page numbers.

Link to publication

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain
• You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the “Taverne” license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy
If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

Download date: 02 Oct. 2023

Maastricht University

UNU MERIT

Working Paper Series

#2023-029

The virtuous loop of quality of government (QoG) and institutional trust in OECD countries, 2006-2021 and culture

Ahmed Hussain and Jo Ritzen

Published 18 September 2023

Maastricht Economic and social Research institute on Innovation and Technology (UNU-MERIT)
email: info@merit.unu.edu | website: http://www.merit.unu.edu

Boschstraat 24, 6211 AX Maastricht, The Netherlands
Tel: (31) (43) 388 44 00

UNU-MERIT Working Papers
ISSN 1871-9872

Maastricht Economic and social Research Institute on Innovation and Technology
UNU-MERIT | Maastricht University

UNU-MERIT Working Papers intend to disseminate preliminary results of research carried out at UNU-MERIT to stimulate discussion on the issues raised.

The Virtuous Loop of Quality of Government (QoG) and Institutional Trust in OECD Countries, 2006-2021 and Culture.

Ahmed Hussain [a,b]

Jo Ritzen [a,b]

[a] United Nations University-MERIT, the Netherlands

[b] Maastricht University, the Netherlands

Abstract

We explore empirically the relationship between trust in government and the quality of government (QoG) with a dynamic panel model for the period 2006-2021 in the 38 OECD countries, with reverse and lag specifications while incorporating a range of social, political, and economic factors as explanatory variables. The results show a clear positive mutually reinforcing dynamic between QoG and trust in government when the social, political and economic factors are included. Trust in government with a three-year lag is positively related to QoG. Foreign-born population with a three-year lag is negatively associated with QoG. The other way around: trust in government is affected by the QoG in the same year. Economic decline reduces trust in government.

QoG and trust appear to be embedded in culture (measured with the Hofstede indices). Power distance is negatively related to both QoG and institutional trust. The association between individualism and QoG is positive, while long-term orientation and indulgence positively impact trust.

JEL classification

D31, D73, D78, E61, H5, H83, I38, O01, Z13, Z18, Z19

Keywords

Quality of Government, Institutions, Trust, Culture, Diversity, Inequality, Economic stability

Chancellor Merkel's (Germany, 2005-2021) adage "Keine Experimente" ("No experiments").

Governance and trust are the twin pillars upon which societies stand or fall. Their dance is as old as time.

1. Introduction

The quality of government (QoG) is widely recognised as a key driver of socio-economic development and a fundamental pillar of sustainability, prosperity and social cohesion (Kaufmann, Kraay, and Zoido, 1999, Holmberg et al. 2009, Goldsmith, 2007). This explains the strong focus by international organisations on the importance of good governance and sound institutions for development, also in OECD countries. At the same time "trust in government" has been seen as essential for the functioning of democracy and government (Barro & McCleary, 2002; Blind, 2007; Bergh & Henrekson, 2011; OECD, 2022; Ritzen & Nillesen, 2022). Hence the question about the relationship between (QoG) and trust in government, in a dynamic environment of social, economic, political, and cultural developments, as in the framework depicted in Figure 1, for all 38 OECD countries over the period 2006-2021. To our knowledge, this is the first exercise of linking QoG with trust in Government while introducing time lags.

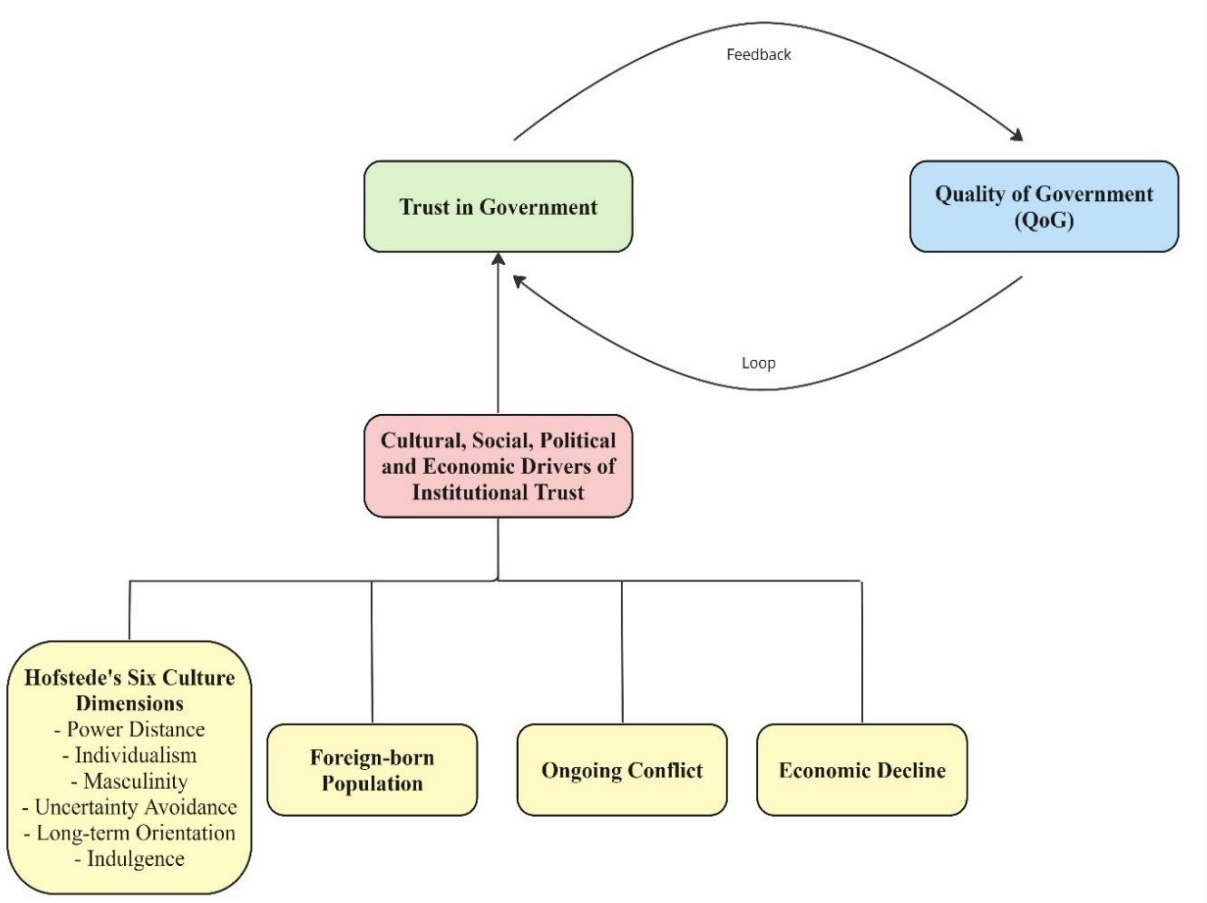

Figure 1. Framework for analysis

We seek an answer to the following two questions:

1. How did cultural, social, political, and economic drivers as well as trust in government with time lags affect the perceived quality of government in the OECD countries between 2006 and 2021?

2. How did, in turn, changes in the quality of government impact trust in government in the OECD countries during the same timeframe while allowing for time lags in that relation?

Chapter 2 presents the main elements of Figure 1 based on the literature. Chapter 3 presents the mathematical model of analysis used for this study and explains the methodology, estimation strategy and lag specifications of the dynamic panel model. Chapter 4 presents the dataset and introduces all explanatory variables. Chapter 5 presents the results for the two questions raised above. Chapter 6 elaborates on the results and reinforces the findings by linking them with existing empirical and theoretical studies in conclusions and discussion.

2. The model against the present literature

2.1 Governance

Central in Figure 1 stands the QoG. The term and its measurement have gone through a lengthy process. The origins of the term Governance in public administration and policy making are found in the work of North on institutional economics (North, 1991), in development studies (World Bank, 1992), public administration (Kooiman, 1993), and political sciences (Rhodes, 1996). A major step in the introduction of the concept of governance has been marked by the 1992 publication of the World Bank "Governance and Development" (Plattner, 2013). The report defines governance as "the manner in which power is exercised in the management of a country's economic and social resources for development," and further adds that "good governance, for the World Bank, is synonymous with sound development management" (World Bank, 1992).

Landel-Mills et al. (1989) specifically highlight the World Bank's Africa study published in the late 1980s as a starting point of the debate on good governance. It made a strong impact in policy circles during the mid-1990s (Rothstein, 2021), mostly related to developing countries (Smith, 2007). The establishment of different measures like the Corruption Perception Index in 1996 and later the World Bank's Worldwide Governance Indicators in 1999 was a major push for reflecting on the role of good governance for development. Rodrik (2000) captured the change in thought that led to the emergence of the good governance

agenda by stating, “the encounter between neo-classical economics and developing societies served to reveal the institutional underpinnings of market economies”. Good governance is considered a fundamental ingredient of sustained economic development (LaPorta et al., 1999; Kaufmann & Kraay, 2007) and incompetent government institutions are the root cause of underdevelopment (Nistotskaya, 2020), realizing that good governance is also the result of development (Bettcher, 2018).

Kaufmann et al., (1999) defined governance as the “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.”

“Good governance” and “quality of government” emerged as key themes in the political economy Rothstein and Toerell (2008) once measurement was established on ordinal scales. These terms are interchangeably (Agnafors, 2013), both concepts referring to the desired character of the exercise of public authority or its outcomes.

Nistotskaya (2020) summarises QoG as a normative, universal, and procedural conceptualisation of the idea of ‘good institutions/good governance.’ The most frequently used definition of QoG rests on the World Bank’s definition of good governance by Kaufman et al., 1999 (Holmberg et al., 2009).

The basic premise of “good governance” forms the basis of the Worldwide Governance Indicators (WGI) that provide a broad measure of governance quality in over 200 countries. WGIs measure governance across six dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 1999; 2010). WGIs are a meta-index for measuring QoG as they identify the underlying dimensions of governance across different countries over time (Laura et al., 2016).

In this paper, we put QoG in the context of political, economic, social, and cultural settings and use the WBI as a measurement of QoG.

2.2 Trust in Government

Trust in government is interchangeably used with ‘institutional trust’ and ‘political trust’ in theoretical, policy and governance discourses (World Bank, 2020). Easton (1965) defines

trust in government as “the confidence of citizens in the actions of a government to do what is right and perceived fair.” Other authors also describe it as a measure of confidence in government institutions (Rousseau et al., 1998) and this description is helpful to understand its importance in a democracy. Trust in government as a multifaceted concept is referred to as a basic consensus among the citizens of a country on collective values, priorities, and differences. In that sense, trust is much more than that as it underpins human contact and institutional interaction (Tonkiss et al., 2000). Some see trust in government as a ‘rational or effective belief in the benevolent motivation and performance capacity of another party’ (Norris, 2011). It signifies that trust in government is not only based on logical reasoning and emotions but also confidence in the government’s ability to fulfil the promise of carrying out responsibilities. Hiltin and Shutava (2022) explain it as the public’s perception of government based on expectations of how it should operate. Correspondingly, OECD (2017b) conventionally defines institutional trust as “a person’s belief that another person or institutions will act consistently with their expectations of positive behaviour.” In contrast, Keele (2007) argues that institutional trust is not a manifestation of how the public perceives the government but rather a result of how much the public engages in civic life. Citizen engagement, as observed by Blind (2007), will generate a notion among citizens that public institutions are fair, efficient, and honest. To conceptualise, trust offers people the confidence that all public institutions of the government will act according to their expectations.

Trust in government is generally assumed to be a necessary precondition for representative democracy (Van der Meer, 2017). Trust in government has been thought to be an important ingredient upon which the legitimacy and sustainability of public and government institutions are built (Blind, 2007). Institutional trust appears also to be positively related to economic growth (Acemoglu & Robinson, 2008; Bergh & Henrekson, 2011). Trust is an important factor in determining the room for governments to manoeuvre for acting towards long-run goals (like sustainability (Ritzen & Nillesen, 2022). Core levels of institutional trust are essential for the efficiency of government institutions, adherence to the rule of law and delivery of public services (Knack & Zak, 2003; Blind, 2007). It may also help governments to implement structural reforms in all sectors with long-term benefits for the citizens of the country (Gyorffy, 2013). Trust in government during times of crisis, such as natural disasters, political instability, and economic decline, seems critical for public compliance, resource mobilisation and effective communication (Tonkiss, 2009; Uslaner, 2010; Sucher & Gupta, 2022).

Measuring whether people trust their government institutions started in the late 1990s with the Gallup World Poll, World Values Survey, and regional Barometers (United Nations, 2021). OECD started to measure trust in 2006 (OECD, 2017b), with a framework that captures the responsiveness and reliability of the institutions in delivering public services and acts in line with the values of fairness, openness, and integrity.

2.3 QoG and Institutional Trust

We seek to understand the interrelationship between institutional trust and QoG on the societal (macro) level where the trust of citizens in government can encourage more participation in democratic processes, signifying a stable environment for policy implementation and development, as the OECD data do not permit us to examine the relations on the meso or micro level.

Political institutions and proper functional democracy matter for trust. They can promote the rule of law, and accountability and enhance transparency (Wilkes 2014). Barro and McCleary (2002) provide evidence that trust in government is positively related to the variety of measures of good governance and the relationship is robust across different periods and countries. Hetherington (2005) points out that institutional trust is the main engine of good governance. Trust in government is not only the consequence of QoG (Spiteri & Briguglio, 2018) but also the driver of QoG (Knack & Keefer, 1997). A core level of trust appears to be a necessary precondition for the quality of governance. Trust legitimises and reinforces policy action and effective, efficient, transparent, open, and fair government institutions (OECD, 2021).

2.4 Intervening factors in the model

2.4.1 Diversity, trust and governance

Patterns of migration, mobility, refugees and asylum seekers have changed in the recent past as a result of modernity, development, ease of communication and travel at the global level, leading to more diverse societies. It has brought the relationship between diversity, social cohesion, trust and governance to the forefront of the public debate. ‘Religion’, ‘language’ and ‘ethnicity’ “born in country” are used as the proxy variables to measure diversity (or heterogeneity or fractionalisation) for cross-national analysis (Easterly & Levine, 1997; La Porta et al., 1999; Alesina & La Ferrara, 2000; Putnam, 2003; Alesina et al., 2003; Letki, 2008; Tsai et al., 2011; Pervaiz et al., 2013, Verhoeven & Ritzen, 2023).

Diversity is also important in shaping QoG: more heterogeneous countries appear to have a poorer quality of government (La Porta et al., 1999) and ethnic diversity appears to depress annual growth (Alesina et al., 2003).

However, there is an opposing view in the literature that reports the positive effects of diversity on trust (Zimdars & Tampubolon, 2012, Stolle et al., 2008). Once the interaction between the community members takes place, the effect of diversity becomes positive as the individual intends to become more favourable to other community members. Additionally, Oliwer and Wong (2003) contend that individuals living in diverse atmospheres exhibit more tolerance, enhanced trust and positive feelings towards their peers.

2.4.2 Conflict, trust and governance

Wars and conflicts have been shown to have a significant effect on political factors like corruption (Hough, 2013), crises (Young & Bologna, 2015), political accountability (Adserà et al. 2003), political instability and economic growth (Goldstone et al., 2010; Bernal-Verdugo et al., 2013) and "country's performance" (Marshall & Cole, 2008). Alesina et al. (2003) illustrate conflicts as an important determining factor of the political economy in many countries and its effects on political instability, quality of institutions and economic performance. Conflict has a detrimental impact on the level of social cohesion (Abu-Nimer & Smith, 2016) and can raise tensions between people of different values, beliefs, and opinions (Knell & Stix, 2021). Due to these social conflicts, there is a lack of a persistent growth rate in many countries (Rodrik, 1999). Apart from internal conflicts, the political involvement of states in external conflicts negatively influences the levels of institutional trust (Zulfiqar et al., 2018). Conflict and political instability appear to be related (Marshal & Cole, 2008; Newman, 2009; Goldstone et al., 2010). Political instability may undermine the citizen's trust in their government (Brezzi et al., 2021).

2.4.3 Economic crisis: unravelling effects on trust and governance

"Economic crises" - a general slowdown of economic activity- may involve high rates of unemployment, a decrease in gross domestic product and a drying up of liquidity. QoG is often affected by economic crises (Smith, 2007, Al-Bassam, 2013) as is trust in government (United Nations, 2021, Dotti Sani & Magistro, 2016).

The 'economic crisis of 2008' provided a unique opportunity to explore the relationship of economic crisis with both institutional and interpersonal trust (Obert et al., 2018; Caïs et al.,

2021). The impact of crises on trust is particularly strong for lower-income groups. As a result, social values in future may deteriorate (Tonkiss, 2009).

The economic decline indicator is used for the model because economic factors have greater explanatory power for institutional trust during times of economic crisis (Blind, 2007; Caïs et al., 2021) and this decline is generally seen as detrimental to governance quality (Van de Walle et al., 2008; OECD 2023b).

2.5 Culture's role in shaping policy, institutional trust and governance

"Culture" is likely to affect QoG and trust in government in a country. Culture as a multifaceted concept has been contextually defined in several ways by anthropologists and sociologists (Daniell, 2014). Culture-based theory and analysis have been used to understand aspects of public policy (Coyle & Ellis, 1994; Rao & Walton, 2002; Enserink et al., 2007; Fukuyama 2001; Putnam, 2001). Sen (2002) suggests that cultural factors have an influence on political participation, economic behaviour, and social solidarity which are intertwined with how and why public policies are designed in different ways in different countries.

For Evan and Holý (2021), the establishment of institutions is a process that originates predominantly in a nation's culture. Licht et al. (2007) show that culture contributes not only to the country's development level but also to governance. The importance of a 'cultural' twist in the understanding of public policy and governance has been recognized (Foucault, 1991; Stubbs, 2005).

Hofstede's six cultural dimensions (Hofstede, 1984) have become standard indicators of the national culture of countries. Hofstede found six dimensions:

- Power distance explains the acceptance of differences between individuals in society. When a society accepts inequality as part of society it entails that power distance is high, hence less fortunate members are expected to accept that power is unequally distributed. In contrast, when inequality is not accepted by society, power distance is low (Hofstede Insights, 2023).

- Individualism covers the level of interdependence among members of a society: whether one's own perception is related to "I" or "We". A society that scores high on the individualism spectrum is one in which individuals are focused on themselves and their close contacts. In contrast, a society that scores low on the individualism spectrum is a collectivist society, wherein people's perceptions of themselves include the group (Hofstede Insights, 2023).

- Masculinity is high in a society that focuses on competition, achievement, and success. Masculinity stands in contrast to femininity as a culture, defined by values of caring for others and for the quality of life (Hofstede Insights, 2023).

- Uncertainty avoidance reflects how a society handles the anxiety of ambiguity and the lesser known. A high score in this indicator is compatible with the need for structured systems for the feeling of safety to predominate. A low score reflects a society that can handle unpredictability well (Hofstede Insights, 2023).

- Long-term orientation is a dimension covering the needs of individuals to remain attached to their history while facing the challenges brought by the present and future. When a society scores low in this dimension it is characterized by the need to maintain traditions. On the other hand, cultures that score high prefer to encourage changes in a way that prepares society towards the future (Hofstede Insights, 2023).

- Indulgence displays the responses to desires and impulses and to what extent these desires are restrained. A high score in this dimension demonstrates the willingness to follow one's desires to appreciate life and have fun. While a low score reflects a high level of self-restraint (Hofstede Insights, 2023).

3. Mathematical Model of Analysis and Econometric Testing

3.1 Model without culture

We have formulated –based on Figure 1- the following two equations for y_{it} as (QoG) and x_{it} (trust in government) where i (country) = 1…N and t (year) = 2…t to allow for estimation with dynamic panel modelling. The lags for x and y are shown here as lags of one-time units, but the lags could be greater and could be different for each variable.

$$y_{it} = \mu_t + \beta_1 x_{i,\,t-1} + \beta_2 y_{i,\,t-1} + \delta_1 w_{it} + \gamma_1 z_i + \alpha_i + \epsilon_{it} \quad \ldots\ldots \quad (1)$$

μ_t = intercept that varies over time.

$\beta_1 x_{i,\,t-1}$ = effect of lagged x variable on y.

$\beta_2 y_{i,\,t-1}$ = effect of lagged y variable on itself.

$\delta_1 w_{it}$ and $\gamma_1 z_i$ = vector coefficients representing time variant (include both current and possibly lagged values) and invariant controls on y_{it}.

α = represents the effect of latent variables that are constant and time-invariant.

ϵ_{it} = error term that represents random disturbance.

$$x_{it} = \tau_{t} + \beta_3 x_{i,\, t-1} + \beta_4 y_{i,\, t-1} + \delta_2 w_{it} + \gamma_2 z_i + \eta_i + \upsilon_{it} \quad \ldots\ldots \quad (2)$$

τ_{t} = intercept that varies over time.

$\beta_3 x_{i,\, t-1}$ = effect of lagged *x* variable on itself.

$\beta_4 y_{i,\, t-1}$ = effect of lagged *y* variable on *x*.

$\delta_2 w_{it}$ and $\gamma_2 z_i$ = vector coefficients indicating time variant (include both current and possibly lagged values) and invariant controls on x_{it}.

η_i = the number of individual effects corresponding to α in equation (1).

υ_{it} = error term that represents random disturbance.

3.2 Culture and QoG and trust

The equations for culture's impact on QoG and trust in government are as follows:

$$mean\ y_i = \pi_o + \phi_j C_j + \varrho_i + \sigma \quad \ldots\ldots \quad (3)$$

$$mean\ x_i = \psi_o + \sigma_j C_j + \Theta_i + \xi \quad \ldots\ldots \quad (4)$$

π_o and ψ_o = constant intercepts

C_j = Hofstede culture dimension (1,…6)

ϕ_j and σ_j = vector coefficients of culture on QoG/trust in Government

ϱ_i and Θ_i = random effect for each country

σ and ξ = error terms representing random disturbance

3.2 Research and Estimation Strategy

STATA is used for running multiple regressions for all four equations. The dynamic panel model presented in Equations (1) and (2) offers protection against the bias that may arise from reverse causality under a wide range of conditions and helps to circumvent the problem of misspecified temporal lags (Leszczensky & Wolbring, 2019, Arellano, 2003, Shrestha &

Bhatta, 2018, Baltagi, 2021). Fixed and random effects will mitigate a possible omitted variable bias (OVB) in the dynamic panel model. OVB can be problematic since it implies that the unobserved variances in the outcome variable are explained by random disturbance, also called the error term (Stock & Watson, 2015). Fixed and random effects control for the time-invariant unobserved heterogeneity (Siegel, 2016). The dynamic panel model, which combines fixed effects and cross-lagged variables, makes it possible to estimate the lagged dependent variables when running multiple regression with fixed effects (Arellano & Bond, 1991; Moral-Benito, 2013).

All variables used in the model have different measurement units. We have normalised all variables to have zero mean and unit standard deviation, also known as z-score normalisation (Anggoro & Supriyanti, 2019), to allow for an easy comparison of the size of coefficients.

3.3 Lag Specification

We assume in Eqs (1) and (2) that the causal effects may take more than a year. Criteria like the Akaike Information Criterion (AIC) or the Bayesian Information Criterion (BIC) are available to decide the optimal lags. Consequently, different time lags from one to five years are created for all explanatory variables which are tested with various combinations to check how well the models fit the data that seem to work best.

4. Data

We use for the analysis a longitudinal, comprehensive and robust dataset on citizens' trust and QoG for all 38 OECD countries, namely: Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United Sates for the time period between 2006 and 2021 (16 years and a total of 608 observations).

Our data have only one point for each country for Hofstede's six culture dimensions.

4.1 Quality of Government (QoG)

We constructed a composite QoG Index to reduce the dimensionality and number of variables in Worldwide Governance Indicators, by applying principal component analysis (PCA) (Jolliffe & Cadima, 2016; Franco, 2013; Hashemi et al., 2021). The Kaiser-Meyer-Olkin

(KMO) measure is used to assess the homogeneity of variables and in this way determine the sampling adequacy of WGI (Kaiser, 1974). KMO measures take a value between 0 and 1 where small values indicate that the variables don't have enough homogeneity. The overall value for the six Worldwide Governance Indicators comes out to be 0.924 and would be expressed as 'marvellous' in the words of Kaiser (1974). The average QoG for the OECD countries for the time period considered appears rather stable, with a wide band of one standard deviation around it.

The Kaiser-Gutmann criterion is used to form the principal component. Only factors with eigenvalues greater than 1 are to be included according to this criterion. The loading of the principal component by "voice and accountability" is 0.863 with "political stability" contributing to another 0.086.

4.2 Trust in Government/Institutional Trust

The indicator for 'Trust in Government' or 'Institutional Trust' is retrieved from the OECD's database. It is the percentage of all survey respondents in the country that "have confidence in the national government" (yes, the other response categories being "no", and "don't know") The sample size is nationally representative of the population aged 15 and over (OECD, 2023c). Also, the average trust in government over the period 2006-2021 is pretty stable.

4.3 Hofstede's Six Culture Indicators .

The data for six cultural indicators (power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulgence) are retrieved from Hofstede's Insights (2023) webpage.

4.4 Foreign-born Population

Foreign-born population is used as a proxy for diversity and the data for this variable is extracted from OECD (2023a).

4.5 Ongoing Conflict

Ongoing conflict is used as a proxy for political instability and the data for this variable is retrieved from the QoG 2023 Dataset (Teorell et al., 2023). It captures the extent to which countries are involved in internal and external conflicts, as well as their role and duration of involvement in conflicts (QoG, 2023). Time series data are available for all OECD member states except for Luxembourg since 2007.

4.6 Economic Decline

Data for the economic decline indicator is retrieved from the QoG 2021 Dataset (Teorell et al., 2021) and gives a measure each year till 2019 for all OECD countries except for Colombia, Costa Rica and Israel. It considers all factors related to economic decline within a country by measuring: "per capita income, gross national product, unemployment rates, inflation, productivity, debt, poverty levels, or business failures, […] sudden drops in commodity prices, trade revenue, or foreign investment, and any collapse or devaluation of the national currency" (Teorell et al., 2021).

4.7 Incomplete data

We have interpolated the few missing data in the variables 'foreign-born population', 'ongoing conflict' (except for Luxemburg) and 'economic decline' (except for Colombia, Costa Rica and Israel) to complete the panel data for macro analysis (Angelini et al., 2006).

Multivariate normality in the dynamic panel data (i.e., the distributions of the variables are bell-shaped) is checked through the Doornik-Hansen Test (Doornik & Hansen, 2008). The test shows that the data does not have a typical bell-shaped distribution. Since multivariate normality is one of the assumptions of the estimation strategy, robust standard errors are applied to deal with the deviation from normality (Baltagi, 2021; Allison et al., 2017).

4.8 Summary statistics

The summary statistics are presented in Table 1.

Table 1: Panel Summary Statistics

Variable Name	Variable Label	Source	N	Mean	Standard Deviation	Minimum Value	Maximum Value
wgipc	Quality of Government (Principal Component)	WGI World Bank	608	0.87	0.94	-2.50	2.00
gov_trust	Trust in Government (Institutional Trust)	OECD	608	43.09	16.28	6.88	87.96
for_born	Foreign-Born Population	OECD	544	13.16	8.72	0.35	48.90

ongoing_conf	Ongoing Conflict (1-5 Higher Intensity of Conflict)	QoG	592	1.36	0.43	0.94	3.26
eco_decline	Economic Decline	QoG	525	3.45	1.31	0.99	7.20
power_distance	Power Distance	Hofstede's Insights	38	46.66	19.14	11.00	100.00
individualism	Individualism	Hofstede's Insights	38	58.00	21.44	13.00	91.00
masculinity	Masculinity	Hofstede's Insights	38	47.42	25.03	5.00	100.00
uncertainty_avoidance	Uncertainty Avoidance	Hofstede's Insights	38	68.00	20.31	23.00	100.00
longterm_orientation	Long-term Orientation	Hofstede's Insights	38	51.55	21.80	13.00	100.00
indulgence	Indulgence	Hofstede's Insights	38	51.68	19.90	13.00	97.00

Table 2 presents the correlation matrix.

Table 2: Pearson Product-Moment Correlation Coefficient Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) QoG Index	1.000										
(2) Trust in Government	0.529	1.000									
(3) Foreign-born population	0.596	0.396	1.000								
(4) Ongoing conflict	-0.746	-0.122	-0.418	1.000							
(5) Economic decline	-0.721	-0.624	-0.513	0.366	1.000						
(6) Power Distance	-0.709	-0.448	-0.544	0.428	0.558	1.000					
(7) Individualism	0.546	0.285	0.485	-0.337	-0.424	-0.550	1.000				
(8) Masculinity	-0.263	-0.107	0.010	0.148	0.157	0.245	0.129	1.000			
(9) Uncertainty avoidance	-0.627	-0.419	-0.366	0.257	0.552	0.631	-0.622	0.152	1.000		
(10) Long Term Orientation	-0.053	-0.135	0.001	-0.114	0.074	0.122	0.106	0.097	0.134	1.000	
(11) Indulgence	0.331	0.482	0.278	0.015	-0.394	-0.284	0.117	-0.003	-0.371	-0.576	1.000

The correlation coefficient between the PCA-derived QoG index and trust in government is positive in line with the earlier findings (Barro & McCleary, 2002; Blind, 2007; Bouckaert, 2012; Spiteri & Briguglio, 2018; OECD 2021; Smid, 2023): a higher QoG is related to higher public trust.

Foreign-born population, as a social driver of trust, has a positive correlation with both trust in the government and QoG contrary to some of the empirical findings (La Porta et al., 1999; Alesina et al., 2003; Costa & Kahn, 2003; Letki, 2008; Gebremedhin & Mavisakalyan, 2013). Ongoing conflict and economic decline, as political and economic drivers of trust, have negative correlations with QoG and trust in government in line with expectations (Greif, 2006; Blattman & Miguel, 2010; Acemoglu & Robinson, 2012; Foster & Frieden, 2017; Harms & Schwab, 2020).

Hofstede's power distance, masculinity, uncertainty avoidance and long-term orientation show a negative single correlation with both QoG and trust in government, whereas individualism and indulgence are positively correlated in a single correlation.

A scatter plot of the relation between institutional trust and QoG is presented in Figure 2. Korea, Colombia, Turkey and Mexico show themselves as outliers.

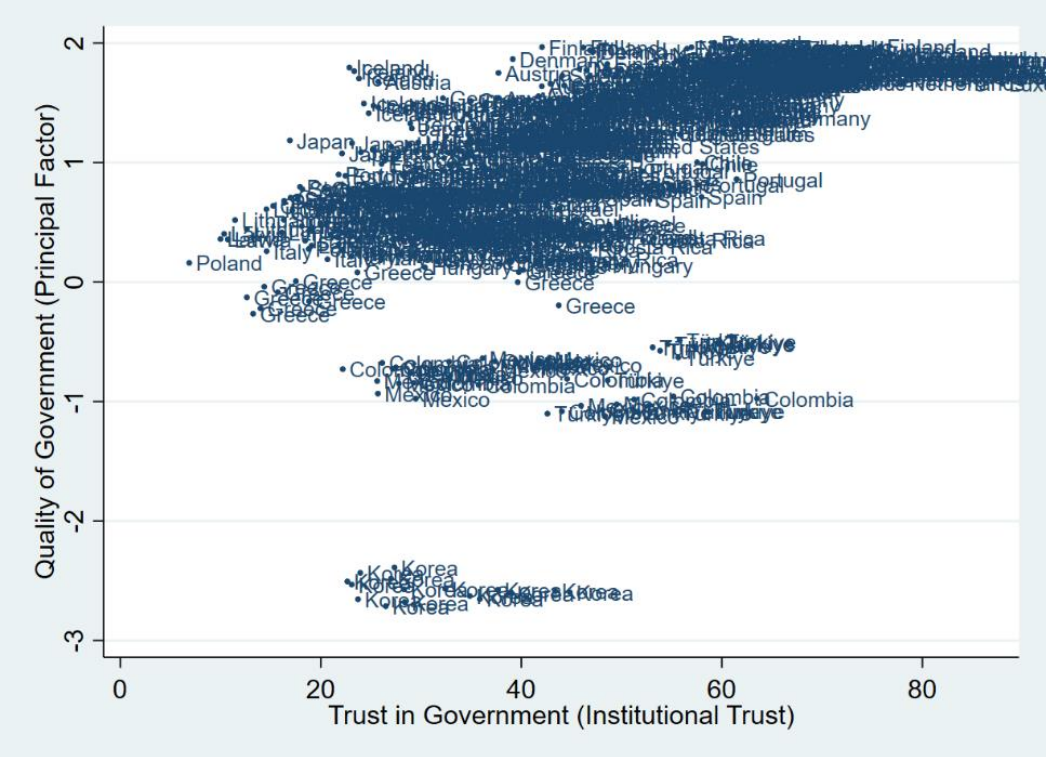

Figure 2: Scatter plot showing a correlation between QoG and institutional trust.

QoG and trust in government measures are highly correlated at all lags as presented in Tables 3 and 4. QoG is more strongly correlated over time than trust in government.

Table 3: Matrix of correlation between the lags of composite QoG Index

	QoG Index	QoG (1-year lag)	QoG (2-year lag)	QoG (3-year lag)	QoG (4-year lag)	QoG (5-year lag)
QoG	1.000					
QoG (1-year lag)	0.998	1.000				
QoG (2-year lag)	0.996	0.998	1.000			
QoG (3-year lag)	0.993	0.996	0.998	1.000		
QoG (4-year lag)	0.990	0.993	0.995	0.998	1.000	
QoG (5-year lag)	0.987	0.990	0.993	0.995	0.998	1.000

Table 4: Matrix of correlation between the lags of trust in government

	Gov Trust	Gov Trust (1-year lag)	Gov Trust (2-year lag)	Gov Trust (3-year lag)	Gov Trust (4-year lag)	Gov Trust (5-year lag)
Gov Trust	1.000					
Gov Trust (1-year lag)	0.883	1.000				
Gov Trust (2-year lag)	0.813	0.882	1.000			
Gov Trust (3-year lag)	0.779	0.801	0.878	1.000		
Gov Trust (4-year lag)	0.735	0.768	0.801	0.885	1.000	
Gov Trust (5-year lag)	0.672	0.716	0.757	0.794	0.875	1.000

5. Results

5.1 How did social and economic drivers and trust in government determine the quality of government (QoG) in the OECD countries between 2006 and 2021?

On the loop trust-to QoG of Table 5: trust bears no relation with QoG in model A when social, political and economic variables are left outside the equation, but trust has a significant impact on QoG when social, political, and economic factors are taken into account (the remaining models B, C and D). We then find that trust in government appears to augment QoG. There is a self-reinforcing effect in QoG: increased quality of government from three years ago also has a significant positive effect on the current QoG. To illustrate the size of the effects: models B, C and D imply that one standard deviation increase in trust in government would increase QoG on average by 0.045 standard deviations or 0.002

measurement scale points on the scale -2.5 to 2.5 (as one can calculate from the z-scores). This is a very small effect and is slightly higher in model D.

Table 5: PCA-derived QoG Index regressed on Trust in Government, Foreign-born Population, Ongoing Conflict, Economic Decline and lagged QoG Index.

	(A)	(B)	(C)	(D)
Trust in Government	0.0183	0.0430***	0.0415**	0.0525***
	(1.34)	(2.96)	(2.60)	(3.49)
L1. Trust in Government (1 year lag)	0.000839	0.0179	0.0138	
	(0.07)	(0.88)	(0.72)	
L2. Trust in Government (3-year lag)	0.0181	0.0269**	0.0177	0.00200*
	(1.33)	(2.27)	(1.60)	(0.19)
L3. Trust in Government (5-year lag)	0.0199	0.00260	-0.00357	
	(1.49)	(0.22)	(-0.29)	
L1. Foreign-born Population (3-year lag)		-0.226**	-0.227**	-0.201***
		(-2.49)	(-2.70)	(-3.84)
L2. Foreign-born Population (5-year lag)		-0.0841	-0.0533	
		(-0.72)	(-0.52)	
Ongoing Conflict		-0.143***	-0.119***	-0.101*
		(-3.10)	(-2.87)	(-2.46)
Economic Decline		0.0361	0.0296	
		(1.24)	(1.04)	
L1. QoG Index (3-year lag)			0.212**	0.318***
			(2.44)	(3.99)
Observations	418	320	320	429

t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.01
Note: All explanatory variables are standardised (z-score normalisation)

Foreign-born population with a three-year lag is negatively associated even though the Pearson correlation moment for contemporary foreign-born population and QoG is positive implying that the variance from other explanatory variables is absorbed. A one standard deviation increase in the foreign-born population (models B, C and D), would decrease the quality of government by 0.22 standard deviations i.e., 0.02 measurement scale points on the QoG index.

Ongoing conflict has a statistically negative relationship with the quality of government, and the contemporaneous effect of conflict leads to a decrease in measurement units on the QoG

index. Interestingly, the variable: economic decline does not have a significant impact on the quality of government.

Interaction terms involving ‘foreign-born population’, ‘ongoing conflict’ and ‘economic decline’ were included to assess whether they influenced the relationship, but the results did not yield any significant findings.

We observed in Figure 3 that certain OECD countries namely Korea, Colombia, Turkey, and Greece appeared as outliers. For robustness check, these outliers were removed, and a second model was constructed and regressed to assess the impact of trust in government on QoG. However, the significance and magnitude of almost all explanatory variables remained largely unchanged.

5.2 How did the quality of government (QoG) impact trust in government?

Our findings (in Table 6) indicate that the quality of government has a statistically significant and positive relationship with trust in government. According to models A, B and C in Table 6, a one standard deviation increase in QoG would lead to an increase of approximately 1.0 standard deviation which is almost 16 scale points of trust in government (on a scale of 0-100). In other words, better governance is associated with substantially higher public trust. Interestingly, the contemporaneous effect of QoG almost remains the same regardless of how many lags are included in the model.

Trust in government is not affected by the lagged quality of government or governance performance from prior years as is evident from the results when regressed on lagged-QoG, while citizen’s trust in government demonstrates temporal persistence.

Surprisingly ongoing conflict has no significant effect on citizens’ trust in the government. Also, the proportion of the foreign-born population from three and five years ago does not influence the trust of citizens in the government as depicted in models B and C. Economic decline shows a negative and statistically negative relationship with trust in government (as also found for European countries by Verhoeven and Ritzen, 2023). A change of one standard deviation of economic decline corresponds to a decrease of almost 7 measurement scale points of trust. This suggests that an economic crisis can lead to the decreased trust of citizens in the government, possibly due to the perception of mismanagement or difficulties in the economy or to unrealized expectations.

Table 6: Trust in Government regressed on PCA-derived QoG index, Foreign-born Population, Ongoing Conflict, Economic Decline and lagged Trust.

	(A)	(B)	(C)	(D)
QoG Index	1.013**	0.960*	1.030**	0.311
	(2.24)	(1.97)	(2.48)	(1.27)
QoG Index (1-year lag)	0.00996	0.474	-0.0566	
	(0.02)	(0.91)	(-0.13)	
QoG Index (3-year lag)	-0.632	-0.200	-0.185	
	(-1.32)	(-0.40)	(-0.41)	
Foreign-born Population (3-year lag)		0.369	0.445	
		(0.91)	(1.48)	
Foreign-born Population (5-year lag)		0.245	0.0755	
		(0.45)	(0.20)	
Ongoing Conflict		0.177	0.0867	
		(1.45)	(0.96)	
Economic Decline		-0.571***	-0.430***	-0.199***
		(-7.17)	(-6.67)	(-4.15)
Trust in Government (1-year lag)			0.337***	0.508***
			(5.54)	(-0.41)
Observations	494	320	320	490

t statistics in parentheses

* p<0.10, ** p<0.05, *** p<0.01

Note: All explanatory variables are standardised (z-score normalisation)

A re-analysis without the outliers Korea, Colombia, Turkey, and Greece did not change the significance and magnitude of almost all explanatory variables. This substantiates the idea that quality of government, lagged trust and economic decline consistently impact trust in government.

5.3 Culture, QoG and Trust in Government

5.3.1 How did culture determine the average quality of government (QoG) in the OECD countries between 2006 and 2021?

The PCA-derived QoG index was regressed on all six dimensions of Hofstede's culture index using random effects because the value remains constant for the longitudinal dataset. Power-distance (negatively) and individualism (positively) are statistically significant related to QoG as Table 7 shows. The multiple regression does not show any changes in the sign of the Pearson correlation moment.

A one standard deviation increase in individualism would lead to an increase of 0.53 standard deviations in the QoG index. This would account for an absolute increase of 0.02 measurement points. A higher level of individualism, meaning societies in which the ties between individuals are loose and everyone is expected to look after themselves and their immediate family, in a country then appears to imply a greater QoG.

Table 7: PCA-derived QoG Index regressed on six dimensions of Hofstede's Culture Index

	(A)	(B)
Power Distance	-0.231*	-0.224
	(-1.65)	(-1.60)
Individualism	0.536**	0.532**
	(2.53)	(2.52)
Masculinity	-0.137	-0.134
	(-1.28)	(-1.26)
Uncertainty Avoidance	-0.000205	0.00151
	(-0.00)	(0.01)
Long Term Orientation	-0.00482	-0.0121
	(-0.02)	(-0.06)
Indulgence	0.162	0.146
	(1.22)	(1.13)
Trust in Government		0.0325*
		(1.71)
Observations	608	608

t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.01
Note: All explanatory variables are standardised (z-score normalisation)

An increase of one standard deviation in power distance would lead to a decrease of 0.23 standard deviations i.e., 0.01 points on the QoG index, implying that in countries with more acceptance of citizens of inequality of power and hierarchical order, QoG will be less.

This remains the case when removing the outliers (Korea, Colombia, Turkey, and Greece), but masculinity and uncertainty avoidance also become statistically significant and negatively related to the quality of government.

5.4 Culture Drivers and Trust in Government

5.4.1 How did culture determine the average trust in government in the OECD countries between 2006 and 2021?

Similarly, Table 8 shows that long-term orientation and indulgence have a significant and positive association with trust in government. Countries with a culture of long-term orientation apparently create a perception that the plans for the long-term future are stable, trustworthy, and reliable. Governments in more indulgent states are likely to be perceived by the people as less oppressive and more supportive of personal freedom and individual happiness, hence, fostering a higher degree of trust in the government institutions.

Table 8: Trust in Government regressed on six dimensions of Hofstede's Culture Index

	(A)	(B)
Power Distance	-0.235**	-0.136
	(-2.57)	(-1.57)
Individualism	0.103	-0.126
	(1.51)	(-1.08)
Masculinity	-0.0911	-0.0326
	(-1.03)	(-0.32)
Uncertainty Avoidance	-0.0528	-0.0528
	(-0.66)	(-0.74)
Long Term Orientation	0.225*	0.227**
	(1.93)	(1.98)
Indulgence	0.501***	0.431***
	(4.47)	(5.12)
QoG Index		0.428**
		(2.28)
Observations	608	608

t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.01
Note: All explanatory variables are standardised (z-score normalisation)

In contrast, power distance is negatively related to trust in government and is statistically significant in model A (Table 8) without the QoG index. The effect is similar in magnitude and direction on trust in government just like that of QoG in Table 5. This implies that in those countries with a greater power distance, the trust of people in the government is lower.

When omitting the outlier countries in the dataset, the results remain by and large the same in terms of significance and magnitude as in model A.

6. Conclusions and Discussion

6.1 QoG and Trust

In Figure 3 we capture the findings visually. QoG and trust in government appear to reinforce each other in OECD countries in the first decades of the 21st century in a virtuous loop. Both have a substantial "state" property: they are highly correlated over time, even though trust is more amenable to change over time. Social, political and economic factors are significant predictors of institutional trust and the quality of government.

This supports earlier findings that trust is an important indicator for QoG (Bouckaert, 2012, Rothstein, 2011; Smid, 2023) and at the same time dependent on the performance and outcome of public governance (Gille & Brall, 2020, Turper &Aarts, 2017, Foster & Frieden, 2017; Harms & Schwab, 2020) and integral to the functioning of any society (OECD 2019; 2021; 2023b). It also supports the OECD's imperative that improving governance, in terms of quality and responsiveness is important to strengthen trust in government OECD (2017a, 2023b).

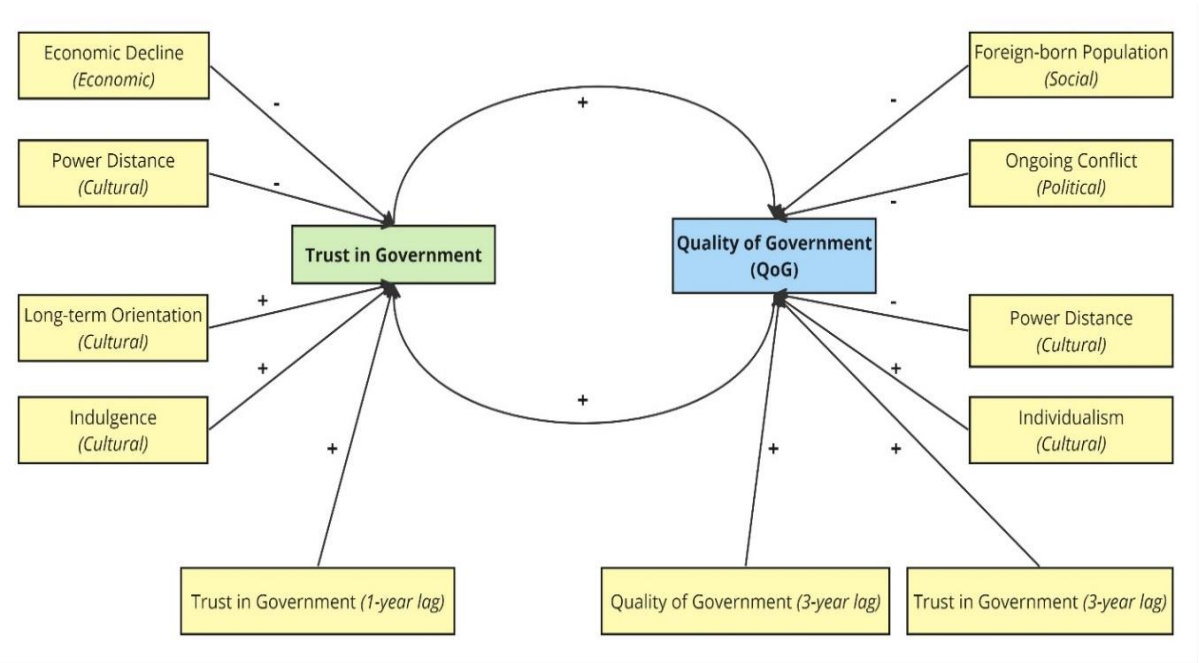

Figure 3: Schematic visual representation of findings.

A higher proportion of foreign-born individuals with a 3-year lag affects QoG negatively, even though the Pearson moment correlation coefficient is positive. The positive correlation can be well explained: diversity associated with immigration can have a positive impact on filling the labour market gap and stimulating economic growth (Bove & Elia, 2017; Rothstein, 2011). The negative impact –found in the multiple regression- is consistent with the empirical findings of Gebremedhin & Mavisakalyan (2013).

Ongoing conflict negatively impacts the quality of government. This is also found elsewhere (e.g., International Republican Institute, 2021). Conflicts disrupt economic growth and result in infrastructure damage and degradation of institutions that are detrimental to the quality of government (Greif, 2006; Blattman & Miguel, 2010; Acemoglu & Robinson, 2012).

6.2 Culture and its impact on governance and trust

6.2.1 Culture and QoG

Power distance has a pronounced negative effect on the quality of government: if the less fortunate members of a society accept inequality and unequal distribution of power, improvements in the quality of government cannot be expected. Individualism, in the sense of loose ties between individuals where everyone is expected to look after themselves and their immediate family is positively correlated with the quality of government. A country that tends to emphasize the importance of individual autonomy, self-expression and personal achievement is more likely to have a higher QoG, as is also found by Licht et al., (2007) and Kyriacou (2016).

6.2.2 Culture and its impact on institutional trust

Power distance has a negative effect on trust in government. When there is a significant power difference between the government and citizens, people may feel powerless, disenfranchised, and vulnerable, which can lead to a lack of trust in the government (Kaasa & Andriani, 2022) and the governance decisions are perceived as insufficient by the population (Chen et al., 2021). Long-term orientation has a positive effect on institutional trust: long-term planning and orientation by the government can help to build trust in institutions as it demonstrates a commitment to stability and predictability in policymaking. indulgence in a state is perceived by the people as more supportive of their personal freedom and individual happiness. Population tend to spend more money on luxuries and enjoy more freedom when it comes to leisure activities. The results suggest that indulgence at a societal level has a positive effect on behaviour and is stronger in individualist societies as posited by Guo et al., (2018).

6.3 Conclusion

QoG and trust in Government are highly related and are mutually reinforcing. The loops between the two seem to be quite fixed in the culture of the country. Political efforts aimed at increasing QoG and trust in government then inevitably have to address the cultural context.

The political and economic imperative of the results is: stability is the best guide to QoG and trust in government. This was precisely Chancellor Merkel's (Germany, 2005-2021) stand in her period in office: "Keine Experimente" ("No experiments").

REFERENCES

Abu-Nimer, M., & Smith, R.K. (2016). Interreligious and intercultural education for dialogue, peace and social cohesion. International Review of Education 62, 393–405. https://doi.org/10.1007/s11159-016-9583-4

Acemoglu, D., & Robinson, J. A. (2008). Persistence of power, Elites, and Institutions. American Economic Review, 98(1), 267–293. https://doi.org/10.1257/aer.98.1.267

Acemoglu, D., & Robinson, J. A. (2012). Small Differences and Critical Junctures: The Weight of History. In Why Nations Fail: The Origins of Power, Prosperity and Poverty. essay, Crown Publishers. https://ia800606.us.archive.org/15/items/WhyNationsFailTheOriginsODaronAcemoglu/Why-Nations-Fail_-The-Origins-o-Daron-Acemoglu.pdf

Adserà, A., Carles, B., & Mark, P. (2003). "Are You Being Served? Political Accountability and Quality of Government." Journal of Law, Economics & Organization 19, no. 2: 445-490. https://www.princeton.edu/~adsera/JLEO.pdf

Agnafors, M. (2013). Quality of Government: Toward a More Complex Definition. The American Political Science Review, 107(3), 433–445. http://www.jstor.org/stable/43654916

Al-Bassam, B. (2013). The relationship between governance and economic growth during times of crisis. European Journal of Sustainable Development, 2(2), 1–18. https://doi.org/10.14207/ejsd.2013.v2n2p1

Alesina, A., & La Ferrara, E. (2000). Participation in heterogeneous communities. Quarterly Journal of Economics, 115(3), 847–904. https://doi.org/10.1162/003355300554935

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. Journal of Economic Growth, 8(2), 155–194. https://doi.org/10.1023/a:1024471506938

Allison, P. D., Williams, R., & Moral-Benito, E. (2017). Maximum likelihood for cross-lagged panel models with fixed effects. Socius: Sociological Research for a Dynamic World, 3, 237802311771057. https://doi.org/10.1177/2378023117710578

Angelini, E., Henry, J., & Marcellino, M. (2006). Interpolation and backdating with a large information set. Journal of Economic Dynamics and Control, 30(12), 2693–2724. https://doi.org/10.1016/j.jedc.2005.07.010

Anggoro, D. A., & Supriyanti, W. (2019). Improving accuracy by applying Z-score normalization in linear regression and polynomial regression model for real estate data.

International Journal of Emerging Trends in Engineering Research, 7(11), 549–555. https://doi.org/10.30534/ijeter/2019/247112019

Arellano, M. (2003). Panel Data Econometrics, Advanced Texts in Econometrics. Oxford, Online Edition. https://doi.org/10.1093/0199245282.001.0001

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo Evidence and an application to employment equations. The Review of Economic Studies, 58(2), 277. https://doi.org/10.2307/2297968

Baltagi, B. H. (2021). Econometric Analysis of Panel Data. Springer Texts in Business and Economics. https://doi.org/10.1007/978-3-030-53953-5

Barro, R. J., & McCleary, & R. M. (2002). NBER working paper series religion and political economy in an international panel. https://www.nber.org/system/files/working_papers/w8931/w8931.pdf

Bergh, A., & Henrekson, M. (2011). Government size and growth: A survey and interpretation of T. Working Paper Series. https://ideas.repec.org/p/hhs/iuiwop/0858.html

Bernal-Verdugo, L. E., Furceri, D., & Guillaume, D. M. (2013). The dynamic effect of social and political instability on output: The role of reforms. IMF. https://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Dynamic-Effect-of-Social-and-Political-Instability-on-Output-The-Role-of-Reforms-40486

Bettcher, K. E. (2018). How good governance got a bad name – and why governance still matters. Center for International Private Enterprise. https://www.cipe.org/resources/good-governance-got-bad-name-governance-still-matters/#_edn4

Blattman, C., & Miguel, E. (2010). Civil War. Journal of Economic Literature, 48(1), 3–57. https://doi.org/10.1257/jel.48.1.3

Blind, P. K. (2007). Building trust in government in the twenty-first century: Review of literature and emerging issues. 2007:26–29. https://www.almendron.com/tribuna/wp-content/uploads/2016/11/building-trust-in-government-in-the-twenty-first-century.pdf

Bouckaert, G. (2012), “Trust and public administration”, Administration, Vol. 60, No. 1, pp. 91-115. https://lirias.kuleuven.be/retrieve/216467

Bove, V., & Elia, L. (2017). Migration, diversity, and economic growth. World Development, 89,

Brezzi, M., et al. (2021), "An updated OECD framework on drivers of trust in public institutions to meet current and future challenges", OECD Working Papers on Public Governance, No. 48,

Caïs, J., Torrente, D. & Bolancé, C. (2021). The Effects of Economic Crisis on Trust: Paradoxes for Social Capital Theory. Soc Indic Res 153, 173–192 (2021). https://doi.org/10.1007/s11205-020-02385-w

Chen, D., Peng, D., Rieger, M. O., & Wang, M. (2021). Institutional and cultural determinants of speed of government responses during COVID-19 pandemic. Humanities and Social Sciences Communications, 8(1). https://doi.org/10.1057/s41599-021-00844-4

Costa, D., & Kahn, M. (2003). Civic Engagement and Community Heterogeneity: An Economist's Perspective. Perspectives on Politics, 1(1), 103-111. doi:10.1017/S1537592703000082

Coyle, D. J. & Ellis, R. J. (1994). Politics, Policy, and Culture, Boulder, CO: Westview Press.

Daniell, K. A. (2014). The Role of National Culture in Shaping Public Policy: A Review of Literature. HC Coombs Policy Forum Discussion Paper, The Australian National University, Canberra. https://coombs-forum.crawford.anu.edu.au/publication/hc-coombs-policy-forum/4543/role-national-culture-shaping-public-policy-review

Doornik, J. A., & Hansen, H. (2008). An omnibus test for univariate and multivariate normality. Oxford Bulletin of Economics and Statistics, 70, 927–939. https://doi.org/10.1111/j.1468-0084.2008.00537.x

Dotti Sani, G. M., & Magistro, B. (2016). Increasingly unequal? the economic crisis, social inequalities and trust in the European Parliament in 20 European countries. European Journal of Political Research, 55(2), 246–264. https://doi.org/10.1111/1475-6765.12126

Easterly, W., & R. Levine. (1997). “Africa's Growth Tragedy: Policies and Ethnic Divisions,” Quarterly Journal of Economics 111(4), 1203-1250. https://www.jstor.org/stable/2951270

Easton, D. (1965). A Systems Analysis of Political Life, John Wiley, New York.

Enserink, B., Patel, M., Kranz, N. & Maestu, J. (2007) Cultural factors as co-determinants of participation in river basin management. Ecology and Society, 12(2): 24, http://www.ecologyandsociety.org/vol12/iss2/art24/

Evan, T., & Holý, V. (2023). Cultural diversity and its impact on governance. Socio-Economic Planning Sciences, 89, 101681. https://doi.org/10.1016/j.seps.2023.101681

Foster, C., & Frieden, J. (2017). Crisis of trust: Socio-economic determinants of Europeans' confidence in government. European Union Politics, 18(4), 511–535. https://doi.org/10.1177/1465116517723499

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller, The Foucault Effects: Studies in Governmentality (pp. 87-104). London: Harvester Wheatsheaf. https://laelectrodomestica.files.wordpress.com/2014/07/the-foucault-effect-studies-in-governmentality.pdf

Franco , G. D. (2013). Differences between Factor Analysis and Principal Component Analysis. ResearchGate. https://www.researchgate.net/publication/323869430_5_Differences_between_factor_analysis_and_principal_component_analysis

Fukuyama, F. (2001). Social capital, civil society and development. Third World Quarterly, 22(1), 7–

Gebremedhin, T. A., & Mavisakalyan, A. (2013). Immigration and political instability. Kyklos, 66(3), 317–341. https://doi.org/10.1111/kykl.12024

Gille, F., & Brall, C. (2020). Public trust: caught between hype and need. Int J Public Health 65, 233–234. https://doi.org/10.1007/s00038-020-01343-0

Goldsmith , A. A. (2007). Is governance reform a catalyst for development? Governance, 20(2), 165–186. https://doi.org/10.1111/j.1468-0491.2007.00352.x

Goldstone, J. A., Bates, R. H., Epstein, D. L., Gurr, T. R., Lustik, M. B., Marshall, M. G., Ulfelder, J., & Woodward, M. (2010). A global model for forecasting political instability. American Journal of Political Science, 54(1), 190–208. https://doi.org/10.1111/j.1540-5907.2009.00426.x

Greif, A. (2006). Institutions and Transactions. In Institutions and the Path to the Modern Economy: Lessons from Medieval Trade (Political Economy of Institutions and Decisions, pp. 29-54).

Guo, Q., Liu, Z., Li, X., & Qiao, X. (2018). Indulgence and long term orientation influence prosocial

Gyorffy, D. (2013). Institutional Trust and Economic policy, Central European University Press, Budapest.

Harms, P., & Schwab, J. (2020). Depression of the deprived or eroding enthusiasm of the elites: What has shifted the support for International Trade? European Journal of Political Economy, 64, 101901. https://doi.org/10.1016/j.ejpoleco.2020.101901

Hashemi, F., Naderi, M., Jamalizadeh, A., & Bekker, A. (2021). A flexible factor analysis based on the class of mean-mixture of normal distributions. Computational Statistics & Data Analysis, 157, 107162. https://doi.org/10.1016/j.csda.2020.107162

Hetherington, M.J. (2005). Why Trust Matters: Declining Political Trust and the Demise of American Liberalism. Princeton: Princeton University Press.

Hiltin, P., & Shutava, N. (2022). Trust in government. Partnership for Public Service. https://ourpublicservice.org/publications/trust-in-government/

Hofstede Insights. (2023). Country Comparison. https://www.hofstede-insights.com/country-comparison.

Hofstede, G. (1984). Culture's Consequences (abridged edition). Beverly Hills, London and New Delhi. Sage. Organization Studies, 5(4), 379–380. https://doi.org/10.1177/017084068400500423

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind, Third Edition. Google Books. https://books.google.com/books/about/Cultures_and_Organizations_Software_of_t.html?id=o4OqTgV3V00C

Holmberg, S., Rothstein, B., & Nasiritousi, N. (2009). Quality of government: What you get. Annual Review of Political Science, 12(1), 135–161. https://doi.org/10.1146/annurev-polisci-100608-104510

Holý, V., & Evan, T. (2021). The Role of a Nation's Culture in the Country's Governance: Stochastic Frontier Analysis. arXiv. https://arxiv.org/pdf/2102.05411.pdf

Hough, D. (2013). Corruption, Anti-corruption and Governance. Palgrave Macmillan.

International Monetary Fund. External Relations Dept. (1989). Finance & Development . Finance & Development, 26(1). https://doi.org/10.5089/9781451951752.022

International Republican Institute. (2021). Conflict, Governance and Legitimacy Assessment Framework. https://www.iri.org/wp-content/uploads/2022/01/iri-conflict-governance-framework-120221.pdf

Jolliffe, I. T., & Cadima, J. (2016). Principal component analysis: A review and recent developments. Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 374(2065), 20150202. https://doi.org/10.1098/rsta.2015.0202

Kaasa, A., & Andriani, L. (2022). Determinants of Institutional Trust: The role of cultural context. Birkbeck Institutional Research Online. https://eprints.bbk.ac.uk/id/eprint/43649/

Kaiser, H.F. (1974). An index of factorial simplicity. Psychometrika 39, 31–36. https://doi.org/10.1007/BF02291575

Kaufmann, D., & Kraay, A. (2007). Governance Indicators: Where Are We, Where Should We Be Going? - Policy Research Working Paper 4370. https://info.worldbank.org/governance/wgi/pdf/wps4370.pdf

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The Worldwide Governance Indicators: Methodology and Analytical Issues. SSRN. https://ssrn.com/abstract=1682130

Kaufmann, D., Kraay, A., & Zoido, P. (1999). Governance Matters. SSRN. https://ssrn.com/abstract=188568

Keele, L. (2007). Social Capital and the dynamics of trust in government. American Journal of Political Science, 51(2), 241–254. https://doi.org/10.1111/j.1540-5907.2007.00248.x

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. The Quarterly Journal of Economics, 112(4), 1251–1288. https://doi.org/10.1162/003355300555475

Knack, S., & Zak, P. J. (2003). Building Trust: Public Policy, Interpersonal Trust, and Economic Development. Supreme Court Economic Review, 10, 91–107. https://doi.org/10.1086/scer.10.1147139

Knell, M., & Stix, H. (2021). Inequality, perception biases and trust. Journal of Economic Inequality 19, 801–824. https://doi.org/10.1007/s10888-021-09490-x

Kooiman, J. (1993). Modern governance: New government-society interactions. Sage Publications.

Kyriacou, A. P. (2016). Individualism–collectivism, governance and Economic Development. European Journal of Political Economy, 42, 91–104. https://doi.org/10.1016/j.ejpoleco.2015.11.005

LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. Journal of Law, Economics and Organization. https://scholar.harvard.edu/shleifer/publications/quality-government

Laura, D. S., Codruta, M., & Maria, D. A. (2016). Overall governance index for developed and Emerging European Life Insurance Markets. International Journal of Academic

Research in Business and Social Sciences, 6(10). https://doi.org/10.6007/ijarbss/v6-i10/2364

Leszczensky, L., & Wolbring, T. (2019). How to deal with reverse causality using panel data? recommendations for researchers based on a simulation study. Sociological Methods & Research, 51(2), 837–865. https://doi.org/10.1177/0049124119882473

Letki, N. (2008). Does Diversity Erode social cohesion? Social Capital and race in British neighborhoods. Political Studies, 56(1), 99–126. https://doi.org/10.1111/j.1467-9248.2007.00692.x

Licht, A. N., Goldschmidt, C., & Schwartz, S. H. (2007). Culture rules: The foundations of the rule of law and other norms of governance. Journal of Comparative Economics, 35(4), 659–688. https://doi.org/10.1016/j.jce.2007.09.001

Marshall, M., & Cole, B. (2008). Global Report on Conflict, Governance and State Fragility 2008. Foreign Policy Bulletin, 18(1), 3-21. doi:10.1017/S1052703608000014

Moral-Benito, E. (2013). Likelihood-based estimation of dynamic panels with predetermined regressors. Journal of Business & Economic Statistics, 31(4), 451–472. https://doi.org/10.1080/07350015.2013.818003

Newman, E. (2009). Failed states and international order: Constructing a Post-Westphalian World. Contemporary Security Policy, 30(3), 421–443. https://doi.org/10.1080/13523260903326479

Nistotskaya, M. (2020). Quality of Government (QoG) as Impartiality: Review of the literature on the causes and consequences of QoG. 1, 25-49. https://gup.ub.gu.se/file/208335

Norris, P. (2011). Democratic Deficit: Critical Citizens Revisited. Cambridge: Cambridge University Press, https://doi.org/10.1017/CBO9780511973383.

North, D. C. (1991). Institutions. Journal of Economic Perspectives, 5(1), 97–112. https://doi.org/10.1257/jep.5.1.97

Obert, P., Theocharis, Y., & van Deth, J. W. (2018). Threats, chances and opportunities: Social capital in Europe in times of social and economic hardship. Policy Studies, 40(1), 21–39. https://doi.org/10.1080/01442872.2018.1533109

OECD (2017a), Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust, OECD Public Governance Reviews, OECD Publishing, Paris, https://doi.org/10.1787/9789264268920-en

OECD (2017b). OECD Guidelines on Measuring Trust, OECD Publishing, Paris, https://doi.org/10.1787/9789264278219-en

OECD (2021). Government at a Glance 2021, OECD Publishing, Paris, https://doi.org/10.1787/1c258f55-en

OECD (2022). Building Trust to Reinforce Democracy: Main Findings from the 2021 OECD Survey on Drivers of Trust in Public Institutions, Building Trust in Public Institutions, Paris, https://doi.org/10.1787/b407f99c-en

OECD (2023a), Foreign-born population (indicator). doi: 10.1787/5a368e1b-en

OECD (2023b), Government at a Glance 2023, OECD Publishing, Paris, https://doi.org/10.1787/3d5c5d31-en

OECD (2023c), Trust in government (indicator). doi: 10.1787/1de9675e-en

Oliver, J.E. & Wong, J. (2003). Intergroup Prejudice in Multiethnic Settings. American Journal of Political Science, 47(4), 567-582. https://doi-org.ezproxy.ub.unimaas.nl/10.2307/3186119

Pervaiz, Z., Chaudhary, A.R., & van Staveren, I. (2013). Diversity, Inclusiveness and Social Cohesion (No. 2013-1). ISD Working Paper Series. Retrieved from http://hdl.handle.net/1765/50480

Plattner, M. F. (2013). Reflections on "governance." Journal of Democracy, 24(4), 17–28. https://doi.org/10.1353/jod.2013.0058

Putnam R. D. (2003) 'Ethnic Diversity and Social Capital'. Paper presented at the Ethnic Diversity and Social Capital, ESRC Families and Social Capital Research Group Seminar, British Academy, London, 24 June.

Putnam, R. D. (2001). Bowling Alone: The Collapse and Revival of the American Community. Simon & Schuster.

Rao, V. and Walton, M. (2002) Culture and Public Action: Understanding the Role of Culture and Development Policy in an Unequal World. World Bank. http://tinyurl.com/ptg7u3q

Rhodes, R. A. (1996). The new governance: Governing without government. Political Studies, 44(4), 652–667. https://doi.org/10.1111/j.1467-9248.1996.tb01747.x

Ritzen, J., & Nillesen, E. (2022). A chance for optimism: Engineering the break away from the downward spiral in trust and social cohesion or keeping the fish from disappearing. UNU. https://www.merit.unu.edu/publications/working-papers/abstract/?id=9377

Rodrik, D. (1999). Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses. Journal of Economic Growth 4, 385–412. https://doi.org/10.1023/A:1009863208706

Rodrik, D. (2000). Institutions for high-quality growth: What they are and how to acquire them. Studies in Comparative International Development, 35(3), 3–31. https://doi.org/10.1007/bf02699764

Rothstein, B. (2011). *The Quality of Government Corruption, Social Trust, and Inequality in International Perspective*. University of Chicago Press.

Rothstein, B. (2021). Quality of Government. The Oxford Handbook of the Quality of Government, 2–24. https://doi.org/10.1093/oxfordhb/9780198858218.013.2

Rothstein, B., & Teorell, J. (2008). What is Quality of Government? A Theory of Impartial Government Institutions. Governance, 21(2), 165–190. https://doi.org/10.1111/j.1468-0491.2008.00391.x

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. Academy of Management Review, 23(3), 393–404. https://doi.org/10.5465/amr.1998.926617

Sen, A. (2002) How does culture matter? In: Rao, V. and Walton, M. (2002) Culture and Public Action: Understanding the Role of Culture and Development Policy in an Unequal World, 37-58. World Bank. http://tinyurl.com/ptg7u3q

Shrestha, M. B., & Bhatta, G. R. (2018). Selecting appropriate methodological framework for time series data analysis. The Journal of Finance and Data Science, 4(2), 71–89. https://doi.org/10.1016/j.jfds.2017.11.001

Siegel, A. F. (2016). Practical Business Statistics. Academic Press.

Smid, S. (2023), "Understanding cultural differences and extreme attitudes in the 2021 OECD Trust Survey: Text analysis of open-ended responses", OECD Working Papers on Public Governance, No. 57, OECD Publishing, Paris, https://doi.org/10.1787/ef25d883-en.

Smith, B. C. (2007). Good Governance and Development. Palgrave Macmillan.

Spiteri, J., & Briguglio, M. (2018). Does good governance foster trust in government? An empirical analysis. Governance and Regulations' Contemporary Issues, 121–137. https://doi.org/10.1108/s1569-375920180000099006

Stock, J. H., & Watson , M. W. (2015). Introduction to Econometrics (3rd Edition). https://www.sas.upenn.edu/~fdiebold/Teaching104/Ch1-8_slides.pdf

Stolle, D., Soroka, S., & Johnston, R. (2008). When does Diversity Erode Trust? neighborhood diversity, interpersonal trust and the mediating effect of social interactions. Political Studies, 56(1), 57–75. https://doi.org/10.1111/j.1467-9248.2007.00717.x

Stubbs, P. (2005) Stretching concepts too far? Multi-level governance, policy transfer and the politics of scale in South East Europe, Southeast European Politics 6(2): 66-87. http://www.seep.ceu.hu/archives/issue62/stubbs.pdf

Sucher, S. & Gupta, S. (2022). The Trust Crisis . Harvard Business Review. https://hbr.org/2019/07/the-trust-crisis

Teorell, Jan, Staffan Kumlin, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon, Cem Mert Dalli & Yente Meijers. QoG (2023). The Quality of Government OECD Dataset, version Jan23. University of Gothenburg: The Quality of Government Institute. https://www.gu.se/en/quality-government doi:10.18157/qogoecdjan23

Teorell, Jan, Staffan Kumlin, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Cem Mert Dalli. QoG (2021). The Quality of Government OECD Dataset, version Jan21. University of Gothenburg: The Quality of Government Institute. http://www.qog.pol.gu.se doi:10.18157/qogoecdjan21

Tonkiss, F. (2009). Trust, confidence and economic crisis. Intereconomics, 44(4), 196–202. https://doi.org/10.1007/s10272-009-0295-x

Tonkiss, F., A. Passey, N. Fenton & L.C. Hems. (2000). Trust and Civil Society. London: Macmillan.

Tsai, MC., Laczko, L. & Bjørnskov, C. (2011). Social Diversity, Institutions and Trust: A Cross-National Analysis. Soc Indic Res 101, 305–322. https://doi.org/10.1007/s11205-010-9670-z

Turper, S., & Aarts, K. (2017). Political Trust and Sophistication: Taking Measurement Seriously. Soc Indic Res 130, 415–434. https://doi.org/10.1007/s11205-015-1182-4

United Nations. (2021). *Trust in public institutions: Trends and implications for economic security | DISD*. https://www.un.org/development/desa/dspd/2021/07/trust-public-institutions/

Uslaner, E. M. (2010). Trust and the Economic Crisis of 2008. Corporate Reputation Review, 13(2), 110–123. https://doi.org/10.1057/crr.2010.8

Van de Walle, S., Van Roosbroek, S., & Bouckaert, G. (2008). Trust in the public sector: Is there any evidence for a long-term decline? International Review of Administrative Sciences, 74(1), 47–64. https://doi.org/10.1177/0020852307085733

Van der Meer, T. W. (2017). Political Trust and the “crisis of democracy.” Oxford Research Encyclopedia of Politics. https://doi.org/10.1093/acrefore/9780190228637.013.77

Verhoeven, L. & Ritzen, J., (2023). Globalisation and Trust in Europe between 2002 and 2018. Research in Globalization, 100142. https://doi.org/10.1016/j.resglo.2023.100142

Wilkes, R. (2014). Trust in government: A Micro–Macro Approach. Journal of Trust Research, 4(2), 113–131. https://doi.org/10.1080/21515581.2014.889835

World Bank (1992). "Governance and Development". Washington. https://documents1.worldbank.org/curated/en/604951468739447676/pdf/multi-page.pdf

World Bank. (2020). Building Trust in Government through Citizen Engagement. https://doi.org/10.1596/33346

Young, A. T., & Bologna, J. (2015). Crises and government: Some empirical evidence. Contemporary Economic Policy, 34(2), 234–249. https://doi.org/10.1111/coep.12154

Zimdars, A., & Tampubolon, G. (2012). Ethnic Diversity and European’s Generalised Trust: How Inclusive Immigration Policy Can Aid a Positive Association. Sociological Research Online, 17(3), 1–11. https://doi.org/10.5153/sro.2643

Zulfiqar, K., Nadeem, M., & Pervaiz, Z. (2018). An empirical analysis of globalisation, diversity and social cohesion. Journal of Political Studies, 25(1), 181-198A. http://pu.edu.pk/images/journal/pols/pdf-files/13_25_1_18.pdf

The UNU-MERIT WORKING Paper Series

2023-01 *Can international mobility shape students' attitudes toward inequality? The Brazilian case* by Cintia Denise Granja, Fabiana Visentin and Ana Maria Carneiro
2023-02 *Demand-led industrialisation policy in a dual-sector small open economy* by Önder Nomaler, Danilo Spinola and Bart Verspagen
2023-03 *Reshoring, nearshoring and developing countries: Readiness and implications for Latin America* by Carlo Pietrobelli and Cecilia Seri
2023-04 *The role of product digitization for productivity: Evidence from web-scraping European high-tech company websites* by Torben Schubert, Sajad Ashouri, Matthias Deschryvere, Angela Jäger, Fabiana Visentin, Scott Cunningham, Arash Hajikhani, Lukas Pukelis and Arho Suominen
2023-05 *More than a feeling: A global economic valuation of subjective wellbeing damages resulting from rising temperatures* by Stephan Dietrich and Stafford Nichols
2023-06 *Was Robert Gibrat right? A test based on the graphical model methodology* by Marco Guerzoni, Luigi Riso and Marco Vivarelli
2023-07 *Predicting social assistance beneficiaries: On the social welfare damage of data biases* by Stephan Dietrich, Daniele Malerba and Franziska Gassmann
2023-08 *Related or unrelated diversification: What is smart specialization?* By Önder Nomaler and Bart Verspagen
2023-09 *Breach of academic values and digital deviant behaviour: The case of Sci-Hub* by Giulia Rossello and Arianna Martinelli
2023-10 *The effect of lobbies' narratives on academics' perceptions of scientific publishing: An information provision experiment* by Giulia Rossello and Arianna Martinelli
2023-11 *Making impact with agricultural development projects: The use of innovative machine learning methodology to understand the development aid field* by Lindsey Moore, Mindel van de Laar, Pui Hang Wong and Cathal O'Donoghue
2023-12 *Green windows of opportunity in the Global South* by Rasmus Lema and Roberta Rabellotti
2023-13 *The green and digital transition in manufacturing global value chains in latecomer countries* by Rasmus Lema and Roberta Rabellotti
2023-14 *Impact of prestigious-STEM Education of corporate board members on innovation effort: Evidence from India* by Rituparna Kaushik, Sourabh Bikas Paul and Danilo Spinola
2023-15 *Reducing environmental impact through shared ownership: A model of consumer behaviour* by Francesco Pasimeni and Tommaso Ciarli
2023-16 *Welfare losses, preferences for redistribution, and political participation: Evidence from the United Kingdom's age of austerity* by Patricia Justino, Bruno Martorano and Laura Metzger
2023-17 *Inequality, social mobility and redistributive preferences* by Isabel Günther and Bruno Martorano
2023-18 *Automation-induced reshoring and potential implications for developing economies* by Hubert Nii-Aponsah, Bart Verspagen and Pierre Mohnen
2023-19 *Ethnic spatial dispersion and immigrant identity* by Amelie F. Constant, Simone Schüller and Klaus F. Zimmermann
2023-20 *Public R&D and Growth: A dynamic Panel VECM Data Analysis for 14 OECD Countries* by Thomas H.W. Zieseme by r

2023-21 *Innovation and the labor market: Theory, evidence and challenges* by Nicoletta Corrocher, Daniele Moschella, Jacopo Staccioli and Marco Vivarelli

2023-22 *Revisiting Schumpeter in Europe: Place-based innovation and transformative industrial policy* by Luc Soete and Johan Stierna

2023-23 *Identification of Fourth Industrial Revolution technologies using PATSTAT data* by María de las Mercedes Menéndez, Önder Nomaler and Bart Verspagen

2023-24 *Expectations and the stability of stock-flow consistent models* by Huub Meijers, Joan Muysken and Giulia Piccillo

2023-25 *Critical minerals and countries' mining competitiveness: An estimate through economic complexity techniques* by Jorge Valverde Carbonell, María de las Mercedes Menéndez, and Carlo Pietrobelli

2023-26 *Internal rates of return for public R&D from VECM estimates for 17 OECD countries* by Thomas H.W. Ziesemer

2023-27 *Does moral transgression promote anti-social behavior? Evidence from lab-in-the-field experiments* by Halefom Yigzaw Nigus, Eleonora Nillesen, Pierre Mohnen and Salvatore Di Falco

2023-28 *Does exposure to markets promote investment behavior? Evidence from rural Ethiopia* by Halefom Yigzaw Nigus, Pierre Mohnen and Eleonora Nillesen

2023-29 *The virtuous loop of quality of government (QoG) and institutional trust in OECD countries, 2006-2021 and culture* by Ahmed Hussain and Jo Ritzen